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### Educational Tests and Measurements

MARVIN F. BEESON, PH. D.



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STANDARDIZED EDUCATIONAL TESTS  
AND MEASUREMENTS AVAILABLE FOR THE  
ELEMENTARY SCHOOL SUBJECTS

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## FOREWORD

The literature and materials of standardized educational tests are increasing so rapidly and becoming so abundant that it is difficult for the teacher or supervisor to find his way through the maze. Hence the purpose of this bulletin is to place in the hands of school superintendents, principals and teachers a brief statement of the nature of the scales, tests and measurements now available for the elementary school subjects, with the available references on each test and a general selected bibliography on the tests for each subject. It was the original intention of the writer to add another division to this bulletin setting forth the purpose and value of educational tests and measurements. Owing to the lack of space that part has been omitted. Most of this has been covered, however, in another bulletin by the writer on "The Value of Standardized Educational Tests to the Teacher," published by Colorado State Teachers College, Greeley, 1920. The general bibliography at the beginning of this bulletin is also added to aid in covering this deficiency.

The tests most widely used and those which seem to be the most promising are indicated by asterisks.

The author wishes to express his indebtedness to Dr. J. D. Heilman and Mr. E. D. Randolph of this institution for helpful suggestions.

The following books on the subject have been consulted:

- Chapman and Rusk: *The Scientific Measurement of Classroom Products*. Silver, Burdett & Co., New York, 1917.
- Monroe, De Voss and Kelly: *Educational Tests and Measurements*. Houghton Mifflin Co., New York and Chicago, 1917.
- Monroe, W. S.: *Measuring the Results of Teaching*. Houghton Mifflin Co., New York and Chicago, 1918.
- National Society for the Study of Education, *Seventeenth Yearbook, Part II—The Measurement of Educational Products*. Public School Publishing Co., Bloomington, Illinois, 1918.
- Starch, D.: *Educational Measurements*. Macmillan Co., 1916.

The most complete bibliographies on the subject are the one by Edna Bryner, included in the *Seventeenth Yearbook of the National Society for the Study of Education*, and the *Library Leaflet No. 2*, April, 1919, Bureau of Education, Washington, D. C.

MARVIN F. BEESON.

Greeley, Colorado, May, 1920.

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## I—SPELLING

### SPELLING, 1897

It is significant that the tests for spelling were the first ones devised. It is one of the most definite of the elementary school branches. The words are usually either entirely right or wholly wrong. The methods of testing the subject readily suggest themselves. The spelling lists and the conditions are easily standardized. The administration of the tests is usually very simple and the results easily scored.

In general there are, with respect to the method of administering the tests, two kinds of spelling tests: those in which the words are dictated in isolated lists, and those in which the words are put in sentences and the sentences dictated. Furthermore, the sentences may be dictated so as to allow the children as much time as they desire for writing them, or they may be timed so that the children will be forced to write at the normal rate of writing for their grade, as determined by standardized tests in writing. This latter method seems to be the more natural, since the pupils are then applying their knowledge of spelling as they usually have occasion to use it, that is, in writing at a normal rate of speed, without the attention concentrated upon the spelling of certain words. The words constituting the spelling test are not known to the pupils, so that attention is not called to the words to be spelled. In fact it is possible to dictate the words without the pupils' knowing at all that it is to be a test in spelling. They might take it to be an exercise in writing or language.

In general more words are misspelled when the words are dictated in sentences than when dictated separately, so that the standards for the same words in the former method must be about 5 to 15% lower than for the latter method. (Courtis and Fordyce; see Monroe, De Voss and Kelly, p. 20.) In the Cleveland Survey, however, no difference was found in the results obtained by the two methods. (See Judd, *Measuring the Results of the Public Schools.*)

Examples of spelling tests and scales which were not intended primarily as timed sentence tests are the Ayres Spelling Scale and the Buckingham Spelling Test. Tests devised as timed sentence tests are the Monroe Timed Sentence Spelling Test and the Courtis Standard Research Tests in Spelling, Forms A and B. The Iowa Dictation and Spelling Tests include both word lists and timed sentence tests.

As to the method of deriving the tests in spelling, three general plans have been followed:

1. Words have been chosen on the basis of their occurrence in several of a large number of standard spelling books. This was the method used in the derivation of the Buckingham Spelling Scale.

2. A study of the words actually used most often in business and personal letters, in newspapers and in standard literature, was made by Ayres for obtaining the thousand words most often used. Jones employed a similar method for the derivation of his material of English spelling, except that he investigated the themes of school children instead of the writings of adults in order to discover the words used by school children. The total number of different words occurring in 75,000 themes written by children of all grades of the elementary school was 4,532.

3. Starch selected for his spelling scale the first non-technical defined word on the even numbered pages of Webster's New International Dictionary, 1910, and divided these words into several lists of 100 words each, according to the length of the words, so that each list is equivalent in difficulty.

### RICE SPELLING TEST, 1897

This test is no longer available in printed form and is no longer in general use. It is of great historical importance, however, in that it marks the beginning of the modern movement for scientific measurements in education. Rice made an extensive investigation of spelling by means of his word lists, and as a result he made the assertion that classes devoting fifteen minutes daily to spelling proved to be as good in spelling as many classes devoting a half hour or more to the subject. He found little correlation between the amount of time spent on the subject and the results achieved.

References: Rice, J. M., *The Futility of the Spelling Grind*, *The Forum* 23: March-August, 1897, pp. 163-172 and 409-419.

Tidyman, W. F., *A Critical Study of Rice's Investigation of Spelling Efficiency*, *Ped. Sem.* 22: September, 1915, 391-400.

### NATIONAL BUSINESS ABILITY TESTS IN SPELLING, 1912

"The elementary test consists of fifty words chosen from Ayres' list of 542 obtained from the examination of two thousand letters. The advanced spelling test consists of a list of fifty words which are printed incorrectly. In ten minutes the pupil is to write the words correctly."

Address: Sherwin Cody, Business Standards Association, 299 Broadway, New York.

Reference: *Commercial Tests and How to Use Them*, 1919, same address.

### \*THE BUCKINGHAM SPELLING SCALE, 1913

(University of Illinois)

The first spelling scale still in general use was that devised by Buckingham. His method of procedure was to select words common to two out of five standard spelling books. By this method he secured 5,000 words, which by an elaborate plan he reduced to two lists of twenty-five words each, which were intended to test children of all grades from the third to the eighth. The difficulty of each word has been determined experimentally and weighted so that any number of these words can be given as a test.

The advantage of this test is that the difficulty of each word is known. The greatest disadvantage is that so few words are included in the test, and that these short lists are to be used in all the grades. The test is well standardized, however, and has been used in several of the surveys.

Address: B. R. Buckingham, University of Illinois, Urbana, Illinois.

References: Buckingham, *Spelling Ability: Its Measurement and Distribution*, *Teachers College Contributions to Education*, No. 59, New York, 1913.

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### THE STARCH SPELLING TEST, 1914

(University of Wisconsin)

This test consists of six lists of 100 words each selected from the dictionary by choosing words at regular intervals. The words are arranged according to length from the shorter to the longer, since it is found that in general the longer words are the more difficult ones. The technical and scientific terms were eliminated, so that the test consists of the non-technical words of the English language.

The advantage of this test is that the score will give one an idea of

the per cent of non-technical words included in his spelling vocabulary of the English language. The disadvantage is that many of them are rarely used, especially by the younger children, and hence are too difficult for a test for most of these. The test does not purport to be a test of words ordinarily used or needed.

The test includes directions for administering and scoring, and standards for the different grades. It has not been used in surveys.

Address: Daniel Starch, University of Wisconsin.

Price: 5c a sheet. One sheet for each examiner or teacher.

References: Starch, Educational Measurements.

Starch, D. The Measurement of Efficiency in Spelling and Overlapping, Etc. Jr. Ed. Ps. 6: March, 1915, 167-186.

Starch, D. Measurement of Ability in Spelling. Jr. Ed. Ps. 88: October 3, 1918, 327-328.

#### **\*AYRES SPELLING SCALE, APRIL, 1915**

(Russell Sage Foundation)

This spelling scale consists of a list of 1,000 common words selected by Leonard Ayres from an investigation of personal and business letters and words contained in novels, newspapers and books. The author's original purpose was to select 2,000 of the most common words of the English language, but he found that a few words recurred very frequently and the remainder of the 2,000 words only a very few times, so that he limited his list to 1,000 words. These he called the "foundation spelling vocabulary."

The amount of written material analyzed in securing these words was about 368,000 words. The scale is divided into twenty-six columns, according to the difficulty of the words. The steps of difficulty between all successive columns are equal. The scale is so arranged that columns of varying degrees of difficulty may be used for any grade. Words for spelling tests are usually selected from a column of 73% or 84% difficulty for that particular grade.

The Ayres Scale has been used more widely than any other spelling test, and has proved its value in very many surveys, so that many different comparisons among the results are possible.

Address: The scale may be procured at the price of 5 cents from the Russell Sage Foundation, New York City. (One copy for each examiner or teacher.)

References: It is described in a monograph of the same foundation entitled: A Measuring Scale for Ability in Spelling.

Ballou, F. W., Measuring Boston's Spelling Ability by the Ayres Spelling Scale. School and Society 5: March 3, 1917, pp. 267-270.

Briggs, T. H., and Bamberger, F. E., The Validity of the Ayres Spelling Scale. School and Society 6: November 3, 1917, pp. 538-540.

Scotfield, F. A. Difficulty of Ayres' Spelling Scale as Shown by the Spelling of 560 High School Students. School and Society 4: August 26, 1916, pp. 339-340.

#### **MONROE CLASS RECORD SHEET FOR THE AYRES SPELLING SCALE, 1915**

(University of Illinois, Urbana, Illinois)

This is a convenient arrangement for tabulating the scores in the spelling test and finding the median.

Address: Bureau of Educational Measurements and Standards, Kansas State Normal School, Emporia, Kansas.

#### **THE BOSTON SPELLING TESTS, MAY, 1915**

(F. W. Ballou, Boston)

This test consists of fifty words for each grade. The words were selected from words most frequently misspelled by the pupils of the seventy elementary school districts of Boston. The measuring of each word is illustrated by a sentence, but the sentences are not to be dictated. Minute directions are in-

cluded for giving and scoring the tests. The test was used in a survey of the Boston schools. The tests are not published for use.

Address: Department of Educational Investigation and Measurement, Boston.

References: Bulletins Nos. 1, 4 and 11, of the Department of Educational Investigation and Measurement, Boston.

### **JONES, CONCRETE INVESTIGATION OF THE MATERIAL OF ENGLISH SPELLING, DECEMBER, 1915**

(University of South Dakota)

This monograph includes a study of the spelling vocabulary of 1,050 pupils from four states. The study was made by examining over 75,000 themes which included about 5,000,000 words. From the study it was found that the total number of different words used was only 4,532. From this it appears that this number of words is the limit of the writing vocabulary of the 1,050 school children from these four states. It is possible, however, that many words whose meanings were known to the children might have been omitted by them in their written compositions because of their hesitancy to attempt to spell the words or to use them in sentences. Very likely many of these would be understood by the children if used by other people. Jones gives the list of words misspelled in each of the grades of the elementary school, and finds that nine-tenths of all the different kinds of misspelled words occurred in the second and third grades.

From the total list he selected 100 "Spelling Demons" with which the children have the greatest difficulty. Four-fifths of these words also occur in the Ayres Scale. The four most frequently misspelled words were found to be: which, their, there and separate. These hundred words may be used as a spelling test, or they may be used as a supplementary list for teaching. The other words included in the investigation, or a selection from these lists, may be used for teaching. From the results of this study Jones has compiled a spelling book called "The Child's Own Spelling Book," which may be obtained from the Capital Supply Company, Pierre, S. D.

It will be observed that Ayres and Jones applied opposite methods in the collection of their material. Ayres' plan was to discover what words were used by business men, and in actual life, while Jones' purpose was to find out what words the children used in their own themes and compositions. Thus the two tests supplement each other, though the former method seems on a whole to be superior, since it inquires what words will be best adapted to the actual needs of life.

Reference: Jones, Concrete Investigation of the Material of English Spelling, Vermillion, S. D., 1914, pp. 27.

### **THE NEBRASKA SPELLING TEST, 1916**

(Dean C. Fordyce, University of Nebraska)

This is a timed sentence test taken from column O of the Ayres Scale. Directions for giving the test, time limits for each grade, and standards are given on the test sheet. The test words are indicated in bold type.

Address: The Nebraska Bureau of Educational Measurements, Lincoln, Nebraska.

### **\*MONROE TIMED SENTENCE SPELLING TEST, 1917**

(University of Illinois, Urbana, Illinois)

There are three of these tests: the first for grades 3 and 4; the second for grades 5 and 6; and the third for grades 7 and 8 and the high school. The tests consist of fifty words each, each chosen from one column of the Ayres list, and arranged in sentences with the time for beginning to dictate each sentence indicated in the margin. The significant words are italicized, and occur in the first or middle parts of the sentences, so that the children may begin a new sentence if they do not have time to complete the one on which they were working.

Complete directions for giving and scoring the tests are given on each test sheet. A class record sheet is included with the test. The test is not

standardized, but tentative standards can be taken from the Ayres Scale, remembering that the children usually spell from 5% to 15% less accurately in the timed sentence tests than in the tests with isolated words. Effective standards are being determined. One copy of the test is needed for each examiner.

Address: W. S. Monroe, University of Illinois, Urbana, Illinois.

**\*THE COURTIS STANDARD RESEARCH TESTS IN SPELLING, 1917**  
(Bureau of Research, Detroit, Michigan)

This test consists of two series of timed sentences, each containing twenty-five words chosen from the Ayres Scale. The first is a preliminary test for training the children in taking dictations; the second part is the actual test. The sentences are dictated to the children according to the time indicated in the margin of the test sheet.

For the second grade lists of words are provided instead of timed sentences on account of the difficulty which second grade children experience with the dictation of sentences.

The method of testing spelling by mistakes in compositions is also discussed. Record blanks and graph sheets and very complete directions for giving and scoring the tests are included with the test material.

Price of envelope for testing forty children, 30c.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

**THE MINNESOTA SPELLING TEST, 1918**

This test, intended for grades 2 to 8, consists of fifty words divided into three lists, two of fifteen words each, and one of twenty words. One list is given each day. The objection to the test is that there are probably too few words, since these are to be given in all the grades beginning with the second. Directions for giving and scoring the tests are included with the material. Class Record Sheet No. 1 contains lines for a tabulation for fifty pupils, and Class Record Sheet No. 2 on the same sheet is for the purpose of tabulating the frequency distribution.

Address: Bureau of Cooperative Research, University of Minnesota.

**IOWA DICTATION EXERCISE AND SPELLING TEST, 1918-19**

This test consists of three forms, one for each two grades, beginning with the third. Each form is printed on a different color of paper so as to prevent confusion. It is a timed sentence test, and 30 seconds are allowed for writing each sentence. There are ten sentences, each sentence containing two significant words chosen from the Ayres list. The words are underscored in the key provided with the spelling test. The significant words are not known to the children, but they are placed near the middle of the sentence so that the children who write very slowly will have an opportunity to spell them. The children need not be informed that they are to take a spelling test.

In addition to the ten sentences, a list of twenty words is provided for an additional spelling test. Directions for giving and scoring the tests, and a card for class records are also provided.

Address: E. J. Ashbaugh, University of Iowa, Iowa City, Iowa.

**\*THE IOWA SPELLING SCALE, SEPTEMBER, 1919**  
(E. J. Ashbaugh, University of Iowa)

This test really consists of three separate scales, one for grades II, III and IV, one for grades IV, V and VI, and the other for grades VI, VII and VIII. The scale was derived from results of tests in more than one hundred schools in the state of Iowa. The entire series consists of 2,977 words from the written correspondence of Iowa people. "Accuracy of each word was determined on the basis of 200 or more spellings by children in each grade. Thus more than 650,000 spellings were used in each grade. . . . The words were then placed in a separate scale for each grade, the scale being divided into twenty-five steps on the basis of the normal probability curve of dis-

tribution. This means that the difference in difficulty of spelling between the words of any two successive steps is approximately equal. . . ."

"As the increase in spelling accuracy from grade to grade was found to be irregular, it was decided to consolidate the seven grade scales into three separate scales instead of into a single scale as Dr. Ayres did with the 1,000 commonest words." (Reference).

The plan of these scales is very extensive, and they have seemingly been well standardized on Iowa children, so that it promises to become a very useful measuring scale.

One copy of each of the three scales needed for every examiner.

Address: Ernest J. Ashbaugh, University of Iowa, Iowa City.

References: University of Iowa Extension Bulletins Nos. 53, 54 and 55, September and October, 1919.

Foster, The Results of a Recent Spelling Test at the University of Iowa. School and Society 5: April 28, 1917, pp. 506-508.

**\*BUCKINGHAM'S EXTENSION OF THE AYRES SPELLING SCALE,  
OCTOBER, 1919**  
(University of Illinois)

This extension consists of 505 words which have been added to the Ayres Scale. Most of these words are more difficult than the words Ayres used. Accordingly the scale is enriched at the upper end. These words were also selected in a different manner than Ayres' list. They were chosen according to agreements among spelling books. The words added by Buckingham are printed in italics so that they can be distinguished from the Ayres fundamental vocabulary.

In addition to the supplement to the scale, Buckingham has added valuable comments and explanations as to the method of using the scale, and has shown the difference in the standards to be used when giving the spelling tests in dictated lists and in timed sentences.

Very convenient record blanks in duplicate form and in different colors with explanations for tabulating and for finding the median, are supplied with the scales.

One scale needed for each examiner.

Address: B. R. Buckingham, University of Illinois, Urbana, Illinois.

**THE GUHIN "TEST YOURSELF IN SPELLING"**  
(Date unknown.)

This is a simple spelling test for seventh and eighth grade pupils.

Address: Hub City Supply Co., Aberdeen, S. D.

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- Cleveland, Ohio—Board of Education. Division of Reference and Research. The Results of a Spelling Test. pp. 19. Bulletin No. 2, 1918.
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- Hunkins, R. V.—An Experiment in Column versus Dictation Spelling. El. Sch. Jr. 19: 689-699, May, 1919.
- Mead, C. D.—The Spelling Ability of Plumas County Pupils. Sacramento, Calif., State Printing Office, 1919, 8 pp.
- Nifenecker, E. A.—Department of Education, Division of Reference and Research. Report on Some Measurements in Spelling in Schools of the Borough of Richmond. City of New York, 1918, 88 pp. Publication No. 16.
- Otis, A. S.—The Reliability of Spelling Scales, involving "Deviation Formula" for Correlation. Sch. & Soc. No. 4, 11, 18, 1916, 676-683, 716-722, 750-756, 793-796.
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## II—ARITHMETIC

### ARITHMETIC, 1908

The tests in arithmetic are of two kinds, the reasoning tests and the tests in the fundamental operations. The former of course generally include the latter, but the two do not require the same abilities, so that a pupil may do well in a test in arithmetical reasoning and yet fall below the average of the class in speed or in accuracy in the fundamental processes. On the other hand a high performance in the fundamental operations does not necessarily insure superiority in arithmetical reasoning.

It is rather strange that the first standardized tests in arithmetic should have been tests in arithmetical reasoning rather than in the fundamental operations. The latter phase of the subject is simpler, more definite, and certainly easier to test and to score. In fact it is still thought by many authorities that there is not yet a suitable standard test for reasoning ability in arithmetic, while there are several good ones for the fundamental operations.

Stone, the author of the first standardized test in arithmetic, showed in the references cited below that the subject of arithmetic involves a number of specific, and more or less distinct, abilities. Curtis has analyzed further the types of abilities involved in operations in the fundamental processes, and finds at least seven in addition, three in subtraction, six in multiplication and nine in division.

In the following discussion the tests in reasoning ability, the fundamental operations, and the practice tests will be considered successively.

## 1. Reasoning Tests in Arithmetic

### \*THE STONE REASONING TEST, 1908 AND 1917 (Teachers College, Columbia University)

There are twelve problems included in this test. The first five receive a value of one point each, the sixth a value of 1.4 points, the seventh a value of 1.2, the eighth 1.6, and the last four a value of 2 points each, if worked correctly. The test is scored by adding the values of the problems worked correctly. Only the method of working the problem is considered, and credit is given for examples partially correct and for those incomplete. Fifteen minutes are allowed for the test.

The test has been widely used in surveys, and so good standards and means of comparison are available for it. One of the disadvantages of it is that the method of scoring is somewhat subjective and open to criticism, since it is difficult to decide how much credit shall be allowed for problems incomplete or partially correct.

Address: Teachers' College, Columbia University, New York City.

References: Stone, *Arithmetical Abilities and Some Factors Determining Them*, Teachers' College Contributions to Education, No. 19, 1908. Stone, C. W., *Standardized Reasoning Tests in Arithmetic and How to Utilize Them*. Columbia University, New York, 1916.

### THE BONSER ARITHMETIC REASONING TEST, 1910

This test consists of ten problems divided into two lists of equal difficulty. It is not published for distribution.

Address: Bureau of Publications, Teachers' College, Columbia University.

Reference: Bonser, *The Reasoning Ability of Children of the Fourth, Fifth and Sixth School Grades*, Teachers' College Contribution to Education, 1910.

### THE COURTIS STANDARD TEST IN ARITHMETIC, SERIES A, 1911 (Bureau of Research, Detroit)

This series includes two reasoning tests which are described below in connection with the tests in the fundamental operations.

### THE BUCKINGHAM REASONING TEST, JANUARY, 1916 (University of Illinois)

This scale appeared as an integral part of the Survey of the Gary and Prevocational Schools of New York City. There are two scales of approximately equal difficulty, consisting of ten problems each. Each question has been carefully evaluated, and the scores are indicated in the margin. Ten minutes are allowed for working each question. The test is not published separately.

Address: Seventeenth Annual Report of the Superintendent of Schools, 1914-15.

Reference: Buckingham, *Notes on the Derivation of Scales of the School Subject with Special Application to Arithmetic*, Fifteenth Year Book of the National Society for the Study of Education, Part I, 1916.

### \*THE STARCH ARITHMETICAL SCALE A, APRIL, 1916 (University of Wisconsin)

This scale consists of twelve problems of increasing difficulty. The actual values of the problems have been determined experimentally, and the value

of each problem is indicated on the sheet. The approximate value, which is also given, is used in scoring the results. Some of the problems of the Stone Test are also used here. The principle of the test differs from Stone's in that here only the correct answer, not the method of work, is considered in the scoring.

The score of each pupil is the most difficult problem worked correctly by him. If he fails on an example but works a more difficult one, he receives credit for every step passed beyond the point where he first failed, and is penalized for every step on which he failed.

This reasoning test has been used in several of the surveys, so that we have rather good standards for comparison. Directions for administering and scoring the test accompany the material. Pupils are allowed as much time as they need for the test.

Address: Dr. Daniel Starch, University of Wisconsin, Madison, Wisconsin.

Reference: Starch, Educational Measurements, MacMillan & Company.

**\*MONROE STANDARDIZED REASONING TESTS IN ARITHMETIC, 1918**  
(University of Illinois)

This promises to be one of the best reasoning tests in arithmetic. The series consists of three tests; test 1 intended for grades 4 and 5, test 2 for grades 6 and 7, and test 3 for grade 8. There are fifteen problems in each test. The weighted values of the problems have not been statistically determined as yet, but tentative values are given at the present time, with the intention of revising these weights on the bases of the returns from the tests.

The test differs from the previous ones in that each problem is evaluated separately for correct principle and correct answer. The scores are determined by adding the values for the principle and those for the correct answer separately. A score for rate may be obtained by requiring each pupil to draw a line around the number of the problem he is working on at the end of ten minutes, and then continuing the test. Twenty-five minutes are allowed for the test. The test is published in three forms of approximately equal difficulty.

Complete directions for giving and scoring the test, as well as a score key and answer sheet and class record sheet, are included with the test.

The test is being standardized on the basis of the returns of those using it, so that tentative standards are already available.

Address: W. S. Monroe, University of Illinois, Urbana, Illinois.

Reference: Monroe, Measuring the Results of Teaching, Ch. VI.

**CLAPP STANDARD SCHOOL TESTS FOR UPPER ARITHMETIC**  
**APRIL, 1918**

(University of Colorado; now University of Wisconsin)

This test consists of 25 problems for grades 5, 6, 7 and 8. The test is arranged in the order of increasing difficulty. Directions for giving and scoring the test, and an answer sheet are included with the material. Forty minutes are required for the test, and the score is the total number of problems correctly solved.

Address: Frank L. Clapp, University of Wisconsin, Madison, Wisconsin.

**\*THE BUCKINGHAM SCALE FOR PROBLEMS IN ARITHMETIC, 1919**  
(University of Illinois)

This scale consists of three divisions, of ten problems each, the first for grades 3 and 4, the second for grades 5 and 6, and the last for grades 7 and 8. Each question has been evaluated statistically, and its value is indicated in the margin. The score of the pupil is the value of the most difficult problem for which the correct answer is obtained. For every failure on problems in Division I previous to the most difficult problem solved, 0.3 is subtracted from the score, or 0.2 in Divisions II or III.

The test is issued in very convenient form. There is a square below each problem for the figuring and a smaller square for the answer. Very complete directions for administering and scoring the test, as well as an answer

sheet, a class record sheet, and a detailed score sheet, are included with the materials.

There is no time limit for the test. Tentative standards are obtainable from the following address. The scale is available in several equivalent forms. On the whole it seems to be one of the most promising of all the reasoning tests.

Address: B. R. Buckingham, University of Illinois, Urbana, Illinois.

## 2. Tests in the Fundamental Operations

### **THOMPSON'S MINIMUM ESSENTIALS IN ARITHMETIC, MAY, 1908**

This consists of a series of thirty oral and written tests in the fundamentals of arithmetic, and in denominate numbers. Two of the latter are tests in elementary denominate numbers, and two others in advanced denominate numbers. The tests in the fundamental operations are of a spiral nature. Sets for drill work are also included with the tests, so that they serve the purpose of both practice tests and performance tests. There is a mechanical device for scoring the papers. They seem to have been originally intended chiefly as teaching devices.

Address: Ginn and Company, New York.

### **COURTIS STANDARD TESTS, ARITHMETIC, SERIES A, 1911** (Bureau of Research, Detroit)

This is the earliest one of the Curtis Standard Research Tests. It consists of a speed test in copying figures, and speed tests in subtraction, multiplication, division, addition and in the fundamentals combined.

There are also two reasoning tests in the series. Test 8 consists of eight problems in arithmetic to be worked out, and Test 6, the speed test in reasoning, consists of 16 problems. These problems are not to be worked out in full, but the operations used in working them are simply to be indicated. For this reason Test 6 is largely a reading test, and so falls short of its aim. When taken with Test 8, however, the results are enlightening.

Directions for giving the test, and record sheets and answer cards accompany the material.

Address: S. A. Curtis, 82 Eliot Street, Detroit, Michigan.

### **THE NATIONAL BUSINESS ABILITY TESTS, 1912**

The addition test consists of eight examples of three columns each with nine figures in each column, time four minutes. The same sheet contains a subtraction test consisting of fifteen examples, time two minutes. A multiplication test consisting of eleven examples, time allowance three minutes, is also included on the same sheet. Another sheet contains the same addition test again and a test in fractions (short cuts) and percentage. There are sixteen examples in the test for fractions, and the time allowance is five minutes. The test in percentage consists of twelve simple problems to be attempted in two minutes.

With the tests are included complete directions for giving and scoring the tests, standards, answer sheets and record blanks.

Address: Sherwin Cody, 299 Broadway, New York City.

Reference: Cody, Commercial Tests and How to Use Them, 1919.

### **\*COURTIS STANDARD RESEARCH TESTS IN ARITHMETIC SERIES B, 1913**

(Bureau of Research, Detroit)

These tests are undoubtedly the best known and most widely used standardized tests in any subject. One of the chief advantages of the Curtis Tests is that they have been so widely used that very reliable standards have been derived for them. Also very many comparisons can be made with results from various school systems. The test is suitable for a general survey of a town, a school, or a class, but the results are not very reliable for the

performance of individual pupils. It is not a diagnostic test, and was not intended to be used for this purpose.

The test consists of work in the four fundamental operations; a page for each one. The examples are arranged so that all are of equal difficulty. There are 24 examples in the addition test and in all the other tests except multiplication, in which there are 25.

Since all of the examples in each operation are of equal difficulty the pupil's score for rate is the number of examples attempted in the time limit, and the score for accuracy is the percentage of those attempted which are correct. The children score their own tests by means of a printed score card which the teacher reads. An individual score sheet is also provided if desired, so that each child can draw a graph showing his own achievement in comparison with the standard and in comparison with the median of the class. A supervisory graph is furnished with the tests for making tabulations for the whole class. Also a class record sheet accompanies the material, as well as detailed instructions for giving and scoring the tests. The test is issued in four forms of equal difficulty, so that it may be repeated by the same pupils using a different form.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

References: Courtis, Teachers' Manual of the Courtis Tests. Also Annual Accounting of the Courtis Research Tests—Department of Co-operative Research, Detroit, Michigan.

Buckingham, R. R.—The Courtis Tests in the Schools of New York City. *Jr. Ed. Psych.* 5: April, 1914, 199-214.

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Baldwin, B. T.—The Application of the Courtis Tests in Arithmetic to College Students. *Sch. & Soc.* 1: April 17, 1915, 569-576.

Cleveland, Board of Education, Division of Reference and Research—Arithmetical Abilities of School Children as Shown by Courtis Tests. Cleveland, 1917.

Monroe, W. S.—A Report of the Use of the Courtis Standard Research Tests in Arithmetic in 24 Cities. *Studies No. 4*, Kansas State Normal School, Emporia.

#### FASSETT'S STANDARDIZED NUMBER TESTS, 1914

This consists of four series of tests, one for each of the fundamentals and a separate test for each grade. The tests are arranged on cards in such a way that the pupils can draw a line at the side of the cards and place the answers to the right of the line. The time limit for each exercise is printed on the card, and the directions for using the tests are printed on the binder for each set. The answers are printed on the back of the cards. The tests are probably of greater value as practice tests than for survey purposes.

Address: Milton Bradley Company, Springfield, Massachusetts.

#### \*THE CLEVELAND SURVEY ARITHMETIC TESTS, 1915 (University of Chicago)

This is a series of 15 tests, each of 30 seconds to 3 minutes duration. The total time for taking this test is 22 minutes. The test is given preferably on two different days so that the children take only half at a time. The test is spiral in character; that is, examples of each operation recur in a more difficult form several times. The chief advantage of this test is that it is a diagnostic test. There are many examples of each of several types, so that the results show just what type of example the pupils have difficulty with, and suggest to the teacher a modification of her methods to suit the needs of the class. It has the further advantage of being short and simple.

A score card and directions for giving and scoring the tests are included. The test has not been completely standardized, but the results of the Cleveland and the Grand Rapids Surveys and those of other cities may be used for

comparison. In principle it seems to be one of the best tests. Where it is desirable to express the results of the test in one single score, however, and there is no desire for a diagnosis of the ability of the pupils, some other test should be used.

Address: School of Education, University of Chicago, Chicago, Illinois.

References: Judd, *Measuring the Work of the Public Schools*, Survey Committee, Cleveland, Ohio.

Heckart, J. W.—*Cleveland Survey Tests in Arithmetic in the Miami Valley*. *El. Sch. Jr.* 18: Feb. 1918, 447-457.

#### BOBBITT'S ARITHMETIC TESTS, 1915

(University of Chicago)

These tests appeared as a part of the Survey of the San Antonio Public School System. They are not published separately.

Reference: *A Survey of the San Antonio Public School System*, School Board, San Antonio, Texas, 1915.

#### \*THE WOODY ARITHMETIC SCALES, SERIES A, 1916

(University of Washington)

This series consists of a separate scale for each of the fundamental operations. As many different types of examples as could be found for each operation are included in the scale. The examples have been arranged in order of increasing difficulty as determined statistically. The addition scale consists of 38 problems, each of a different type, the subtraction scale 35 examples, the multiplication scale 39, and the division scale 36. Twenty minutes are allowed for each operation. The test is not strictly a timed test, as twenty minutes are long enough for most of the pupils to complete the work. The score is the number of the example worked by exactly 50% of the class. A second method of scoring the papers is to find the median of the number of examples worked correctly by each pupil.

There is some difference of opinion with regard to the diagnostic value of these scales. Since there is only one type of each example, a pupil's failure to work the single example of a given type would not necessarily indicate his inability to do all examples of that type. For diagnosis of the class as a whole the scale is no doubt more suited.

These tests have been widely used, so that a number of different comparisons may be made. There are also the tentative standards of the author of the test.

#### Series B

In Series B some of the examples are omitted, so that the scales are abbreviated forms of Series A. The time limit on this series is 10 minutes for each operation.

Address: Teachers' College, Columbia University, New York City.

References: Woody—*Measurement of Some Achievements in Arithmetic*, Teachers College Contributions to Education, No. 80, Columbia University, New York City, 1916.

Woody—*Measurements of Some Achievements in Arithmetic*. *School and Society*, 4: August 19, 1916, 229-303.

Monroe, W. S.—*An Experimental and Analytical Study of Woody's Arithmetic Scales, Series B*. *School and Society*, 6: October 6, 1917, 412-420.

Theisen, W. W., and Fleming—*The Diagnostic Value of the Woody Arithmetic Scales: a Reply*. *Jr. Ed. Ps.* 9: November, December, 1918.

#### BOSTON RESEARCH TESTS IN ARITHMETIC

Operations with Fractions, 1916

(By A. W. Kallom)

These tests consist of a series of operations in the addition, subtraction, multiplication and division of fractions. There is a series of six tests in the addition of fractions, each test of a different type of examples; a series

of five tests in the subtraction of fractions, four in the multiplication of fractions, and three in the division of fractions. The tests in multiplication and division are combined in one leaflet, and each of the other two tests is put up in a separate booklet. The tests are not printed for distribution.

Address: Department of Educational Investigation and Measurement, Boston.

Reference: Determining the Achievement of Pupils in the Addition of Fractions, Bulletin No. 7, School Document No. 3, Boston, 1916.

#### **\*MONROE DIAGNOSTIC TESTS IN ARITHMETIC, 1916-17** (University of Illinois)

These tests are somewhat on the order of the Cleveland Survey Test. The same general plan is used for constructing it, but it is a much more thorough test, and differs greatly from the Cleveland test in detail.

The series consists of four parts, part 1, operations with integers, intended for grades 4 to 8; part 2, operations with integers of a somewhat more difficult form, intended also for grades 4 to 8; part 3, operations with common fractions in addition, subtraction, multiplication and division, to be given in grades 5 to 8; and part 4, an ingeniously devised test in decimal fractions for grades 6 to 8 and the high school. The answers to the examples in decimals are given and the pupils merely insert the decimal point in the proper place. There are five decimal tests, all in division and multiplication.

It will be noticed that the test is spiral in character, proceeding from the simplest fundamental operations in part 1 to the more difficult fundamental operations in part 2, and then to operations with common fractions and decimals. The time required for giving these tests varies from 30 seconds to 4 minutes each. Each part consists of five or six separate tests on different types of examples. Careful directions for giving and scoring the tests and a class record sheet are included with the materials.

This test promises to be one of the best diagnostic tests which we have. The purpose of the test is to diagnose both the class and the individual. It is well suited for this purpose since there are many examples in each type of problem. By this means the teacher can get an accurate knowledge of the needs of her class and of each individual. It is suggested that this test be used only in making a diagnosis of the school, class or individual and not for a general survey of the school or school system. Some more general test, as the Curtis Test or Woody Test, might be used for determining the standing of the school system as a whole, and then Monroe's diagnostic test given to the children who are above or below the standard, in order to discover the cause of their proficiency or inefficiency and their ability on each type of example.

The disadvantage of the test is that it has not yet been standardized, although the author is deriving standards from the returns of those using the tests, and these will be available soon. However, if a general test is also given, the standards are not so important for diagnostic purposes alone.

Address: Walter S. Monroe, University of Illinois, Urbana, Illinois.

References: Monroe—Measuring the Results of Teaching, Chapters 4, 5 and 6.

Monroe—The Ability to Place the Decimal Point in Divisions. *El. Sch. Jr.* 18: December, 1917, 287-293.

Monroe, W. S.—A Series of Diagnostic Tests in Arithmetic. *El. Sch. Jr.* 19: 1918, 585-607.

#### **THE GUHIN NUMBER TESTS, 1917**

This series consists of two tests printed on the same sheet. Both are tests in the simplest addition. The standards are given in terms of the time required for each grade to work the examples on one side of the test sheet.

Address: Hub City School Supply Company, Aberdeen, S. D.

#### **THE GUHIN PRACTICAL MEASURING SET**

This is a set for measurement of performance in denominate numbers.

Address: Hub City School Supply Company, Aberdeen, S. D.

## WOODY-McCALL MIXED FUNDAMENTALS IN ARITHMETIC, 1918

(Teachers' College, Columbia University)

This is similar to the Woody Scale, but it consists of only one set containing examples in all of the fundamental operations arranged in order of increasing difficulty. The time allowance is twenty minutes, which is supposed to be sufficient to allow practically all children to complete the test. The examples are arranged in spiral form, that is, examples in each fundamental operation recur from time to time in a more difficult form. This test is valuable for a brief survey of a large number of children, or it may be used as a general test when there is not sufficient time to give a more complete test. This scale might also be used to discover in what fundamental operation the pupils are weakest, and then a more complete test, at least for that operation, might be given, such as the Curtis Test or the Woody Scale. This test is a recent one, but promises to be of value in a general way. It is published in several forms so that it may be repeated with the same students by using a different form. Tentative standards and test materials may be procured from the Bureau of Publications, Teachers' College, Columbia University, New York City.

Address: Teachers' College, Columbia University, New York.

### 3. Practice Tests in Arithmetic

#### THE THOMPSON MINIMUM ESSENTIALS TEST IN ARITHMETIC, 1908

These tests described above are supplied with sheets for oral and written practice so that they can be used for drill as well as for tests. See description above.

Address: Ginn and Company, New York City.

#### THE FASSETT NUMBER TESTS, 1914

See description above.

#### \*THE STUDEBAKER ECONOMY PRACTICE EXERCISES IN ARITHMETIC, 1916

(Superintendent, Des Moines, Iowa)

This series consists of a number of cards on which are printed a variety of exercises in the fundamental operations with spaces cut out under the exercises so that the pupils can work the examples through the spaces on ordinary paper placed beneath the cards. There are a number of cards for each operation so as to give the children ample opportunity for practice. The cards for multiplication and division are provided with large spaces below the examples so that all of the work may be included.

Set B 3 for smaller rural schools, the set containing 100 cards, costs \$2.50. A Teacher's Manual for the use of the tests, and a Teacher's Daily Record Sheet and other material are included in the outfit.

Address: Scott, Foresman and Company, Chicago.

#### \*COURTIS STANDARD PRACTICE TESTS IN ARITHMETIC, 1916

(Bureau of Research, Detroit)

These tests consist of 32 lessons in different phases of the fundamental operations, and several tests, printed on cards. Before giving the practice series, lesson number 13 (Test A) is given to the pupils. This test consists of several examples in each of the fundamental operations, and is given in order to find out the achievement of the pupils in each operation. After this the kind of practice tests are given in which the pupils need most help.

Each lesson is printed on a separate card, and the examples are so varied that every type of example in the fundamental operations is included for practice. Each pupil is supplied with a tablet of tissue paper so that the pupil places one of the sheets over a card and merely writes the answers in the proper place. The time required for working one of the lessons is taken, and the lesson is repeated until the pupil is up to standard in time and accuracy. Then the succeeding lesson is prepared in the same way. One sheet of exercises may be used by several pupils.



This is an excellent method of providing drill for the pupils who are below the standard in the fundamental operations. It may also be used to good advantage for the purpose of giving individual instruction either to pupils below standard or below the median of the class or to those above standard in some phases of arithmetic and either behind or up to standard in other elements. By means of this device a teacher can devote her time to the median part of the class, the 50% who can profit most by ordinary class instruction, and give individual instruction in the phases of mathematics needed by those who are behind standard and to those who are above standard. To the latter she might assign a greater number of reasoning problems. In this way each pupil can work at his own rate of speed and the instruction needed by each individual is provided without waste of time, either by the teacher or by the pupil.

Until there are differentiated courses of study, or until some provision is made for individual instruction, this is one of the best plans for giving attention to the highest and the lowest qualities of the class. According to the present method many teachers spend the greater part of their time in instructing the dullest pupils in the class, while the other approximate three-fourths of the class suffer as a consequence. It should also be borne in mind that the time devoted to these dullest pupils is the time most wastefully spent by the teachers. It requires very much more time and energy on her part to teach these, and in the end they accomplish far less, even with the greater expenditure of time, than the gifted or average members of the class. It is the more gifted after all who are most likely to profit by the instruction they get out of school and make the most use of it.

Address: World Book Company, Yonkers-on-Hudson, New York.

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### III—HANDWRITING

#### HANDWRITING, MARCH, 1910

Handwriting presents several peculiar difficulties for the examiner. It is not so definite a subject as spelling or arithmetic. In these subjects the elements used are either right or wrong, whereas there are all kinds of handwriting, varying from barely legible to very beautiful handwriting. In general two types of scales have been devised for measuring the quality of handwriting.

According to the first type one aims to decide upon the quality of the writing by the general impression of the specimen. It is assumed that in ordinary life the handwriting of a person is not carefully studied or analyzed to discover its faults and virtues, but it is judged to be good or bad merely by the impression it makes. The different scales of this first type, however, differ among themselves as to the basis upon which, or the distinct qualities by which, ones impression of handwriting is determined. Ayres assumes that legibility alone is the determining factor, and that writing is good if it is easily legible. Thorndike, on the other hand, assumes that we judge handwriting on the basis of legibility, beauty and general merit.

The second type of writing scale attempts to analyze the factors of handwriting into their most important elements and to judge these elements separately. These are the diagnostic and analytic scales, of which there are now several.

In all of the tests for handwriting, speed and quality are scored separately. The score for speed can easily be secured by having the children write a familiar selection from two to four minutes. The letters written in that time by each pupil are then counted, and the average number of letters written per minute is taken as the score for rate of writing. Sometimes the procedure of giving the rate test is modified so that the pupils need not know that they are being timed or are taking a test.

#### \*THORNDIKE'S SCALE FOR MEASURING THE HANDWRITING OF CHILDREN IN GRADES FIVE TO EIGHT, 1910

(Teachers' College, Columbia University)

This was one of the first scales of any kind to be used in the measurement of school subjects. The scale is constructed and the quality of the

specimens to be judged is rated on the basis of "legibility, beauty and general merit" of the handwriting. The specimens were judged and ranked by about 23 to 55 expert judges of handwriting on the basis of the three qualities mentioned above, their judgment being given on one thousand samples obtained from school children in grades 5 to 8. These specimens were divided into fourteen different classes according to quality in such a way that each step was equal in merit to the step between any other two successive specimens of the scale. The unit of the scale equals approximately one-tenth of the difference between the best and the worst of the formal writings of one thousand children. The scale begins with specimen 4, which is barely legible, and extends up to specimen 18, which is a perfect copy book model. The specimens are given in no one system of writing, but every kind of slant and style is used in the scale.

Some of the qualities contain only one example or one specimen, while other qualities are illustrated by as many as three or four examples. This arrangement is a disadvantage, since that quality represented by four examples or four different styles of handwriting is more likely to be assigned often in judging writing than other qualities of which there is only one specimen. The tendency is very strong to select a degree of merit for the score of a given specimen which contains handwriting similar in form to that of the specimen, notwithstanding the advice of the author to be careful to judge solely on the basis of quality without regard to similarity of form and appearance of the specimen to that on the scale. Experience shows that the scores 9 and 11, both of which are illustrated by three examples, are more often assigned than 10, of which there is only one sample.

To score a specimen the examiner should compare it with those of the lower end of the scale, and then move it toward the upper end until a quality of writing is found which is approximately the same as that of the specimen. The number of that quality of writing is taken as the score. Decimals may be used with any score to indicate degrees of difference not shown on the scale.

While it might seem at first that this method of judging handwriting is not more exact than the old method of grading by percentage, repeated tests prove that usually, even without experience in using the scale, the scoring by means of this scale is far more accurate than when done by the old plan. Practice in the use of the scale gives a very great advantage over the old percentile method of grading handwriting. Aside from the accuracy, the scale is of great value because of the objective standards which it gives and the basis of comparison which it offers for the comparing of the grading of one teacher or of the attainment of one school system, or school, or class with that of another. The standard scores obtained from the writing of thousands of other children of each grade in different parts of the United States enable the teacher to compare the work of her school with that done by other schools throughout the country. Before the invention of such scales there was no means of comparing the work of one school with that of others.

If the teacher desires to determine the amount of improvement attained by the use of the scale over the old plan of percentile grading without a scale, she will find a convenient method of doing so outlined in Thorndike's *Teachers' Estimates of the Quality of Specimens of Handwriting*, *Teachers College Record*, Vol. 15, No. 5, 1914, Columbia University, New York City. This contains five problems which may be worked out and fifty specimens of handwriting to be graded by the percentile method and by the use of the scale. The average judgments of a large number of expert judges of handwriting are given as standards and as a basis of comparison. These specimens also provide an excellent means of gaining practice in the use of the writing scale. Every teacher who intends to do much testing by the use of handwriting scales should have some such practice as is provided for by these practice specimens. The working of these problems will convince anyone of the superiority of the writing scales to the percentile plan of grading samples of writing.

The Thorndike Scale has been used very widely in school surveys, so that we have good standards for both speed and quality of writing, and an

excellent basis of comparison with the achievements in other cities. The score for speed is determined by counting the number of letters written by each pupil during a period of two to four minutes and finding the average number of letters written per minute. The median of these scores represents the class score.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

References: Thorndike, E. L.—Handwriting; Reprint from Teachers' College Record, Vol. II, No. 2, March, 1910.

Thorndike, E. L.—Teachers' Estimates of the Quality of Specimens of Handwriting. Teachers' College Record 15: November, 1914, 279-291.

Thorndike, E. L.—Means of Measuring School Achievements in Handwriting. Ed. Adm. & Super. 1: May, 1915, 300-305.

#### **\*AYRES MEASURING SCALE FOR HANDWRITING, THREE SLANT EDITION, 1912**

(Russell Sage Foundation)

This scale was devised upon the basis of legibility alone. All of the original samples used in the derivation of the scale were taken from the fifth grade alone. The specimens were arranged so that the words were placed out of their natural context, and then submitted to ten competent judges. They were asked to read the specimens, and the time required for reading each specimen was taken with a stop watch. The average time required for reading each of the specimens was taken and those specimens requiring the longest time for reading were placed at the lower end of the scale. The specimens were then arranged in eight degrees of merit so that each step was of equal value, and numbered by tens from 20 to 90. Each quality on the scale contains specimens of three degrees of slant, vertical, semi-slant and full slant or business writing.

To use this scale the specimen to be scored is placed along the scale and compared with specimens of each quality, and the score of that quality on the scale which is most similar to the specimen is assigned to it. Intermediate figures may also be used.

The test is issued in convenient form. It has the advantage of including all three degrees of slant and an equal number of specimens under each quality. It, too, has been widely used in surveys. There is little agreement as to the comparative merits of the Ayres Scale and the Thorndike Scale.

Address: Russell Sage Foundation, New York City.

References: Ayres—A Scale for Measuring the Quality of Handwriting of School Children, Bulletin E 113, Russell Sage Foundation, New York City.

Breed, F. S., and Culp, V.—An Application and Critique of the Ayres' Handwriting Scale. School and Society 2: October 30, 1915, 639-647.

Gray, T. C.—The Training of Judgment in the Use of the Ayres' Scale for Handwriting. Jr. Ed. Psych. 6: February, 1915, 85-98.

King, I., and Johnson, H.—The Writing Abilities of the Elementary and Grammar School Pupils of a City System Measured by the Ayres' Scale. Jr. Ed. Ps. 3: November, 1912, 514-520.

#### **\*THE FREEMAN CHART FOR DIAGNOSING FAULTS IN HANDWRITING, 1914**

(University of Chicago)

This chart consists of five separate scales all printed on one sheet for each of the following qualities: uniformity of slant, uniformity of alignment, quality of line, letter formation and spacing. There are three degrees of merit in each one of the scales, qualities 1, 3 and 5. The intermediate qualities 2 and 4 may be used if desired. Each one of the scales contains two or more specimens under each quality. The writing is rated for each one of these five qualities separately, and scored 1, 3 or 5. These scores are added for the total score. A letter gauge consisting of lines of different angles marked on tissue paper is used for determining the uniformity of slant. An align-

ment gauge also drawn on tissue paper is used for determining the uniformity of alignment. Some of the words in the specimen illustrating quality of line are magnified in order to reveal the errors more clearly. In the specimens under letter formation the defects are indicated by small arrows pointing toward them. Deficiencies in spacing are pointed out by marks.

This chart is an analytical scale for the purpose of making a careful diagnosis of the faults in handwriting. This method of judging handwriting is very much slower and more difficult than the method of deciding on the merit of a specimen by the general impression. It is important, however, for the teacher to know what specific faults are involved in the inferior handwriting. For this reason it is suggested the students who rank lowest in the general test be graded in a special test by the Freeman Scale in order to discover the nature of the errors.

Knowing what specific faults are made, however, does not explain the cause of these mistakes. To discover their cause will necessitate watching the pupils carefully while they are writing. This can be done for those who take the Freeman test or those who offer the greatest difficulty in order to discover and correct the cause of the deficiency. The teacher should then give these pupils individual attention and point out to them the cause of the difficulty and give them individual drill for correcting the mistakes.

The Freeman Test is too difficult to use in most surveys, but it is an excellent test for diagnostic purposes. It has been standardized by the author for both rate and quality of writing. Price 25 cents. One copy needed for each examiner.

Address: Houghton Mifflin Company, Chicago.

References: Freeman—An Analytical Scale for Judging Handwriting, *Elementary School Journal* 15: April, 1915, pp. 432-441.

Freeman—The Teaching of Handwriting, Houghton Mifflin Co., Boston, 1914.

Freeman, F. N.—Handwriting Tests for Use in School Surveys. *Elem. Sch. Jr.* 16: February, 1916, 291-301.

Whitney, F. L.—The Pedagogy of the Freeman Handwriting Scale. *Am. Sch. Bd. Jr.* 50: June, 1915, 16, 65-66.

#### THE MONROE RECORD SHEET FOR HANDWRITING, USING THE AYRES SCALE, 1914-15 (University of Illinois)

On one side of the sheet is a record blank for tabulating the results of the writing tests in rate and quality. On the back of the sheet are general instructions for obtaining samples and rating the specimens, finding class medians, and evaluating the results. Standards are also given.

Address: Bureau of Educational Measurements and Standards, Kansas State Normal School, Emporia, Kansas.

#### THE GRAY STANDARD SCORE CARD FOR MEASURING HANDWRITING, JULY, 1915 (University of Texas)

This score card divides the essential qualities of handwriting into nine different items. These qualities and the perfect score for each quality are given below:

1. Heaviness .....	3
2. Slant .....	5
Uniformity	
Mixed	
3. Size .....	7
Uniformity	
Too large	
Too small	
4. Alignment .....	8

5. Spacing of lines.....	9
Uniformity	
Too close	
Too far apart	
6. Spacing of words.....	11
Uniformity	
Too close	
Too far apart	
7. Spacing of letters.....	18
Uniformity	
Too close	
Too far apart	
8. Neatness .....	13
Blotches	
Carelessness	
9. Formation of letters..	26
General form.....	8
Smoothness .....	6
Letters not closed	5
Parts omitted....	5
Parts added.....	2
Total Score....	—

These scores when added give a total score of 100 points as the highest possible score.

Gray has three forms of these score cards, a large one for the teacher or examiner, a medium size card for scoring the results of each pupil and filing, and a small individual report card for each child to take home. The values assigned to the different qualities have been carefully determined by a statistical study of the returns from seventy-five competent judges of handwriting, consisting of teachers and supervisors of writing, elementary school teachers, and students and teachers of education.

This method of judging handwriting is defended on the ground that the score card has long been used successfully in making judgments of wheat and cattle, and is now being used in judging school buildings, rating teachers and students and other such purposes.

Address: C. Truman Gray, University of Texas.

Reference: Gray—A Score Card for the Measurement of Handwriting. Bulletin, University of Texas, 1915, No. 37.

### THE JOHNSON AND STONE HANDWRITING SCALE, FEBRUARY, 1916

This is an analytical scale based upon several factors including movement and an analysis of legibility. There are seven factors considered: letter formation, uniformity of slant, uniformity of alignment, spacing, quality of line, size and degree of slant. Each specimen of the scale is accompanied by an explanation of its faults and merits. The scale is not published for use, but is printed in the following reference.

Johnson and Stone—Measuring the Quality of Handwriting, Elementary School Journal 16: February, 1916, pp. 302-315.

### THE MINNESOTA HANDWRITING TESTS, 1917

(Date uncertain)

These tests consist of a blank sheet of paper with spaces for the heading (name, grade, etc.), and a stanza printed at the head, the first stanza of "Sing a Song of Six Pence" to be written for three minutes. The specimens are to be measured by means of the Ayres Scale. Complete directions for giving and scoring the tests are given in an accompanying folder.

Address: Bureau of Co-operative Research, University of Minnesota, Minneapolis, Minnesota.

### THE BREED AND DOWNS HANDWRITING SCALE, MARCH, 1917

This scale was made chiefly for local use as a result of a survey of handwriting in the schools of Highland Park, Michigan. The specimens were scored by means of the Thorndike Scale and then five-step scales were constructed for each of four school grades. The construction of such a scale for each grade, no doubt, stimulates great interest among the pupils.

References: Breed and Downs—Measuring and Standardizing the Handwriting in a School System. *Elementary School Journal*, Vol. 17, March, 1917.

### \*AYRES MEASURING SCALE FOR HANDWRITING, GETTYSBURG EDITION, MARCH, 1917

(Russell Sage Foundation)

This scale differs from the author's other scales, particularly the "Three Slant Edition," in that here all the specimens are written in one slant, a business hand; the specimens are written on ruled paper; the subject matter is the same in all the tests, namely the first three sentences of Lincoln's Gettysburg Address; the time limit is two minutes in all tests; and the specimens are reproduced in blue-black or fountain pen ink. In addition to this the standards for speed and rate for each grade from the fifth to the eighth are given on the scale, and instructions for giving the test and scoring the results are included.

The author says of the scale, "The purpose of the changes introduced in the present edition is to increase the reliability of measurements of handwriting through standardizing methods of securing and scoring samples, and through making numerous improvements in the scale itself designed to reduce variability in the results secured through its use."

This scale was used in the surveys of Cleveland and Gary.

Address: Russell Sage Foundation, New York City.

Reference: Breed, F. S.—Comparative Accuracy of the Ayres Handwriting Scale, Gettysburg Edition. *El. Sch. Jr.* 18: February, 1918, 458-463.

### THE ZANER HANDWRITING SCALES AND STANDARDS FOR GRAMMAR GRADES, HIGH SCHOOLS, ETC., 1917

This scale was constructed for judging writing of students of the Zaner method. It really consists of several scales constructed in a similar manner. The first one contains samples ranging from quality 30 progressively by ten points to quality 90. Three methods of marking are indicated, the one by the figures referred to, another by letters A, B, C, D and E, and the third by the explanations Very Poor, Poor, Fair, Good and Excellent. The second scale written on the lower half of the page illustrates styles as well as qualities of writing. Under each specimen is a criticism pointing out the defects or the superior qualities of the writing. This scale is graded from 45 to 95, progressively by tens, as well as by the other two methods. The suggestion is made that the examiner compare the writing with both scales, and if desirable assign the intermediate values indicated in the second scale. Below this scale are suggestions defining and analyzing form, movement and speed and indicating methods of judging these qualities.

Below this is a third scale which consists of samples of the alphabet written in capitals and small letters. Only three qualities, 55, 75 and 95, appear on this scale.

The fourth is a scale of three degrees of quality for figures, the three qualities being represented by the scores 60, 75 and 95.

A fifth scale includes three samples of drill work of two kinds, numbered qualities 50, 70 and 90.

Finally three specimens are given to illustrate the average rating of form and movement combined. These specimens are numbered 60, 65 and 95.

Standards are published on the sheet with the scales. Price 25 cents each. Address: Zaner and Blossom Company, Columbus, Ohio.

### KANSAS CITY WRITING SCALE, DECEMBER, 1917

This is another example of a writing scale constructed for local use. Address: Bureau of Research and Efficiency, Kansas City, Missouri.

**\*COURTIS STANDARD RESEARCH TESTS, SERIES W, WRITING, 1917-18**  
(Research Bureau, Detroit)

This test consists of two separate tests, the first one being given on two standardized paragraphs, paragraph 1 and paragraph 2, the former containing 164 letters, and the latter varying in length, since the child's name, age, grade, and school and the date constitute the subject matter to be written. The second test is a test for which the subject matter is names and addresses amounting to 279 letters to be arranged in alphabetical order.

The children practice test 1 on the day previous to the test but do not see test 2. At the time of the test a writing blank is furnished to each child, and the paragraphs to be copied are printed on this blank. The pupils must write each of these paragraphs once. The test is timed by writing a table of numerals from 1 to 20 on the board and counting each unit as 15 seconds. The examiner points to the numerals consecutively as 15 seconds elapse, and the pupils are instructed to write on their papers the number to which the examiner is pointing as they finish writing the paragraph. They immediately begin copying paragraph 2, and then write in the proper blank on the paper the time indicated by the examiner when they complete this. Time is called at the end of five minutes if some are still writing.

On the other side of the paper is a blank for test 2, filing names and addresses which are given at the top. After the test has been explained and illustrated one minute is allowed for study and then two minutes for the test.

The specimens are scored by the Ayres Scale, Gettysburg Edition.

A score card is furnished which gives a count of the letters in tests 1 and 2 and a record blank for each pupil. A class record sheet is included for tabulating the results. Folder B and Folder C give complete explanations of the test and instructions for giving and scoring the test for rate and quality. In Folder C a formula is given for converting the values of the Thorndike Scale into those of the Ayres Scale. Standards are given in Folder C.

Test 1 is a "maximum performance" test. "That is the test is given after practice, the children are told not to hurry and are urged to do their best. Their attention is directed specifically to handwriting." Test 2 is a timed "free choice" test. Attention is not directed specifically to handwriting. The material is new, so that attention must be diverted to reading the copy. Children choose for themselves the rate and quality of the writing.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

**THE HOLMES PENMANSHIP TESTS, 1917-18**  
(Harvard University)

This series consists of minute directions and standardized procedure for administering the tests, which are to be scored by the Ayres Scale, Three Slant Edition. The instructions to the examiners, as well as the selection to be written and the directions to the pupils, are all standardized. There are a dictation test and two practice tests of 15 seconds each, followed by a one-minute test and a four-minute test.

The tests are to be repeated at a later date. In the meantime the pupils are required to practice 15 minutes a day in penmanship, but without instruction in penmanship. By this means improvement under standard conditions can be measured, and a standard of improvement based upon a time unit of practice can be derived.

Address: Professor Holmes, Harvard University, Cambridge, Mass.

Reference: Educational Survey of the Public Schools of Brookline, Mass.

**THE FRAZIER SCALE FOR HANDWRITING, 1918**  
(State Normal School, Cheney, Washington)

The specimens for the construction of this scale were selected by rankings on the Thorndike Scale and the judgment of a competent penmanship teacher. Several improvements over the Thorndike Scale have been intro-



duced in the arrangement of the scale. This is another example of the construction of a scale for local use.

Address: State Normal School, Cheney, Washington.

#### **THE REAVIS AND AIKEN SCORE CARD FOR HANDWRITING, 1918**

This card is described in the reference below.

Reference: Reavis and Aiken—The Use of a Score Card in Measuring Handwriting. *El. Sch. Jr.* 19: 1918, 36-40.

#### **\*THE WISE AND STARCH MEASURING SCALE FOR HANDWRITING, 1919** (University of Wisconsin)

This scale is printed on ruled card board. A business style of handwriting has been used in the better qualities of the scale. The specimens are reproduced in ink, resembling as closely as possible fountain pen ink, and great care has been exercised to make the reproductions as accurate as possible. Other special features of the scale are: uniform test material, including the capital letters, has been used; a continuous series of steps from 0 to 20 has been provided; and the values of the samples have been determined with a high degree of accuracy.

At the top of the scale the authors give the following explanation of the preparation of the scale. "From a total of 627 samples of writing, 227 were selected. These 227 samples were ranked in the order of merit or quality by eleven judges. On the basis of these rankings, 88 samples were chosen from the 227. The 88 samples were then ranked by 100 judges on the basis of which the above 21 samples were selected so that the difference between the successive steps would be such that 75%, or as near that as possible, of the judges considered any given sample better than the next lower one. Finally in order to determine the values of the samples in printed form, the 21 samples as they appear above were ranked by 300 persons. In the case of the 100 rankings of the original hand-written samples, the value of each sample was computed from its comparison with the five next lower samples, that is, from 500 comparative judgments. In the case of the 300 rankings of the printed copies of the original samples, the value of each was computed from its comparison with the two or three next lower samples, that is, from over 600 comparative judgments. Hence, the values of the scale were determined from over 1,100 comparative judgments for each sample obtained from 400 rankings."

Standards for speed and quality based on 6,000 pupils are given above the scale. In addition to this a table for expressing the measurements in terms of the school marks A, B, C, D and E, and a table for expressing these marks in percentages are included.

Address: University Co-operative Company, 504 State Street, Madison, Wisconsin.

References: Starch—A Scale for Measuring Handwriting, *School and Society*, 9: January, 1918, 154-158; 184-188.

Starch, D.—A Revision of the Starch Writing Scale. *Sch. & Soc.* 10: 1919, 498-499.

#### **LISTER AND MYERS' NEW YORK PENMANSHIP SCALE, 1918**

(Brooklyn Training School for Teachers)

The authors give at the bottom of the scale the following description of the derivation of it:

"This scale represents the average of the judgments of 21 teachers and writers in the muscular movement system of penmanship, and of four psychologists.

"From nine schools of Greater New York, representative of the best, medium and poorest product of the muscular movement system of writing, 3,550 specimens were selected from at least one entire class of each grade from 3B to 8B inclusive. Each specimen represented one trial from dictation.

"The specimens from each grade were classified into four groups, on the basis of general merit, and the corresponding groups were thoroughly mixed.

Then on the basis of chance, three hundred specimens were selected, with practically the same number from each group.

"According to written instructions each of the 25 judges ranked these specimens on the basis of movement, on the basis of spacing, and on the basis of form.

"The specimens ranking on the average best and poorest were selected for the top and bottom of the scale, respectively. Therefrom the exact numerical rank which the six other samples on the scale should have was determined, and the specimens whose average ranks are the same as these determined positions, or nearest them, were selected.

"With no exception, all the samples on the scale are less than 0.1 from the determined position."

The unique feature of this scale is that each specimen is graded separately for form, movement and spacing. There is a separate specimen for each of these three features for every value. The total score of a sample is the average of the values for form, movement and spacing determined separately. Under each specimen is a line of criticism pointing out the defects of the writing. The scale is one of the newest ones and consequently is not yet widely known. It seems to promise good results, as it makes use of several new principles and improvements.

Address: C. C. Lister and G. C. Myers, Brooklyn Training School for Teachers.

Reference: Lister, C. C., and Myers, G. C.—An Analytical Scale of Handwriting. Jr. Ed. Ps. 9: 1918, 417-431.

#### SELECTED GENERAL REFERENCES ON TESTS FOR HANDWRITING

- Almack, J. C.—The Writing Ability of Teachers. *Sch. & Soc.* 2: 1919, 389-390.
- Ashbaugh, E. J.—Present Attainment in Handwriting of School Children in Iowa. Iowa City, the University, 1916, 24 pp.
- Boston. Department of Educational Investigation and Measurement. Penmanship. Determining the Achievement of Elementary School Graduates in Handwriting. Boston, 1916, 43 pp. School Document No. 6, Bulletin No. 9.
- Breed, F. S., and Down, E. F.—Measuring and Standardizing Handwriting in the School System. *El. Sch. Jr.* 17: March, 1917, 470-484.
- Breed, F. S., and Culp, V.—Note on the Relation of Legibility and Form in Handwriting. *Sch. & Soc.* 4: 1916, December 2, pp. 870-872.
- Freeman, F. N.—The Teaching of Handwriting. Boston, Houghton Mifflin Co., 1914, pp. 155.
- Freeman, F. W.—Handwriting. Fourteenth Yearbook, National Society, Pt. I, 1915, 61-77.
- Harris, J. H., and Anderson, F. W.—A Study of Handwriting in the Public Schools of Dubuque, Iowa. Bureau of School Measurements, 1916. 10 pp.
- Johnston, J. H.—A Comparison of the Ayres and Thorndike Handwriting Scale. *North Carolina High School Bulletin*, 7: October, 1916, 170-173.
- King, I., and Newcomb, R. E.—Improvement in Handwriting. *Ed. Admin. and Super.* 2: October, 1916, 493-502.
- Koos, L. V.—Determination of Ultimate Standards of Quality in Handwriting for the Public Schools. *El. Sch. Jr.* 18: February, 1918, 423-446.
- Manuel, H. T.—The Use of an Objective Scale for Grading Handwriting. *El. Sch. Jr.* 15: January, 1915, 269-278.
- Manuel, H. T.—Studies in Handwriting. *Sch. & Soc.* 5: March 17, 1917, 327-330.
- Mead, C. D.—The Effect of Exempting Pupils Proficient in Handwriting. *Jr. Ed. Ps.* 10: 1919, 219-229.
- Measuring the Quality of Handwriting. A Symposium. *El. Sch. Jr.* 16: February, 1916, 302-315.
- Nutt, H. W.—Rhythm in Handwriting. *El. Sch. Jr.* 17: February, 1917, 432-445.

- Pechstein, L. A.—Penmanship Scales—Their Merits and Limitations. *Jr. of the N. Y. State Teachers Ass.* 5: March, 1918. 41-45
- Pintner, R.—A Comparison of Ayres and Thorndike Handwriting Scales. *Jr. Ed. Ps.* 5: November, 1914, 525-536.
- Rusk, R. R.—A Class Experiment in Scoring Handwriting. *Jr. Ed. Ps.* 5: September, 1914, 417-418.
- Sackett, L. W.—Comparable Measures of Handwriting. *Sch. & Soc.* 4: October 21, 1916, 640-645.
- Starch, D.—Methods in Constructing Handwriting Scales. *Sch. and Soc.* 10: 1919, 328-329.
- Witham, E. C.—All the Elements of Handwriting Measured. *Ed. Admin. & Sup.* 1: May, 1915, 313-324.
- Witham, E. C.—A Method of Measuring Handwriting. *Am. Sch. Bd. Jr.* 48: May, 1914, 18-19, 72-73.

#### COMMERCIAL TESTS, 1912

#### \*NATIONAL BUSINESS ABILITY TESTS, 1912

(By Sherwin Cody)

This is an elaborate series of tests designed to cover almost every phase of commercial work, including arithmetic, grammar and spelling. They were designed especially for commercial schools and commercial departments. Many of the tests are applicable to the elementary school, however, and some of them have been listed and described in the proper divisions of this bulletin.

Address: Sherwin Cody, Room 620, 299 Broadway, New York.

Reference: Cody, S.—Commercial Tests and How to Use Them. World Book Co., Yonkers, N. Y., 1919.

## V—LANGUAGE AND COMPOSITION

### LANGUAGE AND COMPOSITION, 1912

Fewer satisfactory tests have been devised for language and grammar than for the subjects previously described. This is due chiefly to the difficulty experienced in testing these subjects. The chief causes of this difficulty seem to be found in unanalyzed processes and unformulated values. The subject is complex and indefinite. Language includes very many different elements. It cannot, like efficiency in arithmetic, be divided into qualities of speed and accuracy, or any such definite qualities. It includes very many different items, such as correct usage, knowledge of grammatical terms and rules, punctuation, oral and written composition, and possibly general language ability, as evidenced in the ability to rearrange dissected sentences, or to complete mutilated sentences, and the like. Most of the tests attempted to measure only one or two of these important elements.

The other difficulty which arises in connection with the language tests is due to the lack of agreement as to what are the essential purposes of language study. Is it correct usage of words and forms? Is it a knowledge of formal grammar, the ability to classify parts of speech and moods and tenses, and to analyze sentences? Is it the ability to punctuate correctly? Is it proficiency in written or in oral composition? Or is it the development of general language ability, a "language conscience" or "grammatical instinct?" Or is such general language ability attainable at all by education? These are some of the questions which must be answered before we can devise suitable tests. Some authors of tests and scales have sacrificed definiteness of aim to an attempt to combine most of the above elements in a single scale.

In the following discussion the language tests and scales will be considered first, and then the composition scales.

### 1. Language Tests

#### THOMPSON'S MINIMUM ESSENTIALS IN LANGUAGE, 1908

This is a rather extensive test, combining the features of a set of practice tests and a set of research tests. They are useful chiefly as teaching devices.

The tests combine the elements of usage in short sentences, pronunciation, punctuation, sentences and nouns, the common irregular verbs, adjectives, adverbs and pronouns, etc. In all the tests there is always a sheet for preliminary oral drill and a second sheet for the written test. Much of the tests is in the form of mutilated sentences, sentences to be completed, or questions to be answered.

Address: Ginn and Company, New York.

### THE NATIONAL BUSINESS ABILITY TESTS OF ELEMENTARY GRAMMAR AND ADVANCED GRAMMAR AND PUNCTUATION

1912

These brief tests are all included on one sheet, and accompanying them are directions for giving and scoring the tests.

An Elementary Grammar Test and an Advanced Grammar Test for correct usage are included. Five minutes are required for the former, and ten minutes for the latter. The response called for is to cross out the incorrect form.

The Punctuation Test is also divided into the Elementary and the Advanced Test. In the former, the capitals are to be marked and commas inserted, and ten minutes are allowed for the work. In the Advanced Test the student must insert apostrophes, commas, colons, and semi-colons where needed.

Address: Sherwin Cody, Room 620, 299 Broadway, New York City.

Reference: Cody—Commercial Tests and How to Use Them.

### THE COURTIS ENGLISH TEST, SERIES C, 1914

(Bureau of Research, Detroit)

This test proved to be so complicated that its publication has been discontinued. It contains valuable suggestions, however.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

Reference: Courtis, S. A.—Standard Tests in English. *El. Sch. Teacher* 14: April, 1914, 374-392.

### \*THE STARCH GRAMMATICAL SCALE A, 1914

(University of Wisconsin)

This scale contains questions arranged in order of increasing difficulty from step five to step sixteen, with step thirteen omitted, because of failure to find questions of exactly that degree of difficulty. The pupil is to choose between two forms of expression which are given in each step.

A step is passed if three out of four of the questions in each step are answered correctly. The pupil is penalized for every step on which he fails. "In the case of the steps which have only three sentences, all three must be correct in order to pass the step." Those containing less than three sentences can be counted only if none of the steps below that point have been missed.

A sheet of directions and standard June scores and a key for scoring the results are furnished with the tests. This scale has been used in some of the surveys, and is doubtless a very good test when used in connection with some of Starch's other tests for different phases of grammatical knowledge.

Address: Daniel Starch, University of Wisconsin, Madison, Wisconsin.

Reference: Starch—The Measurement of Achievement in English Grammar, *Journal of Educational Psychology*, December, 1915, pp. 615-626, and Starch—Educational Measurements, Macmillan Co.

### \*STARCH PUNCTUATION SCALE A, 1914

(University of Wisconsin)

This scale is constructed in exactly the same manner as the one just described. It contains ten steps extending from step 6 to step 16. Step 15 is omitted because of the author's inability to find a step of exactly that degree of difficulty. There are from one to four sentences in each step, and the step is counted as passed when the pupil answers three out of four of

the sentences correctly. A key and a sheet of directions for giving the test are included. Standard June scores are given on the directions sheet.

Address: Daniel Starch, University of Wisconsin, Madison, Wisconsin.

Reference: Starch—Educational Measurements (and above reference).

### **\*STARCH ENGLISH GRAMMAR TESTS 1, 2, 3, 1914**

(University of Wisconsin)

Test No. 1 is a test for parts of speech. A selection is given and the nouns, pronouns, adjectives, verbs, adverbs, prepositions, and interjections are to be indicated by standard abbreviations given on the sheet. Three minutes are allowed for the test. The score for each pupil is the number of words correctly designated.

Test No. 2 is a test of knowledge of cases. A selection is given, as in the former case, and the student is to indicate in three minutes time the nominative, possessive and objective cases of as many words as possible, the first letter of each one of these cases being used as an abbreviation. The score is the number of words marked correctly.

Test No. 3 is a test for tense and mood. In the selection given the pupil is to indicate the tense of each verb by the proper abbreviation written above each example. In scoring the results of this test the tense and mood when indicated correctly count as one point each. The total number of moods and tenses given correctly is the score.

Directions and standard scores for grades seven and eight and all the grades of the high school are included with the tests.

Address and references, same as above.

### **BOSTON TEST IN ACCURATE COPYING, NOVEMBER, 1914**

This test was used in the survey of the Boston schools. There is a selection which is to be copied in ink, fifteen minutes being allowed for the purpose. Instructions for giving and scoring the test, a teacher's summary report sheet, and a report blank for each pupil are included. The test is not published for distribution.

Address: Department of Educational Investigation and Measurement, Boston, Mass.

Reference—Determining a Standard in Accurate Copying, Bulletin No. 6, School Document No. 2, 1916.

### **STARCH ENGLISH VOCABULARY TESTS, 1916**

(See Reading)

### **\*TRABUE LANGUAGE SCALES (COMPLETION TESTS)**

**B, C, D, E, J, K, L, M, 1916**

(Teachers' College, Columbia University)

Scales B, C, D and E are practically of the same difficulty and may be used for the elementary grades. Scales J and K are intended for adults, and Scales L and M for high school students. Scales B and C have been used most often.

Each scale consists of ten mutilated sentences in which the blanks are to be filled in correctly—one word for each blank. In Scale C the most difficult sentence contains seven blanks to be filled in. The relative value of the sentences has been carefully determined, and they are arranged in the order of their difficulty. Seven minutes are allowed for Scales B to E.

A practice sheet for the children below the fourth grade is included with the test. This sheet gives four sample sentences which are to be correctly filled in before the test proper is given.

These scales have been widely used in educational research. They do not seem to test for knowledge of any very definite element of language or grammar, but it is thought that they do test, in a way, "general language ability." It is probable that there is no such general ability.

Directions for administering and scoring the test are given in a booklet.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

References: Trabue—Completion-Test Language Scales, same address.

Trabue—Some Results of a Graded Series of Completion Tests. *School and Society* 1: April 10, 1915, 537-540.

Trabue—Completion Tests for Public School Use. *Fifteenth Yearbook of National Society*. Pt. 1, 1916, 52-59.

**TRABUE-KELLY, COMPLETION EXERCISE ALPHA AND BETA, 1917**  
(Teachers' College, Columbia University)

This is an adaptation of the Trabue Completion Scales for individual testing.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

Reference: Kelly—Individual Testing with Completion Test Exercises, *Teachers' College Record*, September, 1917.

**THE MINNESOTA TESTS IN ENGLISH GRAMMAR, 1916-17**

These tests were devised and originally used by Buckingham for the survey of the Gary and Prevocational Schools of New York City. They were later arranged by Haggerty of the University of Minnesota, and issued in their present form. The tests consist of ten questions on different phases of formal grammar. The responses consist of giving the principal parts of verbs, listing parts of speech, analyzing the sentences, using relative pronouns and other difficult parts of speech in sentences, comparing adverbs, giving the case of italicized words, etc.

Complete directions for giving and scoring the tests are included in a separate folder.

Address: University of Minnesota, Minneapolis, Minnesota.

Reference: Buckingham—A Survey of the Gary and Prevocational Schools of New York City, Board of Education, New York, 1916.

**\*CLAPP'S STANDARD SCHOOL TEST: CORRECT ENGLISH, MARCH, 1918**  
(University of Colorado; now University of Wisconsin)

This test is to be used in grades four to eight inclusive. Twenty-five minutes are allowed for the test, and complete directions for giving and scoring the test are included. The test consists of twenty-eight questions including many different elements of English, such as punctuation, capitalization, correct usage, grammatical form, parts of speech, correct forms of words, and the correction of incorrect forms. The difficulty might be mentioned that in practice the standards for spoken English differ from those for written English.

The questions are weighted and the value of each question is placed in the margin of the score sheet. The total number of values equals 100 points, and the score key explains exactly the method for scoring each question. The score of an individual is the sum of the values of the questions answered correctly. Standards are given on the score sheet both for the low and high sections of grades five, six, seven and eight.

This test is a new one and has been used only in local surveys, but the principle seems to be an excellent one, since the test aims to combine many of the elements of grammar.

Address: University of Colorado, Boulder, Colorado.

**GREENE, ORGANIZATION TEST, 1918**  
(University of Iowa)

This test consists of ten dissected sentences, the words and phrases of which are set off in groups and numbered. The test is given to see how well pupils are able to arrange groups of words into sentences in five minutes time. Three practice sentences are given on the back of the test sheet. Instead of writing the words out in the correct order, the response is made by placing in a space provided for the purpose the numbers of the groups of words in

the proper order. A key is provided for scoring, so that the examiner need only compare the numbers on the pupil's paper with those given in the key. Also the value of each sentence is given on the answer key. The pupil's score is the sum of the values of the sentences arranged correctly.

A class record sheet is provided, and contains complete directions for recording the results both of this test and a composition test scored by the Nassau County Supplement to the Hillegas Composition Scale. A correlation sheet is also provided giving complete instructions for correlating the scores of both tests by the Spearman Rank Method (R), and a table for converting this into the Pearson r.

The organization test has the advantage of being extremely simple to use and of giving very definite results. Standard scores are given on the back of the test sheet.

There is need for an organization test for **sentences** in compositions for high school English, but obviously the preparation of such a test would be attended by great difficulties.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

## **\*THE CHARTERS DIAGNOSTIC LANGUAGE AND GRAMMAR TEST**

1918-19

1. Pronouns, 1918.
2. Verbs A, 1919.
3. Verbs B, 1919.
4. Miscellaneous.

### **1. Pronouns**

This test appears in two forms, the simplest one intended for grades 3 to 8, printed on one sheet. The pupils are told to read the sentences numbered 1 to 42 carefully to see if they are right or wrong. If they are right, they are to be copied on the blank below; if they are wrong, the correct form of the sentence is to be copied. Directions for giving the tests are printed on the first page of the sheet, and the pupils and teacher are to read these together aloud. Two illustrative examples are given to show the method of work. The test is to be administered in two periods. The more advanced test is given to the children of the seventh and eighth grades. The test is like the first one except that in addition to writing the correct form of the sentences, the pupil must give his reasons for making every change. A blank space is provided for this at the right of the page. This test is also completed in two periods.

A score key and sheet of directions for giving the tests are provided. Record sheets also accompany the test. The incorrect forms inclosed in this test were selected from errors in oral and written language of pupils. The test considers both use and knowledge of formal grammar.

### **2. Verbs A**

This test is intended for grades three to eight, and is similar to the former one for pronouns. There are 40 sentences in the test. The children are to read these. If the form of each sentence is correct, they are to respond by making a cross on the line below. If the verb of the sentence is wrong, they are to write the correct form of the verb on the line below. Directions for giving and scoring the tests are included.

### **4. Miscellaneous**

There are 40 sentences in this test. All the different parts of speech are included. The pupil must read these sentences, and if a sentence is correct he responds by making a cross on the line below; if any form is incorrect the pupil must write the correct form on the line, as in the other tests. Two illustrative examples are given in the instructions, which the children read aloud with the teacher. In grades VII and VIII reasons must be given for the changes.

Address: Bureau of Educational Research, University of Illinois, Urbana, Illinois.

## THE BUCKINGHAM ENGLISH GRAMMAR TESTS

These tests are now in preparation and will soon be ready for distribution.

Address: Bureau of Educational Research, University of Illinois, Urbana, Illinois.

### 2. Composition Scales

There is considerable difficulty in testing ability in composition. The question arises whether more value should be attached to the correct form of composition—that is, correct English, punctuation, freedom from errors, and other technical matters—or whether the general story value of the composition is to receive the greater emphasis, or whether both elements should be taken into consideration. Some teachers grade the composition entirely on the story value, others according to the number of mistakes made in grammar and in form, and others try to combine these two qualities.

Another difficulty is the indefiniteness of the subject. It includes many different elements, so that, in our present lack of careful analysis of the elements comprising the story value of composition, if a score for story value is desired it is only possible to arrive at this by the general impression.

Another difficulty is that of learning to grade compositions by reference to the scale, the same difficulty experienced in the case of handwriting. A great deal of practice is necessary before one becomes expert in the use of such scales, and the difficulty is very much greater than that of judging handwriting. In grading compositions each specimen must be read very carefully, and also each sample on the scale must be thoroughly familiar in order to judge the value of the pupils' specimens. The technique of using the composition scale is so difficult in fact that at first the teachers may mark the composition with a smaller average deviation without the use of the scale than with it. Even if this were always the case, however, it would still be an advantage to use composition scales under certain circumstances. They give the teacher at least an objective criterion on which to base her judgments of different compositions; and thus a basis for comparison is established. The standards obtained from the use of scales are objective, so that a certain quality on a standard scale has a very definite meaning, and this score will convey approximately the same idea of the quality of the composition to different teachers.

Thus these scales enable us to evaluate the work in composition quantitatively, so that the results so obtained can be published in school surveys for the purpose of comparison. Teachers' marks would not have a meaning definite enough to be used in a school survey, since the standards of teachers in grading vary enormously.

Another advantage in the use of composition scales is that the standards obtained may serve as a definite aim or goal for the teacher to work toward.

It is fortunate that after a little practice in the use of scales the results secured by the teachers in grading compositions are more accurate than without the use of the scales. The more the scales are used the more accurate they become as instruments of measurements.

#### \*THE HILLEGAS SCALE FOR THE MEASUREMENT OF QUALITY IN ENGLISH COMPOSITION, 1912

(Commissioner of Education, Vermont)

This scale consists of ten compositions, the values of which have been determined. The values extend from 0-937. The steps are nearly equidistant apart. Three of the ten compositions are artificial productions and the rest were written by high school pupils and college freshmen. The subject is not the same in all the compositions.

To use this scale we simply compare the compositions written by the pupils to whom the test is given with those on the scale and assign the value of the sample which it resembles most closely. Intermediate values may also be used.



This is the earliest and best known of the composition scales. Standards and several good means of comparison for this scale are available since it has been used in many of the surveys. The disadvantages of it are that there is only one sample illustrating each quality; the topic is not the same for each composition, and the values attached are rather cumbersome.

Address: Bureau of Publication, Teachers' College, Columbia University, New York.

References: Hillegas Scale for the Measurement of Quality in English Compositions by Young People. (State Commissioner of Education for Vermont.) Teachers' College Record, 13; September, 1912, pp. 331 to 384.

Kayfetz—A Critical Study of the Hillegas Composition Scale. Ped. Sem. 21: December, 1914, 559-577.

Thorndike—Notes on the Significance and Use of the Hillegas Scale for Measuring the Quality of English Composition. Eng. Jr. 2: November, 1913, 551-561.

Gunther—My Experience with the Hillegas Scale. English Journal 8: November, 1919, 535-542.

Gordon, K.—A Class Experiment with the Hillegas Scale. Jr. Ed. Ps. 9: 1918, 511-514.

#### **\*HARVARD-NEWTON SCALES FOR THE MEASUREMENT OF ENGLISH COMPOSITION, SEPTEMBER, 1914**

This series consists of four separate scales, one for each form of discourse: exposition, argumentation, description and narration. All the compositions were written by eighth grade pupils and each scale consists of six compositions with the value of each composition giving both its merits and defects.

The subjects are not assigned, so that this fact makes the composition a little more difficult to evaluate them if all were written on the same subject. There is some advantage in having a separate scale for each form of discourse. Also the plan of pointing out the merits and defects of each sample and of making comparisons between the samples is a decided advantage.

Address: F. W. Ballou, Harvard University, Cambridge, Mass.

References: The Harvard-Newton Bulletin No. II, September, 1914. Scales for the measurement of English composition, Harvard University, Cambridge, Mass.

Brownell—A Test of the Ballou Scale of English Composition. School and Society 4: December 16, 1916, 938-942.

Kayfetz—A Critical Study of the Harvard-Newton Composition Scales. Ped. Sem. 23: 325-347, September, 1916.

#### **\*THORNDIKE PRELIMINARY EXTENSION OF THE HILLEGAS SCALE FOR THE MEASUREMENT OF QUALITY IN ENGLISH COMPOSITION BY YOUNG PEOPLE, 1915**

(Teachers' College, Columbia University)

This scale differs from the original Hillegas Scale in several respects. In the first place there are 15 different qualities of composition distinguished. The qualities in the middle of the scale are all illustrated by from 2 to 6 different compositions. The qualities are numbered on the scale of 0 to 95 so that these values are smaller and simpler to deal with than those on the Hillegas Scale. Several of the samples from the original scale are also used.

The advantage of the Thorndike Extension is that several samples are given for some of the qualities and that a greater number of the different qualities are distinguished. On the other hand it is more difficult to learn to use this rather complicated scale.

Address: Bureau of Publication, Teachers' College, Columbia University, New York City.

References: Thorndike—A Scale for Measuring the Merit of English writing. Science 33: June 16, 1911, 935-938.

Thorndike—English Composition: 150 Specimens Arranged for Use in Psychological and Educational Experiments, New York City.

Thorndike—A Scale for Merit in English Writing by Young People. Jr. Ed. Ps. 2: 1911, 361-368.

Johnson, F. W.—The Hillegas-Thorndike Scale for the Measurement of Quality in English Composition. Sch. Rev. 21: January, 1913, 39-49.

Walls, W. A.—The Measurement of English Composition by the Thorndike-Hillegas Scale. Amer. Sch. Bd. Jr. 51: 17, 84, July, 1915.

### MINNESOTA DIRECTIONS FOR GIVING AND SCORING OF TEST OF ENGLISH COMPOSITION

(Date not given)

In this test the Hillegas Scale is used for scoring the compositions in grades 2-6. The Harvard-Newton Scale for English Composition is used for grades 7-8. The subject of the composition is "Three Things I Would Do To Improve My School Building and How I Would Do Them."

Ruled sheets are furnished to the pupil for writing the compositions. The subject is printed at the top and the usual blanks—name, grade, etc.—are provided.

The advantage of this test is that a folder of complete direction for giving and scoring the test and for using the scale is given. Another advantage is that the same subject is used for all. The University of Minnesota Record Blank should be used with these tests.

Address: Bureau of Co-operate Research, University of Minnesota, Minneapolis, Minnesota.

### THE BREED AND FROSTIC COMPOSITION SCALE, 1917

All the compositions of this scale were written by sixth grade pupils. A part of the story called, "The Picnic," was read to the class and then they were told to complete it in twenty minutes. The advantage of this test is the definiteness of the subject matter and the method of standardizing the conditions of the test, so as to make it as definite as possible. The disadvantage of the test is that it was derived entirely from compositions for the sixth grade pupils. The principle of its derivation seems to be an excellent one. The test is published in the references given below.

Reference: Breed and Frostic—Measuring English Composition in the Sixth Grade. Elementary School Journal 17: January, 1917, pp. 307-325.

### \*NASSAU COUNTY SUPPLEMENT TO THE HILLEGAS SCALE FOR MEASURING THE QUALITY OF ENGLISH COMPOSITION, 1917

(Prepared by M. R. Trabue, Columbia University)

This scale was devised for the survey of the schools of Nassau County, New York. Ten compositions are included in the scale, one sample for each quality. The first seven compositions were written by children in the elementary schools of Nassau County. The last three were selected from compositions which had been compiled by Thorndike.

The value of each of the compositions, except the last one, is the median rating of 139 judges, using as the basis of their rating the Hillegas Scale. The value of the last composition is that given it in the Thorndike Extensions of the Hillegas Scale. The values of these compositions extend from 0 to 9, decimals being used for the intermediate values. The subject of the first seven compositions is: "What I Should Like To Do Next Saturday." There is no definite subject for the last three.

The advantage of this scale is its simplicity. There are only 10 qualities of compositions and there is only one sample for each quality. The values are also very carefully determined. The use of the same subject in most of the compositions is another advantage. Standard medians may be found in the references below.

References: Trabue—Supplementing the Hillegas Scale, Teachers' College Record 18: January, 1917, pp. 51-84. The Nassau County Scale Survey, Nassau County, New York.

Theisen, W. W.—Improving Teachers' Estimates of Composition Specimens with the Aid of the Trabue Nassau County Scale. *School and Society* 7: 143-150, February 2, 1918.

Witham, E. C.—Notes on the use of a Composition Scale. *Jr. Ed. Ps.* 10: November, 1919, 461-462.

**\*THE WILLING SCALE FOR MEASURING WRITTEN COMPOSITIONS**  
1917

(Class Records Sheet by W. S. Monroe)

This scale consists of eight different compositions. The qualities are numbered by tens from 20 to 90, 20 meaning from 15 to 24.9, for example. The subject is the same for all of the compositions, namely, "An Exciting Experience." Several specific topics are mentioned in order to illustrate to the children just what kind of subject is desired.

Complete directions for using this scale are given in the bottom paragraph. The unique feature of this scale is that the compositions are rated for both story value and form value. The rating for form value is done by carefully marking all errors in grammar, punctuation, capitalization and spelling. These are counted and the total is multiplied by 100. This is divided by the number of words in the composition. The quotient is the index of the form value.

This scale has several advantages; the definiteness of subject assigned, the simplicity of its arrangement, the rating for both story and form value, the fact that the directions for using the scale are included, and the small number of degrees of merit to be distinguished. Standards are also included on the scale. This scale was used in the survey of the Denver Schools and that of the Grand Rapids Schools.

Address: Bureau of Educational Tests and Measurements, Kansas State Normal School, Emporia, Kansas.

References: School Survey of Grand Rapids, Michigan, Board of Education, Grand Rapids, 1916.

Denver School Survey, 1916.

Willing, M. H.—The Measurement of Written Composition in Grades IV to VIII. *Eng. Jr.* 7: 193-202, March, 1918.

**THE COURTIS STANDARD RESEARCH TEST IN COMPOSITION, 1917-18**  
(Bureau of Research, Detroit)

This is a folder containing detailed instructions for giving a composition test which is to be scored for rate by the method indicated by the author, and for quality according to the Trabue Modification of the Hillegas Scale.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

**\*THE MINNESOTA ENGLISH COMPOSITION SCALE, 1920**

The reference describing the derivation of this test has not yet been published, and so no description of the scale is given here.

Address: Bureau of Co-operative Research, University of Minnesota, Minneapolis, Minnesota.

Reference: Van Wagenen, M. J.—The Minnesota English Composition Scale, Its Derivation and Validity. (This article will be published in the *Journal of Educational Research* some time in 1920.)

**SELECTED GENERAL BIBLIOGRAPHY ON TESTS FOR ENGLISH,  
LANGUAGE AND COMPOSITION**

Barthelmess, H. M.—Determining the Achievements of Pupils in Letter Writing. *Bulletin No. XVI* of the Department of Educational Investigation and Measurement, Boston, Mass., 1918, pp. 35.

Bonser, F. G., Burch, L. H., and Turner, M. R.—Vocabulary Tests as Measurements of School Efficiency. *Sch. & Soc.* 2: November 13, 1915, 713-718.

Boston. Dept. of Ed. Investigation and Mes. English: School Document No. 6, 1918.

- Brandenburg, G. C.—Psychological Aspects of Language. Jr. Ed. Ps. 9: 1918, 313-332.
- Breed, F. S., and Haggerty, M. E.—The Measurement of Improvement in English Composition. Eng. Jr. 6: October, 1917, 515-527.
- Charters, W. W.—Minimal Essentials in Elementary Language and Grammar. Sixteenth Yearbook, National Society, Pt. 1, 1917, 85-110.
- Charters, W. W.—Constructing a Language and Grammar Scale. Jr. Ed. Research 1: April, 1920, 249-257.
- Chicago University High School, English Dept.—Differentiating Instruction in Ninth-Grade English. Sch. Rev. 27: December, 1919, 748-756.
- Curtis, S. A.—The Value of Measurements. Eng. Jr. 8: 1919, 208-217. Detroit, Mich.—English Composition for Use in the Detroit Public Schools. September, 1917. Board of Education, 158 pp.
- Hosie, J. F.—The Essentials of Composition and Grammar. Sch. & Soc. 1: April 24, 1915, 581-587. Also in Fourteenth Yearbook, Nat. Soc. Part I, 1915.
- Hudelson, E.—Standards and Measurements in English Composition. Second Ind. Conf. on Ed. Mes., 13: 1915, 115-122.
- Hudelson, E.—Some Achievements in the Establishment of a Standard for the Measurement of English Composition in the Bloomington, Indiana, School. Eng. Jr. 5: November, 1916, 590-597.
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- Jones, R. G.—Standard Vocabulary. Fourteenth Yearbook National Society, Pt. I, 1915, 37-42.
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- Maxwell, W. H.—Report of Committee on Tests and Standards of Efficiency in Schools and School Systems: English Grammar. Proc. N. E. A., 1915, 565-573.
- Parker, F. E.—The Value of Measurements. Eng. Jr. 8: 1919, 203-208.
- Pintner, R.—The Measurement of Progress in Language Ability. Jr. Ed. Ps. 9: 1918, 270-277.
- Rice, J. M.—The Results of a Test in Language. Forum 35: October, 1903, 269-293 and March, 1904, 440-457. Also in his Scientific Management in Education. New York, 1913.
- Sackett, L. W.—Comparable Measures of Composition. Sch. & Soc. 5: February 24, 1917: 233-239.
- Sears, Isabel, Diebel & Amelia—A Study of the Common Mistakes in Pupils' Oral English. Elem. Sch. Jr. 71; September, 1916, 44-54.
- Stark, W. E.—Measurement of Eighth-Grade Composition. Sch. & Soc. 2, August 7, 1915, 208-216.
- Stoddard, W. E.—A Comparison of the Hillegas and Harvard-Newton Scales in English Composition. Ped. Sem. 23: December, 1916, 498-501.
- Towne, C. F.—Making a Scale for the Measurement of English Composition. El. Sch. Jr. 19: September, 1918, 41-53.
- Vocabulary Tests as Measures of School Efficiency. Sch. & Soc. 2: November 13, 1915, 713-718.
- Ward, C. H.—The Scale Illusion. Eng. Jr. 6: April, 1917, 221-230.
- Wolfe, C. S.—The Topeka Scale for Judging Compositions. Illinois Ass. of Teachers of Eng., Bul. 9, March, 1917, 1-12.

## VI—DRAWING

### THORNDIKE SCALE FOR THE MERIT OF DRAWINGS BY PUPILS EIGHT TO FIFTEEN YEARS OLD, 1913

(Teachers' College, Columbia University)

This scale is similar to the handwriting scale. The evaluation of the different samples are the results of judgments by 400 artists, "teachers of drawing, and men expert in education in general." The degrees of merit extend from 0 to 17. The drawing to be judged is compared with the scale

and the evaluation attached to the sample which it most nearly resembles is taken as the score.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

References: Thorndike—The Measurement of Achievement in Drawing, Teachers' College Record 14: November, 1913, pp. 345-383.

Childs—Measurement of Drawing Ability of 2,177 Children in Indiana City School Systems by the Supplementary Thorndike Scale, Journal of Educational Psychology 6: pp. 391-408, September, 1915.

**\*THE WHITFORD ART TESTS, 1919**  
(University of Chicago)

According to the author, the two fundamental results of art education are ability to recognize and appreciate art quality and ability to draw or describe things graphically. Consequently two types of tests have been included in this series. Test No. 1 deals with ability to appreciate art quality, which is a mental product of art training. Test No. 2 is a test of ability to draw, i. e., "to represent graphically ideas and things of artistic quality."

Test No. 1 consists of a series of 14 problems, each in selection or discrimination between 3 or 4 superior and inferior art considerations. The best drawing of each group is to be marked by the pupils. Only one answer for each problem is correct. The time generally required for this test is less than 15 minutes. The scoring involves no difficulties, since  $7\frac{1}{7}$  points are subtracted from 100 for every incorrect response.

Test No. 2—the drawing test—consists of 7 problems. These are divided into four groups. The scale is reproduced below.

I. To test proportion drawn from specification.

1. Draw freehand a small-scale rectangle in the proportion 5 to 12.
2. Draw freehand a small-scale triangle in the proportion 4 by 4 by 2.

II. To test proportion in representing a given figure (copy).

3. Make a small-scale drawing of the map on board (United States).

III. To test drawing of curved lines.

4. Copy the curved lines drawn on the board. (Instructor draws three groups of well selected curves. This enables the pupil to see how they are drawn.)

IV. To test representation (from memory and from objects).

5. Draw from memory a horse (side view).
6. Make a sketch of the chalk box (on desk).
7. Make a sketch of the waste basket (on chair).

This test is scored according to a rating scale of ten different standards of attainment for each problem of the test representing approximately equal steps of difficulty from the poorest drawing to the best found in all the grades.

The test has been standardized on the basis of the results from 1,000 children in three schools. Thirty persons, supervisors of art in public schools and instructors, have aided in the preparation of this scale. A revision of the tests with still simpler technique of scoring based upon results from a larger number of children is being made.

Address: The Prang Company, Chicago.

Reference: Whitford, W. G.—Empirical Study of Pupils in Ability in Public School Art Courses. *El. Sch. Jr.*, September and October, 1919.

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Ayer, F. C.—The Psychology of Drawing. Baltimore, Md., 1916, 186 pp.  
Eastern Arts Association—Report of Committee on a Scale for Drawing. Proc. 1916, 180-181.

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- Rugg, H. O.—A Scale for Measuring Free-Hand Lettering. *Jr. Ed. Ps.* 6: January, 1915, 25-42.
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## VII—READING

### READING TESTS, 1914

Reading is a difficult subject to test because there are so many factors involved, and these elements are usually rather indefinite. Some of the elements involved in reading are speed, comprehension, word knowledge, expression, pronunciation, emphasis and readiness to use printed material to advance personal ends, to solve personal difficulties, and to gain information. The purpose of teaching elementary reading is to enable children to get the thought from the printed page as quickly and as accurately as possible, and in the upper grades to develop taste and appreciation for reading, and to aid the children to gain information. Usually in our teaching of reading we lose sight of this aim and stress the secondary aim of reading, namely, to pronounce the words correctly and to learn to read aloud with expression. In reality the most important use we have for reading is not to read aloud with expression but to read silently and get the thought as rapidly and as accurately as possible. Most teachers should stress this factor of thought-getting, in other words, silent reading, much more than they do and lay less stress on oral reading. We have occasion to get the contents from a book much more often than to read it aloud, and for that reason the major emphasis in our school-room instruction should be placed on silent reading for the purpose of getting the thought. Reading might also be given for the purpose of increasing the vocabulary of the child. If this is made a conscious aim of the instruction in reading, it will be found that the pupils do increase their vocabularies very greatly by this method, but if left as a matter of incidental gain it will be found that little profit results from these methods.

It is found from the results from reading tests in many different school systems and from psychological tests in the laboratory that the usual idea that the slow reader gets the context of the page more accurately than the rapid reader is not true to fact. There is a little disagreement on the correlation of these two abilities, speed and comprehension, but many authorities agree that usually the rapid reader also gets the thought of what he reads better than the slow reader. There are several reasons for this, namely: greater concentration of attention when working rapidly, also the general tendency of the intelligent person to work faster as well as more accurately than the duller one, and the general correlation found in all mental tests between the rapidity and accuracy of the mental processes. Practically all authorities, both psychologists and those who have used the tests widely, agree that at least the moderately rapid reader has a better comprehension of the subject than the slow reader. It is possible that the very rapid reader skims over the subject matter without getting the thought, that is without actually reading. Results of psychological tests and educational tests also point out the correlation between speed of reading and retention. The rapid reader usually retains more and for a longer time than the slow reader for similar reasons as those above. One of the chief duties of a teacher in instruction in reading then should be to develop speed and accuracy of silent reading and to spend less time in drill work on the mechanical phases of the subject. That much time is wasted in our ordinary methods of teaching is proved by the fact that in most of our tests and measurements and surveys, it has been observed that pupils make little progress in reading after the third or fourth grade. The time devoted to reading after that point is really worse than wasted because the children are forming

habits of carelessly repeating, in a mechanical way, subject matter already known. Too much stress on oral reading causes the children to pay undue attention to the mechanics of reading so that the tendency may persist to pronounce each word with the lips or in the mind when reading silently. Much of the time given to reading might profitably be devoted to other subjects, or to other kinds of reading which will be found useful. Instead of so much drill work then, the children in the upper grades especially should have a great deal of useful reading, parallel reading, not only of a literary nature, but of many other kinds. Since most of the reading done in actual life is not literary material but magazines, newspapers, scientific books, informational works of all kinds, much of the cursory reading in school should be done in these other fields, not distinctly literary. Such a course would prepare the children better for the actual demands of life.

There are two distinct divisions of reading tests, those for oral reading and tests for silent reading. The tests in silent reading are again divided into several different kinds. They may be tests of word knowledge or vocabulary, or they may be tests of comprehension of the material. Of these latter there are again several different types.

One type is those tests which demand that the speed of reading be scored according to the number of words read per minute or per second and then that comprehension be scored either by reporting orally to the examiner the contents of the passage read or by writing out a report of all that was read. This kind of test may be scored for comprehension either by counting the number of words written after eliminating all repetition of words and redundant words, or by referring to a score key on which are indicated all the ideas contained in the passage. The ideas given in the report are then counted, and the number of ideas given constitute the score for comprehension.

Second, the comprehension of tests for the understanding of sentences may be scored by asking questions on the contents of the passage read and weighting these questions by numbers proportionate to the difficulty. Many of the tests combine these two methods, requiring the pupils to write a report of the passage and also to answer questions bearing on the passage read.

Third, there are certain performance tests, or tests chiefly of the nature of performance, which demand that the child shall read the passage carefully and then make certain marks or symbols or follow certain directions to show that he has understood the contents of the selection and the directions given in the selection. Such tests as these are similar in some respects to the test for following directions in the Army Mental Tests, Scale Alpha. These performance tests may be scored in two ways; either the rate of reading and the understanding may be included in one score, or there may be a separate score for the rate of reading and for comprehension. The Kansas Silent Reading Tests follow the first plan, while the Monroe Silent Reading Tests follow the second plan.

## 1. Silent Reading Tests

### \*BROWN SILENT READING TESTS, SEPTEMBER 1, 1914

(State Normal School, Oshkosh, Wisconsin)

This test consists of an interesting reading selection for all the grades from the third to the eighth, the same selection being used for all the grades. There are three forms of equal difficulty provided so that the same tests can be repeated several times by the same pupils. The time required for giving the test is exactly 60 seconds. The pupil is asked to draw a line round the last word read when time is called. The number of words read during the minute are taken as a score for speed. The pupil is then required to write as much as he remembers of what was read. This reproduction is then compared with a key which is furnished with the test and which contains in italics all the principal ideas occurring in the selection. The pupil's paper is scored by the number of ideas correctly reproduced according to the key. The principle of this test has been used in many succeeding tests, since Brown's was the first successful test devised for reading. There are only tentative standards for this test at the present time. The advantage of this method

of scoring is that it gives an objective basis for judging and marking the papers. It is somewhat slow, however. The use of the same selection for all the grades might limit the usefulness of this test somewhat.

Address: H. A. Brown, president of the State Normal School, Oshkosh, Wisconsin.

References: Brown—The Measurement of Ability to Read, New Hampshire Department of Public Instruction, Bulletin No. 1, Second Edition, 1916, Concord, New Hampshire.

Brown, H. A.—The Measurement of the Efficiency of Instruction in Reading. *El. Sch. Tch.* 14: June, 1914, 477-490.

### COURTIS RESEARCH TESTS, SERIES C, ENGLISH, 1914

(Bureau of Research, Detroit)

This test was found to be so complicated to use that its publication has been discontinued. The author's reading test described later has taken its place.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

### \*THE GRAY SILENT READING TEST, 1914

(University of Chicago)

This is a very unique test of silent reading. Each child is tested individually. This makes the test both very accurate yet very difficult to give. There are three selections. Grades 2 and 3 are tested on "Tiny Tad," grades 4, 5 and 6 on "The Grasshoppers," grades 7 and 8 on "Ancient Ships." The selections are printed on cards and are so arranged on the cards that the selection is printed in three parts. For "Tiny Tad" the middle portion contains just 100 words. The teacher observes the child read, and by the stop watch takes the exact time when the pupil's eyes shift from the first division to the second division at the top of the card, and then takes the time again when the child's eyes shift from the bottom of the middle division to the top of the last division of the selection. This gives the exact time required for reading 100 words. The number of seconds required for reading the middle column is recorded. This is the score for rate. The middle column of the other two selections contains 200 words, and so the number of seconds required for reading the second column must be divided by two in order to get the score for rate for those two selections.

If the pupil has been reading "Tiny Tad," the teacher asks him to tell the story as well as he can, and writes down the pupil's exact report. When he discontinues speaking he is asked if he remembers anything else. For the other two selections the pupil writes out on the record sheet a report of what he remembers. Also on the back of the sheet are 10 questions on the story read. Each question counts 10%, so that there are two scores for quality of silent reading, the pupil's report of what he read, and the answers to the 10 questions. To score the reproduction, the teacher should check from the pupil's report all wrong statements and all repetitions, and count the remaining words. The percentage that these words are of the total number of words in the selection is the score. For the questions, the score is determined by giving each one of the 10 questions answered correctly a score of 10%. The average of the score for reproduction and the score for answering questions is the final score for quality.

The same record blank is used for both Gray's Oral Reading and Silent Reading Tests. On the back of the score sheet are included explicit directions for giving both tests, and directions for scoring and tabulating the results. Standards for both oral and silent reading are given on the score sheet.

This test has several advantages, the chief being the accurate method of testing reading by testing each individual separately, the ingenious methods of securing the score for rate, and the fact that each pupil is tested for quality of reading by two different methods. The disadvantage is the time required for giving the test. This test was used in the Cleveland Survey, so that there is a good basis of comparison with the results in other schools.

Address: Schools of Education, University of Chicago.



References: Gray—Methods of Testing Reading; Elementary School Journal 16, January, 1916, pp. 231-246, and February, 1916, pp. 281-298.

Gray, W. S.—Reading in the Elementary Schools of Indianapolis. *El. Sch. Jr.*, 1919, 19: 336-353; 419-444; 506-531; 608-627.

Judd—Measuring the Results of the Public Schools, Cleveland Survey.

Gray, W. S.—Studies of Elementary School Reading Through Standardized Tests. Chicago, 1917.

Gray, W. S.—A Co-operative Study in Reading in Eleven Cities in Northern Illinois. *El. Sch. Jr.* 17: 250-265, 1916.

White, C. W.—A Study in Reading in Indiana Cities. Fourth Conference on Educational Measurements. Indiana University, 1917.

### \*THE KANSAS SILENT READING TESTS, 1914

(Devised by F. J. Kelley, State Normal School, Emporia, Kansas)

This test has been one of the most widely used tests for reading ability. There are three different tests in the series; two for the elementary school and one for the high school. Test No. 1 is to be given to grades 3, 4 and 5; test No. 2 to grades 6, 7 and 8; and test No. 3 to the high school pupils. Exactly five minutes are allowed for giving the test. On the outside page are blanks for the heading, "pupil's name, date, age, grade, etc.," directions to be read in concert by the pupils and teacher, and an example illustrating the tests. After the pupils understand what they are to do, a signal is given to turn over the page and begin with test No. 1. They do as many as they can in the time allowed. The test consists of 16 paragraphs which are to be read and responded to by an answer, or a direction followed. The tests are weighted, and the evaluation of each paragraph is given in the left margin. The score of each pupil is the sum of the values of the paragraphs answered correctly. An answer sheet is furnished with the test, and each question must be answered absolutely correctly in order to receive credit. There is no separate score for rate, but the score for comprehension is intended to include rate of work also.

Instructions for giving and scoring the tests and for finding the median, class record blanks, and an answer sheet are included with the tests. We have very complete standards for this test. It has been widely used in surveys so that there is an excellent basis of comparison with other school systems. The standard medians given on the score sheet were obtained from over 100,000 children.

Address: State Normal, Emporia, Kansas.

References: Kelley—The Kansas Silent Reading Test, Bureau of Tests and Measurements, Publication, New Series 4: 1915, pp. 37.

Kelley—The Kansas Silent Reading Tests, *Journal of Educational Psychology*, Volume 7, February, 1916, pp. 63-80.

Monroe—A Report on the Use of the Kansas Silent Reading Test with Over One Hundred Thousand Children. *Jr. Ed. Ps.* 9: December, 1917, pp. 600-608.

### \*THE STARCH SILENT READING TESTS, 1914

(University of Wisconsin)

This test consists of eight selections printed on separate sheets. Each test is intended for a different grade, No. 1 for the first grade, No. 2 for the second grade, etc. Directions for giving and scoring the tests are included. The pupils are told to read silently, as rapidly as they can, and at the same time to grasp as much as they can. They are also told that they will be asked to write down in their own words as much as they remember of what they read. They are told, furthermore, not to read anything over again but to read on continuously. The blanks are distributed face down, and at the signal "turn and start" they begin reading. The time limit for the test is exactly 30 seconds. The pupils draw a line around the last word read to indicate how far they have read. The pupils are then told to turn the blanks over and write down on the back all they remember of what was read. There is no time limit for reproducing the story, but the teacher should be careful

that they do not copy from each other. The speed of reading is determined by ascertaining the number of words read per second. To find the score for comprehension the written account is carefully read and all incorrect or irrelevant words, as well as repetitions, are crossed out. The remaining words are counted and the number is taken as the score for comprehension. The average number of words which have to be discarded by this method is about 7%, so that if only the class averages are desired the words in the reproduction can simply be counted and 7% deducted. Of course this method cannot be applied if the results of the individual pupils are desired. The author recommends that a second test be given, using the test sheet for the grade below, and that the average of the two results be taken as the final scores for both speed and comprehension. Standards are given on the direction sheet.

This test seems to be a good one, though the plan of counting the number of words in the reproduction of the pupil in order to obtain a score for comprehension has been questioned. Another possible disadvantage is that some of the selections used are familiar to some classes. The advantage is that there is a different selection to be read by each grade. The print of the selections for lower grades is larger than that for the upper grades, and the selections are easier.

Address: Dr. Daniel Starch, University of Wisconsin, Madison, Wisconsin.

References: Starch Educational Measurements, Macmillan and Company, New York City.

Starch, D.—The Measurement of Efficiency in Reading. Jr. Ed. Ps. 6: 1-24, January, 1915.

**\*THORNDIKE READING SCALE ALPHA (1914) AND ALPHA 2 (1915) FOR MEASURING THE UNDERSTANDING OF SENTENCES**  
(Teachers' College, Columbia University)

Since scale Alpha 2 is only an improvement of the earlier scale Alpha, only scale Alpha 2 will be described.

This scale is published in two parts, part one for grades 3 to 5, part two for grades 6 to 12. The two scales overlap to some extent. Part one consists of 4 sets of reading selections with questions added. Each set has a score value attached and the set is marked "passed" if the student succeeds in answering 80% of the questions correctly. Part two consists of 4 sets of paragraphs, beginning with set IV and extending to set VIII. These are more difficult than those for part one, and consequently the score values are higher. A score key containing the correct answers to the questions and a correction table for interpolating the scores and class record sheets containing space for the tabulation of the answer to each question of each paragraph are included. Directions for giving and scoring the tests and standard medians are given in a pamphlet, "Directions for Thorndike Reading Scale Alpha 2," published by Teachers' College, Columbia University, New York City.

Twenty-five minutes are allowed for the test. The test is an excellent one, though it is not, strictly speaking, a timed test, since 25 minutes is usually long enough to complete the work.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

References: Thorndike—An Improved Scale for Measuring Ability in Reading, Teachers' College Record, 16: November, 1915, pp. 31-53; and 17: January, 1916, pp. 40-67.

Thorndike—Reading as Reasoning, A Study of Mistakes in Paragraph Reading, Journal of Educational Psychology, 8: June, 1917, pp. 323-332.

Kelley, T. L.—Thorndike's Reading Scale. Alpha 2 Adapted to Individual Tests. Teachers' College Record 18: May, 1917, 253-260.

**THE MINNESOTA READING TEST: UNDERSTANDING OF SENTENCES, SCALE BETA I**

(Date not obtainable)

There are two scales in this series, the first for grades 3 to 5, the second for grades 6 to 9. The scale is a modification and extension of Thorndike's

Scale, Alpha 2. It is put up in a little more convenient form than the Thorndike Scale.

The test for grades 3 to 5 consists of 5 paragraphs to be read and questions to be answered on each paragraph. The respective scores of 10, 30, 40, 50 and 60 are assigned to the paragraphs. On the back of the folder is a preliminary test which contains three sentences and three questions under each sentence. The child is to read each sentence and then answer the three questions. After the preliminary test is given the directions for the test proper are read, and the children read the paragraphs and answer the questions in writing.

The score for the individual pupil is the "highest numbered line which the child does with one or no omission or error." The class score is the number of the line in which the percentage of error is 20. A table is included to aid in interpolating the scores. There is also a key or answer sheet for determining the answers. A folder of complete directions for giving and scoring the test is included with the test material.

The test for grades 6 to 9 is similar to the one just described. This test begins with value 40 and extends to value 70. Qualities 40, 50 and 60, which are given for the former test, are repeated here. On the first page of both of these tests is an individual score sheet. The scale is issued in two forms which are approximately equal in value, so that the test may be repeated by the same students. Record sheet number 2 should be ordered with the test for recording the results. This test has a high reliability co-efficient. It is not completely standardized, however. Tentative standards can be procured from the following address.

Address: University of Minnesota, Minneapolis, Minnesota.

Reference: Haggerty, M. E.—The Ability to Read: Its Measurement and Some Factors Conditioning It. Indiana University Studies 4: January, 1917, Bloomington.

#### **\*THE FORDYCE SCALE FOR MEASURING THE ACHIEVEMENTS IN READING, 1916**

(University of Nebraska)

This test consists of 2 selections, one for grades 3 to 5, and the other for grades 6 to 9. The test for the lower grades is called "Narcissus" and is taken from the Greek legend. The test for the upper grades is the "Spirit of Spring." Test number one, the story of Narcissus, contains 300 words, and test number two contains 512 words. One minute is allowed for giving the test, and the pupil is asked to make a mark around the word he is reading when time is called. For test number one the percentile grade for rate is found by dividing the number of words read in the given time by three, since there are 300 words in the selections. For test number two the percentile grade for rate is found by dividing the number of words written by five. The number of words can be counted easily by referring to the key given in the leaflet of instructions.

After the speed test is completed the children are to read the remainder of the selection so that they can answer the questions on it. The blanks containing the questions on the passages are then passed around for the purpose of testing the quality of reading. Ten minutes are allowed for answering the questions on test number one, and 15 minutes for test number two. Each one of these questions is evaluated, and the value of each question is given in the booklet of instructions. The total values equal 100. A score card or key is also provided in the booklet of instructions, which gives the correct answer for each question. The values for test number two, "The Spirit of Spring," have been revised recently. Sheets containing the values for this test, and also new standards, can be secured from the address below.

The test includes some practice exercises for the benefit of the students who are behind standard, especially in rate. These exercises consist of groups of words arranged in 4 columns. The first column contains 24 combinations of 2 words each, exercise II, 24 groups of 3 words each, exercise III, 24 groups of 4 words each, and exercise IV, a selection, "The House That Jack Built," printed in groups of from three to five words in a group. The practice is con-

ducted by having the pupil read and grasp groups of words as rapidly as possible. He begins with the simpler exercises and proceeds to the more difficult ones. The author finds that the slow readers are usually those who have to read in small units, and that the perceptual span increases with the ocular span, for "the mind passes more rapidly to meaning from phrases or sentences than from single words." The author asserts that through ten minutes' practice daily of similar exercises he was able to double his rate of reading within one year's time.

Address: Dean Charles Fordyce, University of Nebraska, Lincoln, Nebraska.

Reference: Fordyce—A Scale for Measuring the Achievements in Reading, same address.

**\*MONROE'S STANDARDIZED SILENT READING TEST, 1917**  
(University of Illinois)

This test is devised on the same principle as the Kansas Silent Reading Test, but is an improvement over this earlier test. The test is put up in exactly the same form. The directions are included on the first page of the folder and instructions are given which are to be read aloud by the children and teacher in concert. An illustrative example is also given on the first page and the children respond to this test for preliminary practice. There are three tests in the series, test 1 for grades 3, 4 and 5; test 2 for grades 6, 7 and 8; and test 3 for the high school.

Test 1 consists of 16 paragraphs which are to be read silently. One question is asked on each paragraph to which the child must respond, usually by adding a word in the blank space or by underlining some word given in a series. The response is always very short and definite. Each paragraph has in the left margin of the page a rate value attached and in the right margin of the page a comprehension value. Thus the pupils are scored for rate and comprehension separately. The score for rate is the sum of the rate values of the questions answered and the score for comprehension is the sum of the comprehension values of those paragraphs responded to correctly. An answer sheet is included on the back page of the record blank to aid in scoring the results. Standards are also given on the record blank, as well as instructions for finding the median and tabulating the results. The standards are revised from time to time so that the latest standards should be requested when ordering the tests. Five minutes are allowed for the tests. Directions for scoring the tests and finding the median and recording the results are given on the record sheet. Test 2 is similar except the questions are a little more difficult and there are only 14 paragraphs in this test. Twelve paragraphs are included in test 3.

This test is an improvement over the Kansas Silent Reading Test in two respects. In the first place the paragraphs are selected from readers and are very much less puzzling in their nature than those of the Kansas Test. They are more typical of the paragraphs which the pupil finds in his general reading. The responses too are simpler and more natural than those in the Kansas Test, so that this test seems to be less a test of general intelligence and more nearly a fair test of reading ability than the Kansas Test. In the second place there is a separate score for rate and for comprehension, while both of these factors are included in the score for comprehension in the Kansas Test. A disadvantage is that this test has not been so widely standardized as the Kansas Test and has not been so often used in the surveys, so that the means of comparison with achievements of other cities is somewhat more restricted. This test is employed by the State Department of Public Instruction of Colorado.

Address: Kansas State Normal School, Emporia, Kansas.

References: Monroe, W. S.—Monroe's Standardized Silent Reading Test. Jr. Ed. Ps. 9: 303-312, June, 1918.

Witham, E. C.—Scoring the Monroe Silent Reading Test. Jr. Ed. Ps. 1918: 9, 516-518.

**\*THE COURTIS STANDARD RESEARCH TESTS, SERIES R, SILENT  
READING TEST NO. 2, 1917**  
(Bureau of Research, Detroit)

This test is intended for grades 2-5 inclusive. The results of these tests when given to the upper grades have proved to be unreliable and for that reason Curtis suggests that in grades 6-8 the Monroe Silent Reading Test be substituted for this one. This test consists of a story of two pages in length containing 567 words. This part of the test is used as a speed test and the pupils are instructed to make a mark around a word which they are reading at the end of 30-second intervals which are called out by the teacher during the test. The speed test lasts exactly three minutes. This constitutes part 1 of the test.

Part 2 of the test consists of the same selection divided into 14 paragraphs. There are 5 questions asked under each paragraph, all of which can be answered by "yes" or "no." The pupils are asked to read these selections one at a time and then to answer the 5 questions by the words "yes" or "no." The pupils are allowed to reread these paragraphs in order to get the correct answers. They are also warned not to guess at the answers. The pupils are asked to draw a circle around the number of the question they are answering at the end of each minute when the signal is given by the teacher. The rate score is the number of words read per minute in the speed test. The score for the questions is the number of questions answered in 5 minutes. In case a pupil finishes the test before five minutes the number of questions answered in 5 minutes is computed for the average number answered per minute.

In addition to this another score called the index of comprehension must be found. This is done by subtracting the wrong answers from the right answers algebraically and then dividing the difference by the number of right answers. A table is also given for finding the index of comprehension. Standards are given on the record sheet. A graph sheet is also included for drawing a graph of the class record. Also an individual record card is provided for each pupil with answers printed on the back. This card provides separate space for recording all of the results in detail. Also a very convenient class record sheet is provided as an aid to tabulating the results. This sheet also contains standards for the test. Three folders of instructions are also included with the test. Folder A contains general instructions to examiners in all subjects; folder B-R contains detailed instructions for giving and scoring the tests; folder D-R contains instructions for completing the scoring, for making records, and interpreting the results. The instructions are very complete. The test itself is put up in a very convenient folder.

Some of the possible disadvantages of the test are that the pupils merely reply by the words "yes" or "no" and consequently there is a possibility of guessing. The index of comprehension, however, offers opportunity to check up on this. Also only questions are asked on the contents of the page and no opportunity is given for reproducing the selection.

Address: S. A. Curtis, 82 Eliot Street, Detroit, Michigan.

Reference: Curtis—The Problems of Measuring Ability in Silent Reading. American School Board Journal 54: May, 1917, pp. 17-18, and p. 81.

**\*THE HOLMES READING TEST (Date Uncertain)**  
(Harvard University)

There are two forms of this test, each consisting of a reading selection, the first selection, "The Rich Man," containing 753 words, the second selection, "The Great King," containing 786 words. Twenty seconds are allowed for reading as much of the material as possible. When the time is called to stop, the pupils are to underline the last word read. The pupils are told to finish reading the story, however, so that they may know the contents of it. The children then reproduce the story as accurately as possible. Then a list of standardized questions is copied on the blackboard for the children to answer.

The scoring for rate is done by computing the number of words read per minute. A score sheet is provided with the principal ideas of the test underlined. The score for comprehension is found by counting the number of ideas indicated by the key which are contained in the student's reproduction of the story. The number of ideas correctly reproduced is multiplied by  $2\frac{6}{7}$  in order to determine the final score for the reproductions. The answers to the questions are weighted and the score values indicated opposite the questions. There is also an answer key for these questions which indicates percentages to be given for each part of the answer. Another score sheet is provided which has the words in the selections numbered so as to obviate the necessity of counting the words to determine the score for rate. Complete directions for giving and scoring the test are added.

The method of scoring this test for comprehension is extremely good. The test was used in the survey of the schools of Brookline, Massachusetts, and these results may be used for comparison.

Address: Harvard University, Cambridge, Massachusetts.

Reference: Survey of the Brookline Schools, Brookline, Massachusetts.

**THE SACKETT READING TEST, 1919**  
(University of Texas)

This test consists of a story of 110 words. The directions instruct the children to read the story through till they are sure they know it well. When they have finished reading it they write the story in their own words in the space provided below. On the back of the sheet are 15 questions to be answered on the context. Some of the questions are of the nature of performance tests. Standards are available from the third grade to the university Sophomore Class.

Address: L. W. Sackett, University of Texas, Austin.

**\*THE HAGGERTY ACHIEVEMENT EXAMINATION IN READING,**  
**SIGMA 1, FOR GRADES 1-3, 1920**  
(University of Minnesota)

Test 2 of this series, which is given first, consists of 20 questions which are followed by the words "no" and "yes." The response is made by underlining the correct answer. The questions are increasingly long and difficult. The first, for example, is "Can you eat?" The last is "Do convicts sometimes escape from prison?"

Test 1 consists of reading sentences or paragraphs, and responses to be made or questions to be answered. The simplest ones are printed in very large type and are of the nature of performance tests, for example: "Put a tail on this pig." A sketch of the pig without a tail appears on the other side of the page, and the child is to draw the tail. Test 1 contains 25 questions or responses. Questions 1-8 are in 16 point type, 9-21 in 14 point type, and 22-25 in 12 point type. The test appears in booklet form which is well illustrated by pictures. These serve both as incitements to interest and as means of making responses. The reading paragraphs become increasingly long and difficult. The questions are usually very simple, so as to make the test really a test of reading rather than a test of intelligence. This test was used in the recent Virginia School Survey. Directions for giving and scoring the test are included in a separate manual. A score card, record blanks, and standards accompany the tests.

Address: M. E. Haggerty, University of Minnesota, Minneapolis, Minnesota.

References: Haggerty, M. E.—Manual of Directions, World Book Co., Yonkers, New York, 1920.

Virginia School Survey, Richmond, Virginia.

**THE ADAMS SILENT READING TESTS, 1920**  
(State Normal School, Plymouth, New Hampshire)

This test consists of 8 selections, one for each grade. The first is printed in large, bold type, the second, third and fourth in 12 point type, and the others in smaller type. The reading material is chosen with a view to the

pupil's pedagogical needs, the developmental stage of the child, the child's interests and correlation with school activities.

The speed test is given by allowing the children to read for 30 seconds and then having them draw a line around the last word read, and is expressed as the number of words read per minute. The comprehension score is determined by the answers to 10 questions on the back of the test sheet. To secure the comprehension score each correct answer is marked "1." and the results are multiplied by the grade of the test so that the highest possible score for comprehension in the first grade is 10 and for the eighth grade 80. The pupils are also allowed to report the story and the teacher may check up by the questions. The questions may be answered orally in the first three grades.

Score cards and a direction sheet for giving and scoring the tests are included. The chief advantage of the test is its simplicity and the adaptation of the reading material to the interests of the child.

Address: Edward E. Babb and Company, 93 Federal Street, Boston, Mass.

## 2. Vocabulary Tests

### \*THE THORNDIKE READING SCALES A, A-2 AND B: WORD KNOWLEDGE OR VISUAL VOCABULARY, 1914-1915

(Teachers' College, Columbia University)

The latter two are modifications of Scale A, which was published in 1914. Scale A contains fewer words than the later editions. Scale A-2, x series, will serve as an example. Other series are published as equivalent tests. Scale A-2 consists of 13 lists of words arranged in so many lines and in increasing order of difficulty, each of which has the value indicated in the margin. Above these words are eight-sets of directions. The first set of directions is to write the letter "F" over every word on the page that means a flower. The second is to write the letter "A" over every word on the page that means an animal. There are six other sets of directions of a similar nature. The pupil's score is the score value of the most difficult line of which the pupil answers 8 of the 10 words in the line correctly.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

References: Thorndike—Measurement of Achievement in Reading: Word Knowledge; Teachers' College Record 17: November, 1916, pp. 430-454.

Thorndike—Measurement of Ability in Reading Preliminary Scales and Tests. Teachers' College Record 15: September, 1914.

Childs, H. G.—A Half-Year's Progress in the Achievement of One School System as Measured by the Thorndike Visual Vocabulary Test. National Society for the Study of Ed. 15th Yearbook, 1916, Part I, 79-83.

### THE MINNESOTA READING TEST: VISUAL VOCABULARY SCALE R-2

Form 4 for Grades 3 and 4

Form 5 for Grades 5, 6, 7 and 8

(Date Unknown)

(N. E. Haggerty, University of Minnesota)

This scale is a modification of the Thorndike Scale just described. For Form 4 there are 4 lines, each containing 5 words. There are 12 sets of directions at the top. An illustrative preliminary test is given on the back of the sheet. Form 5 is arranged in the same manner but contains 6 lines of 5 words each and 15 sets of directions. These tests differ from the Thorndike Test chiefly in the use of fewer words, a different selection of words, and a greater number of sets of directions, requiring a greater number of responses.

Address: Bureau of Co-operative Research, University of Minnesota, Minneapolis, Minnesota.

Reference: Haggerty, M. E.—Scales for Reading Vocabulary of Primary Children. *El. Sch. Jr.* 17: 106-115, October, 1916.

**\*THE STARCH ENGLISH VOCABULARY TEST, 1916**  
(University of Wisconsin)

This test consists of two lists of 100 words each. The words are chosen from the dictionary by the method of random sampling, after the technical words are eliminated. The child is to check off the words whose meaning he is sure of and can use correctly, and write the meaning after the words with which he is familiar but of whose meaning he is not quite sure. The children are also told that they will be asked by the examiner to write the meaning after any of the difficult words that they may have checked. This is to insure the examiner that the child knows the meaning of the words checked off. Directions and standards accompany the test. The words of the test are not those comprising the vocabulary of children. The test is not a measurement of words needed by the child, but it is of value since the score indicates the percentage of non-technical words of the English language that the child knows.

Address: Dr. Daniel Starch, University of Wisconsin, Madison, Wisconsin.

References: Starch—The Measurement of Efficiency in Reading, *Journal of Educational Psychology* 6: January, 1915, pp. 1-24.

Starch—Educational Measurements, Second Edition, Macmillan and Company, 1920, New York City.

**THE SOUTHINGTON-PLYMOUTH ENGLISH VOCABULARY SCALE, 1919**

This test consists of 50 rather common words arranged in the order of increasing difficulty, and numbered. On the other side of the page are definitions for these words. The pupil must place before the definition the number of the word which is defined.

Address: Supt. Witham, Southington, Conn.

### 3. Oral Reading Tests

**\*THE GRAY STANDARDIZED READING PARAGRAPHS, 1914**  
(William S. Gray, Chicago University)

This test consists of 12 reading paragraphs of about the same length. The first ones are very simple and the others are increasingly difficult. The first three selections are printed in large type suited to beginning pupils, and the remainder of the paragraphs are in smaller but sufficiently large and clear type. Each pupil is tested separately.

The time is taken when the pupil begins reading each paragraph and again when the pupil finishes reading the paragraph. The errors in pronunciation and of omissions, substitutions, and repetitions are marked in the test, and the time required for reading the paragraph is recorded on the margin of the test sheet. Each pupil is allowed to continue reading until he makes 7 errors in each of 2 paragraphs. The pupil's score varies inversely with the time required for reading the paragraphs and the number of errors made.

Complete directions for giving the test and scoring and tabulating the results are given on the back of the score sheet for reading.

This test is probably the best test of oral reading for all the grades. It was used in the survey of the Cleveland schools and in several other surveys, including the survey of the schools of Sterling, Colorado, so that standards and means of comparison with other school systems are available.

Address: William S. Gray, School of Education, University of Chicago, Chicago, Illinois.

Reference: Gray—Methods of Testing Reading, *Elementary School Journal* 16: January, 1916, pp. 231-246, and February, 1916, pp. 281-298.

**\*THE JONES SCALE FOR TEACHING AND TESTING ELEMENTARY READING, 1915**

This is a test of oral reading for the first three grades. It is made up of all sight words and of phonograms recurring ten times or more in ten



widely used primers. There are really two tests, one for sight words of which there are 192, and one for the phonetic test containing 118 words. The words are weighted according to the frequency of their occurrence in the primers. The score for a pupil is the percentage which the sum of the values attached to the words correctly pronounced is of the sum of the values of all the words. The total value of all the phonograms is 15,657; that of the sight test is 17,565. To find the score for a class of ten pupils selected at random from a larger class, the sum of the total values of the words missed by the entire ten pupils is subtracted from the above number multiplied by ten. The difference is divided by 156,570 for the phonograms, or 175,650 for the sight words, so that the resulting score is expressed in percentage. Standards are given with the test materials. Complete directions for giving and scoring the test and teachers' check cards with the weighted values of the words and space for the individual records of the pupils, also pupils cards for reading the words accompany the tests. There is a separate sheet containing standards from 20 schools. A monograph by the author entitled, "Standard in Mechanics by Elementary Reading," goes with the test.

This test is a very good one for vocabularies of young children, although it takes no consideration of speed reading and errors of insertion, omission, repetition and such mistakes. It is intended only as a test of recognition and vocabulary and pronunciation of unrelated words. Another objection which has been advanced with regard to these tests concerns the method by which the words were evaluated. The fact that "the" occurs a great many more times in the primers than the word "pieces" may not necessarily entitle it to a proportionately high value. The test is, however, a great aid to the teacher.

Address: R. G. Jones, 1453 Marlowe Avenue, Lakewood, Ohio.

References: Jones—Scale for Teaching and Testing Elementary Reading, Rockford, Illinois.

Jones—Standard in Mechanics of Elementary Reading, Lakewood, Ohio.

#### **THE MINNESOTA VISUAL VOCABULARY TEST FOR GRADES 1 AND 2** (Date unknown. Haggerty, University of Minneapolis)

This test is a simplification of the above test by Jones. The test consists of two pupil's cards, form 1 containing 30 sight words and form 2 containing 25 phonetic words. The words are arranged in order of increasing difficulty, 5 words in a group or line.

"The child's score is the highest line in which he makes not to exceed 1 error or omission. The class score is the number of the line in which the per cent of error is nearest 20."

Two class record sheets with space for recording the results of 25 pupils are supplied, one for the sight test and one for the phonetic test. A sheet of directions for giving and scoring the test is also provided.

Address: Bureau of Co-operative Research, Minneapolis, Minnesota.

Reference: Haggerty—Scales for Reading Vocabulary for Primary Children, *Elementary School Journal* 17: October, 1916, pp. 106-115.

#### **THE PRICE PRACTICAL ORAL READING TEST FOR GRADES 2 TO 8** **OCTOBER, 1916** (Superintendent, Enid, Oklahoma)

The same general plan is followed in the test for each grade. The test for each grade consists of two selections to be read, test number 1 to be given early in the school year and test number 2 near the close of the school year. Each test consists of an interesting story or selection. The number of words in each line is indicated in the right margin. The children are tested individually for one minute each and the mistakes are recorded for: 1, words miscalled; 2, words put in; 3, words left out; 4, transposed words. Two persons are required to give the tests, one to give the directions and to keep time, and the other to record the number and nature of the mistakes and count the number of words read. The score for each pupil is found "by multi-

plying the per cent of words read correctly in the total number of words read, by the number of words read correctly. The class score is the approximate median of the individual scores.

Directions for giving the test are printed on the first page of the folder, and directions for scoring the test, as well as standards based on the records of about 200 children of each grade, are given on the back of the score sheet. The score sheet contains columns for age, pupil's name, words miscalled, words put in, words left out, transposed words, number of words read, number of mistakes, and score. The standards are tentative, but are to be revised from time to time. The tests have the advantage of providing different selections for every grade so that the reading material is suitable for the grade intended. The principle of the test seems to be a good one.

Address: E. D. Price, Enid, Oklahoma.

#### GENERAL BIBLIOGRAPHY ON READING TESTS

- Anderson, H. W.—Measuring Primary Reading in the Dubuque Schools. The Harris-Anderson Test. Dubuque, Iowa, 1916, 23 pp.
- Bobbitt, F.—Reading in the Elementary Schools of Indianapolis, V and VI: the Reading Materials. *El. Sch. Jr.* 19: 665-688, 741-761.
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- Brown, H. A.—The Significance of the Measurement of Ability to Read. *Education* 36: May, 1916, 589-610.
- Gray, W. S.—Methods of Testing Reading. *El. Sch. Jr.* 16: January-February, 1916, 231-246, 281-298.
- Gray, W. S.—The Use of Tests in Improving Instruction. *El. Sch. Jr.* 19: 1918, 121-42.
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## VIII—GEOGRAPHY

### GEOGRAPHY TESTS, 1915

The difficulties of testing geography are due chiefly to unformulated aims, purposes, and value of geography instruction, and to lack of analysis of the subject. Possibly most teachers teach the mere facts of geography with the stress on definitions and formal knowledge. Others emphasize the location of important centers, still others, products from different regions, and again others, commercial geography, and still others, physical geography. Other teachers emphasize national geography; some, the influence of climate and geographical relations upon peoples; some, political geography, or various other elements.

It is difficult to test geographical appreciation or geographical thinking, so that most of the standard tests now available must confine themselves largely to an exploration of the facts in the common knowledge of the pupils.

#### THOMPSON'S MINIMUM ESSENTIALS IN GEOGRAPHY, 1908

These consist of two sets of tests, one an oral drill on answering questions of geography and the other the written test. These tests were intended originally chiefly as aids in teaching rather than as standardized tests, but have been found useful also for the latter purpose.

Address: Ginn and Company, New York.

#### THE BOSTON GEOGRAPHY TESTS, JANUARY, 1915

These tests consist of two sheets, one for the geography of the United States and one for the geography of Europe.

The map of the United States occupies the upper part of the first sheet. Below it are blanks for the name, age, sex, school and grade of the pupil. Then follow 10 questions on the geography of the United States. Cities mentioned are to be located on the map. Products for which the cities are noted are to be given. Localities which produce certain staple products and reasons for growth of certain large cities are to be given. Several questions on climatology, and one question on the commerce of San Francisco and New York compared are given.

The test on the geography of Europe consists of a map of Europe and seven questions on European geography. These questions are:

1. Locate on the map 2 seaports of European Russia.
2. Why are the seaports of Russia not so important as the seaports of England?
3. Of what value to the countries of Europe are their colonies in other parts of the world?
4. Why does England import large quantities of wheat?
5. Write on the map the names of the leading manufacturing countries of Europe.
6. Why has Germany become very important as a manufacturing country?
7. Why is the climate of Italy different from that of Germany?

These questions teach many of the important aspects of European geography. The disadvantage of these tests lies in part in their brevity. They were not printed for distribution. They were used, however, in the survey of the Boston schools, and the scores from this survey are available for comparison.

Address: Department of Educational Investigation and Measurement, Boston, Massachusetts.

Reference: Geography: Bulletin No. 5, School Document No. 14, 1915, Boston, Massachusetts, Dept. of Ed. Investigation and Mes.

#### **THE BUCKINGHAM GEOGRAPHY TESTS, JANUARY, 1916** (University of Illinois)

This test was used in the survey of the Gary and Prevocational Schools of New York City. There are 20 questions in the test and these have been evaluated experimentally, and standardized. The tests are not printed for distribution but are given in full in the following reference.

Address: H. R. Buckingham, University of Illinois, Urbana, Illinois.

Reference: Buckingham—A Survey of the Gary and Prevocational Schools of New York City.

#### **THE STARCH GEOGRAPHY TEST, SERIES A, 1917** (University of Wisconsin)

This is a test containing 78 questions and statements arranged in the form of mutilated sentences. The blanks are to be filled in with the correct responses. There are several blanks on each question, and the score consists of the number of blanks correctly filled in. Directions for giving and scoring the test are included in the folder. Standards are given for grades 5 to 8, and were obtained from approximately 1,300 pupils. A score key should be procured to aid in scoring the test.

This test is very complete, but it has the fault of emphasizing disconnected facts and formal knowledge, much of which is less important than geographical thinking, reasoning and judgment. The test is not a timed test.

Address: Dr. Daniel Starch, University of Wisconsin.

#### **\*THE HAHN-LACKEY GEOGRAPHY SCALE, 1917, SECOND EDITION, 1919** (State Normal School, Wayne, Nebraska)

This geography scale is arranged on the same principle as the Ayres Spelling Scale. The scale is based upon 283,100 answers by 1,696 pupils in 12 schools. The scale consists of 216 questions arranged in 25 columns lettered from A to Y. The questions in each column are of an approximately equal degree of difficulty. In no case does the absolute value of an exercise differ from the approximate value by more than 00.4%, and this only in a very few cases. The scale is so arranged that from 15 to 20 tests can be given to each grade without the repetition of an exercise.

The percentage of correct answers to be expected from each school grade for the questions in each column is indicated at the top of the scale, so that these percentages serve the purpose of standards, as is the case in the Ayres Spelling Scale. To give the test, several of the questions, usually ten,

are written on the board as in an ordinary examination, and the pupils are told to answer these in writing. The scale is intended for grades 4 to 8 inclusive.

This is one of the best geography scales. A disadvantage, however, is that no map work is included, and many of the questions are somewhat formal in character.

Address: H. H. Hahn and E. E. Lackey, Wayne State Normal, Wayne, Nebraska.

References: Hahn and Lackey—Monograph Describing the Geography Scale, Wayne State Normal, Wayne, Nebraska.

Lackey, E. E.—Measuring the Ability of Children in Geography, *Journal of Geography* 16: 184-188, January, 1918.

Lackey, E. E.—A Scale for Measuring the Ability of Children in Geography, *Journal of Educational Psychology* 9: 443-451, October, 1918.

Matthewson, C. A.—Some Results with the Hahn-Lackey Scale in Geography, *Journal of Educational Psychology* 9: 581-587, December, 1918.

### THE COURTIS SUPERVISORY TEST IN GEOGRAPHY, TEST A FORM A, 1918

(Bureau of Research, Detroit)

This is intended as a test of the knowledge in only one small field of geographical study, the location of states and of prominent cities. This test consists of a map of the United States, on which each of the 48 states is numbered. Below the map is a list of the states and after the name of each state is to be placed its number on the map. The second part of the test, the location of cities, consists of locating by number states in which 30 prominent cities are located. The time allowed for the first test is four minutes, that for the location of cities, two minutes. The scores are the number of states and the number of cities correctly located. Answer cards, individual record cards, class record cards, and a large class record sheet arranged for filing are included. Standards may be obtained from the following address.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

Reference: Courtis, S. A.—Measuring the Effects of Supervision in Geography, *School and Soc.* 10: 61-70, July 19, 1919.

### \*WITHAM'S STANDARD GEOGRAPHY TESTS, 1918

(Superintendent, Southington, Connecticut)

There are several of these tests, one on the United States (1918), one on South America (1919), and one on the world. The test on the world is to be given to fifth grade pupils. The test on the United States is intended for sixth grade pupils, and that of South America for the more advanced pupils. The test on the United States will be described as a typical example. Following are the questions:

- I. Draw on the space below an outline of the United States.
- II. On the map just drawn, write the names of what bounds the United States on all sides.
- III. Draw an outline on the above map of the state in which you live. Locate the capital of your state by means of a small circle. Write its name.  
(On the second page of the leaflet is a printed outline map of the United States.)
- IV. On the printed outline map on the opposite page, neatly letter the names of the following features. You may use abbreviations. (Then follow the names of ten important rivers.)
- V. Locate the following mountains. (The names of five mountain ranges follow.)
- VI. Locate the following five lakes and gulfs.
- VII. Locate on the outline map the list of fifteen cities.
- VIII. Locate on the map a list of five states. On the last page of the folder are ten maps showing the industrial regions of the United States. The names of these industrial regions are to be found at the top of the page.

IX. Identify on the map each of the ten industrial regions.

A folder of directions for giving and scoring the tests and recording the results, and also directions for drawing a graph of the results are included. On the other side is a class record sheet, and a blank graph for the class scores on all of the questions. The tests on the world and on South America follow the same plan. Standards are available for all of these tests.

This test has been criticised because of the predominance of questions on locations of places, and the emphasis on facts. Most of these elements should, no doubt, be known to one familiar with geography, since they are all rather important questions. The last question in the test described is important because of the knowledge of commercial and industrial geography involved. Many other phases of geography, however, are not included, and so the test is not entirely complete.

Address: Ernest C. Witham, Southington, Connecticut.

References: Witham, E. C.—A Minimum Standard for Measuring Geography. *Amer. Sch. Bd. Jr.* 50: 13-14, January, 1915.

Witham—Standard Geography Test—the Word. For Fifth Grades. *Jr. Ed. Ps.* 9: 432-442, October, 1918.

**THE BUCKINGHAM GEOGRAPHY TEST FOR GRADES 7 AND 8, 1920**  
(University of Illinois)

This test is in preparation at the present time. It may be secured from the Bureau of Educational Research, University of Illinois, Urbana, Illinois.

**BIBLIOGRAPHY ON TESTS IN GEOGRAPHY**

Bagley, W. C.—The Determination of Minimum Essentials in Elementary Geography and History. *Fourteenth Yearbook National Society*, 1915, Pt. 1, 131-146.

Branom, M. E., and Reavis, W. C.—The Determination and Measurement of the Minimal Essentials of Elementary School Geography. *Seventeenth Yearbook National Society*, Pt. 1, 27-39.

Taylor, E. G. R.—Children's Mistakes in Geography. *Jr. Ed.* 50: 1918, 322-323.

Whitbeck, R. H.—A Test in General Geography. *Jr. Geogr.* 16: December, 1917, 149-152.

**IX—HISTORY**

**HISTORY TESTS, 1916**

The difficulties in devising history tests are similar to those encountered in the geography tests, as the subject is one which does not easily lend itself to analysis. Its content is not definite as that of arithmetic or spelling, consequently there is considerable disagreement in the aims and purposes of teaching history. Some would like to have the emphasis placed on names, dates, facts and details; some upon political questions; others upon social and cultural history; and still others upon the philosophy of history, demanding a study of causes and effects of great movements, rather than detailed information; and others upon the study of original sources. For these reasons, the history and geography tests have been developed only recently.

**BUCKINGHAM TEST FOR HISTORY, JANUARY, 1916**  
(University of Illinois)

These tests were constructed for use in the survey of the Gary and Pre-vocational schools of New York City. The values of the questions were determined experimentally. This test is not printed for distribution, but is described in the reference below.

Since then, the author has made a study of the ability to use historical facts. See references below.

Address: B. R. Buckingham, University of Illinois, Urbana, Illinois.

References: Buckingham—"A Survey of the Gary and Pre-vocational Schools of New York City."

Buckingham—"Correlation between Ability to Think and Ability to Remember." *School and Society* 5: April 14, 1917, pp. 443-448.

### THE BELL AND McCOLLUM TEST, 1917

(Arranged by L. W. Sackett, the University of Texas)

This test is arranged in a very convenient form in a little booklet. Directions for giving and scoring the test and standards for different types of schools are given on the covers of the folder. The tests included are as follows:

- I. Give the reason for the historical importance of each of the following dates in United States History. (Then follows a column of 10 dates.)
- II. Indicate for what each of the following men was celebrated. (A series of 10 names is given.)
- III. Mention the name of the man prominently connected with each of the following historical events. (10 events are given.)
- IV. Define in short sentences each of the following historical terms. (10 terms follow.)
- V. Make a list of all the political parties that have arisen in the United States since the Revolution, and state the principle advocated by each. (Value 431.)
- VI. Indicate the great divisions or epochs of United States History. (Value 415.)
- VII. On the accompanying outline map of the United States draw the land boundaries of the United States at the close of the Revolution, and indicate by drawing boundaries and naming what have been the different acquisitions of territory since that date. (Value 325.)

The score of each part of questions I to IV is given in the margin. The time allowance for the different tests is as follows:

Test I.....	4 minutes
Test II.....	5 minutes
Test III.....	3 minutes
Test IV.....	7 minutes
Test V.....	5 minutes
Test VI.....	5 minutes

Repeated trials have shown this to be ample time.

Following the usual blanks for name, age, grade, etc., is a space for a personal report on the length of time spent in studying United State history, the time elapsed since the study of that subject, and an expression of the order of preference for English, geography, physiology, history and arithmetic while in school.

Address: L. W. Sackett, the University of Texas, Austin, Texas.

Reference: Bell and McCollum—A Study of the Attainments of Pupils in United States History. Jr. Ed. Ps. 8: May, 1917, 257-274.

### THE STARCH AMERICAN HISTORY TEST, SERIES A, SPRING OF 1917 (University of Wisconsin)

This test is devised on exactly the same plan as the Starch Geography Test, that is, upon the principle of mutilated sentences. There are 69 questions in all and most of these contain several blanks to be filled in. The deficiencies of the test pertain chiefly to the nature of questions asked. Many details and isolated facts are called for to the neglect of thought questions, historical reasoning and judgment, and appreciation of the comparative importance of the events. Of course many of the questions are of great importance, however. Standards based on the work of 2,000 pupils are given for grades 6, 7, 8 and high school. The scoring is done by counting the number of blanks correctly filled in.

Address: Dr. Daniel Starch, University of Wisconsin, Madison, Wisconsin.

Reference: Starch, D., and Elliott, E. C.—Reliability of Grading Work in History. *Sch. Rev.* 21: 676-681, December, 1913.

### **\*THE HARLAN TEST OF INFORMATION IN AMERICAN HISTORY**

(C. L. Harlan, Lewiston State Normal School, Lewiston, Idaho)

This test is arranged in 10 exercises, each containing several sub-questions. The test includes the following elements of historical information: names of important men and their connection with great events, historical terms and examples of each, the connection of important events with names of places, thought questions for the practical application of civics, the selection from a list of names of men prominent in certain periods of American history, the dates of important events, events associated with important dates, examples illustrating the truth of four general statements concerning the history of our country, giving the significance of four topics in the history of the United States, and citing important immediate historical results of a list of five causes.

Accompanying the test is a folder of complete directions for using and scoring the test and standards based upon the answers of over 2,000 pupils. These tentative standards for the 7th and 8th grades are for the "end-of-the-year tests." The standards are 56 for the 7th grade and 86 for the 8th grade. A score key is furnished, giving the answer to each question and the value of each element of each exercise. The sum of the values of the questions correctly answered is the pupil's score. The class score is the approximate median as determined by the method described on the accompanying record sheet.

This test has the advantage of including some important elements in history. Some of the questions are purely thought questions and others test the student's knowledge of causes and effects.

Address: Bureau of Co-operative Research, University of Minnesota, Minneapolis, Minnesota.

### **RAYNOR AMERICAN HISTORY TEST, 1919**

(W. H. Raynor)

This test is based upon Bagley's investigation of elementary histories. In plan it is similar to the American History Test by Starch.

Address: Bureau of Educational Research, University of Illinois, Urbana, Illinois.

Reference: Rugg, E. N.—Character and Value of Standardized Tests in History. *School Review*, December, 1919, 757-771.

### **\*THE VAN WAGENEN AMERICAN HISTORY SCALES A AND B, 1919-20**

(University of Minnesota)

This is by far the most extensive and thorough history test yet devised. Its derivation was the subject of a dissertation for the Doctor's Degree. Scale B is an equivalent test for Scale A in case the test is repeated by the same pupils. The series consists of three different scales: an information scale, a thought scale, and a character judgment scale. In addition to these, there is a character judgment scale L which is more extensive and more difficult than scales A and B. The information scale consists of 34 questions, most of these with subheads. The questions are arranged in the order of increasing difficulty. Question No. 17 on scale A is:

"What group of Indian tribes lived in the western part of New York?"

Question No. 17 on scale B is:

"Name two American generals who fought in the Revolutionary War.

"Name one more American general who fought in the Revolutionary War."

The thought scale consists of 22 questions, including many subheads, arranged in the order of increasing difficulty. A typical example of these questions is No. 11, scale A, which follows:

"Previous to the Civil War a large part of the Southern cotton crop was exported to England:

"(a) What was evidently one of the chief occupations of England?

"(b) What effect did the blockade of the Southern ports by the North during the Civil War have upon this occupation?"



No. 11, scale B, is the following question:

"At the beginning of the 19th century voting and office holding in the United States were for the most part restricted to property holders. During the next thirty years, with the growth of manufacturing, the people who worked for wages but owned little or no property became a larger part of the population. These people wanted shorter hours of work and better educational opportunities for their children.

"(a) In order to get these things what would you expect the laboring people to demand?"

The character judging scale consists of 15 questions. Question No. 7 from scale A is:

"In 1724 the Massachusetts Colony determined to put a stop to the Indian ravages. One of their armies of about eighty men under Moulton cautiously advanced through a forest to the open village of Norridgewock. Not an Indian was stirring, till at length a warrior came out from one of the huts, saw the English, gave a startled war-whoop, and ran back for his gun. Then all was dismay and confusion. Squaws and children ran screaming for the river, while the warriors, fifty or sixty in number, came to meet the enemy. Moulton ordered his men to reserve their fire until the Indians had emptied their guns. The savages fired wildly and did little or no harm. The English, still keeping their ranks, returned a volley with deadly effect. The Indians gave one more fire, and then ran for the river. Some tried to wade to the farther side, others swam across, while many jumped into their canoes, but could not use them as they had left the paddles in their huts. Moulton and his men followed close, shooting the fugitives in the water or as they climbed the farther bank.

"(a) Draw a line under the three of the following words which you think best describe the action of the English Colonial soldiers:

frightened	resolute	excited	terrified	careless
deliberate	wavering	timid	cowardly	cool

"(b) Draw a line under the three of the following words which you think best describe the action of the Indian warriors:

treacherous	brave	crafty	excited	cool
terrified	courageous	resolute	bold	irresolute"

Question No. 8, scale B, is:

"The first newspaper published in New York City, the New York Gazette, was the organ of the governor and the aristocratic or court party. Nine years later, in 1734, the Weekly Journal, edited by Zenger, appeared and was from the start the organ of the popular party. At the time the governorship of the colony was being used to pension off any court favorite otherwise unprovided for, without reference to the result of his appointment upon the colony. Zenger began publishing a continuous succession of attacks on the crown officials, the governing class, and finally upon the governor, Crosby, himself.

"Zenger was arrested and thrown into jail on the charge of libel. As the chief justice at the time belonged to the popular party, he was turned out of office and replaced by one of the stoutest upholders of the crown. Even Zenger's lawyers were disbarred from the court, so that he had to be defended by one imported from Philadelphia. The defense was that the statements asserted to be libelous were true. The attorney-general for the crown took the ground that if they were true, the libel was only so much the greater. The judges instructed the jury that this was the law, but the jury acquitted Zenger. The acquittal was hailed with clamorous joy by the mass of the population, and gave an immense impetus to the growth of the spirit of independence.

"(a) Draw a line under the three of the following words which you think best describe the action of Zenger in thus attacking the court party:

spiteful	petty	independent	ignoble	daring
reckless	wavering	foolhardy	patriotic	timid

“(b) Draw a line under the three of the following words which you think best describe the action of the governing class in thus prosecuting Zenger:

brave                    patriotic                    unjust                    courageous                    prudent  
contemptible                    just                    judicious                    despicable                    careless

“(c) Draw a line under the three of the following words which you think best describe the action of the jury in acquitting Zenger:

unfair                    just                    timid                    traitorous                    free  
despicable                    submissive                    cautious                    independent                    ignoble”

Character judging scale L contains 10 long questions, including subheads.

A manual by the author gives complete information for giving and scoring the test and standards.

These scales seem to be by far the most promising of the history tests. Their greatest drawback seems to be their expense in time and money, but the advantage gained will probably far more than offset this factor.

Address: Bureau of Publications, Teachers' College, Columbia University, New York.

Van Wagenen, M. J.—Historical Information and Judgment in Pupils in the Elementary School. Bureau of Publications, Teachers' College, Columbia University, New York.

#### THE GOODMAN AND SACKETT UNITED STATES HISTORY TEST, 1920 (University of Texas)

This series contains eight tests with subheads. These tests are: dates-events, events-dates, names-events, events-names, result-events, causes-events, the selection from a list of events, those occurring between certain dates, and the writing of a paragraph of about one hundred words on one of a list of four topics.

The test is as yet incomplete. Directions for giving and scoring the test and standards are available.

Address: Goodman, H. H., and Sackett, L. W.—University of Texas, Austin, Texas.

#### THE DAVIS TESTS IN UNITED STATES HISTORY—COLONIAL PERIOD (University of Pittsburgh)

This test, based upon the results of Bagley's study of elementary histories, is still in preparation.

Address: S. B. Davis, University of Pittsburgh, Pittsburgh, Pennsylvania.

#### THE HAHN HISTORY SCALE FOR GRADES 7 AND 8 (State Normal, Wayne, Nebraska)

This scale is still in preparation.

Address: H. H. Hahn, Wayne State Normal School, Wayne, Nebraska.

#### THE BUCKINGHAM HISTORY TEST FOR GRADES 7 AND 8 (University of Illinois)

This test is in press at the present time.

Address: B. R. Buckingham, Bureau of Educational Research, University of Illinois, Urbana, Illinois.

#### GENERAL BIBLIOGRAPHY ON HISTORY TESTS

Foster, H. G.—Adequate Tests in History. *Hist. Teachers' Mag.* 5: April, 1914, 116-123.

Morehouse, F. M.—Testing Results in History Teaching. *Hist. Tch. Mag.* 8: November, 1917, 301-305.

Myers, G. C.—Delayed Recall in History. *Jr. Ed. Ps.* 8: May, 1917, 275-283.

Rugg, E. U.—Character and Value of Standardized Tests in History. *School Rev.* 27: December, 1919, 757-771.

## X—PHYSICAL EDUCATION

### \*RAPEER SCALE FOR MEASURING RESULTS OF PHYSICAL EDUCATION, 1917

This scale is based upon a study of some thirty different types of physical-efficiency measures which the author had collected. Instead of employing a single measure as an index of all desirable changes, the author has devised a five-fold scale or score-card for measuring some of the principal results of physical education, "selected and built up from the many already invented." This scale includes the one devised by Dr. W. L. Foster and reported in the American Physical Education Review for December, 1914; the norms for height, weight and breathing capacity proposed by B. T. Baldwin in the Fifteenth Yearbook of the National Society for the Study of Education, Part I (individual score cards obtainable from B. T. Baldwin, University of Iowa, Iowa City); and Stecher's Physical Ability Scale, in his Educational Gymnastics, J. J. McVey Co., Philadelphia.

The different divisions of the scale are reproduced below.

- I. Health Scale (Rapeer).....total points 25  
Count off four points for each serious ailment or defect reported during the school year. For uncleanness reported, count off one.
- II. Physiological Efficiency Scale (Foster's).....total points 15
- III. Physical Development Scale (Baldwin's).....total score 20
- IV. Physical Ability Scale (Stecher's).....total score 25
- V. Mental Qualities Scale (Rapeer's).....total score 15

This test includes ability to co-operate, qualities of leadership displayed, willingness to practice good posture, good hygiene and good, clean living, knowledge of physical education, etc. The points in Scale V are distributed somewhat according to the normal probability curve.

Directions for giving and scoring the tests are given in the reference below.

Address: L. W. Rapeer, 1719 H Street, N. W., Washington, D. C.

Reference: Rapeer, L. W.—Minimal Essentials of Physical Education, and a Scale for Measuring Results of Physical Education. Sixteenth Yearbook of National Society, 1917, Public School Publishing Co., Bloomington, Ill.

## XI—SUPERVISORY TESTS

### \*COURTIS SUPERVISORY TESTS, 1918 (Bureau of Research, Detroit)

These are intended as research tests for teachers and supervisors interested in bringing children of different classes up to the standard for the grade. "They are diagnostic in that they classify the children on the basis of their needs for special attention. Provision is made for keeping a continuous record of each individual throughout his school life. They are really a continuous survey and a means of supervisory control." These tests are generally briefer than the regular research tests by Courtis.

Tests are furnished for arithmetic, composition, geography, writing and spelling. Graph sheets are supplied for plotting the results of the class. The scoring is done in such a way that a class, every member of which is up to standard, will have a score of 1,000 points. Class record cards and individual record cards and class record sheets are furnished for each of the tests and are printed in different colors so that the cards and blanks belonging to a certain test can easily be distinguished.

These tests are different from any other tests available. They fulfill the need of supplying the superintendent with diagnostic material for all of the pupils in school in nearly all of the important elementary school subjects. These are kept on file for reference at any time. The superintendent has in his hand information regarding each class and every individual pupil

in the school system. The tests include an instruction bulletin of 52 pages, and a folder of general information regarding the tests.

These tests are especially useful to superintendents.

Address: S. A. Courtis, 82 Eliot Street, Detroit, Michigan.

Reference: Courtis, S. A.—Standard Supervisory Tests, Folder 1918-19, 82 Eliot Street, Detroit.

## **XII—CITIZENSHIP**

### **\*UPTON AND CHASELL SCALE FOR MEASURING HABITS OF GOOD CITIZENSHIP, 1919**

(Teachers' College, Columbia University)

This test is being prepared as eight separate scales with scoring device. A part of the test consists of a list of over 175 common acts of school children which have been rated on a scale of 1 to 10 according to the combined judgments of more than 70 competent judges.

The preliminary discussion of this scale is published in the Teachers' College Record, January, 1919.

Address: Bureau of Publications, Teachers' College, Columbia University, New York.

Reference: Upton, Mrs., and Chassell, Clara F.—Monograph (new edition being prepared.)

## **XIII—MUSIC**

### **\*THE SEASHORE TESTS OF MUSICAL TALENT, 1919**

(University of Iowa)

This is a very elaborate method of testing musical talent. A complete test requires three days and proper laboratory equipment. An abbreviated form of the test is possible, however, by means of the phonograph. Seashore has put on the market disc records which test five phases of musical ability—pitch, intensity, rhythm, consonants and dissonants and musical memory.

The method may be indicated by a description of the test for pitch. Ten series of ten groups of tones in a series constitute the test for pitch. Each group of the series consists of two tones. The subject decides and records by abbreviation, l or h, on a record blank provided for the purpose whether the second note is lower or higher than the first note. In each successive series the difference in pitch is progressively less up to a certain point, so that it becomes very difficult to decide concerning the pitch of the tone. After that point the difference in pitch is progressively greater, so that the subject is tested twice for each degree of difference.

At the end of the test the correct letters are read off from a score card so that the pupils can check their incorrect responses. This gives the per cent of correct responses on the test. A table is given, by means of which the percentile rank can be determined. This is done for each test separately, and the graph is constructed for the pupil's performance on the complete test. The test may be given to a large number of pupils at once. The author suggests that it should be given at least twice during the elementary school period.

Address: E. E. Seashore, University of Iowa, Iowa City, Iowa. Also: The Columbia Graphophone Co., New York.

References: Seashore—Musical Talent, Macmillan and Co.

Seashore—Musical Talent Chart, University of Iowa, Iowa City, Iowa.

Seashore—Manual of Instructions and Interpretation for Measures of Musical Talent. Columbia Graphophone Co., New York.

### **GENERAL BIBLIOGRAPHY ON MUSIC TESTS**

Baldwin, R.—Efficiency in School Music, Teaching and Practical Tests of Same. Jr. of Proc. Music Supervisors National Conf. 1914, 43-50.

- Bingham, W. V.—Some Psychological Aspects of Public School Music Instruction. Proc. Music Superv. National Conf. 1916: 97-102.
- Gaw, E. A.—Music Tests, Iowa Alumnus 16: May, 1919, 248-250.
- Seashore, in Eighteenth Yearbook National Society, Pt. II, pp. 123, Bloomington, Ill. (Publ. School Publ. Co.)
- Seashore, in University of Iowa Studies in Psychology No. 7, pp. 163, Psych. Mon. 25, No. 2, 1918.

#### XIV—VOCATIONAL EDUCATION

##### LEAVITT PRELIMINARY TEST FOR MANUAL ARTS, 1919

This is intended by the author merely as a preliminary test, and is probably not yet in its final form.

Address: F. M. Leavitt, Department of Vocational Education, Pittsburgh, Pennsylvania.

Reference: Leavitt, F. M.—Standardized Measurements in the Field of Industrial Arts. Indus. Arts Mag. 8: April, 1919, 132-138.

##### WARDNER TEST FOR KNOWLEDGE OF TOOLS, 1919

This test requires the identification of a large number of tools. It is based upon the Army Trade Tests.

Address: C. A. Wardner, Springfield, Vermont.

Reference: Wardner, C. A.—Applying the Army Trade Tests to Vocational Schools. Indus. Arts Mag. 8: October, 1919, 402-403.

#### XV—RELIGIOUS GROWTH

##### \*THE HARTSHORNE SCALE FOR MEASURING GROWTH IN RELIGION, 1919

(Union Theological Seminary)

The author is of the opinion that "religious capacity is evinced in proportion as a person succeeds in getting his life organized in terms of some valued end or consequence toward which he is working with all his might." In order to find himself in this extended life he must "be able to visualize the end he seeks and to devise means to carry him thither."

A preliminary analysis of factors which are of importance in measuring capacity for and growth in religion is included in the study.

The author's classification of the most important matters to be tested is reproduced here.

- I. The child's practice. The account of this practice in terms of religious functioning.
- II. Factors involved in religious functioning:
  1. Responses to foreseen social consequences.
    - A. Are social consequences foreseen?
    - B. What is the response? Is it socialized?
  2. Self-organization.
    - A. What purposes are formed?
    - B. Are they effective? To what extent do they control conduct?
  3. Ideas and ideals.
  4. Valuations, attitudes, appreciations, motives.

The test suggested for I, The Child's Practice, is the Upton and Chassel Scale for Measuring Habits of Good Citizenship. This scale comprises a list of common acts of children which have been evaluated by more than seventy judges and arranged on a scale of 1 to 10 according to their contribution to democratic school citizenship.

Several tests are suggested for II, Factors involved in Religious Functioning. For 1 the author attempted to find a test which was both an intelligence

test and a test of religious development. For this purpose Mr. John Lacy's test was chosen, an opposite test consisting of two lists of 50 words each, selected from lists of moral traits.

For judging character (2), Scott's plan of judging personnel is used. Character is taken to mean "steady devotion to a cause or social ideal." A score card is prepared by assigning a score of 10 to the child of the teacher's acquaintance who has the best developed character, and a score of 1 to the child who is "least socially developed in character." The children are then rated, boys and girls separately, on a scale of 1 to 10, with these children representing the upper and lower limits of the scale.

For judging ideas and ideals (3), the motives given in answer to the following questions are compared: "What are you going to do when you are grown up? Why?" The answers implying social motives and purposes are accorded the highest rank, those implying selfish purposes, the lowest.

"The ability to discriminate among possible ways of behaving" (4) can be shown by giving the child a situation in the form of a printed story, and a series of cards on which are listed several possible solutions. The child is asked to arrange these in the order of their value.

Another means of testing the same abilities is to arrange from the list of acts in the Upton and Chassell Scale five groups of ten each, ranging in value from 1 to 10 as estimated by the combined judgments of seventy-odd judges. The child is asked to "arrange these things children do in the order of their importance."

This scale is yet in the preliminary stage, but it is already of use, since it contains helpful and definite suggestions for more accurate judgment of religious growth.

Address: Dr. Hugh Hartshorne, Union Theological Seminary, New York City.

Reference: Hartshorne, H.—Measurements of Growth in Religion. Religious Education 14: June, 1919, 148-155.

## XVI—SEWING

### THE MURDOCH SEWING SCALE, 1919

(Teachers' College, Columbia University)

This scale consists of 15 graded charts, which sell for the price of \$1.00. At the time of this writing it has not yet been possible to procure a copy of the charts and the book from the publishers, and consequently a discussion of the scale is omitted here.

Address: Bureau of Publications, Teachers' College, Columbia University, New York City.

Reference: Murdoch, Katharine—The Measurement of Certain Elements of Hand Sewing. Columbia Contributions to Education, No. 103. Teachers College, Columbia University, New York, 1919, pp. 120.

### SOME OF THE PRINCIPAL SCHOOL SURVEYS EMPLOYING STANDARDIZED EDUCATIONAL TESTS AND MEASUREMENTS

Following the name of each survey is a list of the tests used.

Butte School Survey, 1914. Address: Board of School Trustees, Butte, Montana.

1. Ayres Spelling Scale.
2. Hillegas Composition Scale.
3. Curtis Standard Research Tests in Arithmetic, Series B.
4. Stone Reasoning Test in Arithmetic.

The Survey of the Public Schools of Springfield, Illinois, 1914.

Address: Leonard P. Ayres, Russell Sage Foundation, New York.

1. Ayres Spelling Scale.
2. Ayres Handwriting Scale, Three Slant Edition.

3. Stone Reasoning Test in Arithmetic.
4. Ayres Arithmetic Fundamentals (these tests have since been abandoned in favor of the Curtis Tests, Series B, to which they were similar).

The Salt Lake City Survey.

Address: School Survey Committee, Salt Lake City, Utah.

1. Ayres Spelling Scale.
2. Thorndike Handwriting Scale.
3. Curtis Arithmetic Tests, Series B.
4. Hillegas Composition Scale.
5. Kansas Silent Reading Test.

The Denver School Survey, 1916. Address: The School Survey Committee, Denver, Colorado.

1. Willing Composition Scale.
2. Ayres Handwriting Scale.

Cleveland Educational Survey, 1916. Address: Leonard P. Ayres, Russell Sage Foundation, New York City. The volume describing the Educational Tests and Measurements is Judd's Measuring the Work of the Public Schools.

1. Ayres Handwriting Scale, Gettysburg Edition.
2. Ayres Spelling Scale.
3. Cleveland Survey Arithmetic Tests.
4. Gray Test of Silent Reading.
5. Gray Uniform Test in Oral Reading.

School Survey of Grand Rapids, Michigan, 1916. Address: School Board, Grand Rapids, Michigan.

1. Gray Test of Oral Reading.
2. Gray Test of Silent Reading.
3. Willing Composition Scale.
4. Cleveland Survey Arithmetic Tests.
5. Ayres Handwriting Scale.

A Self-Survey of the Sterling Public Schools, 1917. Address: Colorado State Teachers College, Greeley, Colorado.

1. Curtis Arithmetic Tests, Series B.
2. Starch Arithmetic Scale A.
3. Gray Standardized Reading Paragraphs (oral reading).
4. Kansas Silent Reading Test.
5. Ayres Spelling Scale (Curtis Standard Tests in Spelling).
6. Thorndike Writing Scale.

Educational Survey of the Public Schools of Brookline, Mass., 1917. Address: School Committee, Brookline, Mass.

1. Curtis Tests in Arithmetic, Series B.
2. Stone Reasoning Test.
3. Ayres Spelling Scale.
4. Boston Spelling List.
5. Holmes Test for Speed in Handwriting.
6. Holmes Test for Quality of Handwriting.
7. Holmes Test for Speed of Silent Reading.
8. Holmes Test for Quality of Reproduction.
9. Harvard-Newton Composition Scales.

The Idaho Springs Survey, 1918. Address: University of Colorado, Boulder.

1. Monroe Standardized Silent Reading Tests.
2. Gray Standardized Silent Reading Test.
3. Thorndike Reading Scale, Visual Vocabulary.

4. Woody Arithmetic Scale, Series B.
5. Curtis Standard Arithmetic Tests, Series B.
6. Clapp Standard School Tests, Upper Arithmetic.
7. Ayres Measuring Scale for Ability in Spelling.
8. Ayres Measuring Scale for Ability in Handwriting.
9. Clapp Standard School Tests: Correct English.
10. Nassau County Supplement to the Hillegas Scale for the Measuring of Quality in English Composition.

The St. Louis School Survey, 1918. Address: World Book Company, Yonkers, New York.

1. Gray Oral Reading Test.
2. Gray Silent Reading Test.
3. Cleveland Survey Arithmetic Tests.
4. Freeman Handwriting Scale.

Theisen—The Use of Stone Standard Tests in Wisconsin, 1918. Address: W. W. Theisen, Supervisor of Educational Measurements, State of Wisconsin, Madison.

1. Ayres Spelling Scale.
2. Woody Arithmetic Scales, Series A.
3. Thorndike Handwriting Scale.
4. Hillegas Scale for Measuring Quality in English Composition.
5. Trabue Nassau County Supplement to the Hillegas Scale.
6. Kansas Silent Reading Test.

The Educational Survey of Janesville, Wis., 1918. Address: W. W. Theisen, State Department of Public Instruction, Madison, Wis.

1. Woody Arithmetic Scales, Series A.
2. Stone Reasoning Test in Arithmetic.
3. Kansas Silent Reading Tests.
4. Ayres Spelling Scale.
5. Buckingham Spelling Scale.
6. Thorndike Handwriting Scale.
7. The Hillegas, Thorndike and Nassau County Composition Scales.

Report of a Survey of Public Education in Nassau County, New York, 1918. Address: The University of the State of New York, Albany, N. Y.

1. Hillegas Composition Scale.
2. Nassau County Supplement to the Hillegas Scale for the Measurement of Quality in English Composition.
3. Thorndike Scale Alpha for Measuring the Understanding of Sentences.
4. Thorndike Reading Scale A: Visual Vocabulary.
5. Trabue Language Scales C and L.
6. The Woody Arithmetic Scales, Series A.
7. The Curtis Standard Arithmetic Tests, Series B.
8. Stone Test in Arithmetic Reasoning.
9. Thorndike Handwriting Scale.
10. Ayres Spelling Scale.

Survey of the Gary Schools, 1919. Address: General Education Board, 61 Broadway, New York City.

1. Ayres Handwriting Scale, Three Slant Edition.
2. Cleveland Free Choice Writing Test (see Cleveland Survey).
3. Curtis Dictation Test and Composition Test.
4. Ayres Spelling Scale.
5. Misspelled Words in Compositions (Curtis).
6. Curtis Arithmetic Tests, Series B.
7. Cleveland Survey Tests in Arithmetic.
8. Hillegas Composition Scale.



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## A Comparative Study of Three Diagnostic Arithmetic Tests

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GEORGE WILLIAM FINLEY



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A COMPARATIVE STUDY  
of Three  
DIAGNOSTIC ARITHMETIC TESTS

by

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## FOREWORD

This study was undertaken with a view to making a comparison of the results obtained by the use of different arithmetic tests. Those chosen for comparison were the Cleveland Survey Tests, the Woody Scale, and the Monroe Diagnostic Tests. All three of these purport to be diagnostic in their nature, and if this be true they should lead to approximately the same conclusions concerning the arithmetical abilities of the children tested. It was with a desire to determine whether they do this or not that this study was made.

The study is divided into two parts. Part I gives a discussion of the value of arithmetic tests in general and a description of the tests used. Part II gives the results obtained by giving the three different tests to a group of children and the conclusion reached from these results.



# A Comparative Study of Three Diagnostic Arithmetic Tests

## PART I

In recent years there has been a most remarkable development of all kinds of educational tests and measurements. Of course it has always been necessary for teachers to measure their pupils' attainments in some fashion or other. Some children were promoted at the end of the year while others were retained in the same grade. This was done because the teacher judged that in the one case sufficient progress had been made to enable the children to do the work of the next grade, while in the other such progress had not been made. In order to arrive at these conclusions the teacher had to measure the achievements of the various children in the grade. Again at the end of each month teachers were called upon to "grade" the pupils in the various subjects that they happened to be studying. This again called for the measuring process. But the sort of measuring done was of a very indefinite kind. It was made up very largely of the teacher's estimates of the child, and into it entered a great many things besides the ability to do certain specific things. Then, too, the teacher's knowledge of the specific abilities of the children was exceedingly limited. It is true so-called tests and examinations were given but they were of such a nature as to test the abilities of the children only in a very general way. In fact they were often said to test the children's general ability in this, that, or the other subject, whereas, as we now know, there is no such thing as general ability in a subject. There are, in fact, as many separate abilities in even a single subject as there are different types of mental activities involved.

Another difficulty with these tests was that they lacked uniformity. If a child did not do as well in a test in arithmetic this week as he did last week it was taken to mean that he was losing ground. This might not be at all true. The tests were different and therefore there was really no basis for comparison. Again, if a child in the sixth grade got a grade of 90% in arithmetic while one in the eighth grade got a grade of 70% this fact did not give any basis for comparing the abilities of these two children. Their grades were obtained upon entirely different tests.

This then was the state of things up to within the last twenty years.

At the present time, however, quite a different state of affairs obtains. Tests and scales have been developed and standardized so that a teacher need no longer be in doubt about how her pupils compare with other pupils in the same grade, with pupils in other grades of the same school, with pupils in other school systems, or, best of all, with their own previous records in any specific ability.

The Courtis Standard Research tests were not given in this experiment, but as all of the scales have been built, to a greater or less extent, upon them they will be discussed here.

Inspired by the work of Rice and Stone, the pioneers in the field of tests and measurements in arithmetic, Mr. C. A. Courtis took up the task of developing a set of standard tests. He worked out a set, now known as series A, which he gave to thousands of children in different parts of the country. Five thousand children were tested in Detroit; 33,000 in New York; 20,000 in Boston, and many others in smaller systems. In scoring these papers perhaps the most remarkable fact brought out was the wide range of variability shown by the children in any given grade. Some children in the sixth grade,

for instance, made scores lower than the average of the third grade while others exceeded the average of the eighth grade. In spite of this fact, however, Mr. Courtis found that the scores for the children of the sixth grade tended to be grouped about a certain standard of excellence which was a little lower than that about which the scores of the seventh grade children tended to be grouped and higher than that of the fifth grade. This led to the establishment of certain standards of excellence for the different grades in the particular abilities tested by these examples.

Series A of the Courtis tests includes eight separate tests, each one containing more examples than the swiftest child could complete in the time allotted. The tests are thus a measure of speed as well as of accuracy. These eight tests take up the combinations in addition, subtraction, multiplication and division, speed copying of figures, one-step reasoning problems, abstract examples in the four fundamentals and two-step reasoning problems.

After using this series for several years Mr. Courtis, and others as well, found that it was not satisfactory in several respects. In the first place it was too expensive in both time and money. Then again it did not give an adequate test of the abilities most needed by the pupil. It tested the pupil's knowledge of the addition combinations but did not give much information concerning his ability to apply this knowledge to the addition of columns of numbers. The same is true of the other operations. He found also that there was practically no relation between a child's ability to give the addition combinations and his ability to add a long column of figures. He therefore devised a second group of tests known as series B. This group consists of four tests, one for each of the fundamental operations.

Test 1 involves the addition of columns of 9 three-place numbers; Test 2 the subtraction of eight- and nine-place numbers; Test 3 the multiplication of four- by two-place numbers, and Test 4 the division of four- and five-place numbers by two-place numbers. These tests have also been thoroughly standardized.

These Courtis tests are of great value to the teacher or supervisor of arithmetic. They furnish an instrument by means of which he may determine the degree of excellence reached by a grade or an individual in any one of the four fundamental operations. But they are not primarily diagnostic in their nature. Whatever diagnosis is made by their use is general and not specific in its nature. They do show, for instance, that a certain grade is low in addition, but they give no suggestion as to just which one of the several abilities required in addition is at fault. Then, too, they are limited to the field of the four fundamental operations with integers.

Realizing these facts a number of investigators have been at work devising tests that would be primarily diagnostic in their aim. Three such tests or scales have been devised and used to a considerable extent, viz., the Cleveland Survey tests, the Woody scale, and the Monroe tests. We shall consider them in the order given.

### THE CLEVELAND SURVEY TESTS

When Dr. Judd and his co-laborers started the Cleveland Survey they looked over the field of existing tests and scales in arithmetic and decided that none of those that had been developed up to that time would meet the needs of the situation. The Courtis tests seemed to be the most promising but they were open to serious objections.

Series A they felt to be unsatisfactory for the same reasons as those already given in this discussion. Series B used as a supplement to series A would constitute a decided improvement. But even this combination did not go far enough to suit them. By using the combination they saw that they could measure general attainment in each of the four fundamental operations but nothing more. In other words the test would not be diagnostic. For

instance, a pupil might show by his work on Test 1, Series A, that he knew his addition tables perfectly, and yet he might fail utterly on Test 1 of Series B. These facts, they argued, would be worth knowing, but they would be of comparatively little value unless supplemented by other facts. The question of why he failed on the second test would remain unanswered. It might be because he failed "to bridge the attention spans," or because of his inability to "carry," but the tests would give no indication as to which it was. In order to throw light upon this question it was necessary to introduce between the simple types of the first series and the more complex types of the second some intermediate forms.

These investigators accordingly secured the co-operation of Mr. Curtis and worked out what are known as the Cleveland Survey Tests in Arithmetic. These tests are here reproduced in full. They consist of 15 sets, designated A, B,—O. There are four sets in addition (A, E, J, M), two in subtraction (B, F), three in multiplication (C, G, L), four in division (D, I, K, N), and two in fractions (H, O). This gives a spiral arrangement, as the pupil begins with Set A and takes each set in its proper order.

In the sets involving addition, Set A, which is simply Test 1 of Series A in the Curtis Standard tests, requires simply a knowledge of the combinations. Set E requires the addition of columns of five one-place numbers. This, then, is a new type. The pupil must combine the first two numbers and must then hold this sum in mind while he combines it in turn with the next number. Set J requires the addition of 13 one-place numbers. This again introduces a new element, "bridging the attention span." It is a well known fact that the addition of a long column of numbers is not one continuous process. The individual rather adds up several numbers, pauses for a moment while the attention wavers, then continues the addition. The fourth set, M, requires the addition of columns of five four-place numbers. This brings in another mental process, that of "carrying." The four sets then indicate ability or lack of ability (1) in addition combinations, (2) in adding several numbers in a column, (3) in "bridging the span of attention," and (4) in "carrying."

The tests contain but two sets in subtraction. Set B tests the knowledge of the subtraction combinations, while set F, the subtraction of three- from three- and four-place numbers, tests a knowledge of borrowing. This covers the field of subtraction.

In multiplication there are three sets. Set C gives the simple combinations, Set G, the multiplication of four-place by one-place numbers, tests a knowledge of "carrying," while set L, the multiplication of four- by two-place numbers, requires a knowledge of the mechanics of handling the multiplication by a second number in the multiplier and of the addition of the partial products.

In division there are again four tests. Set D tests a knowledge of the simple combinations. Set I, the division of five- by one-place numbers, introduces "carrying." Set K, the division of three- and four- by two-place numbers, brings in the simplest type of long division, involving no carrying in the multiplication, and no borrowing in the subtraction. Set N is the more complex type of division requiring both carrying and borrowing.

These tests attempt also to diagnose the pupil's ability in fractions in addition to his ability in the fundamentals with integers. For this purpose Sets H and O were introduced. Set H requires addition and subtraction of fractions having a common denominator, while in Set O fractions of unlike denominators are added, subtracted, multiplied and divided.

The Cleveland Survey tests carry out the plan of the Curtis Standard tests as to time allowance. The time limit ranges from 30 seconds to 3 minutes. The plan was to give sufficient time for even the slowest pupil to work out at least one example but not enough to allow the swiftest to finish them all.

**Arithmetic Exercises**  
Cleveland Survey Tests

Name ..... Age today .....  
Years Months  
 Grade ..... School ..... Room .....  
 Teacher ..... Date today .....

Have you ever repeated the arithmetic of a grade because of non-promotion or transfer from other school? If so, name grade .....  
 Explain cause .....

Inside this folder are examples which you are to work out when the teacher tells you to begin. Work rapidly and accurately. There are more problems in each set than you can work out in the time that will be allowed. Answers do not count if they are wrong.

Begin and stop promptly at signals from the teacher.

	A	B	C	D	E	F	G	H
A								
R								
Rank								

	I	J	K	L	M	N	O
A							
R							
Rank							











## THE WOODY SCALES

The Woody scales are the results of another attempt to devise a series of tests for measuring achievements in the four fundamental operations of arithmetic. The author of the scales makes the statement that the fundamental aim was to devise a series which would indicate the type of problems and the difficulty of the problems that a class could solve correctly. Each test is, therefore, composed of as great a variety of problems as possible. They are arranged in the order of increasing difficulty, beginning with the easiest that can be found and gradually increasing in difficulty until the last can be solved by only a small per cent of the pupils in the eighth grade. The degree of difficulty of each problem was determined, not by analysis, but by submitting the tests to a large number of children and computing the difficulty of each problem from the number of children that were able to solve it.

In building the scales under the above outlined plan the author made up tests containing as great a variety of problems as possible and submitted them to a large number of children. The results of these tests showed that the preliminary tests did not conform to the plan adopted. They did not show an arrangement of problems such that they were solved by a gradually increasing per cent of the pupils from one grade to the next higher. There were large gaps between certain problems. These defects were remedied by introducing extra problems to fill up these gaps and by dropping out such problems as were solved by a higher percentage of pupils in the lower grades than in the higher grades.

This method of construction has been severely criticised. It is maintained that if we are to measure arithmetical abilities with any degree of certainty we must include in our tests problems that exercise all the important types of arithmetical abilities, whether or not this gives us a list of problems gradually increasing in difficulty. This criticism is undoubtedly just to a certain extent. At least it is safe to say that if we are to use the Woody scales intelligently we must know their limitations.

These scales are published in two series, A and B. Series A is the more complete, while series B is made from series A by leaving out part of the problems, and is intended to be used by those who can devote but a limited time to giving the tests. Series A was used in this study and is given here in full.

## Series A

### Addition Scale

By Clifford Woody

City..... County..... School..... Date.....  
 Name..... When is your next birthday?.....  
 How old will you be?..... Are you a boy or a girl?.....  
 In what grade are you?..... Teacher's name.....

(1) 2	(2) 2	(3) 17	(4) 53	(5) 72	(6) 60	(7) 3 + 1 =	(8) 2 + 5 + 1 =	(9) 20
3	4	2	45	26	37			10
—	3	—	—	—	—			2
								30
								25

(10) 21	(11) 32	(12) 43	(13) 23	(14) 25 + 42 =	(15) 100	(16) 9	(17) 199	(18) 2563
33	59	1	25		33	24	194	1387
35	17	2	16		45	12	295	4954
—	—	13	—		201	15	156	2065
		—			46	19	—	—

(19) \$ .75	(20) \$12.50	(21) \$8.00	(22) 547	(23) $\frac{1}{3} + \frac{1}{3} =$	(24) 4.0125	(25) $\frac{3}{8} + \frac{5}{8} + \frac{7}{8} + \frac{1}{8} =$
1.25	16.75	5.75	197		1.5907	
.49	15.75	2.33	685		4.10	
—	—	4.16	678		8.673	
		.94	456			
		6.32	393			
		—	525			
			240			
			152			

(26) 12½	(27) $\frac{1}{8} + \frac{1}{4} + \frac{1}{2} =$	(28) $\frac{3}{4} + \frac{1}{4} =$	(29) 4¾	(30) 2½	(31) 113.46	(32) $\frac{3}{4} + \frac{1}{2} + \frac{1}{4} =$
62½			2¼	6¾	49.6097	
12½			5¼	3¾	19.9	
37½			—	—	9.87	
					.0086	
					18.253	
					6.04	

(33) .49	(34) $\frac{1}{6} + \frac{3}{8} =$	(35) 2 ft. 6 in.	(36) 2 yr. 5 mo.	(37) 16½
.28		3 ft. 5 in.	3 yr. 6 mo.	12½
.63		4 ft. 9 in.	4 yr. 9 mo.	21½
.95			5 yr. 2 mo.	32¾
1.69			6 yr. 7 mo.	—
.22				
.33				
.36				
1.01				
.56				
.88				

(38) 25.091 + 100.4 + 25 + 98.28 + 19.3614 =
.75
.56
1.10
.18
.56

Series A

Subtraction Scale

By Clifford Woody

City..... County..... School..... Date.....  
 Name..... When is your next birthday?.....  
 How old will you be?..... Are you a boy or girl?.....  
 In what grade are you?..... Teacher's name.....

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
8	6	2	9	4	11	13	59	78	7 - 4 =	76
5	0	1	3	4	7	8	12	37		60

(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
27	16	50	21	270	393	1000	567482	2¾ - 1 =
3	9	25	9	190	178	537	106493	

(21)	(22)	(23)	(24)	(25)	(26)
10.00	3½ - ½ =	80836465	8⅞	27	4 yds. 1 ft. 6 in.
3.49		49178036	5¼	12⅝	2 yds. 2 ft. 3 in.

(27)	(28)	(29)	(30)
5 yds. 1 ft. 4 in.	10 - 6.25 =	75¾	9.8063 - 9.019 =
2 yds. 2 ft. 8 in.		52¼	

(31)	(32)	(33)	(34)	(35)
7.3 - 3.00081 =	1912 6 mo. 8 da.	5 2	6⅛	3⅞ - 1⅝ =
	1910 7 mo. 15 da.	— — — =	2⅞	
		12 10		

Series A

Multiplication Scale

By Clifford Woody

City..... County..... School..... Date.....  
 Name..... When is your next birthday?.....  
 How old will you be?..... Are you a boy or girl?.....  
 In what grade are you?..... Teacher's name.....

(1) $3 \times 7 =$	(2) $5 \times 1 =$	(3) $2 \times 3 =$	(4) $4 \times 8 =$	(5) $23$ <u>3</u>	(6) $310$ <u>4</u>	(7) $7 \times 9 =$
--------------------	--------------------	--------------------	--------------------	----------------------	-----------------------	--------------------

(8) $50$ <u>3</u>	(9) $254$ <u>6</u>	(10) $623$ <u>7</u>	(11) $1036$ <u>8</u>	(12) $5096$ <u>6</u>	(13) $8754$ <u>8</u>	(14) $165$ <u>40</u>	(15) $235$ <u>23</u>
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(16) $7898$ <u>9</u>	(17) $145$ <u>206</u>	(18) $24$ <u>234</u>	(19) $9.6$ <u>4</u>	(20) $287$ <u>.05</u>	(21) $24$ <u>2\frac{1}{2}</u>	(22) $8 \times 5\frac{3}{4} =$
-------------------------	--------------------------	-------------------------	------------------------	--------------------------	----------------------------------	--------------------------------

(23) $1\frac{1}{4} \times 8 =$	(24) $16$ <u>2\frac{5}{8}</u>	(25) $\frac{7}{8} \times \frac{3}{4} =$	(26) $9742$ <u>59</u>	(27) $6.25$ <u>3.2</u>	(28) $.0123$ <u>9.8</u>	(29) $\frac{1}{8} \times 2 =$
--------------------------------	----------------------------------	---	--------------------------	---------------------------	----------------------------	-------------------------------

(30) $2.49$ <u>.36</u>	(31) $12$ <u>25</u> $\times$ $15$ <u>32</u>	(32) $6$ dollars $49$ cents <u>8</u>	(33) $2\frac{1}{2} \times 3\frac{1}{2} =$	(34) $\frac{1}{2} \times \frac{1}{2} =$
---------------------------	---	---	---	---

(35) $987\frac{3}{4}$ <u>25</u>	(36) $3$ ft. $5$ in. <u>5</u>	(37) $2\frac{1}{4} \times 4\frac{1}{2} \times 1\frac{1}{2} =$	(38) $.0963\frac{1}{8}$ <u>.084</u>	(39) $8$ ft. $9\frac{1}{2}$ in. <u>9</u>
------------------------------------	----------------------------------	---	--	---



Series A  
Division Scale  
By Clifford Woody

City..... County..... School..... Date.....  
 Name..... When is your next birthday?.....  
 How old will you be?..... Are you a boy or girl?.....  
 In what grade are you?..... Teacher's name.....

(1) $\overline{3)6}$	(2) $\overline{9)27}$	(3) $\overline{4)28}$	(4) $\overline{1)5}$	(5) $\overline{9)36}$	(6) $\overline{3)39}$
-------------------------	--------------------------	--------------------------	-------------------------	--------------------------	--------------------------

(7) $4 \div 2 =$	(8) $\overline{9)0}$	(9) $\overline{1)1}$	(10) $6 \times \dots = 30$	(11) $2)13$	(12) $2 \div 2 =$
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(13) $\overline{4)24 \text{ lbs. 8 oz.}}$	(14) $\overline{8)5856}$	(15) $\frac{1}{4} \text{ of } 128 =$	(16) $\overline{68)2108}$	(17) $50 \div 7 =$
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(18) $\overline{13)65065}$	(19) $248 \div 7 =$	(20) $\overline{2.1)25.2}$	(21) $\overline{25)9750}$	(22) $\overline{2)13.50}$
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(23) $\overline{23)469}$	(24) $\overline{75)2250300}$	(25) $\overline{2400)504000}$	(26) $\overline{12)2.76}$
-----------------------------	---------------------------------	----------------------------------	------------------------------

(27) $\frac{7}{8} \text{ of } 624 =$	(28) $\overline{.003).0936}$	(29) $3\frac{1}{2} \div 9 =$	(30) $\frac{3}{4} \div 5 =$
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(31) $\frac{5}{4} \div \frac{3}{5} =$	(32) $9\frac{5}{8} \div 3\frac{3}{4} =$	(33) $\overline{52)3756}$
--	--	------------------------------

(34) $62.50 \div 1\frac{1}{4} =$	(35) $\overline{531)37722}$	(36) $\overline{9)69 \text{ lbs. 9 oz.}}$
-------------------------------------	--------------------------------	--

The addition scale begins with  $2 + 3$  and includes the addition of increasingly difficult exercises. It brings in fractions, both with common denominators and with different denominators, mixed numbers, decimals, and compound numbers of two denominations.

The subtraction scale is made up of problems involving numbers of the same kind as those in the addition scale.

The multiplication scale includes the simple combinations, multiplication of integers by integers up to four figures in the multiplicand and two in the multiplier, a fraction by a fraction, a decimal by a decimal, and a compound number by an integer.

The division scale includes the simple combinations, short division, long division up to the division of a number of from five to seven digits by one of two or three digits, division of mixed numbers, fractions, decimals and compound numbers.

In giving these tests the time allowed is practically unlimited; twenty minutes being allowed for each test. In this length of time nearly all the pupils will have completed all the problems that they can solve. These tests

are then "power" tests rather than "speed" tests such as those devised by Courtis.

Another way in which the Woody scales differ from the Courtis tests is that in the latter the problems in a given test are of equal difficulty, while in the former they are of varying degrees of difficulty. This being the case it became necessary for Mr. Woody to adopt some unit by means of which the degree of difficulty of each problem could be stated. The unit adopted was the Probable Error (P. E.) of the school grade distribution. The median achievement of a grade distribution, i.e., a problem that is solved by exactly 50% of the grade, is taken as the measure of the achievement of the grade. The P. E. of a grade distribution is that distance along the base line of a surface distribution from the median point to the perpendicular on either side of the median which cuts off twenty-five per cent of the cases. The P. E. of the grade's distribution is the limits of the middle 50% of the grade. In other words if exactly 50% of a class are able to solve a problem correctly, then 25% of that class should be able to solve a problem that is at least one unit (P. E.) more difficult, and 75% of that class should be able to solve a problem one unit less difficult.

### THE MONROE TESTS

The third series of tests included in this study is the one devised by Walter S. Monroe.

This author starts out deliberately to construct a series of tests of the operations in arithmetic that will include all or nearly all of the types of examples encountered in arithmetical work. He points out the fact that existing studies show that there are as many arithmetical abilities as there are types of examples and argues that any test that is to be really diagnostic must include all the important types within its scope.

According to Mr. Courtis there are six types of operations in the addition of integers, four in subtraction, nine in multiplication, and ten in division. Kallom has analyzed the addition of two fractions and reached the conclusion that there are fourteen types of examples. Mr. Monroe, without making a very careful analysis, carries the discussion of types on through fractions and decimals and reaches the conclusion that there are at least 86 significant types of examples in the fundamental operations of arithmetic (integers, 30; common fractions, 36; decimal fractions, 20 to 40). This is exclusive of those involved in the writing and reading of numbers, in the tables of denominate numbers, and in the solution of problems.

The 21 tests devised by Mr. Monroe contain 61 of these types. These tests are given in limited lengths of time so that they measure both speed and accuracy. In this respect they differ from the Woody tests and agree with the Cleveland tests. In fact Mr. Monroe argues that arithmetical abilities are "two dimensional," and that any attempt to measure them must take this fact into consideration. He admits, however, that the usual class-room procedure is to measure power only without much regard to speed.

The 21 tests are given here in full. They are printed in four different folders. The first two, containing tests 1-11, deal with the four fundamental operations with integers; the third, tests 12-16, deals with common fractions; the fourth, tests 17-21, with decimal fractions. The fourth folder was not used in this study.

Bureau of Educational Measurements and Standards  
Kansas State Normal School, Emporia, Kansas

DIAGNOSTIC TESTS IN ARITHMETIC

Operations With Integers

Devised by Walter S. Monroe

Name.....Age today.....  
Years Months  
City..... Grade..... Room.....  
School..... Teacher..... Date today.....

Instructions to Examiners

Have the pupils fill out the blanks at the top of this page. Have them start and stop work together. Use a stop watch if one is available; if not, use an ordinary watch with a second hand and exercise care to allow just the exact time for each test. Allow an interval of half a minute or more between tests. Require the pupils to close the folder as soon as the signal to stop is given, in order to make certain that they do not spend this rest period working on the next test. If the pupils need to sharpen pencils before going on, allow this to be done. The following time allowances must be followed exactly:

- |                    |                   |
|--------------------|-------------------|
| Test 1—30 seconds. | Test 4—1 minute.  |
| Test 2—30 seconds. | Test 5—3 minutes. |
| Test 3—1 minute.   | Test 6—2 minutes. |

Have the children read the following directions: “Inside this folder are examples which you are to work out when the teacher tells you to begin. Do not open this folder before the teacher gives the signal. Work rapidly and accurately. There are more examples in each test than you can work out in the time that will be allowed. Answers do not count if they are wrong. Begin and stop promptly at signals from the teacher. Place the test in position on your desk so that you can open it quickly when the signal is given to begin, but do not open it until the signal is given.”

After all of the tests have been completed have the pupils exchange papers. Read the answers aloud and have the children mark each example that is correct “C.” Count the number of examples attempted and the number of “C’s” and write the numbers in the proper spaces at the top of the tests. Examples partially completed or partially right are not counted.

Before collecting the papers have the records transcribed to the first page. The teacher should verify a sufficient number of records to make certain that the pupils have marked the papers and transcribed the results correctly.

Test .....	1	2	3	4	5	6
Number of examples attempted.....						
Number of examples right.....						

Test 1—ADDITION.

At.....

Rt.....

4	5	2	0	1	7	6	7	3	2	3	9
7	5	6	3	1	2	8	7	8	4	3	4
2	9	7	8	4	3	4	0	9	0	6	5
—	—	—	—	—	—	—	—	—	—	—	—
8	8	5	4	4	1	0	0	7	6	6	3
0	9	9	6	5	5	2	1	1	8	7	7
5	2	1	1	8	7	7	4	3	3	0	9
—	—	—	—	—	—	—	—	—	—	—	—

Test 2—SUBTRACTION.

At.....

Rt.....

37	94	60	27	39	41	77	53
5	8	3	6	7	8	3	9
—	—	—	—	—	—	—	—
65	80	92	70	68	58	26	43
2	4	5	3	2	9	9	8
—	—	—	—	—	—	—	—
95	50	36	34	44	25	63	57
4	7	1	8	6	3	7	9
—	—	—	—	—	—	—	—

Test 3—MULTIPLICATION.

At.....

Rt.....

6572	6750	5863	3754	2845
6	9	2	5	8
—	—	—	—	—
4936	9327	8274	8409	6391
4	7	3	6	9
—	—	—	—	—
5482	8609	3679	2758	4658
2	5	8	4	7
—	—	—	—	—
9653	3174	2874	7901	2179
3	6	9	2	5
—	—	—	—	—

Test 4—DIVISION.

At.....

Rt.....

8)3840	4)7432	7)2534	3)8430	6)4680
9)8577	2)6370	5)9310	8)7512	4)3820
7)9653	3)5781	6)6720	9)5373	2)5130

Test 5—ADDITION.

At.....

Rt.....

7862	6809	8941	5917	6772	7864	1249
5013	7623	7910	4814	6028	7883	8975
1761	5299	9845	9007	6535	8240	9005
5872	6601	8522	6975	2340	9869	1573
3739	3496	1046	1227	2319	6794	3203
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

8758	2462	1247	4319	6794	3283	7917
2350	9869	3573	2358	5420	7805	4304
3197	4572	1081	5795	4570	7642	9027
2338	6420	7805	4314	8028	7803	9975
5917	6772	9864	1249	8758	2462	1247
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

Test 6—DIVISION.

At.....

Rt.....

82)3854	43)1591	74)2664	31)1953
63)3591	94)4042	21)1344	53)4452
83)5312	42)672	71)5183	32)2304
62)2108	93)5022	23)782	51)2703
84)7140	41)3567	73)6278	33)1386
64)5312	92)6624	24)984	52)3484

Bureau of Educational Measurements and Standards  
 Kansas State Normal School, Emporia, Kansas

DIAGNOSTIC TESTS IN ARITHMETIC

Operations With Integers  
 Devised by Walter S. Monroe

Name.....Age today.....  
 Years Months  
 City..... Grade..... Room.....  
 School..... Teacher..... Date today.....

Instructions to Examiners

Have the pupils fill out the blanks at the top of this page. Have them start and stop work together. Use a stop watch if one is available; if not, use an ordinary watch with a second hand and exercise care to allow just the exact time for each test. Allow an interval of half a minute or more between tests. Require the pupils to close the folder as soon as the signal to stop is given, in order to make certain that they do not spend this rest period working on the next test. If the pupils need to sharpen pencils before going on, allow this to be done. The following time allowances must be followed exactly:

- |                   |                    |
|-------------------|--------------------|
| Test 7—2 minutes. | Test 10—2 minutes. |
| Test 8—3 minutes. | Test 11—4 minutes. |
| Test 9—1 minute.  |                    |

Have the children read the following directions: "Inside this folder are examples which you are to work out when the teacher tells you to begin. Do not open this folder before the teacher gives the signal. Work rapidly and accurately. There are more examples in each test than you can work out in the time that will be allowed. Answers do not count if they are wrong. Begin and stop promptly at signals from the teacher. Place the test in position on your desk so that you can open it quickly when the signal is given to begin, but do not open it until the signal is given."

After all of the tests have been completed have the pupils exchange papers. Read the answers aloud and have the children mark each example that is correct "C." Count the number of examples attempted and the number of "C's" and write the numbers in the proper spaces at the top of the tests. Examples partially completed or partially right are not counted.

Before collecting the papers have the records transcribed to the first page. The teacher should verify a sufficient number of records to make certain that the pupils have marked the papers and transcribed the results correctly.

Test .....	7	8	9	10	11
Number of examples attempted.....					
Number of examples right.....					

Test 7—ADDITION.

At.....

Rt.....

7	6	6	8	2	1	2	8	8	3	2	6	9	5	7
6	8	7	7	9	3	2	3	9	9	4	3	7	8	8
6	8	0	9	9	8	5	4	5	1	1	6	4	9	0
5	9	1	3	2	3	1	8	7	8	4	4	9	7	2
0	9	3	5	6	6	7	5	2	1	2	8	8	3	1
5	5	4	8	0	1	1	2	0	7	6	9	3	3	8
1	1	0	0	4	6	7	7	8	6	3	2	3	9	9
8	8	7	7	7	1	4	4	4	5	3	0	9	0	6
7	7	5	3	5	5	0	2	2	2	3	1	8	7	8
3	7	5	4	2	4	5	9	1	1	1	2	0	7	6
3	4	6	6	4	2	4	5	9	1	1	1	2	0	7
1	5	4	5	7	5	3	5	6	0	2	2	2	3	1
2	4	6	9	7	9	7	5	7	8	3	4	4	4	5

Test 8—MULTIPLICATION.

At.....

Rt.....

4857	5718	6942	4065
36	92	58	47
-----	-----	-----	-----
9625	6123	7486	9027
23	64	75	89
-----	-----	-----	-----
1253	5376	3786	5492
38	76	49	53
-----	-----	-----	-----

Test 9—SUBTRACTION.

At.....

Rt.....

739	1852	975	1087	516	962
367	948	906	821	239	325
-----	-----	-----	-----	-----	-----
508	1371	1284	730	1853	897
447	843	966	508	162	258
-----	-----	-----	-----	-----	-----
1910	735	1056	877	1190	619
361	478	591	618	739	257
-----	-----	-----	-----	-----	-----
831	954	1077	1328	939	1316
360	483	704	872	654	827
-----	-----	-----	-----	-----	-----

Test 10—MULTIPLICATION.

560	807	617	840	730	609
<u>37</u>	<u>59</u>	<u>508</u>	<u>80</u>	<u>96</u>	<u>70</u>
435	790	940	307	682	870
<u>308</u>	<u>60</u>	<u>38</u>	<u>42</u>	<u>409</u>	<u>40</u>
780	502	386	150	850	401
<u>56</u>	<u>68</u>	<u>207</u>	<u>90</u>	<u>72</u>	<u>80</u>
817	460	730	605	392	590
<u>109</u>	<u>30</u>	<u>52</u>	<u>84</u>	<u>306</u>	<u>30</u>

At.....

Rt.....

Test 11—DIVISION.

47) <u>27589</u>	79) <u>36893</u>	36) <u>28296</u>	68) <u>31824</u>
96) <u>56064</u>	28) <u>21980</u>	57) <u>22572</u>	89) <u>25365</u>
48) <u>32304</u>	76) <u>36708</u>	67) <u>39932</u>	98) <u>46844</u>

At.....

Rt.....





Test 12.—ADDITION.

Reduce your answers to lowest terms.

$$\frac{1}{6} + \frac{1}{3} =$$

$$\frac{5}{6} + \frac{1}{2} =$$

$$\frac{3}{4} + \frac{1}{2} =$$

$$\frac{3}{4} + \frac{5}{12} =$$

$$\frac{1}{6} + \frac{2}{3} =$$

$$\frac{3}{10} + \frac{2}{5} =$$

$$\frac{1}{8} + \frac{1}{2} =$$

$$\frac{1}{3} + \frac{1}{12} =$$

$$\frac{5}{8} + \frac{1}{4} =$$

$$\frac{4}{5} + \frac{7}{10} =$$

At.....

Rt.....

$$\frac{5}{9} + \frac{2}{3} =$$

$$\frac{5}{6} + \frac{7}{12} =$$

$$\frac{1}{2} + \frac{7}{10} =$$

$$\frac{1}{2} + \frac{5}{12} =$$

$$\frac{5}{8} + \frac{3}{4} =$$

Test 13—SUBTRACTION.

Reduce your answers to lowest terms.

$$\frac{3}{4} - \frac{2}{5} =$$

$$\frac{7}{10} - \frac{1}{6} =$$

$$\frac{3}{4} - \frac{1}{3} =$$

$$\frac{5}{6} - \frac{3}{8} =$$

$$\frac{5}{6} - \frac{3}{5} =$$

$$\frac{5}{6} - \frac{3}{4} =$$

$$\frac{2}{3} - \frac{1}{2} =$$

$$\frac{7}{9} - \frac{1}{6} =$$

$$\frac{3}{4} - \frac{2}{7} =$$

$$\frac{8}{15} - \frac{4}{9} =$$

At.....

Rt.....

$$\frac{1}{2} - \frac{2}{7} =$$

$$\frac{5}{6} - \frac{2}{15} =$$

$$\frac{2}{3} - \frac{3}{5} =$$

$$\frac{7}{12} - \frac{3}{8} =$$

$$\frac{4}{5} - \frac{1}{3} =$$

Test 14—MULTIPLICATION.

Reduce your answers to lowest terms.

$$\frac{2}{3} \times \frac{3}{4} =$$

$$\frac{4}{9} \times \frac{2}{5} =$$

$$\frac{2}{5} \times \frac{3}{4} =$$

$$\frac{3}{8} \times \frac{1}{4} =$$

$$\frac{4}{15} \times \frac{5}{8} =$$

$$\frac{2}{5} \times \frac{3}{7} =$$

$$\frac{1}{3} \times \frac{3}{8} =$$

$$\frac{4}{5} \times \frac{1}{3} =$$

$$\frac{2}{7} \times \frac{1}{6} =$$

$$\frac{4}{5} \times \frac{7}{9} =$$

At.....

Rt.....

$$\frac{5}{12} \times \frac{3}{5} =$$

$$\frac{1}{2} \times \frac{1}{3} =$$

$$\frac{7}{12} \times \frac{4}{7} =$$

$$\frac{1}{3} \times \frac{1}{2} =$$

$$\frac{1}{6} \times \frac{3}{10} =$$

Test 15—ADDITION

Reduce your answers to lowest terms.

$$\frac{1}{6} + \frac{3}{5} =$$

$$\frac{4}{9} + \frac{1}{6} =$$

$$\frac{1}{2} + \frac{2}{3} =$$

$$\frac{3}{8} + \frac{5}{6} =$$

$$\frac{2}{5} + \frac{2}{3} =$$

$$\frac{3}{12} + \frac{5}{8} =$$

$$\frac{1}{3} + \frac{4}{7} =$$

$$\frac{7}{10} + \frac{3}{8} =$$

$$\frac{1}{7} + \frac{2}{5} =$$

$$\frac{3}{10} + \frac{1}{4} =$$

At.....

Rt.....

$$\frac{3}{5} + \frac{1}{2} =$$

$$\frac{4}{15} + \frac{5}{9} =$$

$$\frac{1}{3} + \frac{3}{4} =$$

$$\frac{1}{10} + \frac{1}{15} =$$

$$\frac{4}{7} + \frac{3}{5} =$$

Test 16—DIVISION.

Reduce your answers to lowest terms.

$$\frac{2}{5} \div \frac{1}{3} =$$

$$\frac{5}{6} \div \frac{5}{8} =$$

$$\frac{1}{2} \div \frac{1}{3} =$$

$$\frac{4}{7} \div \frac{8}{11} =$$

$$\frac{4}{5} \div \frac{1}{2} =$$

$$\frac{4}{7} \div \frac{2}{3} =$$

$$\frac{3}{7} \div \frac{4}{5} =$$

$$\frac{2}{3} \div \frac{8}{9} =$$

$$\frac{3}{5} \div \frac{3}{4} =$$

$$\frac{2}{5} \div \frac{3}{7} =$$

At.....

Rt.....

$$\frac{3}{8} \div \frac{2}{3} =$$

$$\frac{7}{12} \div \frac{4}{9} =$$

$$\frac{2}{3} \div \frac{3}{4} =$$

$$\frac{1}{4} \div \frac{1}{6} =$$

$$\frac{5}{12} \div \frac{4}{9} =$$

Part IV. Tests 17-21.

Bureau of Educational Measurements and Standards  
Kansas State Normal School, Emporia, Kansas

DIAGNOSTIC TESTS IN ARITHMETIC

Multiplication and Division of Decimal Fractions

Devised by Walter S. Monroe

Name.....Age today.....  
Years Months  
City..... Grade..... Room.....  
School..... Teacher.....Date today.....

Instructions to Examiners

Have the pupils fill out the blanks at the top of this page. Have them start and stop work together. Use a stop watch if one is available; if not, use an ordinary watch with a second hand and exercise care to allow just the exact time for each test. Allow an interval of half a minute or more between tests. Require the pupils to close the folder as soon as the signal to stop is given, in order to make certain that they do not spend this rest period working on the next test. If the pupils need to sharpen pencils before going on, allow this to be done. The following time allowances must be followed exactly:

Test 17—30 seconds.

Test 20—30 seconds.

Test 18—30 seconds.

Test 21—30 seconds.

Test 19—30 seconds.

Have the children read the following directions: "Inside this folder are examples which you are to work out when the teacher tells you to begin. Do not open this folder before the teacher gives the signal. Work rapidly and accurately. There are more examples in each test than you can work out in the time that will be allowed. Answers do not count if they are wrong. Begin and stop promptly at signals from the teacher. Place the test in position on your desk so that you can open it quickly when the signal is given to begin, but do not open it until the signal is given."

After all of the tests have been completed have the pupils exchange papers. Read the answers aloud and have the children mark each example that is correct "C." Count the number of examples attempted and the number of "C's" and write the numbers in the proper spaces at the top of the tests. Examples partially completed or partially right are not counted.

Before collecting the papers have the records transcribed to the first page. The teacher should verify a sufficient number of records to make certain that the pupils have marked the papers and transcribed the results correctly.

Test .....	17	18	19	20	21
Number of examples attempted.....	.....	.....	.....	.....	.....
Number of examples right.....	.....	.....	.....	.....	.....

Test 17—DIVISION.

At.....

Rt.....

The correct answer for each example with the exception of the decimal point is given at the side immediately after the letters "Ans." Write the answer in its proper position and place the decimal point in its proper place. Place ciphers before or after the answer when they are necessary.

.03)16.2	Ans.: 54	.07)1.82	Ans.: 26	.05)4.15	Ans.: 83
.06)7.44	Ans.: 124	.08).952	Ans.: 119	.04)87.6	Ans.: 219
.02).144	Ans.: 72	.08)40.8	Ans.: 51	.09)3.42	Ans.: 38
.03)47.4	Ans.: 158	.07)8.61	Ans.: 123	.05).965	Ans.: 193
.09)5.76	Ans.: 64	.04).348	Ans.: 87	.06)51.0	Ans.: 85
.02).748	Ans.: 374	.03)89.1	Ans.: 297	.05)6.85	Ans.: 137
.09)94.5	Ans.: 105	.01)5.48	Ans.: 548	.06).288	Ans.: 48
.04)9.84	Ans.: 246	.07).238	Ans.: 34	.08)44.8	Ans.: 56

At.....

Rt.....

Test 18—MULTIPLICATION.

Place the decimal point correctly in the following products:

657.2	67.50	5.863	375.4	28.45	4.936
.7	.03	.6	.09	.2	.05
46004	20250	35178	33786	5690	24680
932.7	82.74	8.409	639.7	54.82	8.609
.08	.4	.07	.3	.06	.9
74616	33096	58863	19191	32892	77481
367.9	27.58	4.658	965.3	31.74	2.874
.2	.05	.8	.04	.7	.03
7358	13790	37264	38612	22218	8622
574.6	82.47	7.462	834.7	54.32	7.842
.06	.9	.02	.5	.08	.4
34476	74223	14924	41735	43456	31368

At.....

Rt.....

Test 19—DIVISION.

The correct answer for each example with the exception of the decimal point is given at the side immediately after the letters "Ans." Write the answer in its proper position and place the decimal point in its proper place. Place ciphers before or after the answer when they are necessary.

.4)148.	Ans.: 37	.9)65.7	Ans.: 73	.6)1.68	Ans.: 28
.7).301	Ans.: 43	.3)47.7	Ans.: 159	.6)8.34	Ans.: 139
.2).548	Ans.: 274	.4)744.	Ans.: 186	.3)117.	Ans.: 39
.9).756	Ans.: 74	.8)672.	Ans.: 84	.7)59.5	Ans.: 85
5)865	Ans.: 173	.3)684.	Ans.: 228	.6)93.6	Ans.: 156
.2)7.92	Ans.: 396	.4)352.	Ans.: 88	.3)16.2	Ans.: 54
.7)3.22	Ans.: 46	.5).710	Ans.: 142	.8)376.	Ans.: 47
.1)9.42	Ans.: 942	.6).852	Ans.: 142	.2)74.2	Ans.: 371

Test 20—MULTIPLICATION.

At.....

Rt.....

Place the decimal point correctly in the following products:

$\begin{array}{r} 487.5 \\ .62 \\ \hline \end{array}$	$\begin{array}{r} 57.28 \\ 9.5 \\ \hline \end{array}$	$\begin{array}{r} 6.294 \\ .28 \\ \hline \end{array}$	$\begin{array}{r} 4065. \\ 5.1 \\ \hline \end{array}$	$\begin{array}{r} 967.5 \\ 8.4 \\ \hline \end{array}$
302250	544160	176232	207315	712700
$\begin{array}{r} 61.32 \\ .17 \\ \hline \end{array}$	$\begin{array}{r} 7.465 \\ 4.3 \\ \hline \end{array}$	$\begin{array}{r} 7486. \\ .76 \\ \hline \end{array}$	$\begin{array}{r} 907.2 \\ .39 \\ \hline \end{array}$	$\begin{array}{r} 14.53 \\ 6.2 \\ \hline \end{array}$
104244	320995	558936	353808	90086
$\begin{array}{r} 5.376 \\ .91 \\ \hline \end{array}$	$\begin{array}{r} 8637. \\ 2.4 \\ \hline \end{array}$	$\begin{array}{r} 549.3 \\ 5.7 \\ \hline \end{array}$	$\begin{array}{r} 84.74 \\ .83 \\ \hline \end{array}$	$\begin{array}{r} 8.637 \\ 1.6 \\ \hline \end{array}$
489216	207588	313101	703342	138192
$\begin{array}{r} 5194. \\ .49 \\ \hline \end{array}$	$\begin{array}{r} 784.1 \\ .72 \\ \hline \end{array}$	$\begin{array}{r} 36.74 \\ 3.5 \\ \hline \end{array}$	$\begin{array}{r} 2.893 \\ .68 \\ \hline \end{array}$	$\begin{array}{r} 4936. \\ 9.4 \\ \hline \end{array}$
254506	564552	128590	196724	463984

Test 21—DIVISION.

At.....

Rt.....

The correct answer for each example, with the exception of the decimal point, is given below the quotient, after the letters, "Ans." Write the answer in its proper position and place the decimal point in its proper place. Place ciphers before or after the answer when necessary.

$\begin{array}{r} .47 \overline{)2758.9} \\ \hline \end{array}$	$\begin{array}{r} 8.2 \overline{)38.54} \\ \hline \end{array}$	$\begin{array}{r} 79. \overline{)36.893} \\ \hline \end{array}$	$\begin{array}{r} .43 \overline{)1591} \\ \hline \end{array}$
Ans.: 587	Ans.: 47	Ans.: 467	Ans.: 37
$\begin{array}{r} 3.6 \overline{)2829.6} \\ \hline \end{array}$	$\begin{array}{r} 74. \overline{)26.64} \\ \hline \end{array}$	$\begin{array}{r} .68 \overline{)31.824} \\ \hline \end{array}$	$\begin{array}{r} 3.1 \overline{)1953.} \\ \hline \end{array}$
Ans.: 786	Ans.: 36	Ans.: 468	Ans.: 63
$\begin{array}{r} 96. \overline{)5606.4} \\ \hline \end{array}$	$\begin{array}{r} .63 \overline{)35.91} \\ \hline \end{array}$	$\begin{array}{r} 2.8 \overline{)21.980} \\ \hline \end{array}$	$\begin{array}{r} 94. \overline{)4.042} \\ \hline \end{array}$
Ans.: 584	Ans.: 57	Ans.: 785	Ans.: 43
$\begin{array}{r} .57 \overline{)22572.} \\ \hline \end{array}$	$\begin{array}{r} 2.1 \overline{)140.7} \\ \hline \end{array}$	$\begin{array}{r} 89. \overline{)253.65} \\ \hline \end{array}$	$\begin{array}{r} .53 \overline{)4.452} \\ \hline \end{array}$
Ans.: 396	Ans.: 67	Ans.: 285	Ans.: 84
$\begin{array}{r} 4.8 \overline{)32304.} \\ \hline \end{array}$	$\begin{array}{r} 83. \overline{)531.2} \\ \hline \end{array}$	$\begin{array}{r} .76 \overline{)367.08} \\ \hline \end{array}$	$\begin{array}{r} 4.2 \overline{).672} \\ \hline \end{array}$
Ans.: 673	Ans.: 64	Ans.: 483	Ans.: 16

## PART II

Having in mind the purpose and character of the tests to be used we may now turn to the main question at issue in the study, viz., do the different tests agree as to results? If they do the fact may be taken as a strong indication that they are all well suited to their purpose. If they disagree then certainly one or more of the tests is faulty in some respect or else they do not measure the same abilities.

The tests were given on six successive school days, beginning October 23, to a group of about 60 eighth grade pupils in Manhattan, Kansas. The order followed was Cleveland tests, Monroe tests, and Woody scales.

The tests were all given and the scores checked by the author. Care was exercised to see that conditions were as nearly identical in the different tests as it was possible to make them.

The results of the tests are shown in Tables 1 to 6, and diagrams 1 to 6.

Table 1 shows a comparison of the standard scores and the class scores for the number of problems solved correctly and the per cent of accuracy in each of the Cleveland tests. The standards shown here are the averages of the Cleveland, Grand Rapids and St. Louis median scores in the 8B sections. Table 2 gives the standard scores and class scores in attempts and in per cent of accuracy for the Monroe tests. In both of these tables the tests are arranged in such order as to bring together all the tests in each of the four fundamental operations. Tables 3, 4, 5 and 6 show the results of the Woody tests.

These results are shown in graphic form in diagrams 1, 2, 3 and 4. In these diagrams the horizontal lines represent the grades, the vertical lines the tests and the figures at the points of intersection the standard scores of the different grades in the indicated tests. The broken line represents the class scores as determined by this series of tests.

### Comparison of Standard and Class Scores

Table 1—Cleveland Survey Tests

Test	Standard Scores		Class Scores	
	Rts.	Ac.	Rts.	Ac.
A	29.8	99	24.5	99
E	7.8	94	5.2	93
J	5.6	78	3.7	70
M	5.3	76	4.6	87
B	25.2	99	18.2	95
F	10.2	90	7.1	83
C	19.7	89	16.3	87
G	6.9	88	5.5	90
L	4.7	69	3.6	69
D	22.3	97	18.7	98
I	4.7	84	2.8	70
K	10.8	95	7.6	94
N	2.4	81	1.5	68
H	9.3	77	5.6	89
O	5.7	68	3.5	47

Table 2—Monroe Tests.

Test	Standard Scores		Class Scores	
	Ats.	Ac.	Ats.	Ac.
1	12.7	100	12.5	100
7	5.4	79	4.9	81
5	6.1	66	5.4	62
2	8.9	100	7.9	100
9	8.5	97	8.1	100
3	6.2	84	5.6	86
8	6.5	73	6.1	81
10	6.6	82	4.9	90
4	4.6	88	4.9	100
6	4.5	100	3.4	100
11	3.4	68	3.0	100
12	9.8	73	7.8	76
15	8.5	59	6.5	76
13	7.8	71	6.8	81
14	13.5	75	9.6	93
16	8.5	59	9.7	82

Table 3—Woody Addition Scale

No. of Problem	No. Getting Each Prob.	% Getting Each Prob.
1.....	58	98
2.....	59	100
3.....	59	100
4.....	59	100
5.....	58	98
6.....	58	98
7.....	58	98
8.....	58	98
9.....	58	98
10.....	56	95
11.....	56	95
12.....	55	93
13.....	59	100
14.....	55	93
15.....	54	92
16.....	55	93
17.....	52	88
18.....	55	93
19.....	54	92
20.....	53	90
21.....	47	80
22.....	41	70
23.....	54	92
24.....	49	84
25.....	53	90
26.....	47	80
27.....	51	87
28.....	53	90
29.....	44	75
30.....	43	73
31.....	37	63
32.....	45	76
33.....	36	61
34.....	48	81
35.....	36	61
36.....	36	61
37.....	30	51
38.....	24	34

Standard Score, 9.01; Class Score, 8.76

Table 4—Woody Subtraction Scale

No. of Problem	No. Getting Each Prob.	% Getting Each Prob.
1.....	58	98
2.....	59	100
3.....	58	98
4.....	59	100
5.....	59	100
6.....	59	100
7.....	59	100
8.....	58	98
9.....	59	100
10.....	59	100
11.....	57	96
12.....	59	100
13.....	58	98
14.....	57	96
15.....	55	93
16.....	57	96
17.....	53	90
18.....	54	92
19.....	50	85
20.....	53	90
21.....	44	75
22.....	54	92
23.....	49	84
24.....	51	87
25.....	43	73
26.....	45	76
27.....	37	63
28.....	45	76
29.....	51	87
30.....	45	76
31.....	39	66
32.....	31	52
33.....	42	71
34.....	36	61
35.....	40	68

Standard Score, 7.64; Class Score, 7.99



Table 5—Woody Multiplication Scale

No. of Problem	No. Getting Each Prob.	% Getting Each Prob.
1.....	58	98
2.....	59	100
3.....	59	100
4.....	59	100
5.....	59	100
6.....	59	100
7.....	58	98
8.....	59	100
9.....	55	93
10.....	56	95
11.....	58	98
12.....	58	98
13.....	51	86
14.....	58	98
15.....	56	95
16.....	44	75
17.....	53	90
18.....	54	92
19.....	55	93
20.....	55	93
21.....	56	95
22.....	56	95
23.....	54	92
24.....	53	90
25.....	48	81
26.....	45	76
27.....	53	90
28.....	50	85
29.....	54	92
30.....	51	87
31.....	52	88
32.....	43	73
33.....	46	78
34.....	42	71
35.....	34	57
36.....	34	57
37.....	36	61
38.....	25	42
39.....	27	46

Standard Score, 7.93; Class Score, 8.19

Table 6—Woody Division Scale

No. of Problem	No. Getting Each Prob.	% Getting Each Prob.
1.....	55	96
2.....	57	100
3.....	57	100
4.....	57	100
5.....	57	100
6.....	57	100
7.....	57	100
8.....	55	96
9.....	55	96
10.....	57	100
11.....	55	96
12.....	55	96
13.....	51	89
14.....	57	96
15.....	52	91
16.....	51	89
17.....	52	91
18.....	41	68
19.....	51	89
20.....	48	84
21.....	53	93
22.....	49	86
23.....	36	63
24.....	43	75
25.....	42	74
26.....	44	77
27.....	49	86
28.....	45	79
29.....	34	60
30.....	36	63
31.....	39	68
32.....	43	75
33.....	36	63
34.....	33	58
35.....	22	39
36.....	8	14

Standard Score, 7.16; Class Score, 7.15

As a whole the group made the poorest showing in the Cleveland tests and the best in the Woody tests. This is undoubtedly due in part to the fact that the Cleveland tests were given first. It also indicates that the Cleveland standards are higher than either of the others. In the Cleveland tests the scores are all below standard; only one of them reached seventh grade standard, five are between seventh and sixth, seven between sixth and fifth, and two below fifth grade.

In the Monroe tests the score in one test is above standard, those in six tests are between seventh and eighth grade standards, and those in the three remaining tests are below sixth grade standards. On the Woody scale three are above standard and one between seventh and eighth grades.

There is then, even in this general statement, a serious discrepancy between the results obtained from the Woody scales and those obtained from the other two tests. Using the first named the teacher or supervisor would be led to the conclusion that these pupils did not need much more drill on the fundamentals. Using either of the others he would come to exactly the opposite conclusion.

But leaving the standards out of consideration let us see how the results agree as to the strength or weakness of the group tested in the different operations. Both the Cleveland and the Monroe tests show weakness in addition, the former to a greater extent than the latter, a lesser degree of weakness in subtraction and multiplication and irregularity in division and in fractions. The Woody tests agree with this showing in a general way, but they put subtraction considerably above any of the other operations.

Turning now to a study of the particular abilities in the various operations let us see what the different tests show. Test A, Cleveland, shows the group to be below sixth grade attainment in knowledge of addition combinations. The Monroe tests do not include problems of this character, but the Woody addition scale has two problems, Nos. 1 and 7. Neither of these shows any weakness here as both were solved correctly by all but one member of the group.

Test E, Cleveland, addition of 5 figure columns of single digits, indicates slightly better than fourth grade attainment, the weakest point in addition. Test 1, Monroe, 3 figure columns of single digits, shows between seventh and eighth grade attainment, the highest point in addition. Of course these tests are not identical in character and these results seem to indicate that they are not even of the same type. Problem 2, Woody addition scale, a column of three figures, was solved correctly by every member of the group, showing no weakness in this character of work.

Test J, Cleveland, addition of long columns requiring the bridging of the memory span, shows a score below fifth grade attainment, but slightly better than test E. Test 7, Monroe, gives a score below seventh grade standard, the weakest point in addition. The Woody scale does not give a problem of this character.

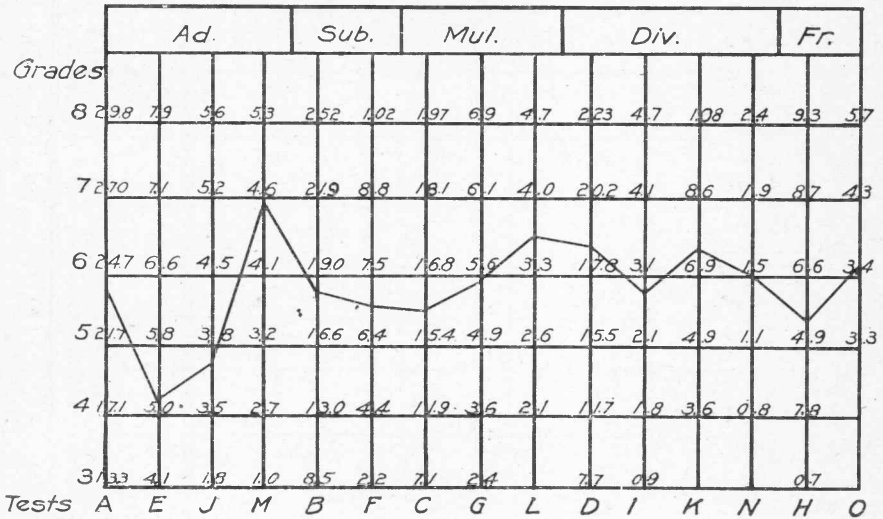
Test M, Cleveland, column addition four numbers wide and five deep, gives a score equal to seventh grade standard, the highest point in addition. Test 5, Monroe, of exactly the same character, also gives a score equal to seventh grade standard. Problem 18, Woody addition scale, was solved correctly by 93% of the class, a showing which agrees fairly well with the other two results.

Test B, Cleveland, subtraction combinations, shows a score a little below sixth grade. The Monroe tests do not include this type, but problems 1 to 7 and problem 10, Woody subtraction scale, show no weakness at all, being solved correctly by practically every member of the class.

Test F, Cleveland, subtraction involving borrowing, gives a score between fifth and sixth grade standards. Test 9, Monroe, gives a score between seventh and eighth grade standards. Problems 16, 17, 18, 19 and 23, Woody sub-

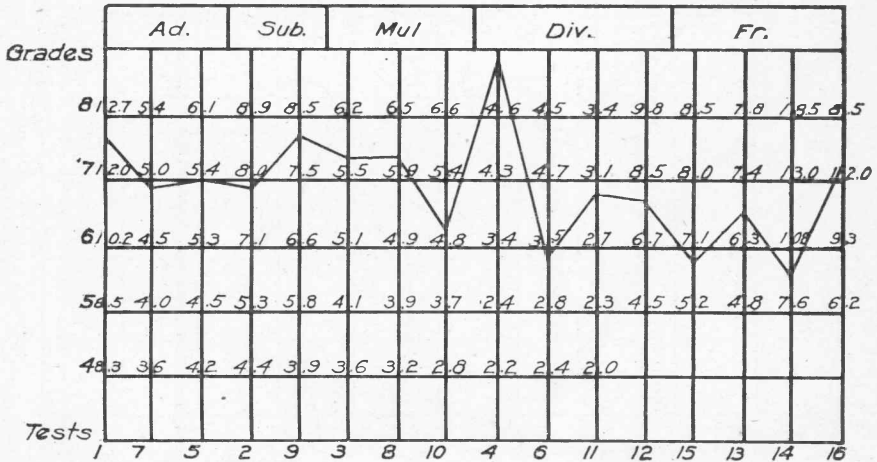
### DIAGRAM 1

Median Scores in Rights, Cleveland Test



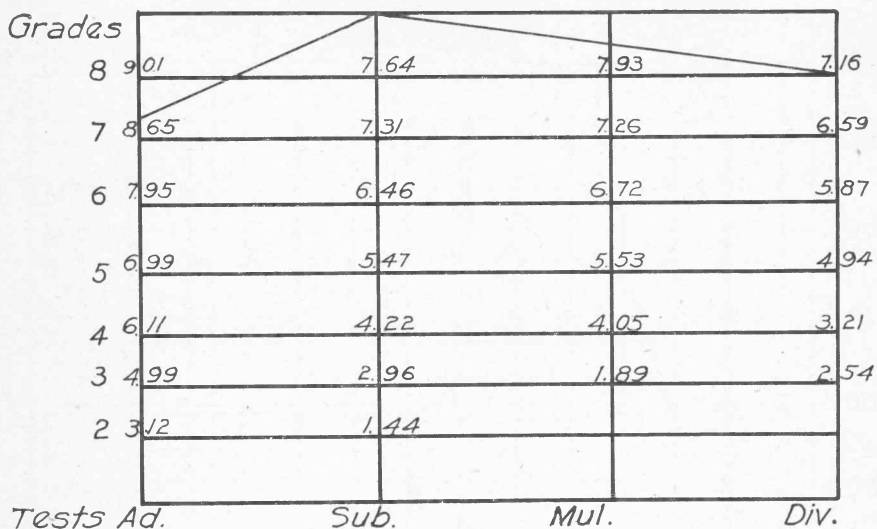
### DIAGRAM 2

Median Scores in Attempts, Monroe Test



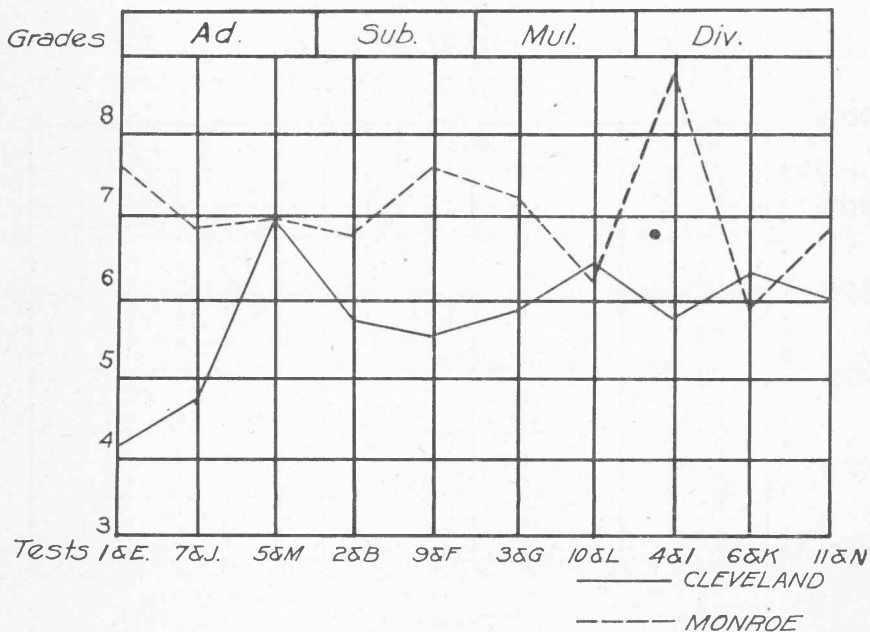
### DIAGRAM 3

Class Scores, Woody Scales



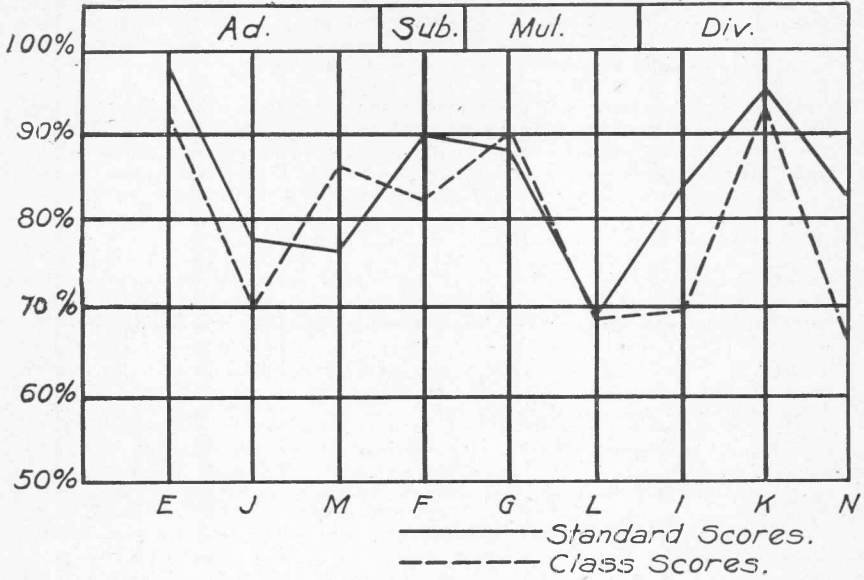
### DIAGRAM 4

Cleveland and Monroe Medians



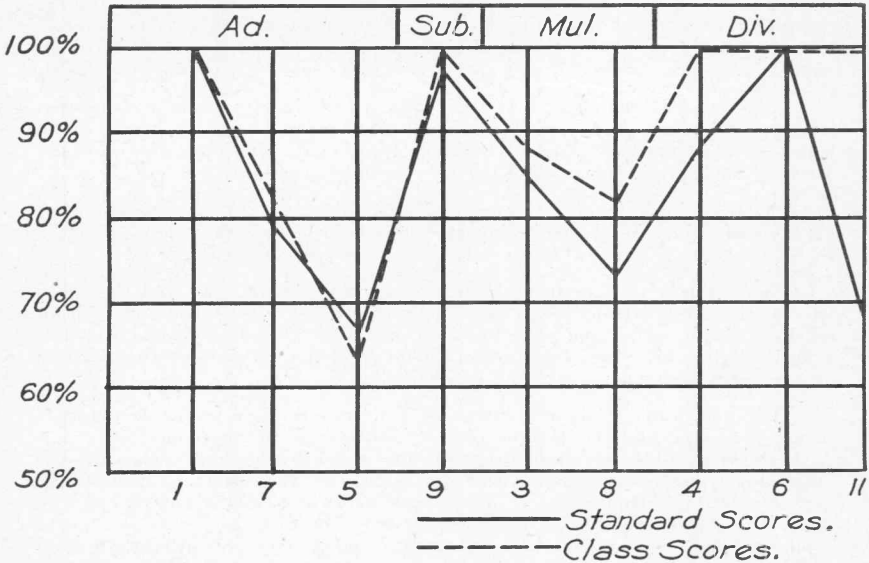
### DIAGRAM 5

Accuracy Graphs, Cleveland Test



### DIAGRAM 6

Accuracy Graphs, Monroe Test



traction scale, were solved correctly by 96, 90, 92, 85 and 84 per cent, respectively, or an average of 89 per cent, which indicates a weakness comparable to that shown by the Monroe test.

Test C, Cleveland, multiplication combination, places the children in this group below sixth grade standard. The Monroe tests do not include this type, and the Woody multiplication scale problems 1 to 4 and 7 again fail to show any weakness.

Test G, Cleveland, multiplication of numbers of 4 digits by a single digit, rates the group a little below sixth grade standard. Test 3, Monroe, the same kind of exercises, rates them a little below seventh grade, while problems 8, 9, 10, 11, 12, 13 and 16, Woody multiplication scale, show scores of 100, 93, 95, 98, 86 and 75 per cents, respectively. Of these 13 and 16 show decided weakness. These require multiplication by 8 and 9. Here again, then, the three tests are in substantial agreement.

Test L, Cleveland, multiplication by numbers of two digits, gives the highest score made in the Cleveland multiplication tests, midway between sixth and seventh grades. Test 8, Monroe, places the score above seventh grade standard, and is also the best score made in multiplication. Problems 15 and 26, Woody multiplication scale, give scores of 95 and 76 per cents, respectively, slightly better than the scores for the preceding type. The three tests here show substantial agreement.

Test D, Cleveland, division combinations, shows the class to be below seventh grade standard, while problems 1 to 5, 7, 8, 9 and 12, Woody division scale, give scores indicating practically no weakness at all.

Test I, Cleveland, short division, gives a score below sixth grade standard, while test 4, Monroe, gives a score above eighth grade standard. This is a discrepancy that is difficult to account for. It would seem to indicate that the small amount of practice the children received in short division in taking the Cleveland tests made a decided difference in their ability to perform this process when they took the second test. Problem 4, Woody division scale, gives a score of 96 per cent. Examination of the papers, however, shows that most of the children used the process of long division, so that the result gives no information concerning their ability in short division.

In test K, Cleveland, long division with small units digits in the divisor, the children scored a little above sixth grade standard. In test 6, Monroe, they scored a little below sixth grade. In problems 23 and 33, Woody division scale, they scored 63% and 63% respectively, a close agreement throughout.

Test N, Cleveland, long division, where the units digit in the divisor is large, shows sixth grade standard. Test 11, Monroe, shows a score a little below seventh grade standard. Problem 16, Woody division scale, shows a score of 89%. Here again we have substantial agreement.

The tests in fractions are not enough alike in type to make direct comparisons of value. In the main, however, all three of the tests show the class to be weak in their knowledge of the operations with fractions.

There is lack of agreement then between the Woody scale and the other two on the combinations in all four fundamental operations, column addition of three single digits, and short division, and substantial agreement in addition involving carrying, subtraction involving borrowing, multiplication by one or more digits, long division, and fractions.

Diagrams 5 and 6 show a comparison of the accuracy scores as obtained in the Cleveland and the Monroe tests in those types of problems that occur in both sets. Both of these graphs show a much closer approach to the standards than was found in either the rights for the Cleveland test or the attempts for the Monroe tests. They both indicate that the children do not vary from the standards so much in accuracy as they do in speed. In the main the two tests show rather close agreement as to results, the excep-

tions being in short column addition involving carrying, where the Cleveland test shows the higher degree of accuracy, short division, where the Monroe test gives the better showing, and long division with large units digits in the divisors, where the Monroe test again gives the better showing. The decided increase in accuracy in division shown by the Monroe tests over the Cleveland tests is probably due to the fact that by the time the children came to the Monroe tests in division they had discovered the fact that the division examples all come out without a remainder. This enabled them to detect errors and correct them.

The Woody scales do not give any adequate measure of accuracy.

This study shows then that there is a substantial agreement between the results obtained by using the Cleveland tests and those obtained by using the Monroe tests. The Monroe standards, however, seem to be distinctly lower than the median scores obtained by the use of the Cleveland tests in Cleveland, Grand Rapids and St. Louis. Considering the fact that this study was made in October while the Monroe standards are mid-year results it would seem that they are too low.

The Woody scale, on the other hand, gives results that differ materially from those obtained by the use of the other two tests. As has already been noted this scale places the class above standard in everything but addition and not far below standard even there, while both the others show them to be distinctly below standard in all the operations. Then it fails altogether to show weakness in the combinations and in the simple problems, a weakness clearly shown by both of the other tests. It fails also to show differences in the abilities in these simpler operations of the different children in a class. That marked differences do exist was clearly shown by the distributions on the score sheets for both the other tests. The reason for this failure is not far to seek. Even if a child does not know his combinations he can count up the results in the simpler problems and thus secure correct results if he has plenty of time, and the Woody scales give practically unlimited time, for most of the children finish each of these scales in less than the twenty minutes allowed.

The Woody scale would seem to be deficient then in several ways: (1) a test in fundamental operations should measure both speed and accuracy, as well as a knowledge of the process involved, (2) the number of problems of each type is too few to give an adequate measure of ability, (3) it fails to show individual differences between pupils or even classes in all of the simpler processes, (4) there is a lack of definiteness in the results obtained for the particular weakness (for instance, the results of the tests in this study show that the class is below standard in addition, but they do not tell us, except in a very indefinite way, how they compare with other eighth grade classes in column addition, in bridging the memory span, etc.), (5) its results are of little value in measuring individuals, while both the other tests can be used to great advantage in this regard. On the other hand the Woody test has some good points. It covers a wider field than either of the other tests. While it fails on the combinations and simple exercises, at least for upper grade work, it does show strength or weakness in the more important exercises, the ones that are most needed. It is in fact a test of neither speed nor accuracy, but rather a test of power. It can be used to advantage to determine which processes have been mastered by a class and which ones are still beyond them.

The Cleveland tests could be considerably improved by putting the four fundamental operations in fractions into four different tests instead of running them together in the two tests, H and O. The arrangement in test H is particularly bad. In all of the tests up to this point the pupils have had a single operation to perform, so that many of them when they come to test H and start in by adding the first two fractions, go right on and add all the others. So marked is this tendency that the results obtained from this test as it stands are practically worthless.

The Monroe tests could be greatly improved by printing the exercises in multiplication and long division so there would be more space for the work. As they are they make the work so crowded that the children are seriously hampered.

This study shows, then, that tests of the Cleveland Survey type are superior for the purpose of diagnosing strength or weakness in the operations of arithmetic and that those of the Woody type are decidedly inferior in this regard. They have their principal value in determining what processes have been mastered by any given class. Both types are valuable, but each should be used in the kind of diagnosis for which it is best fitted.



Colorado  
State Teachers College  
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ALUMNI REGISTER

1891 - 1919



GREELEY, COLORADO

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under the Act of August 24, 1912

JOHN GRANT CRABBE, A.M., Pd.D., LL.D.  
President of the College

**FACULTY ALUMNI COMMITTEE**

1919-1920

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## PREFACE

The Faculty Alumni Committee has undertaken to compile the data for the first Alumni Register. It purports to give the names and addresses of the graduates of the Colorado State Teachers College and its forerunner the Colorado State Normal School from its establishment in 1891 to the summer of 1919, inclusive.

This has been a stupendous task; and although the final result is imperfect, it is offered with the hope that it may indicate, in a way, the growth of the College during her thirty years of existence; that it may be useful to our friends and fellow graduates; and that it may assist in establishing *esprit de corps* among us.

The work has been directed by the secretary of the committee, Mr. Albert F. Carter, and its successful completion is wholly due to his efficient, devoted work. The first step was to compile a list of the graduates of each class from the Registrar's records and the year books. A questionnaire to obtain information concerning permanent and teaching addresses, positions held, academic degrees secured and the like, was then sent to all graduates for whom an address was recorded. About one-half of the number responded, not only stating their own records but giving directly or indirectly information concerning others who were lost to us. School directories in many western towns and cities, and available Colorado city and telephone directories were carefully gone over. The membership list of the Colorado Teachers Association was checked. Lists of the missing were posted on the bulletin boards and published in the Alumni Courier. Several members of the faculty who have been here for many years supplied information. The members of the student body and citizens of Greeley very generously assisted. The most remote and elusive clues were persistently followed up with sometimes as many as seven or eight letters. In all about 9,000 letters were sent out. The record is still incomplete but it is earnestly hoped that it may be completed through the co-operation of the alumni who use this Register. As a result of the year's work, we have an alphabetical alumni mailing list and an alumni record by classes. These data are filed in Mr. Carter's office in the library, where visiting alumni are always welcome. Inquiries concerning the members of the Alumni will be cheerfully answered by the Secretary of the Committee.

We publish the Register fully aware of its inaccuracies. It affords a beginning, however, which can be supplemented year by year through revisions and additions. It now contains the names of 4,412 persons who have been granted diplomas by the institution. Thirty-three have taken the A. M. degree; 487, the A. B. degree; there is a grand total of 5,225 diplomas granted or degrees conferred exclusive of the two- and three-year courses of 1919. There are two lists in this Register: First, the complete alphabetical list, including names and date of first graduation; second, an alphabetical list by classes including name, married name and present occupation. It will be noted that the official school year ends June thirtieth, hence any student graduating at any time during the year after the regular June Commencement is listed as a graduate of the class in the succeeding year.

The committee acknowledges with gratitude the faithful co-operation of President Crabbe and his secretary, Mr. J. P. Culbertson, in the accomplishment of this work.

RAE BLANCHARD,  
Chairman



# Alumni Register

1891-1919

Abbott, Vivian.....	1906	Anderson, Agnes .....	1919
Abrams, Nelle Ruth.....	1911	Anderson, Anna L.....	1915
Ackerman, Lloyd.....	1917	Anderson, Bertha M. G.....	1914
Adams, Birdie F.....	1914	Anderson, Bessie .....	1918
Adams, Edna Matilda.....	1913	Anderson, Blanche .....	1916
Adams, Ella .....	1918	Anderson, Dagmar .....	1914
Adams, George D.....	1915	Anderson, Edna .....	1917
Adams, Helen .....	1897	Anderson, Eloise .....	1907
Adams, Mary .....	1901	Anderson, Emma L.....	1899
Adams, Roxana M.....	1905	Anderson, Esther .....	1915
Adams, (Mrs.) Susan Gale.....	1914	Anderson, Florence .....	1918
Adams, Vera .....	1915	Anderson, Grace Mabel.....	1906
Addington, (Mrs.) Bella Draper.....	1912	Anderson, Hazel .....	1919
Addleman, Minnie B.....	1915	Anderson, Ida M.....	1918
Adkinson, Mary E.....	1913	Anderson, M. Dorothea.....	1910
Agnew, Edna .....	1916	Anderson, Georgina.....	1908
Agnew, Minerva.....	1896	Anderson, Mary Elizabeth.....	1907
Ahern, Margaret .....	1913	Anderson, May .....	1917
Ahlberg, Ingrid.....	1918	Anderson, Myra M.....	1899
Ahrens, Hazel V.....	1907	Anderson, Myrtle E.....	1910
Ailinger, Elsie .....	1913	Anderson, Nettie .....	1907
Akey, Ethel.....	1919	Anderson, Pearle C.....	1906
Alan, Edwina Marie.....	1908	Anderson, Virginia Frances .....	1915
Albee, Emma.....	1900	Andrew, Geneva.....	1913
Albert, Ruby.....	1907	Andrews, Adell .....	1901
Albertson, Dora E.....	1913	Andrews, Margaret .....	1918
Albourn, Laura Gretchen.....	1915	Andrews, Sadie .....	1915
Albright, J. H.....	1914	Angel, Byrda.....	1915
Alderson, H. Alke.....	1914	Angove, Ethel.....	1910
Aldrich, Alice.....	1909	Ankeney, Lillian.....	1913
Alexander, Adaline M.....	1914	Annett, Olive.....	1918
Alexander, Elizabeth .....	1914	Annis, Margie.....	1912
Alexander, Elsie Lavinia.....	1908	Anthony, Anna .....	1902
Alexander, Grace L.....	1904	Anthony, Florine .....	1917
Alexander, Lucile .....	1917	Anthony, Hazyl Katherine .....	1911
Alexander, Mae .....	1917	Appleby, Carrie Louise.....	1906
Alexander, Raymond P.....	1905	Arble, Maurine .....	1915
Allan, Jamie.....	1913	Arbuthnot, Melissa.....	1907
Allard, Lucille.....	1912	Archibald, Allie E.....	1908
Allen, Alethea.....	1912	Ardell, Georgia.....	1912
Allen, Alice .....	1902	Arfsten, Rose.....	1910
Allen, Dorothy A.....	1910	Arkwright, Charlotte .....	1917
Allen, Florence .....	1916	Armsby, Alice M.....	1910
Allen, Grace E.....	1907	Armstrong, Ada.....	1910
Allen, Harland H.....	1917	Armstrong, Mabel .....	1907
Allen, Louisa T.....	1918	Arnold, Emily .....	1917
Allen, Lucretia .....	1916	Arnold, Frank .....	1912
Allen, Mame C.....	1895	Arnold, Gertrude .....	1917
Allen, Mary Agnes.....	1917	Ashback, (Mrs.) Margaret.....	1900
Allen, Myrtle Camp.....	1918	Ashburn, (Mrs.) Emma.....	1910
Allen, Richard .....	1915	Ashburn, F. E.....	1910
Aller, Blanche Crete.....	1919	Ashby, Carrie M.....	1913
Alles, Adam .....	1918	Ashley, Helen M.....	1898
Alley, Urania.....	1910	Ashton, E. Adeline.....	1912
Allin, Jessie.....	1914	Asmussen, Karina.....	1903
Allison, Grace Elizabeth.....	1906	Atherly, Varina.....	1903
Allman, Clifford.....	1917	Atkinson, Mary Agnes.....	1913
Allnut, Frederic.....	1901	Auble, Stella.....	1914
Allsworth, Brainard H.....	1908	Augur, Charlotte C.....	1907
Allyn, Emily.....	1903	Augustine, Irene Winifred.....	1919
Almond, Cora B.....	1910	Augustine, Mabel.....	1913
Alps, George W.....	1904	Auld, Mae.....	1906
Alps, Rosaline .....	1906	Aulsebrook, Martha.....	1906
Ames, Winifred .....	1916	Ault, C. B.....	1896
Amick, M. Ethel.....	1899	Aultman, (Mrs.) L. E.....	1910
Amoss, Georgina.....	1910	Aultman, Lela May.....	1918
Amsbury, Jeannette.....	1918	Austin, Mae Lois.....	1913
Amsbury, Katherine.....	1919	Austin, Muriel Amy.....	1917
Amsden, Elmer E.....	1898	Aux, Minerva.....	1913
Anderson, Addie A.....	1918		

Avers, Laura Jane	1912	Bartels, Gertrude	1917
Avers, Lillye Mae	1914	Bartels, Harriet B.	1899
Avison, Florence	1909	Bartholomew, Beula Cornelia	1913
Avison, (Mrs.) Jennie	1912	Bartholomew, Ione	1916
Axtens, Stephen Arthur	1919	Bartholomew, (Mrs.) Mintie A.	1917
Ayers, Lucy E.	1903	Bartlett, Mary	1915
Baab, Bertha M.	1912	Bartlett, Ruella	1913
Babcock, Elizabeth	1914	Barton, Minnie Agnes	1918
Babcock, Helen	1917	Bashaw, Theodore G.	1914
Bacharach, Bernice B.	1908	Bashor, Esta May	1912
Bachman, Rosa E.	1914	Bashor, Mary Alma	1913
Bagley, Helen	1910	Bashor, Sarah E.	1899
Bailey, Bessie May	1906	Basse, Marie J.	1912
Bailey, D. Lena	1907	Bassler, Helen	1914
Bailey, Esther M.	1908	Bassler, Mary Barber	1906
Bailey, (Mrs.) Latilla	1907	Bate, Helen	1918
Bailey, Louise	1901	Bateman, Kathryn	1915
Bailey, Lulu Ethel	1911	Bateman, Mabel	1917
Bailey, (Mrs.) Mary E.	1906	Bates, Helen Louise	1918
Bailey, Maud	1910	Bauer, Flora	1909
Bailey, W. L.	1902	Baum, Pearl Standley	1912
Baird, Belle	1914	Baum, Ruth E.	1913
Baird, Florence	1914	Baxter, Beulah	1916
Baird, Lavinia	1906	Baxter, Elizabeth	1917
Baird, Myrtle	1909	Baxter, Isabella	1915
Baird, Nellie	1913	Bay, Minnie	1903
Baird, Olive A.	1907	Bayer, Mamie	1917
Baird, Ruth Louisa	1908	Bayles, Maude	1916
Baker, Ada A.	1916	Beach, Rae L.	1906
Baker, (Mrs.) Bertha L.	1913	Beal, Elizabeth	1906
Baker, Beulah	1918	Beamer, Alice E.	1915
Baker, Earl G.	1913	Beamer, Clara	1918
Baker, (Mrs.) E. M.	1910	Beamer, Lelah N.	1914
Baker, (Mrs.) Florence T.	1911	Bean, Elizabeth K.	1913
Baker, Frances	1915	Bean, Estella	1919
Baker, Georgia	1909	Bean, Gertrude	1916
Baker, Ghaska D. J.	1914	Bear, Ethel	1913
Baker, Grace E.	1907	Beardsley, Earl P.	1903
Baker, Jessie L.	1914	Beardsley, Edith	1909
Baker, Mabel	1914	Beardsley, Eugene Darwin	1906
Baker, Roy Jacob	1912	Beardsley, Inez Mabelle	1911
Baker, Ruth	1915	Beardsley, Leda M.	1910
Baker, W. E.	1917	Beattie, Jesse F.	1910
Baker, W. L.	1912	Beattie, Nettie	1912
Baker, Winifred	1919	Beatty, Mary Emaline	1908
Bakke, Ella C.	1916	Beavers, (Mrs.) Etta	1914
Balch, Edith J.	1903	Bechtolt, Nora	1917
Balch, Mabel	1910	Beck, Alethe Olive	1919
Baldauf, Edna	1915	Beck, Catherine	1908
Baldwin, Florence Elizabeth	1912	Beck, Lillian	1915
Baldwin, Mildred Green	1912	Beck, Lulu Mae	1915
Baldwin, Ruth	1918	Beckford, Edith R.	1905
Ball, Katherine Alice	1912	Bedford, (Mrs.) Lora M.	1915
Ball, (Mrs.) Mary	1909	Bedford, Merton I.	1910
Ball, Maud	1905	Beeten, Ruby M.	1912
Ball, Minnie	1916	Bell, Bessie	1916
Bailler, Theresa	1909	Belden, Ethel B.	1910
Bandy, Pearl	1903	Bell, Clara E.	1915
Barber, Florence	1916	Bell, Currie	1911
Barbour, Ethel M.	1915	Bell, Evelyn	1910
Bardwell, Anna	1916	Bell, Juanita A.	1908
Bardwell, Esther	1918	Bell, Rose Isabel	1912
Barker, Anna	1919	Bell, John R.	1896
Barker, Miriam Evelyn	1917	Bell, (Mrs.) Viola	1916
Barker, Myrtle	1915	Bellmar, Marie	1912
Barkley, Nell M.	1915	Belmar, Gertrude	1914
Barmettler, Alice	1903	Belschner, Pauline Helen	1917
Barnard, Floy	1915	Benedict, (Mrs.) Cora Taylor	1914
Barnard, Gladys B.	1917	Benight, Cecile	1916
Barnard, Margaret	1901	Benjamin, Heber Carwyn	1919
Barnard, Nell	1915	Bennett, Dorothy	1917
Barnes, (Mrs.) Abbie G.	1916	Bennett, Edna	1912
Barnes, Frances M.	1918	Bennett, Elizabeth A.	1914
Barnes, Ida	1914	Bennett, Gertrude	1910
Barnes, Katherine E.	1913	Bennett, Nellie L.	1910
Barnes, Mabel	1913	Bennett, Orpha	1915
Barnett, Mary H.	1914	Bennett, Pearl	1917
Barouch, Eulalia	1907	Bennett, Ralph	1918
Barr, F. E.	1908	Benning, Mabel P.	1908
Barry, Lois M.	1907	Benson, Franc V.	1897
Bartels, Bina	1898	Benson, (Mrs.) Miriam	1918

Benston, Hilma C.....	1905	Bonham, Bonnie .....	1908
Bent, Clinton .....	1901	Bonham, Madora L.....	1911
Bentley, Frances .....	1916	Boone, Faye Nelson.....	1912
Bentley, Keturah .....	1909	Booth, (Mrs.) Florence.....	1917
Benton, (Mrs.) Carrie .....	1915	Boreing, Maud .....	1910
Benton, Grace .....	1910	Boresen, Emma E. ....	1912
Benton, Lila E. ....	1913	Boresen, Martha .....	1916
Bentson, Hilder .....	1914	Borgman, Frances.....	1913
Bentson, Hilma .....	1906	Boring, Estella.....	1914
Berg, Eva Matilda.....	1908	Boston, Ina .....	1917
Bergen, Marjorie M.....	1918	Botkin, Mabel.....	1915
Berger, Evangeline .....	1914	Botting, Ethel.....	1912
Berger, Florence .....	1896	Bourg, Mamie.....	1917
Bergstrand, Nellie.....	1908	Bourke, Edward.....	1913
Berkey, Edna .....	1907	Bourn, Frieda E. Z.....	1915
Berliner, Belle.....	1918	Bowen, Claudia .....	1902
Bernard, C. R.....	1909	Bowen, Martha C.....	1906
Berner, Ola.....	1918	Bowland, E. W.....	1914
Berryman, Dorothy .....	1910	Bowland, Sue .....	1914
Berryman, Eliza E.....	1891	Bowles, Jessie.....	1909
Bertolett, Effie M.....	1915	Bowling, Beulah .....	1914
Besser, Grace B.....	1907	Bowman, Emily W.....	1917
Best, Mary W.....	1914	Bowman, Julia B.....	1902
Beswick, Dolphin .....	1901	Bowman, Lena .....	1916
Betts, D. Ethel.....	1911	Boyd, Carrie .....	1909
Bickel, Edith.....	1916	Boyd, Florence A.....	1914
Bickett, Mabel.....	1914	Boyd, Helen .....	1905
Biddle, Ruth.....	1914	Boyd, Marjorie .....	1914
Biebush, Beatrice.....	1917	Boyd, Maud .....	1909
Biegler, (Mrs.) H. K.....	1906	Boyd, Sela M.....	1896
Biggerstaff, Bessie.....	1916	Boyer, Ella F.....	1906
Biggs, Bertha M.....	1913	Boyer, Monta J.....	1918
Biggs, Isa Mae .....	1917	Boylan, Daisey D.....	1902
Bigham, Helen Gould.....	1919	Boyle, Helen T.....	1918
Bigler, Lydia A.....	1914	Boyle, Myrtle G.....	1914
Billington, Maud B.....	1907	Bracewell, Cora .....	1902
Billington, W. Emma.....	1916	Bracewell, (Mrs.) Laverna Goodwin.....	1906
Birkins, Grace .....	1918	Bracken, Carrie.....	1913
Bishop, Ida F.....	1913	Bradburn, Edith.....	1910
Bishop, Ruth .....	1913	Brady, Agnes H.....	1918
Bispham, Anna Nutz.....	1917	Brady, Emma .....	1915
Black, Jane .....	1914	Bragg, Bernice E.....	1915
Black, W. W.....	1909	Bragg, Lottie .....	1909
Blackmore, (Mrs.) Lizzie K.....	1914	Bragg, Stella .....	1917
Blaesi, Mary C.....	1907	Brainard, Edith .....	1912
Blagg, Blanche.....	1919	Brainard, Fay Edwin.....	1908
Blain, Maud.....	1914	Brainard, Iona .....	1908
Blaine, William D.....	1905	Brake, Edith L.....	1908
Blair, Bessie B.....	1913	Brake, Jane Elizabeth.....	1912
Blair, Clara .....	1917	Brand, Lenore.....	1913
Blair, Kate .....	1916	Brandhorst, Lillie Elizabeth.....	1919
Blair, Margaret .....	1915	Branson, Gladys.....	1916
Blair, Martha .....	1918	Braucht, Frank E.....	1899
Blair, (Mrs.) Minnie D.....	1917	Breene, Lillie.....	1912
Blair, Myrtle L.....	1908	Brennan, Lulu May.....	1907
Blaisdell, Edna I.....	1916	Bresse, Minnie.....	1900
Blake, Alta .....	1917	Breuer, Emma.....	1901
Blake, Helen .....	1907	Briggs, Agnes.....	1915
Blanchard, Rae E.....	1914	Briggs, Eunice .....	1918
Blandin, Ethel I.....	1907	Briggs, James A.....	1917
Blank, Martha Evelyn.....	1919	Briggs, Jennie M.....	1896
Bleasdale, Alice .....	1913	Briggs, Lola .....	1915
Bleasdale, Lilly L.....	1913	Briggs, Nellie .....	1917
Blickhahn, Blanche E.....	1913	Briney, Mabel V.....	1914
Bliefernich, Elizabeth .....	1918	Brink, Marion.....	1913
Bliss, Clara S.....	1891	Britt, Eldora.....	1910
Bliss, Lillian M.....	1896	Broad, Pearl L.....	1914
Bliss, Nellie M.....	1900	Broadbent, (Mrs.) Bettie L.....	1911
Block, Beatrice.....	1914	Broadbent, H. M.....	1911
Blumer, Henrietta.....	1910	Brockway, Alma M.....	1912
Blunt, Carrie E.....	1904	Brodbeck, Ada.....	1913
Boak, Fannie K.....	1914	Brodie, Angie .....	1918
Bock, Minnie.....	1911	Brodie, Frances.....	1917
Bodle, Veda.....	1903	Brody, Nora Ann.....	1916
Boggs, Ethel.....	1916	Broman, Anna Rae.....	1917
Bohn, Nellie.....	1918	Broman, Cora.....	1905
Boland, M. D.....	1913	Brooks, (Mrs.) Anna G.....	1916
Bond, Dell .....	1894	Brooks, Bernice .....	1916
Bond, Margaret .....	1916	Brooks, Byra .....	1914
Bonds, Flora .....	1918	Brooks, Ella .....	1908
Bonell, Benjamin Walter.....	1911	Brooks, Ida Belle .....	1914

Broquet, Prudence.....	1901	Burchsted, Laura N.....	1915
Brosius, Helen.....	1916	Burdick, Madonna.....	1915
Brown, Alta.....	1916	Burfield, Gail.....	1918
Brown, Anna Laura.....	1913	Burgess, Blanche.....	1912
Brown, Araba D.....	1905	Burgess, Edith.....	1898
Brown, Benjamin F.....	1907	Burgess, Elizabeth.....	1917
Brown, Dessie M.....	1907	Burgess, Grace Elizabeth.....	1906
Brown, Edith.....	1915	Burgess, Louise M.....	1917
Brown, Edith Lucile.....	1906	Burgess, Madge.....	1912
Brown, Elizabeth J.....	1910	Burgin, W. G.....	1913
Brown, Emily Virginia.....	1911	Burke, Alice.....	1914
Brown, Grace.....	1915	Burke, Lulu.....	1916
Brown, Gussie E.....	1914	Burkholder, Hazel H.....	1910
Brown, G. E.....	1914	Burkitt, Susie V.....	1908
Brown, Harriett Cecile.....	1911	Burks, A. L.....	1918
Brown, Julia Merriman.....	1911	Burks, Wm. B.....	1917
Brown, L. E.....	1900	Burnett, Fannie.....	1899
Brown, Lucille.....	1918	Burnett, Ruth.....	1894
Brown, Marjorie.....	1918	Burns, Jesse.....	1909
Brown, Mary L.....	1916	Burns, Margaret M.....	1906
Brown, Mona.....	1909	Burns, Margaret Vernon.....	1912
Brown, Rebecca.....	1895	Burns, Pearl M.....	1909
Brown, Rowena.....	1909	Burns, T. E.....	1897
Brown, Ruth A.....	1914	Burr, Eleanor.....	1909
Brown, Sadie Britton.....	1918	Burson, Viola.....	1916
Browne, (Mrs.) Augusta Erwin.....	1914	Burtis, Louise.....	1919
Browne, Doris.....	1913	Burwell, Laura.....	1910
Browne, Merge J.....	1905	Burwick, (Mrs.) Della.....	1914
Browning, Fern Evelyn.....	1919	Bush, Genevieve.....	1913
Browning, Violet.....	1917	Bush, Minnie M.....	1915
Brownlee, Sulvia.....	1897	Bashaw, Theodore G.....	1913
Brownlee, Teressa.....	1912	Bushnell, Ama E.....	1914
Brubaker, Irma.....	1917	Bushyager, Genetta.....	1904
Bruce, Helen.....	1918	Butcher, Arthur J.....	1906
Bruce, Margaret L.....	1916	Butler, Bernice B.....	1915
Bruce, Maude.....	1918	Butler, Effie.....	1914
Bruce, Nellie H.....	1915	Butler, Lora.....	1912
Bruckner, Clara.....	1917	Butler, Marian.....	1918
Bruckner, Grace E.....	1917	Butler, Mary.....	1918
Brunell, H. P.....	1916	Butler, Maud.....	1915
Brunner, Blanche.....	1916	Butler, May.....	1898
Brunner, Ruth.....	1917	Butscher, Louis C.....	1898
Bruns, Cora Carolyn.....	1908	Butterfield, Mary Ethel.....	1906
Brunton, Jessie.....	1918	Bybee, Carrie S.....	1893
Brush, Ada.....	1907	Bybee, W. F.....	1891
Brush, F. Thelma.....	1918	Byron, Blanche Beatrice.....	1908
Brush, Mary.....	1905	Byron, Helen Fern.....	1907
Brush, Ruth G.....	1905	Byron, Melvina.....	1914
Bryant, Fannie.....	1898	Cadwell, Alice.....	1910
Bryant, Mary Edna.....	1915	Cadwell, Ella.....	1914
Bryce, Marie B.....	1917	Cadwell, Gladys.....	1918
Bryson, Cleo.....	1916	Cage, Ladie A.....	1912
Buchanan, Lucile B.....	1905	Cagwin, D. C.....	1913
Buchert, Louise.....	1916	Cain, Florence.....	1917
Buck, Nellie.....	1916	Cain, J. Allen.....	1908
Buck, Vera.....	1917	Cain, Leona.....	1917
Buckland, Gertrude.....	1916	Cain, Martha J.....	1911
Buckley, Emma F.....	1904	Cairns, Agnes.....	1915
Bucks, Ada.....	1906	Calder, Henrietta.....	1900
Budd, Myrone D.....	1914	Caldwell, Hester M.....	1917
Budd, Ruth.....	1917	Caldwell, Irene M.....	1907
Budge, Jesse.....	1907	Calkins, Savilla.....	1917
Budin, Anna J.....	1911	Callahan, Bessie Mary.....	1917
Budin, Christina.....	1914	Callahan, Catherine.....	1916
Buffington, Lulu.....	1897	Callaway, June Inga.....	1908
Bugger, Edith M.....	1918	Callison, Cyrus O.....	1907
Bulger, Anna M.....	1914	Calloway, Esther A.....	1915
Bulger, Katherine.....	1913	Calvin, Nona Adelaide.....	1912
Bull, R. Lucile.....	1918	Cameron, Agnes.....	1896
Bullock, Anna Mae.....	1911	Cameron, Deta.....	1909
Bunger, Luda.....	1912	Cameron, J. Truby.....	1908
Bunker, Ada.....	1917	Cameron, William F.....	1896
Bunnell, Clara Elinor.....	1912	Camfield, Gladys.....	1915
Bunner, Clara.....	1914	Camp, Archibald L.....	1899
Bunner, Katherine.....	1913	Camp, Myrtle E.....	1909
Bunning, Elsie.....	1906	Campbell, Della.....	1913
Burbank, Myrtle E.....	1904	Campbell, Florence E.....	1899
Burbridge, Edgar.....	1914	Campbell, Hazel.....	1915
Burbridge, George.....	1918	Campbell, Helen.....	1914
Burch, Emma B.....	1917	Campbell, Jennie M.....	1904
Burchsted, Anna.....	1915	Campbell, John M.....	1915



Campbell, LeRoy E. .... 1914  
 Campbell, May C. .... 1914  
 Campbell, Ruth ..... 1917  
 Campbell, Ruth C. E. .... 1915  
 Campbell, Sadie ..... 1910  
 Campbell, Stella M. .... 1912  
 Campbell, Vera ..... 1916  
 Candlin, Percival R. .... 1917  
 Candor, Ethel. .... 1904  
 Canfield, Mary. .... 1918  
 Canning, Annetta ..... 1895  
 Cannon, Lucie ..... 1915  
 Capps, Evalyn ..... 1918  
 Carder, Ada ..... 1913  
 Carey, Elma Agnes ..... 1919  
 Carey, Nettie M. .... 1912  
 Carhill, Araminta. .... 1914  
 Carlett, Maude ..... 1917  
 Carlson, Anna ..... 1917  
 Carlson, Edna M. .... 1912  
 Carlson, Eloise Ida Marie. .... 1918  
 Carlson, Emma ..... 1909  
 Carlson, George A. .... 1898  
 Carlson, Margaret H. .... 1907  
 Carlson, Rose M. .... 1917  
 Carlson, Thea ..... 1913  
 Carne, Mildred C. .... 1915  
 Carney, Elizabeth ..... 1919  
 Carney, Florence ..... 1914  
 Carney, Gena ..... 1912  
 Carnine, Stella M. .... 1903  
 Carpenter, Anna ..... 1907  
 Carr, Lulu V. .... 1914  
 Carr, Minnie Pearl ..... 1912  
 Carrel, Mabel. .... 1904  
 Carrell, (Mrs.) Katherine ..... 1918  
 Carrell, Mary ..... 1917  
 Carroil, (Mrs.) Ella K. .... 1913  
 Carson, Alma ..... 1916  
 Carson, Jennie ..... 1915  
 Carson, Jessie ..... 1905  
 Carson, Madge ..... 1905  
 Carson, Myra A. .... 1917  
 Carter, Albert F. .... 1911  
 Carter, Arthur ..... 1916  
 Carter, Carrie ..... 1901  
 Carter, Ethel I. .... 1902  
 Carter, Ethel M. .... 1908  
 Carter, Lina ..... 1901  
 Carter, Ruth F. .... 1916  
 Cartwright, Edna ..... 1907  
 Cartwright, Mabel ..... 1904  
 Cary, Clara Leta. .... 1911  
 Cary, Sue M. .... 1915  
 Case, Bertha ..... 1916  
 Case, Ruby ..... 1919  
 Casey, Ethel S. .... 1907  
 Casey, Josephine ..... 1917  
 Casey, Veronica ..... 1917  
 Cash, E. C. .... 1912  
 Cassill, Marguerite ..... 1915  
 Castek, Elizabeth. .... 1912  
 Catherwood, Grace A. .... 1894  
 Cassidy, Eva ..... 1904  
 Castle, Edith ..... 1917  
 Catren, Mary Louise. .... 1911  
 Caven, Lois T. .... 1908  
 Caverly, Edna. .... 1917  
 Cazin, Frances. .... 1916  
 Celeen, Ida ..... 1913  
 Center, G. H. .... 1915  
 Chamberlain, Pansy E. .... 1907  
 Chamberlin, Julia M. .... 1915  
 Champion, Edith ..... 1916  
 Champion, Ernest ..... 1913  
 Chandler, Miller ..... 1917  
 Chaplin, Ruth. .... 1916  
 Chapman, Maude C. .... 1910  
 Chapman, Sophia H. .... 1917  
 Chapple, Dora Ethel. .... 1911  
 Charles, Catherine W. .... 1917

Chase, Belle ..... 1915  
 Chase, Bernice M. .... 1917  
 Chase, Bertha M. .... 1905  
 Chase, Lucile B. .... 1907  
 Chase, Margaret ..... 1917  
 Chatin, Janet. .... 1909  
 Cheatley, Emma. .... 1910  
 Cheek, Emma E. .... 1917  
 Cheeley, Ella. .... 1902  
 Cheese, Cora. .... 1906  
 Cheney, Lucy ..... 1917  
 Chester, Alice M. .... 1908  
 Chestnut, Robert Asa. .... 1910  
 Chilson, Elma M. .... 1910  
 Chivington, (Mrs.) Cordelia. .... 1906  
 Choury, Armande. .... 1918  
 Christeson, Lulu ..... 1918  
 Christopher, Bertha ..... 1907  
 Christopherson, Genevieve Catherine. .... 1906  
 Christopherson, Selma. .... 1912  
 Christy, Mary E. .... 1914  
 Church, Muriel. .... 1915  
 Churchill, Flossie E. .... 1903  
 Churchill, Harry V. .... 1905  
 Churchill, Isabel Lovejoy ..... 1909  
 Churchill, (Mrs.) Isabella. .... 1900  
 Churchill, Lillian M. .... 1918  
 Clair, Helen ..... 1916  
 Clark, Anna M. .... 1913  
 Clark, Betty ..... 1910  
 Clark, Charles E. .... 1894  
 Clark, C. Pearl ..... 1912  
 Clark, Fred W. .... 1898  
 Clark, Katherine ..... 1910  
 Clark, Laura D. .... 1919  
 Clark, Nellie N. .... 1908  
 Clark, (Mrs.) Nora. .... 1913  
 Clark, Ruth M. .... 1895  
 Clarke, Alta ..... 1915  
 Clarkson, Amelya ..... 1915  
 Clasbey, Elizabeth. .... 1919  
 Clausen, Mayme. .... 1919  
 Cleave, Clara J. .... 1904  
 Clement, (Mrs.) Aurora W. .... 1904  
 Clement, H. Harman. .... 1903  
 Clendenen, Nellie. .... 1910  
 Cleveland, Mae. .... 1913  
 Cleverly, Susan Catherine. .... 1908  
 Cline, (Mrs.) Linna ..... 1919  
 Cline, Rosetta ..... 1909  
 Clonch, May ..... 1900  
 Clonch, Minnie B. .... 1899  
 Clonch, Nell P. .... 1903  
 Close, Vera ..... 1917  
 Clough, Edwene ..... 1915  
 Clough, Gertrude ..... 1917  
 Clough, Lillian ..... 1913  
 Clough, Ruth ..... 1918  
 Clune, Helen. .... 1915  
 Cobb, Jessie. .... 1919  
 Cochran, Anna M. .... 1911  
 Cochran, (Mrs.) C. P. .... 1918  
 Cochran, Ethel ..... 1914  
 Cochran, L. Grace ..... 1914  
 Cochran, Mabel ..... 1918  
 Cochran, Mary Frances. .... 1912  
 Coffey, Gillian. .... 1894  
 Coffey, Kathryn A. .... 1917  
 Coghlan, Kathleen D. .... 1914  
 Coil, Linnie D. .... 1914  
 Cole, Cassie Margaret ..... 1919  
 Cole, Lavinia A. .... 1915  
 Colegrove, Rosannah ..... 1916  
 Coleman, Cora ..... 1904  
 Coleman, Mary B. .... 1895  
 Coles, Joseph D. .... 1906  
 Collins, C. Bruce. .... 1900  
 Collins, (Mrs.) D. .... 1916  
 Collins, F. W. .... 1918  
 Collins, (Mrs.) F. W. .... 1917

Collins, LaRita	1917	Cozine, (Mrs.) Fannie Dray	1912
Collom, Leila M.	1906	Craig, Carrie	1910
Collom, Mattie	1896	Craig, Carrie M.	1907
Colvin, Hazel Margaret	1911	Craig, Dora	1915
Combs, Ethel L.	1907	Craig, Edna	1917
Comstock, Bernice Lorena	1908	Craig, Ethel	1914
Comstock, Geo. A.	1910	Craig, Maude	1910
Comstock, Salome	1913	Crain, Cordelia	1914
Comstock, Yolande B.	1908	Craine, Carrie E.	1905
Conant, Claud Bulkley Stanford	1916	Cramer, Mary Lina	1908
Conboy, Irene Kathryn	1910	Crandall, Edith M.	1914
Condit, Philippa	1912	Craton, Lily	1917
Conkright, Josephine	1910	Cratzer, Ruby R.	1918
Connally, Sadie Roberts	1918	Craven, Ina Eleanor	1912
Connell, Helen D.	1916	Craven, May	1901
Connell, Mary V.	1914	Crawford, Ada Belle	1908
Connelly, Mary H.	1907	Crawford, Alice	1915
Conner, Maude E.	1918	Crawford, Edith	1913
Conner, Minnie	1915	Crawford, Grace	1915
Conner, R. Grace	1907	Crawford, Julia L.	1918
Connor, Bliss	1914	Crawford, Mabel L.	1905
Conover, Lou Etta	1917	Crawford, Mary	1911
Constable, Ethel Dana	1912	Crawford, May	1911
Conway, Agnes Cornelia	1919	Crawford, Myrtle	1918
Cook, A. B.	1914	Crawford, Sadie R.	1904
Cook, Alfaretta	1910	Craze, Hyacinth M.	1916
Cook, Florence	1904	Creager, Katie	1894
Cook, Gertrude	1907	Creaghe, Lola F.	1914
Cook, Gracia Adelia	1914	Crenshaw, Kate	1917
Cook, Katherine M.	1912	Cressy, Maude	1915
Cook, Marguerite	1914	Crie, (Miss) Frank M.	1916
Cook, Miriam	1911	Crie, Robert	1915
Cooke, Leonore G.	1908	Crist, Alma	1917
Cooley, Ruth	1903	Criswell, Lillian	1919
Coolidge, Elizabeth	1918	Crittenden, Mabel	1918
Cooper, Clara	1918	Crocker, Martha	1917
Cooper, Elizabeth	1913	Crone, John V.	1901
Cooper, Isaphine D.	1907	Cronin, Josephine	1907
Cooper, Julia Erwin	1914	Cronkrite, Theodore	1898
Cooper, Lena G.	1911	Crosby, Grace Dorothy	1919
Cooper, Marjorie Carolyn	1906	Crosby, Jean	1909
Cooper, Theda A.	1900	Cross, Donzella	1914
Cooperrider, A. O.	1900	Cross, Flora	1909
Coover, (Mrs.) Carrie E.	1898	Cross, Ila	1914
Coover, J. E.	1898	Crotty, Marie L.	1913
Cope, Minnie M.	1904	Crow, Leah Helen	1911
Cope, Myrtle	1905	Crowell, Edith	1908
Copeland, Berdella	1914	Croze, (Mrs.) Anna H.	1912
Corbin, Leila	1918	Culp, Cecelia	1913
Cordes, Carrie	1894	Culp, Ruby Lee	1919
Cordova, Isabel	1912	Culver, Ella P.	1914
Corkish, Nellie	1914	Cumley, Ruby Ruth	1908
Corlett, Abbie	1916	Cummings, Fay R.	1912
Corlett, Jane	1918	Cummings, Josephine	1905
Cornell, Hattie	1900	Cummings, Mildred G.	1916
Cornell, Laura E.	1916	Cummins, Mary	1917
Cornett, Esther	1918	Cuney, Nannie I.	1905
Cornell, Gertrude E.	1905	Cunningham, Alice	1913
Corsberg, Esther	1916	Cunningham, Anna Gertrude	1911
Coryell, Jesse	1917	Cunningham, Carrie C.	1907
Cosgrove, Anna Josephine	1918	Curd, Margaret Katherine	1912
Cotham, Una	1917	Curran, Catherine Anna	1915
Couch, Gertrude T.	1917	Curran, Katie	1899
Coughlan, Kathleen Irene	1915	Curran, Mabel	1914
Coughlin, Mercedes Irene	1908	Currie, Mary Neil	1914
Coughlin, Welhelmina C.	1911	Curry, Flora	1911
Coulson, (Mrs.) Clara G.	1910	Curtis, Earl S.	1906
Coulson, Marguerite	1910	Curtis, Grace E.	1904
Coulson, Paul	1911	Curtis, H. W.	1918
Counter, Mildred	1916	Curtis, Ruth	1916
Courtney, Julia	1913	Curtiss, Frances	1917
Courtright, Harriette	1910	Czaplinski, Lydia	1917
Coverston, Helen	1916	Dace, Mary	1893
Cowgill, (Mrs.) Josephine	1913	Dahlgren, Alice	1918
Cowgill, Marion	1918	Dalley, Minnie M.	1908
Cox, Essie Mae	1914	Dakens, Irma M.	1916
Cox, Grace	1917	Dalbey, Cora	1917
Cox, Hazel	1918	Dale, Dora	1904
Cox, Helen L.	1907	Dale, Ethel	1908
Cox, Lizzie R.	1907	Dale, Ruth Arvilla	1906

Daly, Beulah	1914	Desmond, Leona L.	1908
Damon, J. C.	1917	Desmond, Margaret	1918
Daniel, Aria	1919	DeVine, (Mrs.) Elsie	1900
Daniels, Laura Amelia	1906	DeVinney, Ruth	1917
Daniels, Mildred	1915	Devlin, Melda	1919
Daniels, Winifred Claire	1914	DeWeese, Blanche	1918
Daniels, (Mrs.) Winifred J.	1916	DeWeese, (Mrs.) Luella	1899
Danielson, Cora	1900	Dewey, Cora P.	1915
Danneks, Clara	1909	Dewey, Jane	1917
Darby, Emma A.	1911	Dewitz, Esther P.	1914
Dare, Adela F.	1899	Dewitz, Gertrude	1914
Darling, Mary	1915	Dickerson, Ella	1914
Darlington, Helen	1918	Dickey, Helen M.	1914
Darnell, Bernice	1915	Dickinson, Amy	1912
Daugherty, Maude	1912	Diggs, Chas. Albert	1917
Daugherty, Merle Alice	1918	Dill, Victoria M.	1899
Daugherty, Zona C.	1914	Dille, Florence A.	1914
Dauth, Louise	1916	Dille, Margaret	1909
Daven, Hazel L.	1907	Dillman, Caroline	1904
Daven, Luella Elizabeth	1908	Dillman, Josephine	1906
Davidson, William I.	1912	Dillon, Agnes	1918
Davies, Edwyna S.	1912	Dillon, Bertha	1914
Davis, Anna B.	1915	Dillon, Eva M.	1914
Davis, Bess	1917	Dillon, Mary V.	1915
Lavis, Beulah	1918	Dillon, Thomas	1918
Davis, Claudia	1918	Dingman, Jennie K.	1899
Davis, Edna Belle	1916	Ditzy, Mollie	1896
Davis, Elizabeth	1918	Divelbiss, Grace	1912
Davis, Genevieve	1918	Dixon, Barbara Allen	1908
Davis, Grace M.	1910	Doak, Marie S.	1912
Davis, Helen B.	1910	Doane, Maude S.	1904
Davis, Ida	1913	Dobbins, Nettie M.	1895
Davis, Inda Browne	1915	Dobson, Loave	1908
Davis, John E.	1917	Dodge, Elizabeth M.	1918
Davis, Juanita I.	1907	Dodson, Katherine	1917
Davis, Leah	1913	Doherty, Marguerite Anita	1906
Davis, Lillian G.	1918	Dohner, Jennie	1910
Davis, Reginald S.	1915	Doke, Carrie A.	1906
Davis, Sadie	1909	Dolan, Alice	1898
Davis, Thirza	1915	Dolan, Margaret J.	1904
Davis, Zoe	1914	Donahue, Jessie	1914
Davison, Pearl	1917	Donahue, J. Leo	1896
Dawson, Alma	1918	Donahue, Marie V.	1906
Dawson, Myrtle	1908	Donald, Mildred	1918
Dawson, Olive I.	1907	Donaldson, Etta May	1908
Day, Anna P.	1917	Donley, H. H.	1916
Day, Etta M.	1903	Donnelly, M. Celeste	1907
Day, Fannie L.	1902	Donovan, Clara	1911
Day, Grace T.	1906	Donovan, Margaret	1906
Day, Nellie	1894	Donovan, Mattie	1909
Day, Reba	1901	Doolittle, Mary Tilton	1918
Dayton, Georgian I.	1904	Doonan, Eva B.	1911
Dean, Bessie	1913	Doran, Margaret	1916
Dean, Edna	1906	Dotson, Edna	1912
Dean, Iva	1907	Dotson, Nellie	1909
Dean, Rose	1909	Dotson, Ruth	1913
Debler, (Mrs.) Lavane F.	1911	Douden, Ola M.	1913
Debusk, Margaret	1914	Doughty, Carrie L.	1914
Decker, Elizabeth Ann	1919	Douglas, Ada	1912
Decker, Ina	1913	Douglas, Edith S.	1904
Deeg, Lena	1910	Douglas, Elma I.	1913
Dehoney, Warren	1915	Douglas, Wilhelmina	1915
Deibert, Amy	1912	Douglass, Lucie	1913
Deibert, Ethel	1913	Douglass, Russie	1908
Deitrich, Carrie Margaret	1908	Doull, Elizabeth G.	1904
Delbridge, Eloise	1894	Doull, Frances R.	1908
Delbridge, Lucy	1901	Doull, Rose M.	1907
Delbridge, Wychie	1898	Dowell, (Mrs.) Ethel	1910
Della, Josephine	1918	Dowell, H. L.	1897
Delling, Evelyn	1909	Dowling, Katharyn H.	1907
Delling, Mabelle K.	1910	Downes, Irma	1917
Delling, Olive	1908	Downey, Abner	1895
Demmel, Margaret	1917	Downey, Elijah H.	1898
Dempewolf, Jennie	1916	Downing, Todd	1917
Dempsey, Blanche	1918	Doyle, Mabel	1900
Demsey, Nettie	1901	Doze, Hazel Agnes	1912
De Sellem, Belle	1905	Drach, Mary M.	1907
DeSilvestro, Minnie	1915	Drake, Hattie	1914
Desjardines, May E.	1908	Drake, Lily Mabel	1914
DesJardins, Clotilda	1911	Draper, Albert G.	1907
Desky, Catherine	1917	Draper, Edith	1909

Dresser, Helen C.	1892	Elmer, Colgate	1917
Drew, Mildred V.	1913	Elmer, Marjorie	1911
Driscoll, Edna	1915	Elmer, (Mrs.) Mary Colgate	1914
Drtna, Marie	1914	Elston, Mary K.	1915
Drumm, Anna	1912	Emens, Ruth Alliene	1911
Drumm, Eda	1912	Emerson, Inez	1913
Drummond, (Mrs.) Mary	1917	Emery, Emily Alice	1908
Dubber, Bessie P.	1910	Engels, Bernice	1912
Duboff, Anna	1915	Engleman, Muriel Joy	1911
Duboff, Sarah	1916	English, Dorothy	1919
Dudley, Flora	1907	English, Lillian	1916
Dudley, Ruth	1914	English, Myrtle	1905
Duenweg, Anna	1909	Enoch, Mary Priscilla	1902
Duenweg, Rosa A.	1907	Epple, Florence	1918
Duescher, Alma	1911	Erdrbrugger, Elsa	1917
Duffee, Martha	1915	Erickson, Clara	1918
Duffy, Rosa Anna	1913	Erickson, Ruth	1916
Dugan, Julia	1901	Ericson, Singne	1915
Duggins, Florence C.	1910	Ericsson, Anna	1911
Dukes, Olive	1916	Ernesti, Richard	1910
Duling, Helen	1914	Erwin, Eva Marie	1918
Dullam, Ethel P.	1904	Estabrook, Evelyn	1916
Dumke, Emma Charlotte	1915	Estes, Dossia A.	1907
Dunlavy, Lucile	1919	Estus, Albert L.	1916
Dunn, Cascadia	1917	Estus, (Mrs.) Mary M.	1917
Dunn, Rosalie M.	1893	Eubank, Ethel Vista	1912
Dunshee, Faye	1912	Evans, Agneta A.	1913
Durbin, Augusta	1914	Evans, Bessie B.	1891
Durham, Hazel	1915	Evans, Charlotte	1907
Durkee, Clara	1918	Evans, Clara	1905
Durkee, Alice	1894	Evans, Elsie	1917
Durning, Bertha	1916	Evans, Emma	1900
Dwyer, Elizabeth Boyce	1918	Evans, Florence Alice	1913
Dyckman, Ruby	1906	Evans, Gertrude	1914
Dyer, Edna Lorena	1906	Evans, Katharyne M.	1904
Dyer, Helen	1918	Evans, Pearl	1915
Dyer, Josephine Seeley	1918	Evans, Phillis	1918
Eades, Emma	1911	Everett, Z. Lodice	1917
Eades, Nettie	1912	Everett, Geary E.	1918
Eadie, Isabel P.	1905	Everitt, Elva R.	1916
Eagleton, William H.	1918	Ewing, E. F.	1910
Earhart, Nell R.	1917	Eyser, Maude	1912
Earle, Eva Maude	1908	Eyer, Myrtle	1915
Eason, Za	1917	Fagan, Jennie	1900
Easterly, Sara B.	1909	Fagan, Katie D.	1903
Easton, Virginia	1918	Fallis, Edwina	1914
Eaton, Fern B.	1903	Falloon, Martha E.	1912
Eaves, (Mrs.) Bertha	1912	Fankhauser, Clara C.	1914
Eberhart, Pearl	1912	Fankhauser, Nora Nola	1913
Eckhart, Elizabeth	1916	Faris, Mabel	1910
Edgerton, Iva	1918	Farley, Ruth E.	1910
Edminister, Ethel A.	1906	Farlow, Floe	1902
Edmundson, Ruth I.	1917	Farmer, G. E.	1915
Edwards, Ethel	1907	Farmer, Grace	1898
Edwards, Grace E.	1918	Farnsworth, Lucinda	1919
Edwards, Mabel	1901	Farnsworth, Mary	1903
Edwards, Ruth A.	1912	Farr, Gladys	1913
Eichel, (Mrs.) Lucy	1915	Farr, Jennie	1916
Elam, Velma	1916	Farr, Ruth	1915
Elder, (Mrs.) Edith E.	1913	Farrar, (Mrs.) Eliza R.	1911
Elder, Helen I.	1915	Farrar, (Mrs.) Elizabeth	1910
Eldridge, Eva	1905	Farrar, Myrtle Ronald	1912
Eldridge, Myrtle R.	1912	Farrar, Rosalia	1913
Eldridge, Peggy	1916	Farrell, Hazel C.	1911
Elias, Minnie	1918	Farrell, Mayme	1915
Eliason, Clarence	1917	Farrell, S. Mary	1913
Ellerby, Bettie	1909	Farrelly, Clara	1917
Elliott, Caroline	1904	Farrington, Flora	1910
Elliott, Elizabeth	1904	Fashbaugh, Carrie E.	1891
Elliott, Erma Julia	1918	Faus, Ada	1903
Elliott, Gertrude Mae	1913	Feast, S. Isabelle	1913
Elliott, Minerva	1911	Fedde, Agnes	1909
Elliott, Nellie	1917	Felth, Beulah M.	1910
Ellis, Adda	1900	Felton, Mark A.	1895
Ellis, Carrie E.	1897	Fennell, Anna	1898
Ellis, E. Edith	1906	Fenneman, (Mrs.) Sarah G.	1899
Ellis, Esther	1900	Fenton, Bess	1914
Ellis, Florence Hope	1915	Ferguson, Mabel C.	1905
Ellis, Grace Irene	1915	Ferguson, Frances Janet	1912
Ellis, Ralph W.	1905	Ferguson, (Mrs.) Lillian H.	1918
Ellsworth, Shelia H.	1909	Ferguson, Mabel C.	1905

Ferrier, Josephine.....	1909	Fowler, Alice .....	1917
Fiertag, Caroline.....	1908	Fowler, (Dr.) O. S.....	1898
Filber, Kittle Mary E.....	1911	Fowler, Ruby .....	1900
Filger, Ilma .....	1909	Francis, Rose .....	1913
Filger, Irma C. ....	1906	Frank, D. Alice .....	1906
Filkins, Grace.....	1901	Franke, Louise R.....	1911
Filson, Emma M.....	1916	Franklin, G. T.....	1912
Finch, Callie M.....	1911	Franks, Helen M.....	1914
Finch, Caroline Alice.....	1919	Franks, Wilbert A.....	1912
Finch, Clarence A.....	1911	Frantz, Katherine .....	1910
Finch, Lester R.....	1909	Frantz, Mary .....	1912
Finch, Myrtle M.....	1906	Frasier, Alice M.....	1915
Fincher, Mabel.....	1912	Frazier, Eileen Lucile.....	1917
Fink, Jessie Alice.....	1916	Frazier, Olive E.....	1913
Finn, Nora .....	1918	Frederick, Marie A.....	1907
Finney, Emma A.....	1906	Freed, Ruth.....	1916
Fish, Florence.....	1916	Freedle, Alma .....	1918
Fisher, Annie C.....	1918	Freedle, James Casper.....	1917
Fisher, Edna V.....	1903	Freeland, (Mrs.) G. E.....	1918
Fisher, Elizabeth.....	1918	Freeman, Maude .....	1894
Fisher, Helen H.....	1909	Frelick, Annie Delma.....	1910
Fisher, (Mrs.) Otto M.....	1917	Frerker, Agnes.....	1915
Fisher, Ruth .....	1914	Friedman, John L.....	1915
Fisher, Virginia A.....	1917	Friel, Pauline.....	1910
Fitz, Theophilus.....	1915	Frink, Amy .....	1912
Fitzgerald, Myrtle.....	1910	Frink, Hazel .....	1916
Fitzmorris, Ray.....	1914	Frink, Marguerite R.....	1900
Fitzpatrick, Mary.....	1906	Frink, Ruby .....	1904
Flach, Marie I.....	1907	Froelich, Virginia Grace .....	1911
Flaherty, (Mrs.) Mary.....	1915	Fry, Esther Gladys.....	1918
Flansburg, Alda.....	1914	Fry, Jessie K.....	1908
Flath, Lucy.....	1910	Fugate, (Mrs.) Emma.....	1917
Fleckenstein, Felicia.....	1912	Fugate, Inda .....	1902
Fleming, Bernice.....	1917	Fugate, Laura E.....	1902
Fleming, Carrie A.....	1917	Fuller, (Mrs.) Hattie.....	1916
Fleming, Edna.....	1917	Fuller, Louanna Mae.....	1918
Fleming, Gertrude.....	1909	Fulton, Florence R.....	1913
Fleming, Guy B.....	1899	Fulton, Harriett.....	1919
Flint, Ruth L.....	1907	Fulweider, Eva.....	1905
Flood, Mary L.....	1918	Fuson, Bertha D.....	1912
Florin, Madeline.....	1911	Futvoye, Margaret G.....	1915
Flowers, Beulah.....	1916	Gaarder, Teola .....	1914
Floyd, A. J.....	1902	Gage, Ethel M.....	1916
Floyd, Alice T.....	1910	Gaines, Joysa Pearl.....	1908
Floyd, Branda.....	1908	Gaines, Louise .....	1910
Floyd, M. R.....	1917	Gaines, Mary A.....	1913
Fluharty, Ada D.....	1918	Galbreath, Edna.....	1916
Flynn, Katherine M.....	1914	Gale, Edith V.....	1902
Flynn, Mary E.....	1915	Gale, Grace M.....	1895
Foley, Irene .....	1918	Gale, Mae .....	1918
Foley, Marie .....	1910	Galer, Anna Grozzelle.....	1906
Foley, Nellie .....	1910	Gallagher, Florence.....	1913
Foley, Ruth .....	1916	Galloway, Nona.....	1913
Follette, Celinda G.....	1902	Gallup, Ruth.....	1917
Foote, Amy Rachel.....	1906	Gammill, F. L.....	1918
Forbes, Wallace W.....	1912	Gammon, Hallie.....	1908
Forbush, Edith L.....	1908	Gannett, Anne.....	1917
Force, Anna Laura.....	1916	Garber, Vera.....	1916
Force, Harriet Louise.....	1912	Garcia, James.....	1902
Force, Jessie .....	1908	Gardiner, Ana .....	1917
Ford, Margaret S.....	1913	Gardiner, Elizabeth.....	1912
Ford, Mildred .....	1915	Gardiner, Julia .....	1894
Ford, Rae R.....	1905	Gardiner, Kathryn.....	1917
Foresman, Sue.....	1918	Gardiner, Mary Ellen.....	1913
Forhan, Marie F.....	1913	Gardner, Ada E.....	1914
Forquer, Ellen C.....	1913	Gardner, Laura M.....	1917
Forsyth, Bessie .....	1914	Gardner, Marian A.....	1906
Forsyth, Clara.....	1905	Gardner, Pearl C.....	1914
Forsyth, Orrin M.....	1907	Gardner, (Mrs.) Ruby A.....	1908
Fortune, Agnes.....	1914	Garinger, Edna R.....	1918
Forward, Zoe R.....	1912	Garnett, Genevieve Cook.....	1913
Foss, Evelyn.....	1916	Garrigues, Grace .....	1910
Foster, Arthur J.....	1918	Garrigues, Helen.....	1904
Foster, Fern .....	1918	Garwood, Estella.....	1912
Foster, Gertrude M.....	1907	Gary, Ethel R.....	1912
Foster, Harriet Z.....	1917	Gass, Maud.....	1894
Foster, Lucy B.....	1919	Gates, Allie .....	1910
Foster, Verda L.....	1912	Gault, Laura G.....	1912
Foulk, Charles M.....	1915	Gauss, Charlotte.....	1912
Foulk, Lola .....	1918	Gauss, Louise.....	1912

Gayton, Julia H.	1916	Gothard, Eula	1915
Gearhart, Orpha	1918	Gould, Helen M.	1913
Gedney, Beatrice	1919	Gould, Willie Ann	1918
Geffs, Bessie	1902	Gourley, Anna	1909
Gehman, Wanda L.	1907	Grable, Laura	1909
Gehrung, Emma Gertrude	1906	Graham, Anna D.	1905
Geiger, Rosalie A.	1908	Graham, Grant D.	1916
Geizer, Eva	1910	Graham, Kate	1896
Gerkin, Marie	1917	Graham, Katherine	1917
Gerstle, Regina	1916	Graham, Luda D.	1914
Gibbons, Marcella	1902	Graham, Mary Edna	1919
Gibbs, Elizabeth	1901	Graham, Mary M.	1899
Gibson, Alice M.	1914	Graham, Melcena	1901
Gibson, F. Emma	1908	Graham, Myra K.	1912
Gibson, Grace	1917	Graham, Olivia I.	1910
Gibson, Marguerite	1914	Graham, Rosa	1913
Gibson, May	1915	Graham, Veda S.	1905
Gibson, Mildred	1900	Granger, Margaret	1909
Gibson, Myrtilia L.	1912	Grant, Marie	1909
Gigax, Agnes	1918	Grant, Xina M.	1918
Gilbert, Arthur	1918	Grass, Florence	1918
Gilbert, Pauline	1918	Gray, Bertha	1914
Gilchrist, Eleanor C.	1917	Gray, (Mrs.) C.	1910
Gildea, Mary	1917	Gray, Montello	1914
Gill, Elizabeth	1917	Gray, Sarah A.	1913
Gill, Emma	1907	Gray, Mayme S.	1918
Gill, Eula B.	1916	Gray, Ruth	1917
Gillespie, (Mrs.) A. H.	1916	Green, (Mrs.) Anna Scheffler	1918
Gillette, Florence Marie	1911	Green, E. L.	1914
Gillett, Vera F.	1917	Green, Hilda	1902
Gilligan, Pearl	1916	Green, Jenny Lind	1917
Gillin, Selina	1913	Green, Minnie L.	1914
Gillman, Harriet Evangeline	1912	Green, Myrtle	1917
Gillmore, William Bruce	1912	Green, Prudence Viola	1919
Gilmore, Faith W.	1914	Greene, B. R.	1909
Gilmore, Mary E.	1917	Greene, Sarah Margaret	1911
Gilmour, Verna	1913	Greener, Jewl H.	1917
Gilpatrick, Gail L.	1907	Greenlee, Ethel	1917
Gilpin-Brown, (Mrs.) Helen	1913	Gregg, Elizabeth Ann	1911
Gilpin-Brown, Helen Frances	1915	Gregg, Florence E.	1899
Gilpin-Brown, Margaret	1914	Gregg, Maud C.	1899
Ginther, Eva	1916	Greist, Anna L.	1917
Girvan, Mina	1917	Grewell, Mary Jane	1914
Gjellum, Bertha	1909	Griest, Anna L.	1913
Gladney, Annie M.	1908	Griffin, Agnes May	1919
Glassey, Helen F. R.	1917	Griffin, Amy	1912
Glaze, Anna Wolfe	1906	Griffin, L. Luther	1909
Glaze, Carrie Ellen	1906	Griffin, Reba	1914
Glazier, Winifred G.	1915	Griffith, Emily	1912
Gleasman, Belle	1909	Griffith, Eva Lena	1913
Gleasman, Lillian	1915	Griffiths, Catherine	1917
Gleeson, Anna	1917	Griffiths, Elizabeth	1914
Gleeson, Josephine	1911	Grimes, Cora M.	1912
Glenn, Lela	1917	Grimoldby, Winifred A.	1905
Gloystein, Hope	1916	Grisier, Orville J.	1915
Goddard, Susan	1895	Gross, Eda	1916
Godfrey, Florence E.	1911	Gross, Etta	1907
Godfrey, Hazel	1909	Grout, Lizzie M.	1900
Godfrey, (Mrs.) Maude Corey	1912	Grout, Stella	1918
Godfrey, Maude E.	1910	Grove, Rhena M.	1902
Godley, Sophie	1905	Gruber, Edna E.	1908
Goldacker, Mary V.	1905	Gruber, Mayme F.	1903
Golden, Bessie E.	1912	Grundy, Ella L.	1914
Gooch, Sarah	1918	Guanelle, Ethel V.	1915
Goodale, Frances	1915	Guenzi, Julia	1919
Goodale, Nellie	1900	Guillet, Lucille	1918
Goodrich, Annie H.	1908	Guiraud, Emma	1916
Goodwin, Edna F.	1907	Guisse, Mabel L.	1907
Goodwin, Hazel Ruth	1916	Gulliford-Smith, Madame	1918
Gookins, (Mrs.) Clara	1915	Gumaer, Mae Louise	1912
Gookins, Helen	1918	Gunnison, Esther	1917
Gordan, Grace Linzy	1912	Gynna, H. G.	1897
Gordon, Carrie	1903	Haaff, Clarence F.	1916
Gordon, Ethel	1910	Hadden, S. M.	1897
Gordon, Jessie	1908	Hadley, Jennie M.	1914
Gordon, (Mrs.) Mary I. B.	1911	Hadley, Laurie	1895
Gordon, Sarah W.	1916	Haffing, Reuben G.	1906
Gorman, Edith	1907	Hagaman, Neva	1914
Gorman, Helen	1917	Haggerty, Avia	1918
Gormley, Anna	1914	Haines, Alice	1915
Gossage, Thela	1915	Haines, Mary E.	1917

Hale, Katherine L.....	1910	Hart, Dora Evelyn.....	1911
Haley, Ida Isabelle.....	1919	Hart, Dorothea.....	1915
Hall, Agnes.....	1901	Hart, Z. Rosamond.....	1911
Hall, Elizabeth Perry.....	1906	Hartung, Belle.....	1909
Hall, Emma M.....	1913	Hartung, Louise.....	1909
Hall, Ermine.....	1915	Haruff, (Mrs.) Reba.....	1918
Hall, (Mrs.) Grace B.....	1910	Harvat, Helen.....	1918
Hall, Grace Emily.....	1911	Harvey, Sarah.....	1918
Hall, Ivan Clifford.....	1906	Hasbrouck, Hila.....	1913
Hall, Jessie M.....	1912	Hasenkamp, Eleanor.....	1916
Hall, Kathryn.....	1917	Hatch, Elizabeth.....	1915
Hall, Lucy F.....	1914	Hatfield, (Mrs.) Magdalen W.....	1916
Hall, Luella A.....	1914	Hathaway, Cecelia.....	1917
Hall, Mabel Gladys.....	1906	Hattenhauer, Jessamine.....	1915
Hall, Pearl M.....	1914	Hauptman, Ruth.....	1918
Hall, Sibbell K.....	1916	Haverty, Estella.....	1915
Hall, Suma.....	1912	Hawes, Josephine.....	1918
Hall, Winifred R.....	1914	Hawes, Mary M.....	1898
Hallberg, Ida.....	1917	Hawke, Vera Leone.....	1911
Halsted, Halcyon.....	1910	Hawley, Florence Emma.....	1911
Hamilton, Catherine.....	1918	Hawley, Margaret.....	1911
Hamilton, (Mrs.) Ida M.....	1896	Hawley, Nelle.....	1906
Hamilton, Isabella.....	1908	Hawley, Olive J.....	1914
Hamilton, Jessie M.....	1897	Hawley, S. Frances.....	1916
Hamilton, Mabelle.....	1907	Hawthorne, Rebecca.....	1916
Hamilton, Vera.....	1918	Hay, Helen.....	1916
Hamm, Elsie.....	1901	Hayes, James H.....	1916
Hammel, Anna.....	1915	Hayes, Mary.....	1910
Hammers, George M.....	1912	Hayes, Stella.....	1913
Hammersley, Mabel.....	1899	Haynes, Alice K.....	1919
Hammond, Helen Gertrude.....	1918	Hays, Carrie.....	1909
Hammond, Louise.....	1917	Hayton, (Mrs.) Kate W.....	1918
Hammond, (Mrs.) Maude Carroll.....	1914	Hayward, Lois.....	1903
Hammond, Eva V.....	1897	Hazelbaker, Laura.....	1915
Hampton, Alice.....	1915	Head, (Mrs.) Twyla.....	1917
Hanel, Bertha.....	1905	Heale, Florence.....	1916
Hanan, Alice.....	1914	Heath, Edith V.....	1899
Haney, Mabel.....	1908	Heath, Herbert G.....	1893
Hanks, Alberta.....	1896	Hecker, Mary M.....	1907
Hanks, May.....	1913	Heckert, Mabel.....	1917
Hanna, Cornelia M.....	1916	Hed, Emma.....	1914
Hanna, M. Winifred.....	1917	Hedburg, Agnes.....	1914
Hannas, Winifred.....	1912	Hedeen, Alice Laura.....	1917
Hanno, Charlotte.....	1916	Hedrick, (Mrs.) Anna A.....	1912
Hansen, Bertha M.....	1912	Hedstrom, Horace H.....	1907
Hansen, Katherine.....	1918	Heenan, Florence.....	1909
Hansen, Laura Z. M.....	1906	Heighton, Harry W.....	1905
Hansen, Marie.....	1918	Heilman, (Mrs.) Lulu A.....	1910
Hansen, Valborg.....	1914	Heiskell, Bettie G.....	1906
Hansen, Zelma Elizabeth.....	1906	Heitsman, Kathryn Remington.....	1919
Hanson, Martha.....	1914	Heizer, Nelle.....	1914
Hanson, M. J.....	1915	Helm, Marguerite.....	1916
Hanson, Norma.....	1910	Helm, Marian F.....	1917
Hanson, Viola.....	1916	Hemberger, Elizabeth.....	1908
Happner, Mary F.....	1909	Hemingway, Ruth.....	1917
Harbison, Mildred C.....	1917	Henderson, Alice.....	1901
Harbison, Sophia.....	1914	Henderson, Ethel M.....	1916
Harbottle, (Mrs.) Florence.....	1917	Henderson, Wilma.....	1910
Harbottle, John.....	1902	Henebry, Agatha C.....	1903
Hard, Nellie.....	1909	Henley, Bessie.....	1918
Hardcastle, Amy B.....	1891	Henley, Pearl P.....	1918
Hardenbergh, Hilda.....	1917	Hennes, Elizabeth L.....	1911
Hardy, Maria.....	1915	Hennes, Marie.....	1910
Harker, Annie.....	1917	Hennes, Olive.....	1910
Harkey, Tula Lake.....	1906	Hennes, Wilma.....	1909
Harmless, Edith M.....	1911	Hennick, Anna B.....	1918
Harrington, Ada.....	1901	Henry, Elizabeth C.....	1919
Harrington, Alice M.....	1918	Henry, Luella V.....	1906
Harrington, E. Mary.....	1907	Henry, Martha.....	1918
Harrington, Mae.....	1918	Henson, Julia A.....	1913
Harrison, Lorena.....	1911	Herdon, Ruby.....	1917
Harris, Alma.....	1915	Herren, C. M.....	1915
Harris, Irmagard H.....	1908	Herren, Ida.....	1914
Harris, Lola F.....	1912	Herrick, Anita L.....	1917
Harris, Luella.....	1917	Herrick, Olive M.....	1903
Harris, Ruth.....	1918	Herrington, Edith P.....	1907
Harrison, Lucian H.....	1899	Hersey, Nellie R.....	1899
Harrison, Lucile.....	1911	Hersey, Rose.....	1897
Harrison, Maude.....	1915	Hershey, Janet.....	1908
Harrison, Shirley West.....	1918	Hersum, Evelyn.....	1915
Harrison, Virginia.....	1898		

Hesler, Lelia.....	1913	Horn, Ilda.....	1915
Hetrick, Grace C.....	1898	Hornberger, Etta M.....	1913
Hewett, (Mrs.) Cora W.....	1893	Horner, Irene.....	1918
Hewett, Edgar L.....	1893	Horning, Noah Orestes.....	1912
Hewitt, Clara E.....	1913	Horton, Mamie.....	1910
Heyduk, Esther.....	1915	Horton, Mary Catherine.....	1911
Hiatt, Grace.....	1906	Horton, Mary E.....	1914
Hiatt, J. Frances.....	1902	Horton, Nellie.....	1909
Hiatt, Margaret.....	1913	Hotchkiss, Bessie.....	1914
Hibner, Dee M.....	1909	Hotchkiss, Esther.....	1902
Hickman, Lois Gertrude.....	1918	Houghton, (Mrs.) Louise P.....	1913
Hicks, Bertha.....	1915	Hounson, Niota B.....	1913
Hicks, Marie.....	1918	House, Hazelle L.....	1914
Hicok, Nancy Ebert.....	1916	House, Louise.....	1901
Higginbotham, Ethel.....	1908	Housman, Virginia.....	1917
Higgins, Ada Theresa.....	1919	Houston, Butler.....	1917
Higgins, Gladys.....	1917	Houston, George M.....	1893
Higgins, Marjorie Frances.....	1918	Howard, Edna E.....	1917
Higgins, T. C.....	1915	Howard, (Mrs.) Elizabeth.....	1919
High, Maggie E.....	1913	Howard, Ethel.....	1898
Hikes, Linnie T.....	1917	Howard, Florence.....	1896
Hilbert, Ethel.....	1914	Howard, Helen L.....	1916
Hildebrand, Miriam E.....	1907	Howard, Lavinia Jane.....	1918
Hildinger, Luella.....	1912	Howard, Mary.....	1918
Hile, Belle D.....	1918	Howard, Maud.....	1906
Hill, Azela.....	1918	Howard, Mildred.....	1903
Hill, Inez E.....	1917	Howard, Sadie.....	1898
Hill, Marian.....	1917	Howard, Sherman H.....	1908
Hill, Myrtie.....	1912	Howard, Wellington.....	1896
Hillyard, Grace T.....	1911	Howe, Bonna.....	1914
Hillyard, Sydney N.....	1911	Howe, Nolan.....	1916
Hines, Viola.....	1907	Howell, Grace G.....	1910
Hinkley, Anna C.....	1897	Howett, Edwin L.....	1898
Hinkley, Winifred.....	1918	Hoy, Minnie M.....	1906
Hise, Henry L.....	1915	Hubbard, Helen R.....	1908
Histed, Ruth.....	1917	Hubbard, Nettie L.....	1895
Hoagland, Hazel.....	1908	Hubbell, Julia.....	1909
Hoagland, Mary A.....	1916	Hubert, Gladys.....	1910
Hoberton, Sibyl B.....	1912	Huecker, Lydia E.....	1895
Hoch, Lillian E.....	1897	Huffman, E.....	1899
Hockett, Emily.....	1914	Huffman, Murl.....	1917
Hodge, Louise W.....	1898	Hugh, (Mrs.) Anna Heileman.....	1913
Hodgson, Caryl R.....	1911	Hughell, Samuel L.....	1903
Hoffman, Ethel Angenette.....	1906	Hughes, Adella.....	1900
Hoffman, Mary E.....	1916	Hughes, Emma E.....	1904
Hoffman, Myrtle.....	1918	Hughes, Ida.....	1900
Hogarty, Michaela.....	1898	Hughes, Mildred B.....	1905
Hogarty, (Mrs.) Viola Collins.....	1903	Hugins, Jane E.....	1913
Hogue, Rose.....	1915	Huizel, Jacob Henry.....	1912
Holaday, Minnie.....	1897	Hull, Orlo B.....	1912
Holden, Erma Ruth.....	1910	Hullender, Ruth.....	1908
Holderer, Louisa.....	1908	Hulme, Ida May.....	1918
Holland, Beulah Gray.....	1918	Hultquist, Mabel.....	1918
Holland, Nena.....	1901	Humberstone, Myrtle.....	1915
Holland, M Pearl.....	1905	Humes, (Mrs.) Inez.....	1918
Holliday, Maud.....	1897	Hummer, Ruthella.....	1905
Hollingshead, C. A.....	1896	Humphrey, Alice.....	1918
Hollister, Evaline.....	1918	Hungerford, Lora R.....	1917
Hollister, Katherine Pullen.....	1916	Hunt, Carra M.....	1912
Holloway, Adeline.....	1917	Hunt, Grace Ethel.....	1913
Holmberg, Alva E.....	1914	Hunter, Annie.....	1919
Holmberg, Helen.....	1913	Hunter, Calla.....	1910
Holmberg, Frances.....	1914	Hunter, Emily.....	1919
Holmes, Agnes.....	1913	Hunter, Helen Josephine.....	1911
Holmes, Anne Henrietta.....	1915	Hunter, Leona D.....	1905
Holmes, Luella.....	1906	Hunter, Mabel.....	1916
Holt, Ethelyn.....	1913	Hunter, Margaret.....	1917
Homberger, E. H.....	1908	Hunter, Maude E.....	1903
Hon, (Miss) Clyde.....	1908	Hunting, Addie L.....	1905
Hong, Theodora C.....	1911	Hurd, Louise Emily.....	1913
Hooper, Hazel D.....	1909	Hurford, Alice.....	1910
Hood, Reba Linn.....	1912	Hurley, Ethel.....	1918
Hooker, Arline.....	1915	Hurley, Will R.....	1911
Hoon, Helen Mae.....	1916	Hurst, John L.....	1909
Hooper, Dorothy.....	1905	Hussong, Mossie B.....	1912
Hooven, Mary Eleanor.....	1916	Huston, (Mrs.) Mabel Bennett.....	1918
Hopkins, Carrie.....	1909	Hutchison, Alice.....	1910
Hopkins, Helen.....	1912	Hutchison, Alodia.....	1915
Hopkins, Mildred A.....	1911	Hutchison, Ethel Z.....	1917
Hopkins, Wallace.....	1915	Hutchison, Jessie A.....	1905
Horn, Ella B.....	1917	Hutchison, Katherine.....	1917



Hutchison, Morris H.	1910	Johnson, Mabel	1909
Hutton, Jessie	1911	Johnson, Mildred	1909
Imboden, J. W.	1900	Johnson, Minnie	1898
Imes, Laura Bonnie	1909	Johnson, Rita	1915
Imrie, Harracena	1907	Johnson, Shirley A.	1916
Ingalls, Clarissa M.	1913	Johnson, Earl Lynd	1906
Ingersoll, May	1897	Johnston, Florence	1917
Ingersoll, Edna	1909	Johnston, Harry E.	1908
Ingersoll, Nettie R.	1904	Johnston, Joy Helen	1919
Ingle, Ethel M.	1914	Jones, Alice J.	1909
Ingledeew, G. E.	1910	Jones, Allie	1903
Ingmire, Jessie	1914	Jones, Avis	1915
Ingram, Lillian Grace	1903	Jones, Bea	1910
Inman, Katherine	1910	Jones, B. Ida	1897
Inman, Minnie J.	1903	Jones, Bertha	1918
Irons, Blanche	1907	Jones, Bessie E.	1904
Irvine, Lois	1918	Jones, Carl	1918
Irving, Elizabeth	1916	Jones, Edith Helen	1892
Irving, Olive M.	1915	Jones, Eleanor M.	1905
Isbill, Cecile E.	1917	Jones, Emarene	1911
Ivey, Mattie M.	1918	Jones, Gertie	1911
Jackman, Lena	1914	Jones, Gladys	1917
Jackson, Carrie E.	1914	Jones, Grace E.	1912
Jackson, Lois	1917	Jones, Gwladys Mary	1911
Jackson, Nellie	1910	Jones, Ida B.	1912
Jackson, O. E.	1899	Jones, Ione	1912
Jackson, Rae L.	1917	Jones, Jeanette	1915
Jacobs, Charlotte	1917	Jones, Jennie	1900
Jacobs, Clara M.	1911	Jones, Jessie Graeme	1912
Jacobs, Mary Fay	1893	Jones, J. W.	1912
James, Annie	1896	Jones, Katherine	1904
James, Mary	1918	Jones, Katie	1901
Jamieson, Estella L.	1906	Jones, Lura	1917
Jamieson, Margaret	1916	Jones, Lynn	1909
Jamison, Grace	1896	Jones, L. Maude	1912
Jamison, Rea	1900	Jones, Mary E.	1915
Jansson, Esther	1914	Jones, Mary Esther	1918
Jay, Nelle	1916	Jones, Ruby W.	1911
Jefferies, Bernice	1916	Jones, Ruth M.	1914
Jeffery, Esther M.	1907	Jones, Susan	1911
Jennerick, Burdella A.	1907	Jones, Victor William	1918
Jenkins, Faith	1911	Jones, Wilhelmina	1907
Jenkins, Katherine	1913	Jones, Winifred	1892
Jenkins, Marie	1905	Jones, W. R.	1916
Jenkins, Vivian	1914	Jonik, Elizabeth	1910
Jennings, Mary F.	1917	Jordan, Beulah	1918
Jensma, Anna Margaret	1919	Jordan, Katherine	1916
Jepperson, Bessie	1918	Jordan, Mary Alice	1916
Jessup, Leona	1902	Jordan, Mary Arlene	1916
Job, Henry I.	1918	Jorgensen, Olive	1912
Jocelyn, Emma C.	1915	Joseph, Beatrice	1918
Joel, Ethel E.	1910	Joy, Nellie	1914
John, Grant B.	1891	Joy, Pearl	1916
Johnson, Alice	1906	Joyce, Elizabeth	1918
Johnson, Alma E.	1917	Joyce, Ellen	1917
Johnson, Alta	1917	Joyce, Gertrude	1907
Johnson, Anna	1907	Joyce, Mary E.	1914
Johnson, Anna G.	1911	Judd, Effa	1914
Johnson, Augusta	1917	Judson, Beulah Lee	1917
Johnson, Axel E.	1904	Justice, Hazel I.	1918
Johnson, Bevie T.	1917	Kammerer, Mary D.	1907
Johnson, Edith	1917	Kane, Katherine A.	1917
Johnson, Edna B.	1917	Karlson, Lottie	1918
Johnson, Edna L.	1912	Karnes, Marie A.	1910
Johnson, Ella C.	1910	Kasten, Irma	1917
Johnson, Ethel	1916	Kauffman, Harriett	1904
Johnson, Eva V.	1911	Kauffman, Hazel L.	1912
Johnson, Everett	1917	Keating, Mary	1910
Johnson, Georgia	1918	Keefe, Veronica L.	1910
Johnson, Georgie W.	1907	Keeler, Bessie	1903
Johnson, Grace	1914	Keener, Bertha L.	1915
Johnson, Hanna	1918	Keener, Goldie	1914
Johnson, Hattie L.	1893	Keightley, Anna K.	1902
Johnson, Helen A.	1918	Keightley, Margarita	1915
Johnson, Hilda	1916	Keiper, Bertha	1915
Johnson, Ida	1907	Keirn, Clara M.	1914
Johnson, Irene	1915	Keiser, Jennie	1914
Johnson, John C.	1909	Kelher, Miriam	1912
Johnson, Laura	1917	Keller, Elizabeth M.	1918
Johnson, Lillian	1914	Kellerman, Marguerite	1914
Johnson, Loustalet	1918	Kelley, Edith	1904

Kelley, Esther	1918	Kittle, Helen	1901
Kelley, Lillian	1909	Klatt, Minnie A.	1912
Kellogg, Gertrude F.	1899	Kleckner, Fannie G.	1911
Kellogg, J. L.	1916	Klein, Caddie	1914
Kelly, Challis M.	1915	Kleinsorge, Eliza	1904
Kelly, Chas. W.	1916	Kleinsorge, Louise J.	1903
Kelly, Eileen	1916	Kline, Edna L.	1913
Kelly, Gladys	1916	Klock, Emma J.	1911
Kelly, Howard	1918	Klonfenstein, Emma	1915
Kelsey, Sofia	1902	Knapp, Edith A.	1897
Kelsey, Wheeler	1904	Knapp, Hortense E.	1908
Kemp, Josephine	1903	Kniest, Eleanor E.	1905
Kendall, Mary E.	1907	Knight, Lizzie M.	1893
Kendall, Zella A.	1899	Knight, Marian	1910
Kendel, Arthur J.	1899	Knight, Myrtle	1910
Kendel, Elizabeth	1896	Knott, Dorothy Elizabeth	1918
Kendel, J. C.	1906	Knous, Lucile	1915
Kendel, Juanita	1897	Knous, Mildred	1915
Kendel, Mary	1903	Knous, Miriam	1914
Kenehan, Kate	1910	Knowlton, Charles	1901
Kenehan, Katherine	1915	Knowlton, Myrtle	1916
Kennedy, Anna	1917	Knowlton, Richard G.	1902
Kennedy, Bess	1916	Koeb, Otto	1911
Kennedy, Ethel	1902	Kohen, Nora I.	1918
Kennedy, Eunice	1918	Konkel, Anna	1910
Kennedy, Hazel	1919	Kondel, James	1911
Kennedy, Jennie	1917	Konkel, O. C.	1916
Kennedy, Lyrra Harriet	1911	Konkel, Olive	1914
Kennedy, Ruby Hazel	1919	Koster, Elizabeth	1907
Kennedy, Rozella R.	1916	Koster, Hattie	1914
Kenton, Nuna	1909	Kouba, Emma T.	1907
Kenwell, Joseph C.	1900	Kouba, Marie E.	1908
Keplinger, Peter	1902	Kouns, Zella	1919
Kermode, Gentille	1916	Kramer, Mary	1910
Kerr, Berdie	1904	Kramer, Mary G.	1910
Kerr, Esther	1912	Kreiner, Marie K.	1913
Kerr, Harriette	1905	Kridler, Grace	1898
Kerr, Milton R.	1911	Kroeger, Appolonia	1913
Kersey, Margaret	1900	Kroeger, Margaret	1915
Kershaw, Leta H.	1911	Kronen, Margaret	1919
Kessler, F. C.	1916	Kruh, Sara	1915
Kesler, Joseph	1901	Kucera, Emilie	1914
Kessler, (Mrs.) Kate E.	1918	Kuhnley, Irene Elizabeth	1909
Ketner, Sarah P.	1900	Kuhnley, Mabel Luella	1905
Key, Elizabeth B.	1911	Kuhnley, Stella Melvilla	1909
Keyes, Margaret Joy	1914	Kulp, Freeda	1905
Keyes, Victor	1901	Kussart, Jeanette	1917
Keys, Elizabeth	1915	Kutzleb, (Mrs.) Amanda	1911
Kibby, Ira W.	1919	Kyle, Clover	1910
Kibby, Laura M.	1905	Kyle, Henry Irving	1911
Kidder, Ethel	1917	Kyle, Homer L.	1908
Kiefer, Edith Enola	1913	Kyle, John	1915
Kier, Mary E.	1913	Kyle, Veda	1916
Kiker, Stella	1914	Kyler, Lela	1916
Kimball, Effie M.	1899	Labbo, Frances	1918
Kimball, Phylis	1917	Labriola, Elizabeth	1918
King, Alicia G.	1910	Lace, Jessie A.	1910
King, Alpha E.	1897	Lace, Mona	1909
King, Anna	1910	Lacher, Luella	1909
King, Ellen	1910	Lackey, Maggie	1915
King, Etta M.	1913	Lackore, Lillian	1912
King, Frances	1919	Iadd, Dora	1902
King, (Mrs.) Grace B.	1913	Ladd, Helen	1910
King, Harold C.	1917	Laffea, (Mrs.) Dolly Hale	1913
King, Kathryn	1917	Lafferty, Edith	1907
King, (Mrs.) L. C.	1895	Lagershausen, Emma	1916
King, Margaret V. C.	1912	Lahman, Margaret	1916
King, Nettie M.	1915	Laing, Margaret Ann	1918
King, Reta	1907	Laird, Leah Florence	1913
Kingwill, Jessie G.	1911	Lakin, Irene R.	1904
Kingwill, L. Bernice	1908	La Mar, Leona	1905
Kinsey, Helen I.	1918	Lamb, Grace	1913
Kirk, D. Estelle	1914	Lamb, Helen	1910
Kirk, Helen C.	1916	Lamb, Sylvia	1913
Kirke, Irene	1918	Lambert, Iva	1916
Kirkpatrick, Cecil	1913	Lambie, Jean Dorothy	1919
Kirkpatrick, Sadie	1907	Lambie, May Constance	1919
Kiser, Freda	1915	Lamma, Helen Irene	1912
Kistler, Isabelle	1910	Lamma, Clara	1909
Kitchel, Jennie L.	1910	Lamma, Mary Anna	1918
Kitchel, Lena	1911		

Lammie, Elizabeth R. . . . . 1910  
Lamont, Margaret. . . . . 1914  
Landers, Hazel . . . . . 1918  
Landers, Laura . . . . . 1910  
Landers, Prudence . . . . . 1909  
Landram, Anne B. . . . . 1915  
Landrum, Mabel R. . . . . 1907  
Lane, Florence M. . . . . 1908  
Lane, Loretta M. . . . . 1914  
Langdon, May . . . . . 1916  
Lanning, C. W. . . . . 1916  
Lapham, Etta E. . . . . 1908  
Lappin, Georgia. . . . . 1918  
Larkin, Bernice . . . . . 1912  
La Rose, Dora C. . . . . 1913  
Larson, Gladys . . . . . 1909  
Larson, Marvel . . . . . 1914  
Larson, Ruth . . . . . 1919  
Larson, Thyra . . . . . 1915  
LaShier, Ethel . . . . . 1915  
LaShier, Virginia . . . . . 1918  
Latas, Carolyn . . . . . 1917  
Latronico, Mary . . . . . 1916  
Latson, Elmer . . . . . 1900  
Latson, Frank E. . . . . 1907  
Latson, Inma . . . . . 1908  
Laubman, Louise. . . . . 1914  
Lauder, Maude. . . . . 1912  
Laudmann, Mary. . . . . 1914  
Lauenstein, Minnie V. . . . . 1903  
Laughead, Myrtle E. . . . . 1910  
Laughlin, Ethel M. . . . . 1907  
Laughlin, Grace E. . . . . 1907  
Laughrey, Leona. . . . . 1907  
LaVelle, Irene. . . . . 1915  
Law, Bess R. . . . . 1910  
Law, Daisy N. . . . . 1899  
Law, Nona J. . . . . 1899  
Law, Elma Olive. . . . . 1912  
Lawson, Anna. . . . . 1913  
Lawler, Cecilia . . . . . 1908  
Lawler, Katherine Ann. . . . . 1919  
Lawrence, Helen. . . . . 1917  
Laws, Irene. . . . . 1917  
Lay, Edith. . . . . 1916  
Layden, Marie . . . . . 1918  
Layden, Susie A. . . . . 1907  
Laylander, Virda. . . . . 1917  
Layton, Nellie B. . . . . 1916  
Layton, (Mrs.) Nellie L. . . . . 1912  
Leavenworth, Helen . . . . . 1918  
Leavenworth, Marian . . . . . 1918  
Leckenby, Grace . . . . . 1914  
Lee, Emma . . . . . 1908  
Lee, Eva Grace . . . . . 1914  
Lee, Homer J. . . . . 1917  
Lee, J. Walter . . . . . 1919  
Lee, Lyndall . . . . . 1915  
Leeper, Sigel Milburn. . . . . 1912  
Legler, Rosina . . . . . 1910  
Leibo, Joseph . . . . . 1911  
LeMaster, Gladys . . . . . 1917  
Lemmon, Alpharetta . . . . . 1908  
Lenau, Bertha B. . . . . 1918  
Leonard, (Miss) Gene . . . . . 1917  
Leonard, Margaret . . . . . 1914  
Leonard, Sadie K. . . . . 1902  
Leshner, Mabel G. . . . . 1917  
Lesslie, Maude E. . . . . 1911  
Lester, Lucy E. . . . . 1913  
LeVahn, Esther . . . . . 1914  
Levell, Dolina R. . . . . 1910  
Levell, Josephine . . . . . 1916  
Levis, Edna D. . . . . 1910  
Lewellyn, Mary J. . . . . 1902  
Lewis, Alta Coral. . . . . 1906  
Lewis, Blanche . . . . . 1909  
Lewis, Charlotte . . . . . 1902  
Lewis, Donna M. . . . . 1907  
Lewis, Ella M. . . . . 1904  
Lewis, Harriet E. . . . . 1912

Lewis, (Mrs.) Ivy Yeaton. . . . . 1918  
Lewis, Lena Adele . . . . . 1916  
Lewis, Lottie . . . . . 1894  
Lewis, Mabel A. . . . . 1905  
Lewis, Madeline . . . . . 1916  
Lewis, W. A. . . . . 1900  
Libby, Jeanette M. . . . . 1914  
Lichtenwalter, Viola. . . . . 1913  
Light, Edith Mary. . . . . 1906  
Lillard, Daisy G. . . . . 1907  
Lillard, Zanelda Belle. . . . . 1907  
Lilley, Vina M. . . . . 1918  
Lillie, Agnes . . . . . 1918  
Lilly, Louise . . . . . 1909  
Lincoln, Clara S. . . . . 1904  
Lincoln, Generva. . . . . 1891  
Lines, Celia . . . . . 1895  
Lininger, (Mrs.) Louise. . . . . 1913  
Linn, Irene F. . . . . 1918  
Linn, Vera M. . . . . 1908  
Linville, Mary E. Johnson . . . . . 1914  
Linville, Eva Boyle. . . . . 1907  
Lister, Ivah M. . . . . 1912  
Little, Isabel M. . . . . 1904  
Little, Rosamond L. . . . . 1910  
Livesey, Mary. . . . . 1909  
Llewellyn, Sarah . . . . . 1898  
Lloyd, Jane . . . . . 1919  
Lloyd, Josephine . . . . . 1914  
Lloyd, Martha . . . . . 1918  
Lloyd, Nathaniel . . . . . 1912  
Lloyd, Philip W. . . . . 1909  
Lloyd, Sarah E. . . . . 1913  
Locker, Vinette . . . . . 1914  
Lockerby, Bernice. . . . . 1915  
Lockett, Margaret . . . . . 1897  
Lockhart, James I. . . . . 1912  
Lockhart, Lee M. . . . . 1916  
Lockhart, Mae . . . . . 1912  
Logan, Helen. . . . . 1914  
Lohman, Mabel D. . . . . 1917  
Long, Alta . . . . . 1914  
Long, Geraldine . . . . . 1909  
Long, Margaret . . . . . 1909  
Long, May . . . . . 1914  
Long, Olive . . . . . 1899  
Longan, Anna M. . . . . 1912  
Longenbaugh, Bertha. . . . . 1918  
Looney, Ethel. . . . . 1917  
Loper, Carrie . . . . . 1915  
Lory, Charles A. . . . . 1898  
Loss, Ruth E. . . . . 1913  
Lott, Clara D. . . . . 1914  
Loud, Harriet. . . . . 1913  
Loughery, Catherine. . . . . 1918  
Loughran, Loretta. . . . . 1910  
Love, S. Helen. . . . . 1907  
Love, Josephine . . . . . 1918  
Love, (Mrs.) R. Homer. . . . . 1919  
Lovelady, Pearl. . . . . 1915  
Loveland, Ethel. . . . . 1917  
Lovering, Esther A. . . . . 1902  
Lowe, Anna . . . . . 1901  
Lowe, Elizabeth F. . . . . 1900  
Lowe, Grace E. . . . . 1914  
Lowe, Guidotta Muntzing. . . . . 1918  
Lowe, Lillian . . . . . 1918  
Lowe, Naamah . . . . . 1909  
Lowenhagen, Elsie. . . . . 1917  
Lowery, Mary . . . . . 1913  
Lowery, (Mrs.) Mary T. . . . . 1914  
Lowery, Margaret Ruth. . . . . 1912  
Lowther, Laura. . . . . 1900  
Loy, (Mrs.) Anna B. . . . . 1918  
Lucas, Cora . . . . . 1909  
Lucas, Ethel Estelle. . . . . 1913  
Lucas, M. Adella. . . . . 1905  
Ludwick, Samuel Miller. . . . . 1917  
Lund, Harriet. . . . . 1912  
Lundy, Granville E. . . . . 1899

Lundy, Kate N.....	1917	McFarland, Mary .....	1917
Lundy, Katie .....	1901	McFarland, Rachel B.....	1905
Lycan, Cora E.....	1913	McFeeley, Mary Valeria .....	1906
Lydick, Nora.....	1912	McFie, Mabel .....	1892
Lyle, (Mrs.) Mary .....	1913	McFie, Vina.....	1892
Lyman, Genevieve M.....	1910	McGee, Grace G.....	1913
Lynch, Andrew R.....	1892	McGee, May .....	1894
Lynch, Ella T.....	1915	McGetrick, Ada.....	1913
Lynch, Gladys M.....	1910	McGillivray, Harriet A.....	1914
Lynch, John .....	1894	McGinn, Margaret M.....	1910
Lyon, Florence .....	1909	McGirr, Lucy .....	1918
Lyon, Marguerite .....	1914	McGowan, Cynthia M.....	1907
Lyon, (Mrs.) Maude.....	1909	McGowan, Florence Eunice.....	1908
Lyons, Anna B.....	1918	McGrath, Margaret .....	1912
Lyons, Florence .....	1916	McGrath, Mary .....	1912
Lyons, Mildred .....	1918	McGuckin, Irene.....	1917
Lytle, Ruth .....	1916	McGrew, Amy.....	1913
Mabee, Elsie .....	1911	McIntosh, Edith L.....	1899
Mabee, Mertie .....	1910	McIntyre, Jennie .....	1903
McAfee, Fannie G.....	1907	McIntyre, Mary L.....	1918
McAllister, Emma .....	1912	McIntyre, Ruth .....	1916
McAllister, Nell .....	1916	McKay, Ethel.....	1914
McAllister, Winifred .....	1910	McKee, Genevieve .....	1916
McAndrew, Ellen.....	1918	McKee, Gladys V.....	1914
MacArthur, Jessie J.....	1904	McKee, Mabel .....	1913
MacArthur, Lillian .....	1916	McKeehan, Cora.....	1898
McBee, Mary.....	1917	McKelvey, Eva M.....	1914
McBreen, Barbara .....	1905	McKelvey, Kathryn .....	1901
McBride, Sallie Belle.....	1911	McKelvey, Nina .....	1905
McBurney, Belle .....	1914	McKelvie, William .....	1908
McCarn, Rocena.....	1907	McKennie, Alice.....	1919
McCarthy, Mary .....	1901	McKeon, Madge L.....	1904
McCarthy, Nancy .....	1910	Mackey, Druzilla Ruth.....	1907
McCarty, Anna.....	1918	Mackey, Katherine Irwin .....	1911
McCauley, Estella.....	1916	McKibben, Edith .....	1910
McClave, Blanche M.....	1895	McKinlay, Marie .....	1906
McClellan, Carrie L.....	1915	McKinley, Harriett .....	1897
McClelland, Alvin .....	1918	McKinley, Ruth .....	1918
McClelland, Helen .....	1913	McKinnie, Shirley .....	1914
McClelland, Robert A.....	1892	McKissick, Ethel.....	1911
McClintock, Alva .....	1917	McKune, D. Hazel .....	1905
McClintock, (Mrs.) Bessie T.....	1914	McLain, Minnie E.....	1893
McClintock, Mildred .....	1917	McLane, Lucy N.....	1912
McCloskey, Anna .....	1911	McLaughlin, Agnes.....	1916
McCloskey, Viola .....	1901	McLaurin, Mary M.....	1916
McClure, Martha .....	1910	McLean, Beryl .....	1918
McClure, Ruby M.....	1916	McLean, Gladys .....	1918
McClurg, Alice.....	1918	McLean, Mae .....	1917
McCollum, Jessie Cecil .....	1913	McLean, Margaret M.....	1911
McCollum, Merriam E.....	1911	McLean, Mary .....	1909
McCConnell, Katherine.....	1910	McLellan, E. Irene .....	1899
McCord, Emma D.....	1899	MacLeod, Bernice .....	1914
McCorkle, Lulu V.....	1914	McLeod, Carrie .....	1897
McCormick, Cora Frances.....	1906	McLeod, Mary C.....	1899
McCoy, Adelaide N.....	1911	McLin, Alma.....	1914
McCoy, Anna .....	1901	McLravy, M. Pearl.....	1905
McCoy, Maude M.....	1895	McMahan, L. Hermann.....	1914
McCoy, Minnie E.....	1903	McMechen, Elizabeth.....	1912
McCracken, Katherine .....	1903	McMenamin, Faye.....	1915
McCracken, Mary.....	1898	MacMillan, (Mrs.) E. P.....	1916
McCray, Blanche .....	1918	McMillan, Mary A.....	1909
McCreery, Grace E.....	1910	McMullin, Edith.....	1901
McCullough, A. M.....	1919	McMurphy, Jessie .....	1904
McCullough, Edith E.....	1903	McMurtry, Florence.....	1912
McCune, Letha.....	1916	McMurty, Elithe.....	1918
McCuniff, John T.....	1911	McNair, Agnes .....	1891
McCurdy, Mary B.....	1917	McNair, Ida M.....	1910
McCutcheon, Frances .....	1917	McNair, Madge .....	1917
McCutcheon, Marjorie .....	1918	McNair, Nelle .....	1914
McCutcheon, Mary Bruen.....	1906	McNamara, Margaret.....	1916
McDaniel, Emabel .....	1916	McNeal, Chandos L.....	1903
McDermet, Ella .....	1905	McNee, Elizabeth .....	1900
McDonald, Anna .....	1905	MacNee, Harriet Jane.....	1918
McDonald, Christine M.....	1910	McNee, Jessie.....	1902
McDonald, Elizabeth .....	1911	McNeel, Maybell .....	1917
McDonald, Eva .....	1915	MacNeil, Evelyn.....	1918
McDonald, Grace .....	1908	McNew, Addie .....	1910
McDonald, Mollie A.....	1904	McNicholas, Abbie.....	1909
McDonald, R. A.....	1897	MacNitt, E. Alice.....	1898
McDowell, Mayble.....	1915	McNutt, Sarah A.....	1917
McFadden, Loren E.....	1919	McPherson, Mattie .....	1901

McPherson, William	1901	Mayne, Fannie	1900
McQuie, Fannie	1915	Mays, Josephine	1909
McRorey, Laura	1914	Mazzone, Freda	1917
McVey, Romaine	1918	Meacham, Hazel P.	1916
Madison, Harriet	1918	Mead, Lexie	1906
Madrid, Sophia	1917	Mead, Wilhelmina	1910
Magner, Bessie M.	1905	Meads, Mildred	1910
Magor, Iris	1917	Meddings, Ada M.	1907
Mahon, (Mrs.) Maude	1918	Meddins, Beatrice	1905
Mahoney, Blanche	1912	Meddins, (Mr.) Winfred C. P.	1904
Mahoney, Elizabeth	1905	Meehan, Maud	1908
Mahoney, Margaret	1913	Meek, Edela	1892
Mahoney, Rebecca	1907	Meeker, Anicartha M.	1907
Mahoney, Theresa	1913	Meglasson, Eliza	1911
Mahuron, Ira D.	1915	Mellor, Florence M.	1915
Maine, Lottie	1905	Mellor, M. Ethel	1910
Maize, Nellie	1918	Melville, Bessie L.	1900
Malcolm, Louise Agnes	1911	Melvin, Harriette	1909
Mallaby, Julia B.	1908	Melvin, Pearl	1894
Mallery, Mary Margaret	1906	Menard, Mary Naomi	1916
Malleš, Nelle	1914	Mencimer, Lida M.	1912
Mallon, Vera Elizabeth	1912	Menke, Alice	1904
Mallonee, Mary Iva	1908	Merchant, Maud	1901
Mallot, Pauline	1917	Meredith, Nora	1907
Malloy, Evelyn H.	1913	Mergelman, Lulu	1903
Maloney, Margaret A.	1914	Merriam, Dorothy	1915
Maloney, (Mrs.) Mary E.	1915	Merriam, Ruth	1917
Mangun, Clara B.	1913	Merrill, Ada M.	1904
Manifold, W. H.	1899	Merrill, Hattiebelle	1915
Mansfield, Esther	1910	Merrill, Louisa A.	1894
Marion, Carrie	1915	Merryfeld, Esther	1916
Marker, Edith	1914	Messenger, Edna	1894
Markham, Verdi	1914	Metzger, Myrtle	1913
Markle, Hazel Mae	1917	Meyer, Edith	1912
Markley, Bertha	1915	Meyers, Bertha	1914
Markuson, Martha	1900	Meyers, Gladys	1914
Markwardt, Alma L.	1907	Meyers, Rosa V.	1917
Maroney, May	1913	Michaels, Hollis	1919
Marris, F. M.	1913	Mickelson, Alma	1911
Marron, Bernice	1917	Mickey, John L.	1910
Marron, M. Florence	1908	Miller, Adolphus	1914
Marsh, C. T.	1895	Middleswarth, Harriet E.	1903
Marsh, Mary B.	1893	Midgett, Alma Mayme	1906
Marshall, Estella D.	1902	Miles, Cornelius	1899
Marshall, Helen T.	1918	Miller, Adolph	1915
Marshall, Myrtle E.	1906	Miller, Agatha M.	1913
Marteney, Ethel Blanche	1914	Miller, Anne	1914
Marteeny, Maude Estelle	1906	Miller, Edna	1912
Martin, Anna	1915	Miller, Edwin	1895
Martin, B. F.	1917	Miller, Evelyn	1917
Martin, Beatrice E.	1903	Miller, Florence D.	1917
Martin, Carrie	1914	Miller, Geneva	1914
Martin, Clara Lois	1908	Miller, Geo. C.	1916
Martin, Maude E.	1905	Miller, Gladys M.	1917
Martin, Teena	1902	Miller, J. A.	1892
Martinez, Elvira	1911	Miller, Katherine	1910
Martinson, Emma A.	1916	Miller, Laura Louise	1906
Marvin, Grace H.	1910	Miller, Loretta K.	1914
Marx, Edith	1908	Miller, L. W.	1914
Marx, Myrtle	1913	Miller, (Mrs.) Mabel	1914
Mason, Alice D.	1918	Miller, Mabel R.	1913
Mason, Grace	1918	Miller, Maggie	1918
Mason, Lela H.	1918	Miller, Margaret M.	1915
Mason, Luella	1917	Miller, (Mrs.) Mary F.	1899
Massey, Joyce	1918	Miller, Mary G.	1904
Masterson, W. G.	1915	Miller, Maude	1912
Mater, Clara F.	1914	Miller, M. Elizabeth	1916
Mathews, Minnie V.	1896	Miller, Nell M.	1910
Matson, Edna A.	1913	Miller, (Mrs.) Nora R.	1913
Matson, Irene Anna	1911	Miller, Valeria A.	1912
Matthews, Anna H.	1912	Milligan, Mabel	1907
Matthews, Lillian E.	1913	Mills, Carrie T.	1907
Matthews, Wm. Ralph	1916	Mills, Jessie M.	1913
Matzick, Emma	1909	Mills, Ruth Esther	1907
Mau, Laura Emilie	1908	Milne, Cora L.	1911
Maxwell, Fay	1911	Milne, Katherine B.	1912
Maxwell, Mildred E.	1913	Miner, Elizabeth	1908
Mayer, George J.	1919	Minks, Elsie	1915
Mayer, Lena	1918	Minniss, Nellie	1917
Mayes, Mildred	1918	Minns, Effie	1916
Mayhoffer, Frances L.	1911	Mirriam, (Mrs.) Minnie	1913

Missimore, Alma May.....	1919	Mott, Irene B.....	1911
Mitchell, Bessie.....	1902	Mowery, Gertrude.....	1918
Mitchell, Lulu Mae.....	1914	Moyer, Bernice Jane.....	1916
Mitchell, M. Aopha.....	1913	Moynahan, Marguerite.....	1912
Mitchell, Mariam V.....	1903	Moynahan, Minnie.....	1910
Mitchell, Minnie B.....	1916	Muhr, D. A.....	1918
Mitchell, Pearl.....	1916	Mullen, Elizabeth.....	1910
Mitchell, Vera.....	1915	Muller, Maude L.....	1907
Moffatt, Marguerite.....	1913	Mulnix, Sadie S.....	1900
Moffatt, Maggie.....	1915	Mulnix, Sara S.....	1914
Mohrbacher, Florence.....	1917	Mulnix, Maisie.....	1912
Moler, Lenita E.....	1914	Mulvaney, Alma.....	1910
Molnar, Louis.....	1895	Mulvaney, Gertrude Jennie.....	1913
Money, (Mrs.) Carrie E.....	1908	Mulvehill, Reta.....	1913
Monfort, Warren.....	1914	Mumper, Anna T.....	1892
Monical, Sara.....	1913	Muncaster, Edith A.....	1907
Monroe, Gussie.....	1910	Mundee, Helen A.....	1902
Monsh, Hester Ursula.....	1918	Mundell, Lucy.....	1915
Montag, Ida C.....	1898	Mundie, Isabelle F.....	1903
Montague, Bessie Belle.....	1908	Mundy, Florence.....	1907
Montague, Joel Benjamin.....	1919	Mundy, James H.....	1912
Montague, Ruth E.....	1906	Munro, Edith.....	1913
Montgomery, Emma.....	1911	Munroe, Marcele.....	1917
Montgomery, Jessie.....	1891	Munson, Mary.....	1914
Montgomery, Mabel Fisher.....	1918	Murchison, Irene Alice.....	1917
Moomaw, Helen Frances.....	1919	Murchison, Mina.....	1914
Moon, Etta C.....	1913	Murphy, Cora Elizabeth.....	1914
Mooney, William B.....	1902	Murphy, Edna.....	1916
Moore, Attie D.....	1908	Murphy, Eleanor.....	1911
Moore, Catherine.....	1909	Murphy, Katherine Alice.....	1913
Moore, C. E.....	1914	Murray, Grace.....	1906
Moore, Chas. T.....	1917	Murray, Irene.....	1915
Moore, Edith M.....	1907	Murray, Julia Helena.....	1908
Moore, Fanny.....	1916	Murray, Maye.....	1908
Moore, Grace Gertrude.....	1909	Murray, Rose.....	1915
Moore, Hazel H.....	1909	Muse, A. W.....	1913
Moore, Hazel Lee Gladys.....	1911	Myers, Elizabeth.....	1917
Moore, Jessie R.....	1912	Myers, Joice.....	1915
Moore, Mamie F.....	1892	Myers, Sadie M.....	1908
Moore, Marie.....	1914	Naave, Emma.....	1915
Moore, Neal D.....	1913	Naeve, Clara.....	1916
Moore, Pearl Louise.....	1915	Nankervis, Leota.....	1918
Moorehouse, Geneva.....	1898	Nash, Bessie A.....	1913
Morand, Earle G.....	1905	Nash, Ella May.....	1906
Morehouse, Florence A.....	1899	Nash, Katherine F.....	1905
Morey, Jessie.....	1904	Nash, Kathryn A.....	1905
Morgan, Alice.....	1916	Nash, Margaret.....	1898
Morgan, Dolores Bessie.....	1911	Nash, Mary.....	1910
Morgan, Edna Georgiana.....	1918	Nauman, Minnie.....	1894
Morgan, Gladys F.....	1911	Naylon, Bernice.....	1919
Morgan, Grace M.....	1907	Neeb, Lenore.....	1916
Morgan, Jesse Robert.....	1912	Needham, (Dr.) Charles.....	1901
Morris, Clara Evelyn.....	1910	Needham, (Mrs.) Kate S.....	1914
Morris, Florence.....	1901	Neel, Ora.....	1900
Morris, Gertrude.....	1916	Neeland, Mary.....	1917
Morris, Hannah P.....	1912	Neeley, A. S.....	1917
Morris, Ruth Athalia.....	1911	Neil, Jennie.....	1916
Morrison, B. H.....	1918	Neill, (Mrs.) Myrtle Wilson.....	1914
Morrison, Delphine.....	1913	Neitzel, Olga.....	1914
Morrison, Elizabeth G.....	1915	Nelson, Armored.....	1913
Morrison, (Mrs.) Kellaphene.....	1906	Nelson, Esther E.....	1919
Morrison, Lelah.....	1911	Nelson, Gertrude E.....	1917
Morrison, Marguerite E.....	1907	Nelson, Grace.....	1918
Morrison, Mary.....	1917	Nelson, H. Gilbert.....	1913
Morrison, Nellie.....	1913	Nelson, Josephine.....	1904
Morrison, Walter.....	1916	Nelson, Lena M.....	1904
Morrow, Alice M.....	1918	Nelson, Louise.....	1906
Morrow, Margaret D.....	1912	Nelson, Maybelle C.....	1918
Morrow, Mary E.....	1918	Nelson, Nell.....	1910
Morse, Keith C.....	1913	Nelson, Rose.....	1916
Mortensen, L. H.....	1914	Nelson, Ruth J.....	1919
Moseley, Eunice.....	1914	Nesbitt, (Mrs.) Winifred.....	1917
Moseley, Frank Y.....	1914	Ness, Alice C.....	1912
Moses, Mathilda R.....	1914	Nettleton, E. Augusta.....	1907
Mosher, Abbie.....	1902	Neuman, Edna.....	1911
Mosher, Edna T.....	1907	Neuman, Ella.....	1903
Mosher, Jessie.....	1910	Neutze, John W.....	1917
Mosier, Leila.....	1905	Neville, Anne.....	1915
Moss, Eva May.....	1902	Nevins, Frances.....	1918
Motheral, Clare.....	1913	Newitt, Eva E.....	1903
Mott, Alphonse.....	1916	New, Nellie Blanche.....	1911

Newall, Agnes.....1897  
 Newby, Florence.....1899  
 Newcomb, Anna H.....1903  
 Newcomb, Eleanor.....1915  
 Newcomb, Kate.....1910  
 Newcum, Charles L.....1908  
 Newman, Emma.....1895  
 Newman, Lucy.....1915  
 Newman, Winnifred.....1896  
 Newsome, Ethel.....1905  
 Newsome, Ruth.....1917  
 Newton, Bessie.....1909  
 Newton, Florence.....1918  
 Newton, Lillian B.....1907  
 Newton, Vera.....1913  
 Nicholas, Queen.....1914  
 Nichols, Harriet.....1910  
 Nichols, (Mrs.) Helen.....1915  
 Nichols, Helen E.....1910  
 Nichols, Mary E.....1915  
 Nichols, (Mrs.) Mary J.....1918  
 Nichols, Stella.....1917  
 Nicholson, Bessie Pearl.....1912  
 Nicholson, Nell.....1915  
 Nicholson, Nettle B.....1915  
 Nims, (Mrs.) Lillian G.....1916  
 Nisbet, Louise.....1917  
 Nixon, Alice M.....1893  
 Noble, Iva.....1916  
 Noble, Viva H.....1917  
 Noce, M. C. Lillian.....1914  
 Noel, Maude.....1899  
 Noll, Florence Eleanor.....1908  
 Noonan, Edna.....1914  
 Noonan, Urbana.....1914  
 Nordahl, Esther.....1915  
 Nordstrom, Florence.....1914  
 Nordstrom, Olga.....1916  
 Nordstrom, Sylvia Maybelle.....1911  
 Norgaard, R. Marie.....1907  
 Norine, Mayme.....1901  
 Norris, A. Lena.....1912  
 Norris, Lillian.....1910  
 Norris, Luella.....1906  
 Norton, Nell.....1896  
 Norton, Nona.....1901  
 Norviel, Alma.....1910  
 Nott, Helen.....1918  
 Nowlin, E. W.....1918  
 Noyes, Frances E.....1909  
 Noyes, Mary.....1912  
 Nusbaum, Jess.....1907  
 Nusbaum, Nelda.....1918  
 Nutting, Drusilla.....1900  
 Nye, Faye.....1916  
 Nye, Marie Ellen.....1914  
 O'Bannon, Catherine.....1915  
 O'Boyle, Alice.....1908  
 O'Boyle, (Mrs.) Georgina M.....1917  
 O'Boyle, Lila M.....1900  
 O'Brien, Camilus E.....1914  
 O'Brien, Catherine.....1914  
 O'Brien, Emma L.....1898  
 O'Brien, Gladys.....1916  
 O'Brien, Mary Rose.....1913  
 O'Brien, Rhoda.....1901  
 O'Connell, Anna.....1908  
 O'Connell, Mamie.....1900  
 O'Connell, Mary J.....1915  
 O'Connell, Sara.....1909  
 O'Conner, Charles.....1901  
 O'Conner, Florence.....1917  
 O'Connor, Agnes L.....1917  
 O'Dea, Kathryn.....1916  
 O'Dea, Margaret.....1915  
 O'Dea, Mary.....1915  
 Oehlkers, (Mrs.) Clara.....1916  
 Off, Frieda.....1914  
 Offdenkamp, A. Ruth.....1907  
 Ogle, Mayme.....1910  
 O'Keefe, Agnes.....1901

O'Kelly, Kathleen.....1916  
 O'Kelly, Nellie.....1915  
 Oklun, Mattie.....1907  
 Oldfather, (Mrs.) Carrie.....1918  
 Oldham, Ethel J.....1904  
 Olds, Hazel.....1914  
 Olin, Marguerite.....1910  
 Oliver, Margaret.....1915  
 Oliver, Viola W.....1915  
 Olney, Nellie.....1907  
 Olsen, Leah.....1909  
 Olson, Ellen.....1914  
 Olson, Mamie.....1900  
 Ommanney, Katharine.....1913  
 O'Neal, Emma Frances.....1917  
 O'Neill, Alice L.....1915  
 O'Neill, Anna.....1916  
 Onstine, Eulalia.....1901  
 Onstine, Geraldine.....1917  
 Organ, Bertha.....1916  
 O'Rourke, Bessie.....1910  
 O'Rourke, Justine.....1910  
 O'Rourke, Mary Agnes.....1918  
 Orr, Irma.....1900  
 Orrison, Emma.....1913  
 Osborne, Mary C.....1904  
 Osborne, Myrtle I.....1911  
 Oster, Martha.....1916  
 O'Sullivan, Cornelia.....1915  
 O'Toole, Mary.....1916  
 Ott, Luella.....1910  
 Oviatt, Hazel.....1915  
 Oviatt, Helen.....1915  
 Oviatt, Inez.....1918  
 Ovren, Josephine.....1909  
 Owen, Mary Marguerite.....1912  
 Packer, W. R.....1902  
 Paden, Grace.....1915  
 Paden, Mary.....1917  
 Padgett, Mabel.....1908  
 Page, (Mrs.) Alida.....1915  
 Page, Edith May.....1911  
 Page, Helen.....1917  
 Page, Mildred A.....1918  
 Paine, Velma E.....1910  
 Painter, Edith G.....1916  
 Palm, Frances T.....1918  
 Palm, Helen.....1918  
 Palmquist, Christina.....1909  
 Pancake, Florence.....1917  
 Pantall, Myrta.....1919  
 Park, Mary.....1914  
 Parker, A. P.....1917  
 Parker, Evelyn.....1916  
 Parker, Opal.....1916  
 Parker, Susie M.....1908  
 Parkinson, Emma.....1909  
 Parlow, Mary.....1910  
 Parrett, Florence Edna.....1908  
 Parrett, Kate.....1901  
 Parsons, Alice.....1918  
 Parsons, Jessalyn L.....1916  
 Partner, Nettie Orville.....1906  
 Pascoe, Edna J.....1915  
 Pasley, Edith L.....1905  
 Pasley, Elizabeth Mabel.....1906  
 Pate, Ethel.....1918  
 Pate, Pearl A.....1905  
 Patterson, Anna.....1917  
 Patterson, Daisy P.....1899  
 Patterson, Elizabeth V.....1904  
 Patterson, Helen.....1915  
 Patterson, Ona Colvin.....1916  
 Patton, Elizabeth.....1914  
 Patton, Mabel.....1896  
 Paul, Elena Thompson.....1910  
 Paul, Isabel.....1896  
 Pauly, Irene.....1915  
 Pavel, Matilda.....1913  
 Paxton, Lucinda Ann.....1906  
 Payne, Bird.....1909

Payne, Martha	1911	Pittman, Frances	1909
Peak, (Mrs.) Lottie Broum	1914	Pixler, Denova	1917
Pearce, Hazel B.	1915	Plumb, Pearl	1912
Pearce, Lela E.	1912	Plumb, Vanche Etoil	1910
Pearce, Mable	1911	Poe, Eva Lucy	1915
Pearce, Ruth	1918	Poirson, Ema	1912
Pearce, Stella	1893	Poirson, Eugenie	1907
Pearcey, Lillie	1907	Poirson, Henriette	1899
Pearl, Stella Keith	1912	Poirson, Louise	1903
Pearson, Genevieve M.	1915	Poland, Belle	1900
Pearson, Hazel	1909	Pollock, Emma	1896
Pearson, Helen	1915	Pollock, Rose M.	1899
Pearson, Jessie	1910	Pomeroy, Miriam Morris	1918
Pease, Ethel	1914	Pond, Clarence B.	1913
Pechin, Zadia	1902	Pond, Georgia A.	1916
Peck, Elvira	1917	Pool, Annie	1915
Peck, Ethel Gertrude	1906	Porges, Nettie	1906
Peck, Ruby L.	1916	Porter, Della E.	1902
Peck, Vera	1895	Porter, F. Gertrude	1905
Peck, Hermina	1913	Porter, Frances	1904
Peers, Katherine E.	1916	Porter, Harriet	1917
Peery, Clara M.	1914	Porter, L. Adella	1908
Peirano, Ruth R.	1910	Porter, Mary	1917
Peilton, Eveline	1913	Porter, Ralph M.	1918
Pemberton, Myrtle	1913	Porter, Virginia	1916
Pemberthy, Edith	1914	Porterfield, C. H.	1915
Penberthy, Esther	1911	Porterfield, Lois	1913
Penberthy, Martha	1911	Potochnick, Stephy	1911
Pendell, Dorcas M.	1902	Potochnick, Tracy	1915
Pendery, Alice E.	1904	Potter, Berenice	1918
Penfield, Edna L.	1912	Potter, Emerson Carlisle	1919
Pengra, Ray F.	1917	Potter, Helen	1918
Penley, Hazel E.	1918	Potter, Lucia	1916
Perkins, Birdie	1918	Potts, J. George	1899
Perkins, Lillie Coles	1919	Pound, John L.	1910
Perry, Edith	1918	Powell, M. Evelyn	1899
Perry, Geraldine M.	1904	Powell, Frances L.	1899
Peters, Anna	1894	Powell, Olive Elizabeth	1906
Peters, Leona	1915	Powelson, Pearl E.	1899
Peterson, Alice	1916	Power, Alice	1916
Peterson, A. Maria	1907	Powers, Mary Genevieve	1909
Peterson, Grace A.	1913	Powers, Myrtle A.	1902
Peterson, Hanna	1901	Poynter, Mary Lee	1911
Peterson, Jennie H.	1910	Prentice, Maggie May	1915
Peterson, Josie L.	1915	Prescott, Bessie A.	1908
Peterson, Mary V.	1907	Pressler, Anna W.	1907
Petit, Avis	1919	Pressly, Gladys	1911
Petticrew, Abbie	1917	Preston, Charles W.	1906
Phelan, Mercedes C.	1912	Preston, Florence	1908
Phelps, Eleanor Phillips	1918	Price, J. M.	1895
Phelps, Lona Jamerson	1919	Price, Virginia E.	1899
Phelps, Mabel	1913	Priest, Lee	1893
Phelps, Mattie	1913	Priest, Zella M.	1916
Phenix, A. May	1912	Priddy, Bessie	1916
Phenix, Florence	1918	Priddy, Roy H.	1917
Phillip, J. Lonie	1907	Pridmore, Eula	1907
Phillips, Clarice	1908	Prince, A. H.	1914
Phillips, Edith	1917	Prince, (Mrs.) Carrie M.	1914
Phillips, Eleanor	1899	Pritchard, Hazel	1914
Phillips, Jessie	1903	Pritchard, Henrietta	1911
Phillips, S. S.	1914	Probst, Emma	1896
Phillips, Stella	1895	Probst, Rose	1900
Phillips, Zelma	1913	Proctor, Irene F.	1907
Phippeny, G. O.	1917	Proctor, Mildred	1916
Phippeny, Lael	1918	Proctor, Ula	1902
Phippeny, Lucile	1916	Proffitt, Edward F.	1906
Pick, Gladys A.	1919	Prosser, Georgianna	1918
Picket, Lulu May	1906	Provis, Dora Mary	1906
Pickett, Blanche	1917	Prunty, Iona E.	1916
Piedalue, Laura	1909	Pughe, Charlotte	1917
Pierce, (Mrs.) Anna Laurene	1913	Pulliam, Eulalee Isabelle	1913
Pierce, (Mrs.) C. W.	1914	Puntenney, Harriet	1914
Pierce, Fanny	1917	Purdee, Myrtle	1907
Pierce, Kathel	1915	Purdy, Edna J.	1908
Pierce, Pansy Edythe	1919	Purdy, Ethel M.	1909
Pierson, Gertrude	1909	Purdy, Rena	1911
Pierson, Sadie L.	1910	Putnam, (Mrs.) A. E.	1913
Pingrey, Jennie N.	1917	Putnam, Jennie	1897
Pingrey, Maria Z.	1918	Putnam, Kate	1892
Piper, Grace E.	1917	Putnam, Nellie	1898
Pittman, Alice	1906		



Quayle, Margaret Z.	1918	Rhys, Mary G.	1902
Quick, Anna	1909	Rice, Grace G.	1911
Quinlan, Agnes	1915	Rice, Lucile	1907
Quinlan, Gertrude	1915	Rice, Marjorie	1913
Quinlan, Mary	1916	Rice, Siddle E.	1915
Quinn, Alice	1918	Richards, Carrie L.	1898
Raber, Carrie	1916	Richardson, E. Florence	1902
Radford, Minnie Etheline	1906	Richardson, Etta E.	1908
Rafferty, May	1919	Richardson, Georgia D.	1914
Ragan, J. B.	1910	Richardson, Leolla	1916
Raichart, Eva	1918	Richardson, Ruth	1918
Ramsay, Bernice E.	1916	Richart, Lillian	1910
Ramsay, Edith	1917	Richart, (Miss) L. M.	1917
Ramsdell, Catherine	1914	Ricketts, Blanche	1917
Ramsdell, Fred Stanley	1908	Ricketts, Elizabeth	1918
Ramsey, Adele A.	1910	Richey, William Earl	1911
Ramsey, Carrie H.	1913	Riddell, Floy	1914
Ramsey, L. Fern	1904	Riddell, Fannie	1898
Randall, Bertha	1916	Riddle, Nora	1914
Randall, (Mrs.) Maud Agnew	1906	Rider, Ida M.	1910
Randol, Josephine	1917	Ridley, Mirian	1918
Rank, Margaret	1894	Riedel, Gladys	1916
Rankin, Bessie	1902	Riek, Meta	1900
Rankin, Pearl B.	1899	Riggs, Caroline	1905
Ransdell, Gladys	1916	Riley, Bertha M.	1914
Ransom, Lucy	1916	Riley, Ione	1918
Rapp, Leila	1917	Riley, Laura V.	1917
Rardin, Florence	1917	Ringle, Helen	1915
Rawlings, Mary Edna	1918	Rink, Ethel O.	1915
Ray, Zoa	1917	Rissman, Gertrude R.	1917
Rayl, Blanche	1916	Ritter, Blanche	1919
Rayner, Irene	1915	Ritter, Garnett	1914
Rayner, Marguerite	1909	Ritter, Grace S.	1915
Rayner, Mary	1909	Roach, Marie	1917
Raynolds, Nona	1919	Roarke, Estelle	1915
Rea, Inez	1916	Robb, Gladys	1915
Read, Faye	1909	Robb, Mary	1905
Read, Hazel H.	1912	Robb, Pearl	1905
Reath, Sarah E.	1915	Robb, Roxana	1912
Redden, Julia P.	1908	Robbins, Esther	1916
Redic, Mary E.	1907	Robbins, Ruth	1912
Reece, Benita	1917	Robbins, W. F.	1900
Reece, Genevieve	1916	Roberts, Ethel	1908
Reed, Adaline W.	1905	Roberts, Guy H.	1908
Reed, Barbara	1918	Roberts, Helen Christanna	1912
Reed, Bessie	1912	Roberts, Imogene	1913
Reed, Erika	1917	Roberts, Isabel	1915
Reed, Ethel	1909	Roberts, Mabel	1918
Reed, Gertrude Mabel	1908	Roberts, May	1916
Reed, Truman G.	1915	Roberts, Prudence Beverly	1914
Reeder, John M.	1898	Roberts, Stella E.	1899
Reedy, Mary B.	1905	Robertson, Alverna	1918
Reh, Agnes Louise	1918	Robertson, Chrissie G.	1907
Reich, (Mrs.) Ida	1915	Robertson, Edna	1909
Reichelt, Vera E.	1914	Robertson, Jean	1901
Reid, Alice	1913	Robey, Claude	1906
Reid, Beneta	1918	Robinette, Sara J.	1902
Reid, Janette	1910	Robinson, Abbie	1901
Reid, Lois E.	1902	Robinson, Angelina B.	1899
Reid, Pearl	1904	Robinson, Anna	1894
Reilley, Katherine	1909	Robinson, Armina E.	1907
Reinhardt, Ida E.	1915	Robinson, Beulah Estella	1918
Reinkem, Emma	1915	Robinson, Blanche	1906
Reitzel, Ferne B.	1917	Robinson, Fannie F.	1892
Remington, Mayme	1901	Robinson, Frances I.	1905
Rendahl, Martin O.	1906	Robinson, Goldie W.	1903
Renkes, Josephine	1911	Robinson, Helen K.	1916
Rennold, C. E.	1918	Robinson, Henrietta	1911
Reno, Alice	1909	Robinson, Merna B.	1908
Reno, Stella	1914	Robinson, Nellie	1899
Repetschnig, Elizabeth	1914	Robinson, Rachel C.	1916
Resor, Virginia	1900	Robinson, Roberta	1910
Retallack, Gladys	1913	Rochat, Emma Cecile	1899
Reynolds, Alma S.	1902	Roche, H. E.	1914
Reynolds, Effie	1912	Roche, Mary	1918
Reynolds, Gerda	1903	Rockefeller, Edna	1909
Reynolds, Naomi E.	1916	Rockwell, R. E.	1914
Reynolds, Pauline	1918	Roddy, Gary	1907
Rhiner, Ethelyne	1916	Rodefer, Mary Frances	1912
Rhoades, Esther Alfreda	1917	Rodgers, Blanche I.	1918
Rhoades, Helen Elaine	1919	Rodgers, Elsyne	1914

Rodgers, Grace L.	1910	Sansburn, Alvin	1916
Roe, Anna	1909	Sarell, Jessie	1900
Roe, (Mrs.) Mabel E.	1912	Sargeant, C. G.	1915
Roe, Myrtle A.	1917	Sargent, Lela F.	1916
Rogers, Ada M.	1912	Sauer, Carrie	1915
Rogers, Hettie M.	1912	Saunders, Agnes	1911
Rogers, Iva Maude	1916	Saunders, Edith	1906
Rogers, Ivalou	1913	Savage, Ella G.	1904
Rogers, Ora	1912	Sawin, Katherine	1907
Rogers, Ruth	1909	Sawyer, Dora	1913
Rohr, Frieda	1912	Sayer, Emma	1906
Rohrer, Etta M.	1913	Sayer, Myrtle P.	1906
Roman, Edith	1918	Saylor, Myrtle	1913
Romans, Ab. H.	1900	Saylor, Florence	1912
Romick, Nell	1918	Scandrett, Ina	1913
Rose, Florence	1918	Scanlan, Alice	1917
Rose, Julia	1910	Scanlan, R. Ella	1919
Rose, Lila May	1918	Scanlan, Mary	1898
Rosebrough, Vera	1917	Schafranka, Ella	1906
Rosedahl, Charlotte	1910	Schattinger, Clara B.	1908
Rosedahl, Victoria	1908	Schattinger, Mary L.	1907
Rosell, Flossie	1917	Schayer, Fanny	1914
Rosen, Astrid Marie	1914	Scheffler, Bertha S.	1899
Rosenberg, Esther	1911	Scheffler, Josephine	1901
Rosenburg, Frances	1909	Schellabarger, Clara Ethel	1909
Rosenthal, Minnie	1918	Schenck, Gertrude	1909
Ross, A. B.	1916	Schenck, Mary E.	1911
Ross, Deborah Anna	1908	Schenk, Erich	1918
Ross, Edwin A.	1907	Scherrer, Josephine L.	1903
Ross, (Dr.) Hettie M.	1898	Schertel, Max	1909
Ross, Jeanette	1914	Schied, Ethel M.	1906
Ross, Leila E.	1915	Schillig, Clara	1907
Ross, Maude E.	1899	Schillig, Edna	1911
Ross, M. Esther	1903	Schisler, Pearle	1914
Ross, Nellie B.	1913	Schlupp, Julia	1918
Rote, Orville W.	1915	Schmidt, Kari	1900
Rothschild, (Mrs.) Cora Levy	1897	Schneider, A. Marie	1918
Rourke, Sophia	1916	Schoppe, Gype	1910
Rowe, Edith	1908	Schrader, Bonita M.	1917
Rowe, Irene	1915	Schrader, Ruby	1913
Rowell, Eva G.	1913	Schroeder, Helen W.	1907
Rowen, Gladys	1917	Schultz, Mary D.	1914
Rowton, V. E.	1907	Schultz, Nettie H.	1912
Rubin, Ruth P.	1915	Schultz, Tyro	1901
Rudolph, Elizabeth	1914	Schumate, Agnes J.	1906
Rudolph, Victor	1897	Schurman, Lucille	1912
Ruecan, Elsa Von	1917	Schurman, Mary E.	1918
Ruffer, William	1910	Schweizer, Ellen	1911
Rumley, Maude	1919	Schweitzer, Katherine	1903
Rundquist, Winona	1917	Schwyn, Luella A.	1917
Rupp, Gertrude	1905	Scofield, Beulah F.	1903
Rupp, M. Ethel	1918	Scott, Bertha I.	1904
Russell, Helen G.	1916	Scott, C. E.	1917
Russell, Mabel N.	1904	Scott, Crystal Madeline	1918
Russell, S. Alice	1914	Scott, Ethel	1904
Rutherford, Harry H.	1912	Scott, Fern	1918
Ryan, La Fayette	1913	Scott, Leta M.	1907
Ryan, Laura	1914	Scott, (Mrs.) Letitia A.	1908
Ryan, Frances	1914	Scott, Lucy	1901
Saathoff, W. H.	1919	Scott, Madeleine	1905
Sackett, Anna	1908	Scott, Malvina S.	1919
Said, Nettie A.	1904	Scott, Marie	1918
Salberg, Eleanor	1918	Scott, Nancy May	1906
Sale, Luella J.	1910	Scotland, May	1916
Sallen, Katherine	1909	Scouler, Jessie Elizabeth	1912
Salmon, Edith L.	1907	Scoville, Jared M.	1910
Saltus, Charles N.	1911	Scribner, Bonnie	1917
Saltus, (Mrs.) C. N.	1917	Scribner, Dee M.	1902
Saltus, (Mrs.) D.	1915	Seal, Agnes	1910
Sammons, Jessie	1910	Seaman, Lelia	1910
Sampson, Nellie E.	1908	Searles, Nine	1900
Sanborn, Mabel	1897	Searway, Irene	1918
Sanborn, Roma	1904	Sease, Susie	1914
Sandberg, Edith	1917	Seaton, Janet	1899
Sanden, Edith Mabel	1918	Sebring, Mabel Esther	1912
Sandine, Agnes	1917	Sechrist, Bernice	1914
Sandoval, (Mrs.) Rafaelito V.	1917	Secret, Florence	1914
Sandstedt, Hilma	1909	Sedgwick, Myrtle M.	1916
Sanford, Edith D.	1906	Seed, Stella H.	1893
Sanford, Margaret O.	1906	Seeger, May	1911
Sansburn, (Mrs.) Alvin	1916	SeEVERS, Adalyn L.	1913

Seiss, Ermie ..... 1919  
 Selberg, Edith ..... 1918  
 Seller, Irene Marie ..... 1913  
 Sellers, Gilbert ..... 1901  
 Sellers, Will ..... 1902  
 Sellers, W. A. .... 1917  
 Senecal, Marie ..... 1913  
 Severance, Dora ..... 1894  
 Sexson, John A. .... 1905  
 Seybold, Bertha ..... 1900  
 Seymour, (Mrs.) Melita ..... 1911  
 Shackelford, Lila ..... 1911  
 Shacklett, Estella ..... 1914  
 Shaffer, Dorothy H. .... 1913  
 Shambo, Mabel Ruby ..... 1912  
 Shank, Hazel ..... 1918  
 Shank, Iva P. .... 1913  
 Shapcott, Edith M. .... 1915  
 Sharp, Elizabeth ..... 1915  
 Sharpnack, Hazel M. .... 1916  
 Sharp, Mabel ..... 1914  
 Sharp, W. A. Seward ..... 1912  
 Sharpe, Clio Vesta ..... 1912  
 Shattuck, Dorothy ..... 1917  
 Shattuck, Marian ..... 1917  
 Shaw, Helen D. .... 1907  
 Shaw, Jesse R. .... 1913  
 Shaw, L. T. .... 1914  
 Sheeder, (Mrs.) Elizabeth ..... 1911  
 Sheeder, Ruth ..... 1913  
 Sheeley, Nellie I. .... 1905  
 Shelburn, Bessie ..... 1916  
 Shepard, Marian ..... 1916  
 Shepard, Pauline C. .... 1912  
 Shepherd, Frank H. .... 1910  
 Sherar, Ethel S. .... 1917  
 Sherman, Jessie ..... 1912  
 Sherry, Lulu ..... 1906  
 Shields, Faye ..... 1918  
 Shields, Gertrude ..... 1918  
 Shifflette, Blanche ..... 1916  
 Shillady, Miriam E. .... 1917  
 Shirley, Hazeldean ..... 1913  
 Sholty, Maud ..... 1915  
 Shomaker, Edith Irene ..... 1911  
 Shreves, Rolla M. .... 1909  
 Shriber, Esther ..... 1917  
 Shriber, Eva Ruth ..... 1918  
 Shriber, J. H. .... 1915  
 Shuck, Anna ..... 1913  
 Shull, Grace ..... 1896  
 Shultis, Frank W. .... 1915  
 Shultis, Lorraine ..... 1916  
 Shultis, Mabel ..... 1916  
 Shultz, Lila J. .... 1914  
 Shultz, Nettie H. .... 1913  
 Shumate, Letha ..... 1905  
 Shumate, Mary D. .... 1906  
 Shumway, William ..... 1894  
 Sibley, Ada M. .... 1913  
 Sibley, (Mrs.) Ada Stilson ..... 1912  
 Sibley, (Mrs.) Bella B. .... 1898  
 Sibley, Blanche T. .... 1905  
 Sibley, Winifred M. .... 1906  
 Siess, Ermie ..... 1917  
 Sievers, Clarinda ..... 1910  
 Silver, Martha M. .... 1911  
 Simmons, Ruby ..... 1912  
 Simonson, Thelia Ruth ..... 1912  
 Simms, (Mrs.) Nelle P. .... 1911  
 Simpkins, Florence ..... 1914  
 Simpson, Lettie ..... 1919  
 Sinclair, Myra A. .... 1914  
 Singer, Harriet H. .... 1904  
 Singleton, (Mrs.) Helen A. .... 1903  
 Sipple, (Mrs.) Carrie Parks ..... 1918  
 Sites, Florence Ethel ..... 1906  
 Skidmore, Hazel ..... 1915  
 Skinner, C. E. .... 1917  
 Skinner, Edith ..... 1909  
 Skinner, Mary E. .... 1916

Skones, Marion ..... 1914  
 Slater, Catherine M. .... 1909  
 Slatore, Nelson ..... 1897  
 Slattery, Mary ..... 1915  
 Slaughter, Elizabeth A. .... 1909  
 Slavin, Helen A. .... 1903  
 Sleeper, Sarah E. .... 1903  
 Slindee, Agnes ..... 1918  
 Small, Lavina A. .... 1899  
 Smiley, Josephine ..... 1919  
 Smiley, Louise ..... 1911  
 Smith, (Mrs.) Adda Wilson ..... 1902  
 Smith, Alberta Kenworthy ..... 1912  
 Smith, Alice ..... 1909  
 Smith, Alma ..... 1905  
 Smith, Alsen ..... 1915  
 Smith, Amy A. .... 1899  
 Smith, Anna ..... 1915  
 Smith, Anna P. .... 1906  
 Smith, Carolin Estella ..... 1906  
 Smith, Carrie ..... 1918  
 Smith, Madame Clara H. Gulliford ..... 1917  
 Smith, Cora E. .... 1897  
 Smith, Cora Jean ..... 1918  
 Smith, Della ..... 1917  
 Smith, Edith M. .... 1917  
 Smith, Eleonore P. .... 1918  
 Smith, Elizabeth B. .... 1915  
 Smith, Eula A. .... 1908  
 Smith, Eulah ..... 1915  
 Smith, Eula ..... 1916  
 Smith, Flora A. .... 1916  
 Smith, Frances ..... 1900  
 Smith, Frank B. .... 1902  
 Smith, Gertrude V. .... 1911  
 Smith, Gratia Hyde ..... 1917  
 Smith, Helen Fay ..... 1898  
 Smith, Helen ..... 1908  
 Smith, Josephine ..... 1909  
 Smith, Juanita L. .... 1914  
 Smith, Katherine ..... 1913  
 Smith, Kathryn E. .... 1918  
 Smith, Lavinia ..... 1904  
 Smith, (Mrs.) Leta A. .... 1907  
 Smith, Lilly ..... 1913  
 Smith, Louise ..... 1909  
 Smith, Lucille E. .... 1918  
 Smith, Luna I. .... 1896  
 Smith, (Mrs.) M. .... 1910  
 Smith, Margaret H. .... 1915  
 Smith, Mary A. .... 1910  
 Smith, (Mrs.) Mary B. .... 1915  
 Smith, Mary L. .... 1892  
 Smith, Mary Olive ..... 1916  
 Smith, Maybelle ..... 1915  
 Smith, Mildred ..... 1912  
 Smith, Miriam Elberta ..... 1916  
 Smith, Nettie ..... 1913  
 Smith, Olive ..... 1900  
 Smith, Omer DeWitt ..... 1915  
 Smith, Rena ..... 1917  
 Smith, Rhoda Worthington ..... 1913  
 Smith, Robert J. .... 1916  
 Smith, Ruth B. .... 1912  
 Smith, Sadie E. .... 1916  
 Smith, Sybil ..... 1916  
 Smith, T. Carrie ..... 1905  
 Smith, Viva R. .... 1915  
 Smith, Vivian ..... 1917  
 Smyser, Fanny Alice ..... 1912  
 Smythe, Adah Agnes ..... 1919  
 Snead, Lucy ..... 1910  
 Snedden, Jessie ..... 1916  
 Snedgen, Alfred ..... 1918  
 Snively, Lena ..... 1915  
 Snoddy, Martha B. .... 1910  
 Snodgrass, Geneva ..... 1911  
 Snook, Carrie ..... 1909  
 Snook, Harry ..... 1906  
 Snyder, E. R. .... 1895

Snyder, E. Tyndall	1904	Stiles, Elizabeth	1907
Snyder, Laura	1901	Stimson, Helen	1917
Snyder, Rosa E.	1912	Stobbs, Edna	1918
Soister, Hazel L.	1908	Stockdale, Martha	1900
Songer, Myrtle	1909	Stockham, Ima	1917
Sonne, Margaretha	1918	Stockover, Catherine	1912
Sonner, Verna	1917	Stockton, Guy C.	1897
Sopp, Helen	1908	Stockton, J. Leroy	1893
Spangler, Vera M.	1913	Stoddard, Helen	1918
Sparlin, Nellie	1899	Stoddard, Mabel	1910
Sparling, Emma	1905	Stodghill, Corinne	1917
Spence, Mary R.	1907	Stoelsing, Katrina	1913
Spencer, Frank C.	1891	Stokes, Katherine E.	1903
Spencer, Jennett Stevens	1915	Stolt, Edna B.	1917
Sperry, Bessie L.	1908	Stone, Alice I.	1903
Spethman, Mame	1915	Stone, (Mrs.) Bertha	1910
Spicer, Mabel	1914	Stone, Blanche	1918
Spicer, Wilma Olive	1911	Stone, Geneva	1917
Spillman, Albert R.	1912	Stone, Gertrude	1911
Spivey, Anna	1913	Stone, Hattie	1917
Sprague, Jessie	1910	Stone, Helen	1918
Springsteen, Francis	1907	Stone, Lulu M.	1918
Stackhouse, Evelyn	1911	Stone, Martha	1917
Staley, Hazel	1918	Stout, Opal	1917
Stampfel, Alvine L.	1907	Stout, Ruth	1918
Stanforth, Della	1916	Strack, Caroline	1913
Stannard, Emily M.	1907	Strang, Anna	1909
Stannard, Laura V.	1907	Strang, Marjorie	1913
Stansfield, Helga	1915	Stratton, Ella E.	1895
Stanton, Kate M.	1895	Strawbridge, Vera	1917
Stapleton, Joan	1918	Strayer, Grace A.	1899
Stapp, Melvina	1909	Streeter, Emma Pearl	1911
Starbuck, Etta	1916	Stribley, Hazel	1912
Stark, Lela M.	1908	Strickler, C. S.	1899
Starr, Bertha McClure	1914	Striffer, Ruth	1913
Starr, Mildred B.	1914	Strock, Mildred	1914
Starrett, Adda M.	1912	Strong, Ettah	1916
Statler, Nellie Margaret	1908	Strong, Myrta M.	1910
Stauffer, Beulah Gray	1907	Struble, Lizzie	1893
Stauffer, Ida M.	1910	Struble, Nina	1914
Stauffer, Myrtle	1918	Stryker, Mary Madeline	1908
St. Clair, Mary	1916	Stuart, Edith	1913
St. Cyr, Helen E.	1899	Stubbs, Laura Elda	1912
Steadman, H. A.	1916	Stump, Minnie	1914
Stealy, Eliza R.	1903	Suess, Olive	1918
Stears, Henry G.	1897	Suiter, R. W.	1914
Stebbins, Helen H.	1898	Sullens, (Mrs.) Velma P.	1918
Steck, June	1916	Sullivan, Georgia F.	1912
Steck, Susie Marie	1912	Sullivan, Grace	1915
Steele, Jane G.	1913	Sullivan, Mary E.	1907
Steele, Mary F.	1916	Sullivan, (Mrs.) Mary S.	1910
Stein, (Mrs.) Ethel E.	1917	Sullivan, Vera Faye	1911
Stein, Louise	1911	Summ, Anna C.	1915
Stemen, Ruth	1911	Summ, Johanna	1918
Stenhouse, Rilla Mae	1914	Sumner, George	1916
Stephen, Elsie	1910	Sumnicht, Mollie Elsa	1908
Stephen, Mabel	1908	Sutherland, Clara Belle	1912
Stephens, Edith F.	1915	Sutherland, Mary L.	1904
Stephens, Gertrude A.	1915	Sutton, (Mrs.) Julia M.	1917
Stephenson, Elizabeth	1917	Svedman, Ellen	1912
Stern, Edith	1909	Svedman, Lillian	1913
Stevens, Dorothy J.	1917	Swain, Lottie	1913
Stevens, (Mrs.) Eva	1910	Swan, Rosa E.	1899
Stevens, Hazel	1916	Swan, Ruth	1911
Stevens, Laura C.	1904	Swansey, Linah	1913
Stevens, Lawrence B.	1909	Swanson, Anna	1916
Stevenson, Audrey	1896	Swanson, Emma	1918
Stevenson, Eleanor	1897	Swanson, Linnea	1913
Stevenson, Elsie	1916	Swanson, Lois Hildegard	1911
Stevenson, Ethel May	1915	Swanzey, Linah	1914
Stevenson, Mildred	1898	Swart, Frank	1909
Stevenson, Olivia	1914	Swart, Katherine	1914
Stevenson, Walter B.	1915	Swedensky, Frances	1917
Stewart, Charles Edmond	1906	Sweeney, Frances	1912
Stewart, Eugene	1917	Sweeney, Margaret	1915
Stewart, Lulu	1919	Sweetland, Adaline	1910
Stewart, Marguerite	1914	Swallow, Grace M.	1912
Stewart, Marjory	1914	Swenson, Frances	1918
Stewart, Mildred E.	1917	Swett, Naomi Lorraine	1918
Stiffler, Rachel	1913	Swift, Jessie F.	1919
Stiffler, R. Ewing	1910		

Swisher, Ida Belle	1913	Tierney, Mary Bertha	1907
Switzer, (Mrs.) Ella S.	1914	Tiffin, Mary	1914
Sword, (Mrs.) Flora A.	1914	Tilyou, Blanche	1903
Sydney, Cecil E.	1895	Tilyou, Mabel L.	1902
Tabor, Elizabeth	1907	Timpte, Caroline	1914
Tague, Benarda	1915	Tinch, Mildred	1918
Tandy, Edna	1917	Titsworth, Mary Elizabeth	1918
Tandy, Frances	1909	Tobey, Frances	1917
Tandy, Helen M.	1910	Tobias, Ruby	1918
Tanquary, Ruberta	1912	Tobias, Ruth	1912
Tarr, Eldora	1914	Tobin, Sadie	1918
Tate, Ethel M.	1898	Todd, Christie A.	1918
Taylor, Alice	1916	Todd, Lota A.	1912
Taylor, Beulah	1918	Todd, Vera	1918
Taylor, Edith	1917	Tohill, Elizabeth	1917
Taylor, Edna Ruth	1919	Tohill, Enid	1909
Taylor, (Mrs.) Emma H. (Hall)	1916	Tohill, Grace	1913
Taylor, Esther	1914	Tohill, Mabel Erline	1912
Taylor, Florencé Marie	1918	Tomlin, Reba	1917
Taylor, Hazel	1900	Toothaker, Olive	1914
Taylor, Hope C.	1903	Toplitzky, Sadie	1916
Taylor, Laura	1917	Torbit, Pauline	1916
Taylor, Lela E.	1918	Towle, Elizabeth	1917
Taylor, Lewis E.	1913	Towne, Isabel	1918
Taylor, Lola Pearl	1908	Towne, Mary E.	1907
Taylor, Margaret	1908	Townsend, Alice Juanita	1911
Taylor, Mary D.	1905	Townsend, Beryl	1917
Taylor, Mattie	1917	Tracey, Irene	1917
Taylor, Nellie A.	1898	Tracey, Lillian	1909
Taylor, (Mrs.) Nettie	1913	Trachsel, Bernice	1917
Taylor, Opal	1917	Travis, Marian	1917
Taylor, Ruth Adeline	1916	Travis, Mary C.	1918
Taylor, Vena	1918	Traylor, Ruby	1916
Tefft, Ruth	1901	Treadway, Jessie M.	1910
Teller, Emma	1915	Treadwell, Florence Amelia	1917
Teller, Maude	1914	Trehearne, Beatrice	1894
Temple, Juanita	1916	Trent, Gertrude	1917
Tenney, A. L.	1913	Tressel, Jennie L.	1918
Terrien, Myrtle	1913	Trezise, Ethel I.	1914
Terry, Earl K.	1905	Trimmer, Helen Luttell	1918
Terry, Leona	1911	Tripler, Grace	1915
Tharp, B. Ellen	1899	Trout, Marguerite	1912
Thedinga, Mary E.	1904	Troutman, Leah	1907
Thickens, Thelma	1916	Troutman, May	1907
Thill, Estelle	1909	Truman, Grace E.	1912
Thoborg, Mabel	1908	Tschiche, Anna	1914
Thomas, Caroline S.	1913	Tuck, Fred	1916
Thomas, Cora M.	1893	Tucker, Hazel	1903
Thomas, Dora	1916	Tucker, Jennie M.	1918
Thomas, Elizabeth R.	1913	Tucker, Mary	1911
Thomas, Eleanor C.	1918	Tucker, Pearl	1909
Thomas, Frances M.	1915	Tudor, Alven O.	1913
Thomas, Helen	1898	Tuggy, Harriet E.	1912
Thomas, H. F.	1909	Tully, Ethel N.	1915
Thomas, Kathryn	1898	Tully, Isabel	1915
Thomas, Laura K.	1916	Tully, Mary Shields	1907
Thomas, Lillie	1904	Tupper, Ada	1908
Thomas, Mary Ann	1916	Turcotte, Adelaide H. V.	1916
Thomas, Myra	1905	Turnbull, Elizabeth	1917
Thomas, Rosanna W.	1913	Turner, Clara	1915
Thomas, Ruth	1918	Turner, Clarence E.	1916
Thomas, Thurza	1911	Turner, Elmer	1911
Thompson, Andrew W.	1897	Turner, (Mrs.) Elva M.	1907
Thompson, Anna F.	1913	Turner, Erié Amelie	1912
Thompson, Blanche	1902	Turner, Etheline	1914
Thompson, Daisy M.	1914	Turner, Flora B.	1894
Thompson, Florence Anna	1903	Turner, Florence	1913
Thompson, Homer C.	1913	Turner, Mattie	1904
Thompson, Ira Alvan	1912	Turney, Mary Elizabeth	1917
Thompson, Jettie	1902	Turney, Ruby	1914
Thompson, Laura	1909	Tuttle, Bessie	1913
Thompson, Leotta G.	1908	Twombly, Della L.	1910
Thompson, Lillian	1915	Twombly, H. Jane	1909
Thompson, Louise	1918	Twombly, Margaret	1907
Thompson, Nellie	1902	Twomey, H. Jennie	1905
Thorpe, Alice E.	1915	Twomey, Iona	1908
Thrall, Evelyn	1918	Tyler, Cecilia M.	1909
Thurman, Geneva B.	1914	Tyler, Edna	1912
Tidball, Elizabeth	1910	Tyler, Jennie	1914
Tierney, Anna	1909	Tyler, Mildred	1916
		Tyrrell, Florence	1917

Tyvold, Helen	1917	Walsh, Lottie E.	1909
Uebelhoer, Margaret D.	1913	Walter, Anna Laura	1918
Uhri, Sophia	1895	Walter, Clara B.	1893
Underhill, Harlan	1918	Walter, Gladys	1914
Unger, Egerton J.	1914	Walter, Lavernia	1919
Unger, John C.	1914	Walter, Mae	1913
Unger, (Mrs.) Nellie Merriam	1913	Walter, Mary E.	1914
Uzzell, Margaret James	1906	Walter, Nellie	1916
Uzzell, Mary M.	1907	Walters, Leonore M.	1911
Van Atta, Clara	1916	Walters, Alice	1917
Van Atta, Mary E.	1910	Walz, Mina	1910
Van Atta, Prudence G.	1908	Warberg, Anna	1917
Van Atta, William Fitch	1915	Ward, Daniel	1915
Van Buren, Guy Arthur	1905	Ward, John	1899
Van Cleave, Ada M.	1903	Ward, Marguerite	1913
Van Craig, (Mrs.) Edna E.	1892	Warner, Isabelle	1908
Vanderlip, Lorena Belle	1913	Warning, G. A.	1900
Vanderlip, Verner V.	1917	Warnock, Katherine	1917
Vandiver, Maude	1916	Warren, Josephine	1911
Van Dorpen, Anna	1909	Warren, Winifred	1918
Van Gorder, Elizabeth	1909	Washburn, Lizzie	1902
Van Gorder, Gladys	1917	Wasley, Mabel	1908
Van Horn, George	1898	Wasley, Vera	1912
Van Meter, Sara Hampton	1919	Wasson, Dell	1912
Van Meter, (Mrs.) Susan Hart	1912	Waterman, Verna H.	1910
Van Pelt, Minnie	1913	Waters, Eva	1900
Van Ullem, Lois	1917	Watkins, Beulah	1918
Van Winkle, Grace L.	1907	Watson, Alice	1901
Varney, Julia A.	1893	Watson, Edna	1903
Varvel, E. Irl.	1915	Watson, Eva	1908
Veal, Olive	1916	Watson, Fern	1915
Veazey, Oma	1905	Watson, Iva C.	1916
Veghler, Mary Rose	1919	Watson, Lillian	1915
Veniere, Cecilia	1900	Watson, Margaret A.	1914
Vermillion, Mildred N.	1919	Watson, Margaret Reynolds	1906
Ver Steeg, Helen	1910	Watson, Ola	1898
Vertrees, Rhea	1917	Waxham, Faith Caroline	1906
Veverka, Madaline M.	1901	Weaver, Frances	1912
Veverka, Marie	1910	Weaver, Gertrude	1913
Vezzetti, Mary T.	1916	Weaver, Inez E.	1910
Vialpando, Ramoncita	1918	Webb, Margaret Elizabeth	1906
Vickers, Edith	1914	Webber, Helen	1917
Vickers, Florence	1913	Webber, Jennie E.	1906
Vineyard, Julia M.	1912	Weber, Adelaide Rosalind	1916
Vinton, Marjory E.	1913	Weber, (Mrs.) Angelia W.	1912
Voeltz, Eva Genevra	1919	Weber, Anna	1909
Vogel, Ida D.	1915	Weber, Dora	1915
Voils, Leone	1915	Weber, Lina	1908
Vories, Emma S.	1918	Weber, Magdalin	1913
Voris, (Mrs.) Jessie Wright	1917	Webster, Ella	1901
Vosler, Alba E.	1910	Webster, Lillian C.	1916
Waddingham, (Mrs.) Nellie Knight	1918	Webster, Mary R.	1907
Wade, Bonnie	1908	Webster, Ruth	1909
Wagoner, Reba	1906	Weckel, Lillian	1908
Wagner, Marguerite G.	1910	Weddle, Harriett	1913
Waite, Helen	1910	Weddle, Lulu D.	1915
Waite, Vesta M.	1898	Weeber, Callie	1906
Wakeman, Alleah	1903	Weed, Helen Adell	1912
Walde, Gena F.	1912	Weeks, Edna	1909
Waldran, Mary G.	1910	Wegerer, C. Mary	1914
Walek, Anna	1916	Wegerer, Verona M.	1913
Walek, Mary	1916	Weidman, Blanche	1916
Walk, Olive	1914	Weigl, August	1914
Walker, Dexter B.	1916	Weiland, Adelbert A.	1899
Walker, E. A.	1916	Weirich, Edna G.	1917
Walker, E. Jane	1915	Weirick, M. Esther	1911
Walker, Ella May	1912	Weiser, Florence Vivian	1913
Walker, Erdeena	1916	Weiser, Grace	1914
Walker, Ethel	1909	Welborn, Anne Action	1918
Walker, F. A.	1897	Welch, Edith C.	1910
Walker, Nannie	1912	Welch, Fred	1902
Wall, Pauline J.	1918	Welch, Harry	1901
Wallace, Alberta	1917	Welch, Hattie	1901
Wallace, Frances R.	1912	Welch, Irene	1894
Wallace, Mary H.	1907	Welch, Jeanne	1903
Waller, Marie E.	1916	Welch, Lyda	1914
Wallick, Mary	1910	Weld, Amy C.	1916
Walsh, Delia	1910	Weld, Ida M.	1910
Walsh, Ella P.	1906	Welker, Franklin C.	1914
Walsh, Eva	1909	Weller, Mary	1901
Walsh, Helen McGirr	1918	Weller, William H.	1916

Wells, Gladys	1915	Willard, Sadie E.	1914
Wells, Lella M.	1906	Willcox, Margaret	1902
Welsh, Edna F.	1915	Williams, Alice E.	1912
Welsh, Mabel C.	1913	Williams, Dee	1908
Welty, J. Florence	1905	Williams, Helen	1919
Werbin, Lillian	1914	Williams, Letha	1910
Werner, Emily	1915	Williams, L. Hazel	1916
Wesner, Eleanor M.	1909	Williams, Lizzie F.	1899
West, Edna W.	1899	Williams, Lyle	1913
West, Lucretia	1913	Williams, Marguerite	1914
West, Mae	1908	Williams, Mary E.	1898
West, Olive	1902	Williams, Nellie	1894
West, Wallace P.	1918	Williams, Nellie J.	1913
West, W. R.	1912	Williams, Rowena	1911
Westen, Georgia	1916	Williams, Sarah A.	1909
Wester, Ellen M.	1916	Williams, S. D.	1900
Westfall, Meda	1915	Williams, Velma	1916
Westlund, Nellie	1918	Williams, Vida V.	1916
Wetherald, Estella	1918	Williams, Yvette	1919
Wetmore, Rose A.	1911	Williamson, Jean	1915
Wetterburg, Alma	1913	Williamson, Lucy	1900
Wetzel, George L.	1904	Williamson, Mary M.	1915
Weyand, Mamie	1907	Willie, Anna	1902
Wharton, Carrie	1916	Willis, Anna	1918
Wheatley, Esther A.	1918	Willis, Edna	1908
Wheaton, Anna Atchison	1916	Willsea, Mary A.	1918
Wheaton, Esther Almyra	1916	Wilmarth, Maude E.	1912
Wheaton, Libbie	1918	Wilson, Alice I.	1910
Wheeler, Alice E.	1917	Wilson, Alma	1909
Wheeler, B. B.	1893	Wilson, Bertha	1917
Wheeler, Gertrude E.	1897	Wilson, Edith	1897
Wheeler, Ina B.	1912	Wilson, Edna	1917
Wheeler, Winnie E.	1917	Wilson, Ella	1912
Whelpley, Dorothy	1919	Wilson, Elma A.	1892
Whetsel, (Mrs.) A. L.	1910	Wilson, Florence	1918
Whistleman, Ruth	1917	Wilson, Grace H.	1908
White, (Mrs.) Edna	1918	Wilson, Isabelle D.	1903
White, (Mrs.) Esther F.	1897	Wilson, Jean E.	1913
White, Esther L.	1917	Wilson, Jessie M.	1916
White, Fern	1919	Wilson, Lillian	1918
White, Grace	1907	Wilson, Marie	1900
White, Hazel	1916	Wilson, Martha	1917
White, Ida M.	1909	Wilson, Mary Stuart	1905
White, Julia Katherine	1909	Wilson, May F.	1915
White, Lois	1909	Wilson, May L.	1913
White, Mabel	1903	Wilson, Minnie	1910
White, Mabel A.	1918	Wilson, N. E.	1913
White, Mary Eleanor	1918	Wilson, Nora	1907
White, (Dr.) Walter	1898	Wilson, Stella	1917
Whitehead, Josephine W.	1917	Wimmer, Edith M.	1908
Whitehouse, Pattie	1918	Wimmer, Elva	1914
Whitehurst, Ruth E.	1914	Winburn, Bula	1915
Whiteman, John R.	1891	Winger, Albertus Z.	1917
Whiteman, Virgin Mary	1912	Winger, Olive Blanche	1912
Whitham, Bronte	1903	Wintz, Claudia	1898
Whitham, Xavia	1903	Wirtz, Wilhelmina Minerva	1911
Whitlock, Lula M.	1914	Wise, Effie M.	1899
Whitman, Bertha Hortense	1910	Wise, Leslie A.	1913
Wickham, Esther L.	1918	Wise, Zelma C.	1913
Wickmann, Irene P.	1917	Wishard, Mary	1914
Wickstrum, Ethel	1916	Witter, Nellie L.	1918
Wieman, Emma	1913	Witter, Stella	1897
Wiedmann, D. E.	1902	Wogan, Arthryn	1915
Wieland, Pearl	1908	Woland, Frances	1913
Wilder, George	1914	Woland, Julia	1917
Wilder, Ruth	1918	Wolf, (Mrs.) Clara	1907
Wilder, (Mrs.) Winifred	1914	Wolfe, Beulah	1915
Wilhelm, Jewel	1915	Wolfe, Carolyn	1908
Wilbur, Marian	1918	Wolfe, Clara L.	1906
Wiley, Anna L.	1912	Wolfe, Hazel D.	1915
Willkie, Anna C.	1916	Wolfe, Lily Valentine	1918
Wilkins, Erma T.	1898	Wolfe, Rosa Lila	1918
Wilkinson, Bessie	1897	Wolfenden, Anna	1901
Wilkinson, Eleanor	1918	Wolfensberger, Alice	1917
Wilkinson, Mabel	1907	Wolfer, Dora C.	1918
Wilkinson, Marguerite	1899	Wolfer, Nellie R.	1911
Wilkinson, Nannie D.	1909	Wood, Carolyn	1900
Wilkinson, Olive Fay	1909	Wood, Cora V.	1917
Will, Dorothy	1915	Wood, Florence	1901
Willard, Estella M.	1914	Wood, Gladys Elizabeth	1915
		Wood, H. G.	1913

Wood, Jean	1910	Wright, Lora B.	1909
Wood, Mary A.	1912	Wright, Lulu A.	1894
Wood, Myra	1918	Wright, Mabel J.	1915
Wood, Texie M.	1903	Wright, Nana	1894
Woodbury, Edith	1912	Wright, Nell Grant	1907
Woodbury, May L.	1904	Wright, Olive	1897
Woodford, Cora M.	1907	Wright, Pearl	1914
Woodley, Vera	1916	Wyckoff, Dorothy Helen	1916
Woodmansee, Clara	1913	Wyckoff, Marie	1919
Woodring, Helen	1910	Wylie, Eva	1907
Woodruff, Gerta	1915	Wyman, Ree	1895
Woodruff, (Mrs.) Gertrude B.	1913	Wyss, Frances	1912
Woodruff, Hazel	1914	Wurtz, Ora C.	1914
Woodruff, Myrna	1895	Yard, Jessie	1894
Woods, Alberta	1918	Yardley, Alice Elizabeth	1906
Woods, Elizabeth M.	1909	Yardley, Hattie F.	1914
Woods, Hulda Marie	1906	Ydren, Nellie	1914
Woods, James	1894	Yerion, Cena	1909
Woodward, Ethel	1907	Yerion, Grace Anna	1913
Woodward, Flora Bernice	1918	Yoder, Albert Henry	1908
Wooley, Emily	1910	Youberg, Lois	1917
Woolf, Mabel	1910	Young, Charles A.	1903
Work, Anna	1894	Young, Della A.	1917
Work, Anna Dayton	1906	Young, Edith	1919
Work, C. M.	1897	Young, Edna A.	1914
Work, Ella	1894	Young, Florence	1913
Work, Frances	1914	Young, (Mrs.) G.	1910
Work, Josephine	1905	Young, (George P.	1909
Workman, Mildred	1914	Young, (Mrs.) Kate	1897
Worley, James	1904	Young, Mildred M.	1916
Worley, Victor E.	1904	Young, Wilma	1912
Worrell, Blanche	1903	Youngclaus, Emma	1903
Worth, Elizabeth May	1917	Youngclaus, Katherine	1903
Worth, Katie	1903	Yust, Dorothy L.	1916
Worthington, Lutie	1913	Zahm, Gertrude	1914
Wren, Lena	1909	Zilar, Bessie	1910
Wright, Edna F.	1910	Zilar, John I.	1913
Wright, Elizabeth M.	1914	Zimmerman, George	1898
Wright, (Mrs.) G.	1910	Zingg, (Mrs.) Bernice	1908
Wright, Lois	1909	Zingg, Ottway C.	1908
		Zorn, Frederica E.	1905



# Alumni Register by Classes

1891-1919

## CLASS OF 1891

Berryman, Eliza E.  
(Mrs. Eliza E. Howard)  
La Jolla, Calif.  
Bliss, Clara S. (Mrs. C. H. Ward)  
1534 11th St., Greeley, Colo.  
Bybee, W. F. . . . . Colorado Springs, Colo.  
Evans, Bessie Berryman  
(Mrs. Elizabeth Evans Edgerton)  
845 Grand Ave., Grand Junct., Colo.  
Fashbaugh, Carrie E. (see Class of 1914).  
Hardcastle, Amy B. (Mrs. Davidson).  
John, Grant H., Doctor,  
640 Metropolitan Bldg., Denver, Colo.  
Lincoln, Geneva. . . . . Utah  
Montgomery, Jessie (deceased).  
McNair, Agnes.  
Spencer, Frank C. . . . . Aquilar, Colo.  
Whiteman, John R. (deceased).

## CLASS OF 1892

Dresser, Helen C. (Mrs. W. L. Dresser)  
Holtville, Calif.  
Jones, Edith Helen  
226 Dexter St., Denver, Colo.  
Jones, Winifred  
(Mrs. Winifred Millard)  
Manhattan, Kans.  
Lynch, Andrew R., Lawyer. . Clifton, Ariz.  
McClelland, Robert A.  
McFie, Mabel (Mrs. J. A. Miller)  
629 So. Edith St., Albuquerque, N. M.  
McFie, Vina (Mrs. Jas. L. LeRoy)  
1017 I St., Sacramento, Calif.  
Meek, Idela (Mrs. Bale).  
Miller, Joseph A., Lawyer  
20 Stern Bldg., Albuquerque, N. M.  
Moore, Minnie Frances  
(Mrs. Arthur D. Wall)  
2343 Vine St., Denver, Colo.  
Mumper, Anna T. (Mrs. Anna Wallace)  
Deceased  
Putnam, Kate (Mrs. Kate P. Elms)  
Teacher  
1311 So. Pearl St., Denver, Colo.  
Robinson, Fannie Florence, Bookkeeper  
2402 E. Colfax Ave., Denver, Colo.  
Smith, Mary L. (Mrs. Mary L. Batterson)  
Deceased  
Van Craig, Mrs. Edna E.  
(Mrs. A. B. Craig)  
306 E. Hawthorne, San Diego, Calif.  
Wilson, Elma A. (see Class of 1904).

## CLASS OF 1893

Bybee, Carrie S.,  
220 E. Uintah St., Colo. Springs, Colo.  
Dace, Mary (Mrs. F. M. Simpson)  
503 Meeker St., Ft. Morgan, Colo.  
Dunn, Mrs. Rosalie M., Probation Officer  
5205 Cates Ave., St. Louis, Mo.  
Heath, Herbert G. (see Class of 1916).  
Hewett, Mrs. Cora W. (deceased).  
Hewett, Edgar L. (see class of 1907).  
Houston, George Meredith, Farmer  
Miami Farms, Greeley, Colo.  
Jacobs, Mary Fay (Mrs. Mary Lunt)  
Deceased

Johnson, Hattie L. (Mrs. Hattie Wallace)  
Deceased  
Knight, Lizzie M. . . . . Vancouver, B. C.  
McLain, Minnie, H. S. Teacher  
(Mrs. Minnie McLain Allison)  
Brighton, Colo.  
Marsh, Mary B. (Mrs. Smith).  
Nixon, Alice M. (Mrs. John T. Jacobs)  
1631 11th Ave., Greeley, Colo.  
Pearce, Stella, H. S. Teacher  
1415 E. Olive St., Seattle, Wash.  
Priest, Lucie Lee  
(Mrs. Henry Land Shepherd)  
Box 72, Cripple Creek, Colo.  
Seed, Stella H. (Mrs. Stella Freeman)  
Deceased  
Stockton, James Leroy  
Supt. Training School  
State Normal School, San Jose, Calif.  
Struble, Lizzie (Mrs. F. A. Cole)  
519 Edwards St., Ft. Collins, Colo.  
Thomas, Cora M.,  
1028 11th St., Greeley, Colo.  
Varney, Julia A. (Mrs. Geo. G. Marshall)  
La Salle, Colo.  
Walter, Clara B. (Mrs. Long)  
San Miguel, Calif.  
Wheeler, B. B., Judge  
Court House, Muskogee, Okla.

## CLASS OF 1894

Bond, Dell.  
Burnett, Ruth.  
Catherwood, Grace A. (Mrs. Billig),  
Boulder, Colo.  
Clark, Chas. E., Druggist  
1029 9th St., Greeley, Colo.  
Coffey, Gillian (deceased).  
Cordes, Carrie L. (Mrs. F. W. Loftiss)  
Akron, Colo.  
Creager, Katie G.  
(Mrs. Royal W. Bullock)  
Merino, Colo.  
Day, Nellie R. (Mrs. Burl E. Tolman)  
1118 Josephine St., Denver, Colo.  
Delbridge, Eloise (Mrs. W. L. Petrikin)  
2109 E. 9th Ave., Denver, Colo.  
Durkee, Alice (Mrs. Rockafellow)  
Canon City, Colo.  
Freeman, Maude (Mrs. Maude Felton)  
Deceased.  
Gardiner, Julia H.  
1450 Grant St., Denver, Colo.  
Gass, Maude B., Teacher  
Hall Hotel, Denver, Colo.  
Lewis, Lottie J. (Mrs. E. W. Davis),  
Central City, Colo.  
Lynch, John, Chief Clerk  
State Reformatory, Buena Vista, Colo.  
Melvin, Pearl (Mrs. Ruthledge).  
McGee, May (Mrs. May Winzer) deceased.  
Merrill, Louisa A., Teacher  
1350 Grant St., Denver, Colo.  
Messenger, Edna (Mrs. Frand C. West)  
Trinidad, Colo.  
Nauman, Minnie (Mrs. Hanson Lauritsen)  
Cambridge, Nebr.  
Peters, Anna L., Teacher  
919 State St., Trinidad, Colo.

Rank, Margaret (Mrs. T. M. Morrow)  
Scottsbluff, Nebr.  
Robinson, Anna (see Class of 1908).  
Severance, Dora (Mrs. Dora Tinsman)  
Severance, Colo.  
Shumway, William, deceased.  
Trehearne, Beatrice  
1516 S. Clarkson, Denver, Colo.  
Turner, Flora B. (Mrs. K. F. S. Hansen)  
Box 97, Caspar, Calif.  
Welch, Irene A.  
(Mrs. Irene Welch Grissom)  
Idaho Falls, Idaho  
Williams, Nellie, Housekeeper  
Box 466, Elbert, Colo.  
Woods, James. . . . . Grand Junction, Colo.  
Work, Anna B. (Mrs. Anna W. Shawkey)  
207 Beauregard, Charleston, W. Va.  
Work, Ella (Mrs. J. C. Bailar)  
1512 Maple St., Golden, Colo.  
Wright, Lulu A. (Mrs. Lulu A. Heilman)  
See Class 1911, Heilman, Mrs. Lulu A.  
Wright, Nana, deceased.  
Yard, Jessie (Mrs. Oscar G. Crawford)  
291 E. B St., Colton, Calif.

CLASS OF 1895

Allen, Mayme C.  
1013 Locust Ave., Long Beach, Calif.  
Brown, Rebecca, Teacher  
400 Du Boce Ave., San Francisco, Calif.  
Canning, Annetta B., Teacher  
1554 Logan, Denver, Colo.  
Clark, Ruth M. (Mrs. Wm. Russell),  
Woodstock House 21, Grove Crescent Rd.,  
Kingston-on-Thames, England  
Coleman, Mary B. . . . . Seattle, Wash.  
Dobbins, Nettie M.  
419 Collyer St., Longmont, Colo.  
Downey, Abner, Principal of H. S.  
Selma, Calif.  
Felton, Mark A. . . . Red Wood City, Calif.  
Freeman, Maude (Mrs. Maude Felton)  
Deceased  
Gale, Grace M. (Mrs. Grace Clark)  
Deceased  
Goddard, Susan E., Teacher  
155 Harrison Ave., Littleton, Colo.  
Hadley, Laurie, deceased.  
Hubbard, Nettie, Teacher  
(Mrs. Nettie H. Lynch)  
Buena Vista, Colo.  
Huecker, Lydia E. (Mrs. Dr. Rover)  
Clay and W. 32nd Ave., Denver, Colo.  
King, Mrs. L. C.  
Lines, Celia, deceased.  
McClave, Blanche M.  
(Mrs. G. C. Bishop), McClave, Colo.  
McCoy, Maude M. (Mrs. Maude Creeks)  
Baylis, Calif.  
Marsh, C. T., deceased.  
Miller, Edwin A., Merchant  
Wellington, Colo.  
Molnar, Louis, Lawyer  
1711 So. Hope St., Los Angeles, Calif.  
Newman, Emma. . . . . Elbert, Colo.  
Peck, Vera, Teacher  
138 Logan St., Denver, Colo.  
Phillips, Stella (Mrs. Stella North)  
Rocky Ford, Colo.  
Price, James Marion, Editor  
59 W. Byers Place, Denver, Colo.  
Snyder, E. R., Com. of Vocal Edu.  
Sacramento, Calif.  
Stanton, Kate M. (Mrs. Kate Wallace)  
529 Emery St., Longmont, Colo.  
Stratton, Ella E., Teacher  
Broadway High School, Seattle, Wash.  
Sydner, Cecil E. . . . . Las Animas, Colo.  
Uhri, Sophia (Mrs. W. E. Keass)  
Salida, Colo.

Woodruff, Myrna (Mrs. Cecil Sydner)  
Las Animas, Colo.  
Wyman, Ree (Mrs. E. W. Meyer)  
Doctor  
2726 West 14th St., Los Angeles, Calif.

CLASS OF 1896

Agnew, Minerva  
(Mrs. Minerva Brotherton)  
1213 Garden St., Santa Barbara, Calif.  
Ault, C. B., deceased.  
Bell, John R., Prin. I. H. S.  
Greeley, Colo.  
Berger, Florence (Mrs. E. N. Miller)  
1523 10th Ave., Greeley, Colo.  
Bliss, Lillian M., Teacher  
1356 Pearl St., Denver, Colo.  
Boyd, Sela M. (Mrs. J. H. Kester)  
See Class of 1907  
Briggs, Jennie M. (Mrs. Jennie M. Mayo)  
804 Walnut Ave., Rocky Ford, Colo.  
Cameron, Agnes (Mrs. Hunter Palmer)  
816 Main St., Canon City, Colo.  
Cameron, William F., Supt. of Schools  
Siloam Springs, Ark.  
Collom, Mattie (Mrs. M. J. Singleton)  
1011 12th St., Golden, Colo.  
Dittey, Mollie.  
Donahue, John Leo, Broker  
No. West 34th St., Suite 1008-10,  
New York City.  
Graham, Kate (Mrs. Nierns), deceased.  
Hamilton, Mrs. Ida M., deceased.  
Hanks, Alberta (Mrs. L. B. Stevens)  
Box 85, Loyalton, Calif.  
Hollingshead, Charles Anton, Prin. H. S.  
410 2nd Ave., Santa Barbara, Calif.  
Howard, Florence, Teacher  
(Mrs. Florence Slockett)  
308 12th St., Greeley, Colo.  
Howard, Wellington, Farmer. . . Gill, Colo.  
James, Annie (Mrs. Annie Preston)  
Deceased  
Jamison, Grace, Teacher  
(Mrs. Grace Jamison Rowe)  
1604 Illinois St., Golden, Colo.  
Kendel, Elizabeth (see Class of 1914).  
Mathews, Minnie V. (Mrs. Dole).  
Newman, Winifred  
(Mrs. Winifred Scoville)  
Ft. Morgan, Colo.  
Norton, Nell (Mrs. B. W. Lawyer)  
Rocky Ford, Colo.  
Patton, Sarah Mabel. . . . . Seaman, Ohio  
Paul, Isabel (Mrs. Isabel Clayton)  
Deceased  
Pollock, Emma E. (Mrs. Geo. J. Smyth)  
344 E. Center St., Pocatello, Idaho  
Probst, Emma, Teacher  
2757 Champa St., Denver, Colo.  
Shull, Grace G. (Mrs. Grace G. Eichmann)  
628 S. Church St., Visalia, Calif.  
Smith, Luna I. (see Class of 1915).  
Stevenson, Audrey (Mrs. Lynph Stanley)  
1746 Clarkson St., Denver, Colo.

CLASS OF 1897

Adams, Helen, Sec. and Asst. Treas.  
55 Wall St., Nat. City Bank of N. Y.,  
New York City.  
Benson, Franc V. (Mrs. J. I. Lanham)  
355 W. 5th St., Loveland, Colo.  
Brownlee, Sylvia (Mrs. C. M. Work)  
Ft. Morgan, Colo.  
Buffington, Lulu (Mrs. James T. Hogan)  
Albany, Tex.  
Burns, T. E. (see Class of 1915).  
Dowell, Harry L., Real Estate  
822 9th Ave., Greeley, Colo.  
Ellis, Carrie E. (Mrs. Carrie Blackwood)  
La Salle, Colo.  
Guynn, Horace Greeley. . . . Greeley, Colo.

Hadden, S. M., Teacher C. T. C.  
1729 10th Ave., Greeley, Colo.

Hamilton, Jessie M., Prin. of School  
Aaron Gove Junior H. S., Denver, Colo.

Hammond, Eva V. (Mrs. Blood)  
Denver, Colo.

Hersey, Rose (Mrs. New) . . . Denver, Colo.

Hinkley, Anna C. (Mrs. E. H. Mathis)  
R. F. D. 1, Aurora, Colo.

Hoch, Lillian E.

Holaday, Minnie (Mrs. W. H. Rathmell)  
Ouray, Colo.

Holliday, Maude (Mrs. John R. Bell)  
1938 9th Ave., Greeley, Colo.

Ingersol, Mary G.  
Carnegie Technical Institute,  
Pittsburg, Pa.

Jones, Ida B. (Mrs. Guy C. Stockton)  
U. S. P. O. Box 717, Shanghai, China

Kendel, Juanita (Mrs. John L. Asmus)  
Brush, Colo.

King, Alpha E.

Knapp, Edith A. . . . . California

Lockett, Margarette (Mrs. Patterson)  
R. F. D. 2, McEwen, Tenn.

McDonald, R. A., deceased.

McKinley, Harriet (Mrs. W. L. Shaffer)  
Idaho Springs, Colo.

McLeod, Carrie. . . . . Canon City, Colo.

Newell, Agnes (Mrs. S. A. Coston)  
973 14th St., Boulder, Colo.

Putnam, Jennie F.  
(Mrs. Henry T. Lyford)  
Wayland, Mass.

Rothschild, Mrs. Cora Levy  
1417 11th Ave., Greeley, Colo.

Rudolph, Victoria (Mrs. W. G. Eldred)  
226 W. Eaton Ave., Cripple Creek, Colo.

Sanborn, Mabel, Teacher  
(Mrs. Mabel S. Marsh)  
1413 11th St., Greeley, Colo.

Slatore, Nelson (Mrs. Nelson Thompson)  
Deceased

Smith, Cora E. (Mrs. Ralph McDonald)  
Greeley, Colo.

Steans, Henry G.  
1749 W. 42nd St., Los Angeles, Calif.

Stevenson, Margaret Eleanor  
(Mrs. B. L. Kittle)  
1617 13th Ave., Greeley, Colo.

Stockton, Guy C. (see Class of 1907).

Thompson, Andrew W.

Walker, F. A., Teacher. . . . . Gill, Colo.

Wheeler, Gertrude E.  
(Mrs. Gertrude Bell)  
Golden, Colo.

White, Mrs. Esther F.

Wilkinson, Besse M., Teacher  
Buck Run School, Pottsville, Pa.

Wilson, Edith (Mrs. E. E. W. Vivian)  
Auditorium Hotel, Denver, Colo.

Witter, Stella M. (Mrs. Ozzie R. Kerlee)  
Bayfield, Colo.

Work, C. M.

Wright, Olive (Mrs. Lloyd Egbers)  
1112 Macon Ave., Canon City, Colo.

Young, Mrs. Katherine (Mrs. J. S. Young)  
1120 6th St., S. E., Minneapolis, Minn.

CLASS OF 1898

Amsden, Elmer E.

Ashley Helen M. (Mrs. W. E. Hawkins)  
Box 394, Sandpoint, Idaho

Bartels, Bina, Teacher  
(Mrs. Bina B. Laverty)  
R. F. D., Box 65, Salida, Colo.

Bryant, Fannie B.  
(Mrs. William A. Bryant)  
Flemington, N. J.

Burgess, Edith M.  
(Mrs. J. Leroy Stockton)  
Normal School, San Jose, Calif.

Butler, May (Mrs. Wiles).

Butscher, Louis C.  
1025 Cranford, Greeley, Colo.

Carlson, George A., Lawyer  
529 Foster, Denver, Colo.

Clark, Frederic Wilson, Lawyer,  
222 Opera House Bldg., Greeley, Colo.

Coover (Mrs.), Carrie E.  
Box 142, Stanford Univ., Palo Alto, Calif.

Coover, John Edgar, Teacher,  
Box 142, Stanford Univ., Palo Alto, Calif.

CronkHITE, Theodora Henrietta  
(Mrs. W. G. Hubbell)  
Ft. Lupton, Colo.

Delbridge, Wychie (Mrs. C. S. Desch, Jr.)  
737 Hill Ave., Grand Junction, Colo.

Dolan, Alice L. (Mrs. A. S. Sinclair)  
Box 539, Bisbee, Ariz.

Downey, Elijah H., Merchant,  
920 10th St., Greeley, Colo.

Farmer, Grace (Mrs. Grace Sweetzer)  
Philippine Islands

Fennell, Anna, deceased.

Fowler, O. A., Doctor  
530 Metropolitan Bldg., Denver, Colo.

Harrison, Virginia (Mrs. Virginia White)  
601 N. 2nd St., Montrose, Colo.

Hawes, Mary Moneta  
(Mrs. John William Amesse)  
1467 Detroit St., Denver, Colo.

Hetrick, Grace C. (Mrs. McNabb).

Hewett, Edwin L., Teacher  
Amer. Archaeological Institute,  
Santa Fe, N. M.

Hodge, Louise W.  
(Mrs. W. L. Pitcaithly, Jr.)  
1110 Madison St., Denver, Colo.

Hogarty, Michaela  
(Mrs. Delph E. Carpenter)  
1112 10th St., Greeley, Colo.

Howard, Ethel (Mrs. Harry L. Dowell)  
See Class of 1910, Dowell, Mrs. Ethel

Howard, Sarah Frances, Stenographer  
(Mrs. Axel E. Johnson)  
1020 6th St., Greeley, Colo.

Johnson, Minnie W.  
(Mrs. Clarence H. Nelson)  
241 Gunnison Ave., Grand Junct., Colo.

Kridler, Grace (Mrs. Huff).

Llewellyn, Sara  
(Mrs. Edwin Reagan Snyder)  
2244 Portola Way, Sacramento, Calif.

Lory, Chas. A., President C. A. C.  
Ft. Collins, Colo.

McCracken, Mary (Mrs. H. G. Steans)  
1749 W. 42nd St., Los Angeles, Calif.

McKeehan, Cora, deceased.

Montag, Ida C. (Mrs. F. L. Evans)  
Gallup, New Mexico

Moorehouse, Geneva, deceased.

Nash, Margaret  
Box 1042, Cripple Creek, Colo.

O'Brien, Emma L., deceased.

Putnam, Nellie (Mrs. R. S. Moseley)  
Orland, Calif.

Reeder, John M.

Richards, Carrie Louise  
(Mrs. Chas. A. Lory)  
College Campus, Ft. Collins, Colo.

Riddell, Fannie  
(Mrs. Harry H. Bulch)  
Box 232, Bayard, Nebr.

Ross, Hettie M., Doctor  
(Mrs. Hettie M. Ross Ryan)  
Bryn Mawr, Wash.

Scanlon, Mary  
16 Fairview St., New Britain, Conn.

Sibley, Mrs. Bella B. (see Class of 1913).

Smith, Helen Fay (Mrs. Zarbell)  
Louisville, Ky.

Stebbins, Helen H. (Mrs. Helen McLeod)  
Deceased

Stevenson, Mildred (Mrs. Mildred Pattison)  
Deceased

Tate, Ethel H. (Mrs. J. S. Danley)  
Route 1, Box 126, Greeley, Colo.

Taylor Nellie A.  
(Mrs. Abraham I. Akin)  
901 W. Mt. Ave., Ft. Collins, Colo.

Thomas, Helen. 31 W. Lake St., Chicago

Thomas, Kathryn (Mrs. J. L. Russell)  
City Park, Denver, Colo.

Van Horn, George H., Lawyer  
Walden, Jackson Co., Colo.

Waite, Vesta Millicent  
(Mrs. August Daeschner)  
521 Mt. View Ave., Boulder, Colo.

Watson, Ola

White (Dr.) Walter, deceased.

Wilkins, Emma T., Co. Supt. of Schools  
218 Remington St., Ft. Collins, Colo.

Williams, Mary E. (Mrs. Mary Wilson)  
Geneva, Kansas

Wintz, Claudia.

Zimmerman, George, Lawyer  
103 Second St., Emmett, Idaho

CLASS OF 1899

Amick, M. Ethel (Mrs. T. O. Mann)  
830 N. Van Buren St., Stockton, Calif.

Anderson, Emma L. (Mrs. Geo. Hager)  
Ft. Collins, Colo.

Anderson, Myra M. (Mrs. Arthur Gale)  
1025 Raton Ave., La Junta, Colo.

Bartels, Harriet B.  
(Mrs. Louis Robinson)  
4918 Stevens St., Spokane, Wash.

Bashor, Sarah Elizabeth, Teacher  
Hotel Tremont, Denver, Colo.

Braucht, Frank E. (see Class of 1906).

Burnett, Fannie, deceased.

Camp, Archibald L., Teacher  
721 Pearl St., Boulder, Colo.

Campbell, Florence (Mrs. Jos. Couse)  
326 W. Golden Ave., Cripple Creek, Colo.

Clonch, Minnie B. (Mrs. Minnie Decker)  
Deceased

Curran, Katie  
(Mrs. Katie Curran Roberts)  
Florence, Colo.

Dare, Adela F. (Mrs. Braudes).

DeWeese, Mrs. Luella, deceased.

Dill, Victoria M.

Dingman, Jennie K., Prin. of School  
918 Lake Ave., Pueblo, Colo.

Fenneman, Mrs. Sarah G. (Pd. M.)  
Deceased

Fleming, Guy B., deceased.

Graham, Mary M. (Mrs. Mary Badger)  
1739 7th Ave., Greeley, Colo.

Gregg, Florence  
(Mrs. Florence Thompson)  
1225 Josephine St., Denver, Colo.

Gregg, Maude C., Teacher  
915 So. Union, Pueblo, Colo.

Hammersley, Mabel (Mrs. Mabel Moore)  
Box 892, Warren, Ariz.

Harrison, Lucian H.  
R. F. D. 1, Platteville, Colo.

Heath, Edith V. (see Class of 1915).

Hersey, Nellie R. (Mrs. Nellie Luper)  
Wray, Colo.

Huffman, E., deceased.

Jackson, O. E. (Pd. M.).

Kellogg, Gertrude F., Teacher,  
Flagstaff, Ariz.

Kendall, Zella A. (Mrs. Will Lewis)  
La Junta, Colo.

Kendel, Arthur I., Probation Officer  
Greeley, Colo.

Kimball, Effie M. (Mrs. John H. Weir)  
832 E. Kiowa St., Colo. Springs, Colo.

Law, Daisy N. (Mrs. James Ogilvie)  
R. R. 1, Greeley, Colo.

Law, Nona J. (Mrs. A. S. Harris)  
Eaton, Colo.

Long, Olive  
(Mrs. James W. Montgomery)  
2644 Java Court, Denver, Colo.

Lundy, Granville E.  
1220 Pioneer Ave., Puyallup, Wash.

McCord, Emma D. (Mrs. J. A. Weaver)  
1405 Ninth Ave., Greeley, Colo.

McIntosh, Edith L. . . . . Ft. Collins, Colo.

McLellon, C. Irene  
(Mrs. Francis Chancellor Bledsoe)  
Box 808, Bisbee, Ariz.

McLeod, Mary C.  
Field Representative of Red Cross,  
Gulf Division, Amer. Red Cross,  
Washington Artillery Hall,  
New Orleans, La.

Manifold, W. H.

Miles, Cornelius (Pd. M.), Prin. of School  
Hotel Colorado, Denver, Colo.

Miller, Mrs. Mary Fenton, Teacher  
1055 Lincoln St., Denver, Colo.

Morehouse, Florence A.  
(Mrs. Thomas Berry)  
Gardena, Calif.

Newby, Florence, Postmistress  
(Mrs. Florence Hays)  
Easton, Kans.

Noel, Maude (Mrs. Maude McMillen)  
La Salle, Colo.

Patterson, Daisy (Mrs. E. R. Paul)  
Santa Fe, N. M.

Phillips, Eleanor (Pd. M.)  
(Mrs. Kenneth G. Phelps)  
(See Class of 1918)  
Phelps, Mrs. Eleanor P.

Poirson, Henrietta (Mrs. Frank Dille)  
2002 8th Ave., Greeley, Colo.

Pollock, Rose M. (Mrs. H. G. Jeter)  
2008 W. Tejon St., Colo. Springs, Colo.

Potts, J. George. . . . . Denver, Colo.

Powell, Frances L. (Mrs. C. M. Rolfson)  
Julesburg, Colo.

Powell, M. Evelyn (Mrs. C. G. Avery)  
541 N. Harvey Ave., Oak Park, Ill.

Powelson, Pearl E. (Mrs. Clark)  
Grand Junction, Colo.

Price, Virginia E. (Mrs. . . . .)

Rankin, Pearl B. (Mrs. Claude Heston)  
Fairfield, Ia.

Roberts, Stella E. (Mrs. Dr. Naylor)  
Pueblo, Colo.

Robinson, Angeline B.  
(Mrs. Chas. Johnson)  
703 W. Gordon Ave., Spokane, Wash.

Robinson, Nellie, deceased.

Rochat, Cecile E. (Mrs. John A. Weaver)  
1405 9th Ave., Greeley, Colo.

Ross, Maude E. (Mrs. B. A. Casner)  
Olathe, Colo.

St. Cyr, Helen E. (Mrs. H. G. McMechen)  
Teacher, La Salle, Colo.

Scheffler, Bertha S., Teacher,  
Miami, Ariz.

Seaton, Janet.

Small, Lavinia A., Prin. of School  
9 E. Dale St., Colo. Springs, Colo.

Smith, Amy A. (Mrs. Amy Moynahan)  
Deceased

Sparlin, Nellie, H. S. Teacher  
125 E. 11th Ave., Denver, Colo.

Strayer, Grace A. (Mrs. Harry E. Mulnix)  
1565 Lafayette St., Denver, Colo.

Strickler, C. S. (see Class of 1914).

Swan, Rose E., Teacher  
 R. F. D. 5, Box 38, Greeley, Colo.  
 Tharp, B. Ellen (Mrs. B. P. Peck)  
 130 Elm, Eaton, Colo.  
 Ward, John J. (Pd. M.), Supt. of Schools  
 Castle Rock, Colo.  
 Weiland, Adelbert A., Engineer  
 717-735 Thatcher Bldg., Pueblo, Colo.  
 West, Edna W. (see Class of 1911).  
 Wilkinson, Marguerite, Office Clerk  
 1002 E. 17th Ave., Denver, Colo.  
 Williams, Lizzie F.  
 (Mrs. L. E. McDonough)  
 Box 533, Fruita, Colo.  
 Wise, Effie M. (Mrs. Cattell)  
 Navelencia, Calif.

CLASS OF 1900

Albee, Emma (Mrs. J. E. Marshall).  
 Ashback, Mrs. Margaret.  
 Bliss, Nellie M., Doctor's Assistant  
 Greeley, Colo.  
 Bresse, Minnie  
 1221 Charleston Ave., Mattoon, Ill.  
 Brown, L. E., deceased.  
 Calder, Henrietta, Teacher  
 621 First Ave., West, Seattle, Wash.  
 Churchill, Mrs. Isabelle (see Class of 1913)  
 Clonch, May (Mrs. McDonald)  
 Gunnison, Colo.  
 Collins, C. Bruce (see Class of 1905).  
 Cooper, Theda A. (Mrs. Benschadler).  
 Cooperrider, A. O., Prin. of H. S.  
 Arcata, Humboldt Co., Calif.  
 Cornell, Hattie, Supply Work  
 (Mrs. Hattie Goodfellow)  
 R. F. D., Edgewater, Colo.  
 Danielson, Cora, Teacher  
 W. Vernon School, Los Angeles, Calif.  
 De Vine, Mrs. Elsie  
 4138 Sheridan Blvd., Denver, Colo.  
 Doyle, Mabel,  
 516 E. 16th St., Chicago, Ill.  
 Ellis, Adda  
 639 So. Union Ave., Pueblo, Colo.  
 Ellis, Esther (Mrs. Melvin Faris)  
 La Salle, Colo.  
 Evans, Emma (Mrs. Hahn).  
 Fagan, Jennie (Mrs. Jennie McCarthy)  
 Deceased  
 Fowler, Ruby (Mrs. F. W. Remington)  
 Ft. Morgan, Colo.  
 Frink, Marguerite  
 (Mrs. Marguerite Crouter)  
 Brighton, Colo.  
 Gibson, Mildred (Mrs. Murray)  
 660 So. Penn. Ave., Denver, Colo.  
 Goodale, Nellie, Stenographer  
 Shirley Hotel, Denver, Colo.  
 Grout, Lizzie M. (Mrs. Gilbert)  
 818 E. 10th St., Pueblo, Colo.  
 Hughes, Adella (Mrs. Leon F. Klink)  
 313 E. Baca St., Trinidad, Colo.  
 Hughes, Ida, Teacher  
 94 Sherman, Denver, Colo.  
 Imboden, J. W., Real Estate  
 2005 7th Ave., Greeley, Colo.  
 Jamison, Rea.  
 Jones, Jennie Virginia, Teacher  
 Ironton School, Denver, Colo.  
 Kendel, Alice (Mrs. Albert J. Johnston)  
 Martlach, Sask., Canada  
 Kenwell, Joseph C.  
 Kersey, Margaret (Mrs. Robt. Cahill)  
 Leadville, Colo.  
 Ketner, Sarah P. (see Class of 1916).  
 Latson, Elmer.  
 Lewis, W. A., Railway Mail Service  
 711 Park St., Trinidad, Colo.

Lowe, Elizabeth F.  
 (Mrs. Norman McLeod)  
 430 N. Cataline Ave., Pasadena, Calif.  
 Lowther, Laura (Mrs. J. E. Laws)  
 R. R. No. 1, Ordway, Colo.  
 McKelvey, Eva M. (see Class of 1918).  
 McMillin, Edith (Mrs. Collins).  
 McNee, Elizabeth (Mrs. F. H. Burcham)  
 Blairsburg, Iowa  
 Markusen, Martha C., H. S. Teacher  
 125 E. 11th Ave., Denver, Colo.  
 Mayne, Fannie M. (Mrs. Fannie M. Sizer)  
 501 12th Ave., Greeley, Colo.  
 Melville, Bessie L., Teacher  
 (Mrs. Bessie M. Hawthorne)  
 378 Broadway, Denver, Colo.  
 Mulnix, Sadie S.  
 216 E. Route Ave., Pueblo, Colo.  
 Neel, Ora (Mrs. Leete).....Orin, Wyo.  
 Nutting, Drusilla  
 (Mrs. Chester E. Shultis)  
 R. 4, Box 30, Corvallis, Ore.  
 O'Boyle, Lila M. (see Class of 1916).  
 O'Connell, Mamie (see Class of 1908).  
 Olson, Mamie (Mrs. E. A. Koehler)  
 Windsor, Colo.  
 Orr, Irma (Mrs. J. H. Edwards)  
 Fillmore, Calif.  
 Poland, Belle, Sec. Commercial Club  
 903 E. 7th St., Pueblo, Colo.  
 Probst, Rose, deceased.  
 Resor, Virginia (Mrs. John R. Fox)  
 Cunningham, Wash.  
 Riek, Meta (Mrs. J. A. Irving)  
 1847 Cherokee Ave., Los Angeles, Calif.  
 Robbins, W. F., deceased.  
 Romans, Ab. H., Lawyer. Loveland, Colo.  
 Sarell, Jessie (Mrs. A. H. Rudd)  
 421 Madison St., Pendleton, Ore.  
 Schmidt, Kari (Mrs. Williams).  
 Searles, Nina (Mrs. J. L. Kendel)  
 321 Cheyenne Ave., Eaton, Colo.  
 Seybold, Bertha (Mrs. Fisher)  
 1160 Auburn Ave., Oakland, Calif.  
 Smith, Frances (Mrs. Bert F. Worrall)  
 Simla, Colo.  
 Smith, Olive, Teacher  
 3438 Wyandot St., Denver, Colo.  
 Stockdale, Martha, Teacher  
 517 W. Dale St., Colo. Springs, Colo.  
 Taylor, Hazel.....Durango, Colo.  
 Veniere, Cecelia, Teacher  
 2731 W. 37th Ave., Denver, Colo.  
 Warning, G. A., U. S. Reclamation Serv.  
 820 Chipeta Ave., Grand Junct., Colo.  
 Waters, Eva (Mrs. ....)....Yuma, Colo.  
 Williams, S. D.  
 Williamson, Lucy (Mrs. Griffie).  
 Wilson, Marie (Mrs. A. J. Benham)  
 640 Mapleton Ave., Boulder, Colo.  
 Wood, Carolyn (Mrs. Carolyn Greenacre)  
 Ft. Collins, Colo.

CLASS OF 1901

-Adams, Mary (see Class of 1917).  
 Allnut, Frederic J.  
 1313 7th Ave., Greeley, Colo.  
 Andrews, Adell.....Denver, Colo.  
 Bailey, Louise.....Los Angeles, Calif.  
 Barnard, Margaret, Teacher  
 1783 W. 25th St., Los Angeles, Calif.  
 Bent, C. A., Supt. of Schools  
 Berwind, Colo.  
 Beswick, Dolphin  
 621 1st West, Apt. 212, Seattle, Wash.  
 Breuer, Emma (Mrs. Will Madison)  
 North Platte, Nebr.  
 Broquet, Prudence (Mrs. Bailey).  
 Carter, Carrie (Mrs. Jno. Martin)  
 Barada, Nebr.

Carter, Lina, Teacher  
 (Mrs. Lina Carter Bunn)  
 Apt. 8, Vinenna Apts., 1746 Clarkson  
 St., Denver, Colo.

Craven, May (Mrs. May Clemens)  
 Deceased

Crone, John V. (see Class of 1904).

Day, Reba, Librarian....Longmont, Colo.

Delbridge, Lucy  
 1121 11th St., Greeley, Colo.

Dempsey, Nettie (Mrs. A. F. Hillesly)  
 2637 Pike Ave., Ensley, Ala.

Dugan, Julia (Mrs. Julia Beach)  
 Laplata, Colo.

Edwards, Mabel (Mrs. Jacob Fox)  
 1344 W. 5th St., Riverside, Calif.

Filkins, Grace (see Class of 1915).

Gibbs, Elizabeth, Teacher La Junta, Colo.

Graham, Melcena  
 (Mrs. Wellington Howard)  
 Gill, Colo.

Hall, Agnes.

Hamm, Elsie (Mrs. Humphreys).  
 Fremont, Neb.

Harrington, Ada.....Canon City, Colo.

Henderson, Alice (Mrs. L. L. Bryant)  
 (See Class of 1902)

Holland, Nena R. (Mrs. Fred C. Gedge)  
 600 Molino Ave., Long Beach, Calif.

House, Louise (Mrs. E. H. Downey)  
 920 10th St., Greeley, Colo.

Jones, Katie.....Denver, Colo.

Kesler, Joseph, Teacher  
 645 Arapahoe Ave., Boulder, Colo.

Keyes, Victor, Atty.-General of State  
 Denver, Colo.

Kittle, Helen M. (Mrs. W. B. Starr)  
 Greeley, Colo.

Knowlton, Charles..Pagosa Springs, Colo.

Lowe, Anna F., Teacher  
 Hotel Erhard, Denver, Colo.

Lundy, Katie (Mrs. Y. B. Wilkes)  
 418 S. Washington, Ft. Collins, Colo.

McCarthy, Mary, deceased.

McCloskey, Viola (Mrs. Chas. W. Waddle)  
 2148 Ivar St., Los Angeles, Calif.

McCoy, Anna Belle  
 (Mrs. James R. Dressor)  
 1430 Milwaukee St., Denver, Colo.

McKelvey, Kathryn (see Class of 1917).

McMullin, Edith (Mrs. C. B. Collins)  
 Imperial, Calif.

McPherson, Mattie  
 149 Cowper St., Palo Alto, Calif.

McPherson, William.

Merchant, Maud (Mrs. John Harvey)  
 813 Spruce St., Leadville, Colo.

Morris, Florence.....Brandon, Colo.

Needham, C. N., Phys. and Surgeon  
 764 Metropolitan Bldg., Denver, Colo.

Norine, Mayme (Mrs. Everett S. Smith)  
 Salem, Nebr.

Norton, Nona  
 (Mrs. Nona Norton Broadbent)  
 Ordway, Colo.

O'Brien, Rhoda.

O'Conner, Charles, Lawyer,  
 527 Mayo Bldg., Tulsa, Okla.

O'Keefe, Agnes, deceased.

Onstine, Eulalia (Mrs. Jas. Dunn)  
 836 W. Jefferson, Los Angeles, Calif.

Parrett, Kate.

Peterson, Hanna (Mrs. G. O. Beale)  
 Gypsum, Colo.

Remington, Mayme  
 (Mrs. Mamye R. O'Mailia)  
 Fairplay, Colo.

Robertson, Jean (Mrs. Clay Tollman)  
 1654 Irving St., Washington, D. C.

Robinson, Abbie (Mrs. William Hunn)  
 Hillyard, Wash.

Scheffler, Josephine, Teacher  
 1248 Gaylord St., Denver, Colo.

Schutz, Tyro W., Merchant  
 1829 7th Ave., Greeley, Colo.

Scott, Lucy M.  
 211 No. Pasadena Ave., Pasadena, Calif.

Sellers, Gilbert.

Snyder, Laura (Mrs. S. M. Hadden)  
 1729 10th Ave., Greeley, Colo.

Tefft, Ruth (Mrs. Charles Knowlton)  
 Pagosa Springs, Colo.

Veverka, Madeline M. (see Class of 1911).

Watson, Alice M., Teacher  
 1003 Lincoln, Denver, Colo.

Webster, Ella  
 3203 Univ. Ave., Los Angeles, Calif.

Welch, Harry, Chief Chemist  
 1645 Orange St., Los Angeles, Calif.

Welch, Hattie (Mrs. C. M. Johnson)  
 Hereford, Ariz.

Weller, Mary, Teacher  
 5851 Brentwood Ave., Los Angeles, Calif.

Wolfenden, Anna (Mrs. F. J. Allnutt)  
 1313 7th Ave., Greeley, Colo.

Wood, Florence (see Class of 1902).

CLASS OF 1902

Allen, Alice (Mrs. Alice Kennedy)  
 Johnstown, Colo.

Anthony, Anna (Mrs. Ernest Kuisely)  
 Lake George, Colo.

Bailey, W. L. (see Class of 1911).

Bowen, Claudia (Mrs. Ab. H. Romans)  
 Loveland, Colo.

Bowman, Julia B. (Mrs. Frank Deich)  
 Julesburg, Colo.

Boylan, Daisy D.  
 4019 Woodlawn Ave., Kansas City, Mo.

Bracewell, Cora, Teacher  
 101 N. Margarita Ave., Alhambra, Calif.

Carter, Ethel I.  
 So. Pearl St., Denver, Colo.

Cheeley, Ella (Mrs. Ella Frink)  
 825 Gaylord St., Denver, Colo.

Coil, Lina D.....Greeley, Colo.

Crone, John V. (see Class of 1904).

Day, Fannie L. (Mrs. Earl Thompson)  
 Masters, Colo.

Enoch, Mary Priscilla  
 (Mrs. Mary Warning)  
 Grand Junction, Colo.

Farlow, Floe.

Floyd, A. J.....Trinidad, Colo.

Follette, Celinda C.  
 (Mrs. Arthur Johnston)  
 Cripple Creek, Colo.

Fugate, Inda (Mrs. Inda F. Bowman)  
 1569 Emerson St., Denver, Colo.

Fugate, Laura E., Teacher  
 (Mrs. C. A. Bent)  
 Berwind, Colo.

Gale, Edith V., Teacher C. T. C.  
 (Mrs. H. J. Wiebking)  
 1718 8th Ave., Greeley, Colo.

Garcia, James, Doctor  
 Ft. Lupton, Colo.

Geffs, Bessie (Mrs. Dr. J. C. Carlson)  
 Eaton, Colo.

Gibbons, Marcella (see Class of 1907).

Green, Hilda (Mrs. Laurence Stoddard)  
 825 Tillotson St., Trinidad, Colo.

Grove, Rhena M.  
 (Mrs. Rhena M. Williams)  
 4018 Agua Vista St., Oakland, Calif.

Harbottle, John (see Class of 1914).

Henderson, Alice (Mrs. Lloyd L. Bryant)  
 1102 11th St., Greeley, Colo.

Hiatt, J. Frances (Mrs. Reid).

Hotchkiss, Esther, deceased.

Jessup, Leona (Mrs. Joseph Kesler)  
 645 Arapahoe Ave., Boulder, Colo.

Keightley, Annie K.  
513 Broadway, Pueblo, Colo.

Kelsey, Sofia, Bookkeeper  
(Mrs. Sofia Decker)  
Box 116, Ft. Lupton, Colo.

Kennedy, Ethel (Mrs. R. B. Rugh)  
1206 8th St., Greeley, Colo.

Keplinger, Peter, Forester  
3044 W. 29th Ave., Denver, Colo.

Knowlton, Richard G., deceased.

Ladd, Dora (Mrs. Victor E. Keyes)  
655 High St., Denver, Colo.

Leonard, Sadie K. . . . . Denver, Colo.

Lewis, Charlotte, deceased.

Llewellyn, Mary J. (Mrs. H. L. Alder)  
2450 Portola Way, Sacramento, Calif.

Lovering, Esther A. (Mrs. Fred Shambo)  
Briggsdale, Colo.

McNee, Jessie, deceased.

Marshall, Estella D.  
(Mrs. Estella Darrah) -  
3161 W. Denver Pl., Denver, Colo.

Martin, Teena (Mrs. Teena M. Willson)  
1838 1/2 Arapahoe St., Los Angeles, Calif.

Mitchell, Bessie  
(Mrs. Arthur Van De Mark)  
Wellton, Ariz.

Mooney, William B. (see Class of 1910).

Mosher, Abbie, Teacher,  
Erhard Hotel, Denver, Colo.

Moss, Eva May (Mrs. Ira Ullum)  
419 S. El Paso St., Colo. Springs, Colo.

Mundee, Helen A.

Packer, W. R., Teacher. . . . Sunrise, Wyo.

Pechin, Zadia.

Pendell, Dorcal M. (Mrs. Geo. Grant)  
1827 So. Bronson Ave., Los Angeles, Calif.

Porter, Dell (Mrs. Zenas T. Roberts)  
305 S. 7th St., Rocky Ford, Colo.

Powers, Myrtle Alice  
(Mrs. Griffith H. Teller)  
Windsor, Colo.

Proctor, Ula (Mrs. V. A. Campbell)  
1933 Lincoln St., Denver, Colo.

Rankin, Bessie (Mrs. Howard Adams)  
Palmer, Nebr.

Reid, Lois E. (Mrs. M. W. Berry)  
Torrington, Wyo.

Reynolds, Alma S. . . . . Missouri

Rhys, Mary G., Teacher  
1764 Julian St., Denver, Colo.

Richardson, E. Florence  
(Mrs. Bert Thomas)  
Samanda Park, Calif.

Robinette, Sara J., Teacher  
941 E. 17th Ave., Denver, Colo.

Scriven, Dee. M.

Sellers, Will. . . . . Denver, Colo.

Smith, Mrs. Adda Wilson.

Smith, Frank B., Doctor  
Nampa, Idaho

Thompson, Blanche, Prin. of H. S.  
(Mrs. Blanche Ratcliffe)  
974 Grandview Ave., Boulder, Colo.

Thompson, Jettie (Mrs. Jettie McElfresh)  
Deceased

Thompson, Nellie (see Class of 1908).

Tilyou, Mabel L. (Mrs. Mabel Mackey)  
(See Class of 1916)

Washburn, Lizzie (Mrs. Coffman).  
Welch, Fred, deceased.

West, Olive (Mrs. A. H. Trelease)  
1735 Granada, San Diego, Calif.

Wiedmann, D. E. (see Class of 1915).

Willcox, Margaret, Teacher  
(Mrs. H. M. Baltosser)  
601 So. Howes, Fruita, Colo.

Willie, Anna (Mrs. Malonnee).

Wood, Florence (Mrs. Florence Leavitt)  
517 Belvedere St., San Fran., Calif.

CLASS OF 1903

Allyn, Emily (Mrs. Emily Porter), de-  
ceased.

Asmus, Karina (Mrs. Alexander Karina)  
Silver City, N. M.

Atherly, Varina,  
616 S. College Ave., Ft. Collins, Colo.

Ayers, Lucy Emery, Teacher  
(Mrs. Lucy E. A. Smith)  
3643 W. 23rd Ave., Denver, Colo.

Bandy, Pearl (Mrs. Pearl Carlisle)  
Ft. Collins, Colo.

Balch, Edith J. (Mrs. Sender).

Bay, Minnie (Mrs. Ward).

Beardsley, Earl P., Dentist  
107 West St., Cripple Creek, Colo.

Bodle, Veda May, Teacher  
2634 Downing St., Denver, Colo.

Carnine, Stella M. (Mrs. Biddle).  
Churchill, Flossie E.  
(Mrs. Flossie E. Casebeer)  
415 Serino St., Los Angeles, Calif.

Clement, Mrs. Aurora W. (see Class of  
1904).

Clement, H. Harman (see Class of 1916).

Clonch, Nell P. (Mrs. R. E. A. Drolet)  
Farmington, N. M.

Cooley, Ruth, Asst. Registrar  
111 East Fifth St., Trinidad, Colo.

Day, Etta M. (Mrs. Etta M. Williams)  
Eaton, Colo.

Eaton, Fern B. (Mrs. Fern Howe)  
San Diego, Calif.

Fagan, Katie D. (Mrs. Carter)

Farnsworth, Mary (Mrs. Hillsalock).

Faus, Ada Rowena, Teacher  
Monte Vista, Colo.

Fisher, Edna Vaughan  
(Mrs. Howard S. Braucher)  
57 Herald Ave., Richmond Hill, N. Y.

Gordon, Carrie (Mrs. Cory Scott)  
234 So. Corona, Denver, Colo.

Gruber, Mayme F. (Mrs. Barclay).

Hayward, Lois H. (Mrs. Lois H. Coil)  
Benton City, Mo.

Henebry, Agatha C.  
(Mrs. Mallory Catlett)  
2340 Fairfax, Denver, Colo.

Herrick, Olive M. (Mrs. A. Wilson)  
2702 Jara Court, Denver, Colo.

Hogarty, Mrs. Viola Collins, Teacher  
(Mrs. Barry Hogarty)  
1310 E. Coifax Ave., Apt. 4,  
Denver, Colo.

Howard, Mildred  
(Mrs. Ernest H. Frolick)  
Barnesville, Colo.

Hughell, Samuel L., Life Insurance  
Rupert, Idaho

Hunter, Maude E.

Ingram, Lillian Grace  
(Mrs. H. C. Cushman)  
1945 9th Ave., Greeley, Colo.

Inman, Minnie J. (Mrs. Williams).

Jones, Allie.

Keeler, Bessie (Mrs. John H. Weldon)  
Loveland, Colo.

Kemp, Josephine (Mrs. McGuire).

Kendel, Mary (see Class of 1904).

Kleinsorge, Louise (Mrs. C. R. Peake)  
675 E. 45th St. No., Portland, Ore.

Lauenstein, Minnie V., Teacher  
8th Ave. and Bowen St., Longmont, Colo.

McCoy, Minnie E.  
(Mrs. Minnie E. Bradfield)  
377 Loma Ave., Long Beach, Calif.

McCracken, Katherine, Los Angeles, Calif.

McCullough, Edith (Mrs. Phil Dale)  
Belle Fourche, S. D.

McIntyre, Jennie (Mrs. Jennie Robison)  
2453 Dunkeld Place, Denver, Colo.

McNeal, Chandos L.  
(Mrs. Walter A. Funk)  
Idaho Springs, Colo.

Martin, Beatrice E. . . . . Denver, Colo.  
Mergelman, Lulu.

Middleswarth, Harriet E.  
2100 Williams St., Denver, Colo.

Mitchell, Miriam V. (see Class of 1904).

Mundie, Isabelle F. (Mrs. Isabelle Mabee)  
Central City, Colo.

Neuman, Ella (Mrs. A. S. Cooper)  
388 Palm Ave., Riverside, Calif.

Nevitt, Eva E. (Mrs. Wood).

Newcomb, Anna H. (Mrs. Willbur Curtis)  
Saguache, Colo.

Phillips, Jessie A.  
(Mrs. Herbert A. Radford)  
1142 Steele St., Denver, Colo.

Poirson, Louise (Mrs. Floyd R. Liggett)  
722 Mathews St., Ft. Collins, Colo.

Reynolds, Gerda.

Robinson, Goldie W.  
(Mrs. Fred J. McNair)  
422 W. 7th St., Leadville, Colo.

Ross, M. Esther (Mrs. Alex Silver)  
Gem, Alberta, Canada

Scherrer, Josephine L.  
(Mrs. M. Bartosh)  
3519 W. 23rd Ave., Denver, Colo.

Schweitzer, Katherine.

Scofield, Beulah F.

Singleton, Mrs. Helen A.  
6 Broadway, Denver, Colo.

Slavin, Helen A.

Sleeper, Sara Eldred, Teacher  
63 Logan St., Denver, Colo.

Stealy, Elza Rollin, Dentist  
Shenandoah, Iowa

Stokes, Katherine E.  
(Mrs. Chas. Eldridge Davis)  
1218 Mansfield Ave., Spokane, Wash.

Stone, Alice I. (Mrs. A. T. Swope)  
R. F. D. No. 2, Meridian, Idaho

Taylor, Hope C., Teacher  
(Mrs. Theodore Brott)  
Box 284, Aspen, Colo.

Tilyou, Blanche (Mrs. E. E. Mackey)  
Route 5, Caldwell, Idaho

Tucker, Hazel (Mrs. Donald Hill)  
R. R. No. 1, Box 49, Ontario, Calif.

Van Cleave, Ada M., Ranch Work  
Arco, Idaho

Wakeman, Alleah  
5601 Dorchester Ave., Chicago, Ill.

Watson, Edna Knowlton, Teacher  
(Mrs. Edna Freeman)  
Lake City, Colo.

Welch, Jeanne (Mrs. Ben Coen)  
State Agr. College, Ft. Collins, Colo.

White, Mabel, deceased.

Whitham, Bronte  
F-X Ranch, Hillsboro, N. M.

Whitham, Xavia  
F-X Ranch, Hillsboro, N. M.

Wilson, Isa. D. (Mrs. Andrew B. Ross)  
Briggsdale, Colo.

Wood, Texie M. (Mrs. Will Armatage)  
Eaton, Colo.

Worrell, Blanche (Mrs. Blanche Yeager)  
Lowell, Ariz.

Worth, Katie (Mrs. McClain)

Young, Chas. A. (see Class of 1916).

Youngclaus, Emma H., Teacher  
1340 Josephine St., Denver, Colo.

Youngclaus, Katherine  
(Mrs. Carl Armcling)  
Basin, Wyo.

CLASS OF 1904

Alexander, Grace L., Housekeeper  
1405 8th St., Greeley, Colo.

Alps, George W. (see Class of 1914).

Blunt, Carrie Edna  
(Mrs. Benjamin C. Rienks)  
1738 7th Ave., Greeley, Colo.

Buckley, Emma F., Teacher  
960 W. 11th St., Riverside, Calif.

Burbank, Myrtle E.  
(Mrs. Fred Hamilton)  
Wiggins, Colo.

Bushyager, Genetta (Mrs. Wm. Bell)  
Houston, Mo.

Campbell, Jennie M., deceased.

Candor, Ethel. . . . . Paris, France

Carrell, Mabel (Mrs. John N. Kerr)  
1046 Vine St., Denver, Colo.

Cartwright, Mabel. . . . . La Junta, Colo.

Cassidy, Eva (Mrs. C. B. Hamilton)  
1270 York St., Denver, Colo.

Cleave, Clara J. (Mrs. Jos. H. Lanphier)  
1557 Garfield St., Denver, Colo.

Clement, Mrs. Aurora W.

Clement, H. Harmon (see Class of 1916).

Coleman, Cora, Teacher  
923 So. Normandie Ave., Los Angeles

Cook, Florence.

Cope, Minnie M. (Mrs. Clarence A. Smith)  
Delta, Colo.

Crawford, Sadie R.

Crone, John V., General Agent  
808 Kearns Bldg., Salt Lake City, Utah

Curtis, Grace E.

Dale, Dora (Mrs. J. F. Steck)  
Fruitdale, So. Dak.

Dayton, Georgian I. . . . . Pueblo, Colo.

Dillman, Caroline (Mrs. Kehm).

Doane, Maude S. (Mrs. Roy Hazen)  
Winner, So. Dak.

Dolan, Margaret J. (Mrs. John Pitts)  
413 E. 5th St., Leadville, Colo.

Douglas, Edith S. (Mrs. Earl Beardsley)  
Cripple Creek, Colo.

Doull, Elizabeth G.  
(Mrs. W. A. Hamnett)  
805 6th St., Greeley, Colo.

Dulliam, Ethel P. (Mrs. E. W. Knowles)  
1127 16th St., Greeley, Colo.

Elliot, Caroline (Mrs. Canady).

Elliot, Elizabeth.

Evans, Katharyne M. . . . . Denver, Colo.

Frink, Ruby W. (Mrs. Ernest B. Davis)  
Ft. Lupton, Colo.

Garrigues, Helen (Mrs. Helen McGrew)  
(See Class of 1905)

Hughes, Emma E.

Ingersoll, Nettie R., deceased.

Johnson, Axel E. (see Class of 1913).

Jones, Bessie E. (see Class of 1912).

Jones, Katherine.

Kauffman, Harriett R., Teacher  
1525 Logan St., Denver, Colo.

Kelley, Edith (Mrs. Geo. D. McDougall)  
543 Gay St., Longmont, Colo.

Kelsey, Wheeler, deceased.

Kendel, Mary, Student  
546 W. 124th St., New York City

Kerr, Berdie.

Kleinsorge, Eliza.

Lakin, Irene (Mrs. Frank Paine)  
415 E. St. Vrain St., Colo. Spgs., Colo.

Lewis, Ella M. (Mrs. L. B. Blair)  
836 Jefferson Ave., Loveland, Colo.

Lincoln, Clara (Mrs. Norman Baldrige)  
R. F. D. No. 2, Eaton, Colo.

Little, Isabel Monroe, Teacher  
(Mrs. J. E. Hummer)  
2616 Eudora St., Denver, Colo.

MacArthur, Jessie Jane  
(Mrs. Howard S. Phelps)  
3024 Rutland Ave., Des Moines, Ia.

McDonald, Mollie A., deceased.



McKeon, Madge Louise  
(Mrs. D. G. Whitney)  
2310 10th St., Wichita Falls, Tex.

McMurfey, Jessie.

Meddins, Winfred C. P. (see 'Class of 1913').

Menke, Alice, Teacher  
1010 E. 17th Ave., Denver, Colo.

Merrill, Ada M. (Mrs. Hedges).

Miller, Mary G. .... Denver, Colo.

Mitchell, Miriam V.  
1017 Downing St., Denver, Colo.

Morey, Jessie (Mrs. Milton E. Dukes)  
1127 E. 16th Ave., Denver, Colo.

Nelson, Josephine  
(Mrs. Herman E. Meyers)  
1444 Josephine St., Denver, Colo.

Nelson, Lena M., Teacher  
515 14th St., Oakland, Calif.

Oldham, Ethel J. (Mrs. Breeze).

Osborne, Mary C. (Mrs. W. D. Little)  
374 Wisconsin Ave., Long Beach, Calif.

Patterson, Elizabeth V.  
(Mrs. Elizabeth O'Grady)  
821 5th St., Greeley, Colo.

Pendery, Alice E. .... Whittier, Calif.

Perry, Geraldine May  
(Mrs. L. B. Newbold)  
836 Prospect St., La Jolla, Calif.

Porter, Frances. .... Greeley, Colo.

Ramsay, Fern (Mrs. Geo. Ellis Evans)  
3030 W. 38th Ave., Denver, Colo.

Reid, Pearl (Mrs. Pearl Owen)  
(See Class of 1905)

Russell, Mabel Nelle  
(Mrs. Walter F. Cozad)  
1640 Madison St., Denver, Colo.

Said, Nettie A.

Sanborn, Roma (Mrs. A. I. Kendel)  
1305 6th St., Greeley, Colo.

Savage, Ella G.

Scott, Bertha L. (Mrs. Bertha Alter)  
Portland, Ore.

Scott, Ethel.

Sibley, Mrs. Bella B. (see Class of 1913).

Singer, Harriet H.  
(Mrs. Harriet Howlett)  
5130 Kensington Ave., St. Louis, Mo.

Smith, Lavina (see Class of 1912).

Snyder, E. Tyndall  
2036 8th Ave., Greeley, Colo.

Stevens, Laura.

Sutherland, Mary L. (see Class of 1905).

Thedinga, Mary E., H. S. Teacher  
Peacock Apts., Alhambra, Calif.

Thomas, Lillie (Mrs. Edmison).

Turner, Mattie.

Wetzel, George L.

Wilson, Elma A., Librarian,  
1010 6th St., Greeley, Colo.

Woodbury, May L. (see Class of 1906).

Worley, James H.  
2237 E. 14th Ave., Denver, Colo.

Worley, Victor E. (see Class of 1915).

CLASS OF 1905

Adams, Roxana M. (see Class of 1917).

Alexander, Raymond P.  
R. F. D., Cortes, Colo.

Ball, Maud.

Beckford, Edith R. .... Denver, Colo.

Benston, Hilma C.  
(Mrs. John T. Anderson)  
Haxtun, Colo.

Blaine, William D. (see Class of 1915).

Boyd, Helen (see Class of 1907).

Broman, Cora Carthew  
(Mrs. E. Tyndall Snyder)  
2036 8th Ave., Greeley, Colo.

Brown, Arba D., Teacher  
(Mrs. J. R. Haynes)  
320 Pine St., Sterling, Colo.

Browne, Merge J.  
(Mrs. Edwin Herrington)  
See Class of 1906

Brush, Mary J.  
(Mrs. Theodore B. Moodey)  
1526 11th St., Greeley, Colo.

Brush, Ruth (Mrs. G. Will Bliss)  
Box 711, Greeley, Colo.

Buchanan, Lucile B.

Carson, Jessie (Mrs. Jessie Clark)  
14 Nettford Apts., Cheyenne, Wyo.

Carson, Madge (Mrs. Madge Evans)  
1045 Broadway, Denver, Colo.

Chase, Bertha M.  
3339 Broadway, Oakland, Calif.

Churchill, Harry V. (see Class of 1914).

Collins, C. Bruce (Pd. M.)  
Supt. of Schools, Imperial, Calif.

Cope, Myrtle (Mrs. ....) deceased.

Correll, Gertrude E., Bookkeeper  
(Mrs. Geo. McLeod)  
Lebanon, Ore.

Craine, Carrie E.

Crawford, Mabel L. (see Class of 1914).

Cummings, Josephine (Mrs. Lloyd).

Cuney, Nannie I.

De Sellem, Belle  
(Mrs. Belle Bardwell)  
Anaheim, Calif.

Eadie, Isabel P.

Eldridge, Eva. .... Pueblo, Calif.

Ellis, Ralph W., Prin. of School  
Box 523, Walsenburg, Colo.

English, Myrtle (see Class of 1906).

Evans, Clara (Mrs. H. P. Brunelle)  
8th Ave., Greeley, Colo.

Fergus, Mabel C. .... Denver, Colo.

Ferguson, Mabel C., Teacher  
473 Santa Fe Drive, Denver, Colo.

Ford, Rae R. (Mrs. Rae F. Denning)  
900 So. 4th St., Lamar, Colo.

Forsyth, Clara Lavern  
(Mrs. R. K. Holt)  
1425 1st Ave. No., Gt. Falls, Mont.

Fulweider, Eva, deceased.

Garrigues, Helen G. (Pd. M.)  
(Mrs. L. W. McGrew)  
Tabernacle, Colo.

Godley, Sophie. .... Edgewater, Colo.

Goldacker, Mary (Mrs. Frank Rathbun)  
Morenci, Ariz.

Graham, Anna D. (Mrs. Anna Smillie)  
(See Class of 1906)

Graham, Veda S. .... Denver, Colo.

Grimoldley, Winifred A.  
(Mrs. Winifred McBroom)  
R. 3, Colorado Springs, Colo.

Hanel, Bertha (Mrs. G. C. Kirkbride)  
Trenton, Nebr.

Heighton, Harry W. .... Greeley, Colo.

Holland, M. Pearl (Mrs. L. W. Welch)  
1845 Olive Ave., Long Beach, Calif.

Hooper, Dorothy.

Hughes, Mildred B.

Hummer, Ruth Ella, Teacher  
1730 Ogden St., Denver, Colo.

Hunter, Leona D. .... Greeley, Colo.

Hunting, Addie L. (Mrs. Sweeney).

Hutchinson, Jessie A.  
4120 Umatilla, Denver, Colo.

Jenkins, Marie J., Teacher  
400 Ogden St., Denver, Colo.

Jones, Eleanor M. .... Los Angeles, Calif.

Kerr, Harriet (Mrs. Chas. Troutman)  
Fullerton, Calif.

Kibby, Laura M. (Mrs. Sybrandt)

Kniest, Eleanor E.

Kuhnley, Mabel L. (see Class of 1910).

Kulp, Freeda (Mrs. Percy R. Naylor)  
1378 S. Penn. Ave., Denver, Colo.  
La Mar, Leona.  
Lewis, Mabel A. . . . . Colo. Springs, Colo.  
Lucas, M. Adella  
2230 14th Ave., Denver, Colo.  
McBreen, Barbara  
3915 King, Denver, Colo.  
McDermet, Ella.  
McDonald, Anna. . . . . Pueblo, Colo.  
McFarland, Rachel Bianca  
(Mrs. Rachel McFarland Byrd)  
8312 So. J St., Tacoma, Wash.  
McKelvey, Nina.  
McKune, Hazel (Mrs. Norman Corson)  
Creede, Colo.  
McLravy, M. Pearl (Mrs. Earl W. Fishel)  
Box 691, Aspen, Colo.  
Magner, Bessie (Mrs. Ben S. Curtis)  
Teacher  
Mahoney, Elizabeth (see Class of 1909).  
Maine, Lottie (Mrs. A. L. Fox)  
1126 9th St., Greeley Colo.  
Martin, Maud E., Teacher  
Hotel Fifth East, Salt Lake City, Utah  
Meddins, Beatrice S.  
445 Josephine, Denver, Colo.  
Meddins, Winfred C. P. (Pd. M.)  
(See Class of 1913)  
Morand, Earle G. (see Class of 1917).  
Mosier, Lelia (Mrs. Rollo Hess)  
Deceased  
Nash, Katherine (see Class of 1914).  
Nash, Kathryn A.  
(Mrs. Kathryn A. Walker)  
Windsor, Colo.  
Newsome, Ethel (Mrs. Kelso), deceased.  
Pasley, Edith L. (Mrs. H. W. Heighton)  
Greeley, Colo.  
Pate, Pearl A. (Mrs. McGilvery)  
Denver, Colo.  
Porter, F. Gertrude  
(Mrs. J. M. Mogensen)  
Fruita, Colo.  
Reed, Adaline W. (Mrs. R. E. Adams)  
Velardina, Durango, Mexico  
Reedy, Mary B. (see Class of 1906).  
Reid, Pearl (Mrs. Pearl Owens)  
Hugo, Colo.  
Riggs, Caroline (Mrs. Willard Reid)  
Ft. Morgan, Colo.  
Robb, Mary (Mrs. Mary Walt)  
(See Class of 1916)  
Robb, Pearl (Mrs. Austin).  
Robinson, Frances I. (Mrs. . . . .).  
La Junta, Colo.  
Rupp, Gertrude (Mrs. Rodney Jay)  
1060 White Ave., Grand Junction, Colo.  
Scott, Madeline.  
Sexson, John A. (see Class of 1913).  
Sheeley, Nellie I. (Mrs. McDonough).  
Shumate, Letha. . . . . Rocky Ford, Colo.  
Sibley, Blanche T. (see Class of 1906).  
Smith, Alma, Teacher  
2630 Church St., Baker, Ore.  
Smith, Carrie T. (Mrs. Carrie T. Anthony)  
Canon City, Colo.  
Sparling, Emma, Teacher  
Box 98, Bozeman, Mont.  
Sutherland, Mary L. (Pd. M.).  
Taylor, Mary D. (see Class of 1906).  
Terry, Earl K. (see Class of 1906).  
Thomas, Myra L.  
31 W. Lake St., Chicago, Ill.  
Twomey, H. Jane, Teacher  
4722 15th Ave., Seattle, Wash.  
Veazey, Oma (Mrs. Ed. Davies).  
Welty, J. Florence (Mrs. Merrell).  
Wilson, Mary Stuart (see Class of 1919).

Work, Josephine (Mrs. A. A. Brown)  
2731 Forest Ave., Berkeley, Calif.  
Zorn, Frederica E. (Mrs. Cox).

CLASS OF 1906

Abbott, Vivian (Mrs. Bruce Gilmore)  
1731 11th Ave., Greeley, Colo.  
Allison, Grace Elizabeth, Teacher  
1028 Colfax Ave., Denver, Colo.  
Alps, Rosaline (Mrs. Geo. Carlson)  
915 Emerson St., Denver, Colo.  
Anderson, Grace Mabel  
(Mrs. Mark A. Chapman)  
2121 Central Ave., Cheyenne, Wyo.  
Anderson, Pearle (Mrs. J. J. Jones)  
700 Elizabeth, Ft. Collins, Colo.  
Appley, Carrie Louise.  
Auld, Mae (Mrs. H. V. Churchill),  
Denver, Colo.  
Aulsebrooks, Martha F.  
(Mrs. Walter Scott Perry)  
1314 Carteret Ave., Pueblo, Colo.  
Bailey, Bessie May.  
Bailey, Mrs. Mary E. . . . . Denver, Colo.  
Baird, Lavinia (Mrs. Virgil L. Bennett)  
R. 3, Golden, Colo.  
Bassler, Mary (Mrs. C. Wiles Hallock)  
2509 E. 3rd Ave., Denver, Colo.  
Beach, Rae L. (Mrs. Rae Jackson)  
See Class of 1913, Jackson, Mrs. Rae L.  
Beal, Elizabeth (Mrs. Parker)  
Boston, Mass.  
Beardsley, Eugene Darwin (see Class of  
1907).  
Bentson, Hilma.  
Bieghler, Mrs. Harriet Kile, Prin. H. S.  
Lund, Nevada  
Bowen, Martha C. (Mrs. Crawford).  
Boyer, Ella F.  
Bracewell, Laverna Goodwin, Housekeeper  
1501 9th St., Greeley, Colo.  
Braucht, Frank  
67 Park Ave., Galt, Ontario, Canada  
Brown, Edith Lucile (see Class of 1907).  
Brown, Merge J. (Mrs. Edwin Herring-  
ton).  
Bucks, Ada . . . . . Denver, Colo.  
Bunning, Elsie . . . . . Greeley, Colo.  
Burgess, Grace Elizabeth, Housekeeper  
142 W. Cedar Ave., Denver, Colo.  
Burns, Margaret M., deceased.  
Butcher, Arthur J.  
Butterfield, Mary Ethel.  
Cheese, Cora. . . . . Platteville, Colo.  
Chivington, Mrs. Cordelia, deceased.  
Christopherson, Genevieve  
(Mrs. Harry T. McCaeney)  
1201 E. 16th St., Denver, Colo.  
Coles, Joseph, Banker  
655 So. Spring St., Los Angeles, Calif.  
Collom, Lelia M., deceased.  
Conkright, Josephine (see Class of 1910).  
Cooper, Marjorie Caroline.  
Curtis, Earl S., deceased.  
Dale, Ruth A. (Mrs. A. W. Ellis)  
Box 523, Walsenburg, Colo.  
Daniels, Laura Amelia.  
Day, Grace T. (Mrs. Grace Day Beaver)  
Box 114, Orchard, Colo.  
Dean, Edna (Mrs. Edna D. Wysong)  
Deceased  
Dillman, Josephine (Mrs. Archie Littler)  
Deceased  
Doherty, Marguerite Anita  
(Mrs. Marguerite Karr)  
Eaton, Colo.  
Doke, Carrie A. . . . . Barnesville, Colo.  
Donahue, Marie V. (see Class of 1913).  
Donovan, Margaret. . . . . Longmont, Colo.  
Dyckman, Ruby (Mrs. H. B. Thomas)  
Barstow, Calif.

- Dyer, Edna Lorena (Mrs. E. Espey)  
Crested Butte, Colo.
- Edminster, Ethel A. (Mrs. Robt. Bliss)  
R. F. D. No. 1, Greeley, Colo.
- Ellis, Edith E. (Mrs. Edith E. Watkins)  
119 W. Pitkin, Pueblo, Colo.
- English, Myrtle I.  
(Mrs. Frank K. Ashworth)  
Box 187, Miami, Florida
- Filger, Irma C. (Mrs. S. L. Stoner)  
Reedley, Calif.
- Finch, Myrtle M.  
(Mrs. Myrtle M. Sedgwick)  
Box 54, Salt Creek, Wyo.
- Finney, Emma A., Teacher  
2142 Irving St., Denver, Colo.
- Fitzpatrick, Mary..... Littleton, Colo.
- Foote, Amy Rachel (see Class of 1915).
- Frank, D. Alice..... Pueblo, Colo.
- Galer, Anna Grozzelle, Teacher  
Seattle, Wash.
- Gardner, Marian A..... Denver, Colo.
- Gehring, Emma Gertrude.
- Glaze, Anna Wolfe, deceased.
- Glaze, Carrie Ellen, Teacher  
1450 Grant St., Denver, Colo.
- Graham, Anna (Mrs. J. D. Smillie)  
Eaton, Colo.
- Hafing, Reuben G.
- Hall, Elizabeth P. (Mrs. Ivan C. Hall)  
5524 Kimbark Ave., Chicago, Ill.
- Hall, Ivan C., Teacher,  
Dept. of Hyg. and Bacteriology,  
Univ. of Chicago, Chicago, Ill.
- Hall, Mabel Gladys  
(Mrs. Harlan B. Wolfe)  
Eaton, Colo.
- Hansen, Laura Z. M.  
(Mrs. Laura Charpiot)  
24 E. 14th Ave., Denver, Colo.
- Hansen, Zelma, Teacher  
2283 Hudson, Denver, Colo.
- Harkey, Tula Lake.
- Hawley, Nelle  
(Mrs. Nelle Hawley Lewis)  
618 W. Baca, Trinidad, Colo.
- Heiskell, Bettie G.  
(Mrs. Fred G. Quackenbush)  
Ft. Morgan, Colo.
- Henry, Luella V.
- Hiatt, Grace (Mrs. Webb).
- Hoffman, Ethel Angenette (see Class of 1914).
- Holmes, Luella (Mrs. Floyd B. Campbell)  
505 Pike Ave., Canon City, Colo.
- Howard, Maud.
- Hoy, Minnie M., Teacher  
San Bernardino, Calif.
- Jamieson, Stella Louise  
(Mrs. Jack J. Coats)  
Box 276, Golden West Ave.,  
San Gabriel, Calif.
- Johnson, Alice (see Class of 1907).
- Johnston, Earl Lynd (see Class of 1916).
- Kendel, J. C. (see Class of 1914).
- Lewis, Alta Coral.
- Light, Edith Mary.
- McCormick, Cora F., Student  
1629 W. Adams St., Chicago, Ill.
- McCutcheon, Mary Bruen, H. S. Teacher  
(Mrs. Howard B. Price)  
1019 10th St., Greeley, Colo.
- McFeely, M. Valeria  
(Mrs. Emmett R. Keefe)  
573 Kensington Ave., Astoria, Ore.
- McKinley, Marie (Mrs. J. J. Ward)  
Castle Rock, Colo.
- Mallery, Mary Margaret, Teacher  
955 26th St., Ogden, Utah
- Marshall, Myrtle (Mrs. Wm. Blaine)  
1103 E. Fifth, Pueblo, Colo.
- Marteeny, Maude Estelle  
(Mrs. Clifford Bartel)  
Colorado Springs, Colo.
- Mead, Lexie  
(Mrs. Harvey N. Stronach)  
Cheney, Wash.
- Midgett, Alma M. (Mrs. H. F. Denio)  
Eaton, Colo.
- Miller, Laura Louise, Teacher  
737 E. 16th St., Denver, Colo.
- Montague, Ruth E. (Mrs. ....)  
Denver, Colo.
- Morrison, Mrs. Kellaphene (see Class of 1915).
- Murray, Grace, Stenographer  
Palo Alto, Calif.
- Nash, Ella May, Teacher.... Victor, Colo.
- Nelson, Louise (Mrs. C. A. Taylor)  
Kersey, Colo.
- Norris, Luella (Mrs. Luella Wedmier)  
Deceased
- Partner, Nettie Orvilla, Teacher  
1118 Maple Ave., Rocky Ford, Colo.
- Pasley, Elizabeth Mabel  
(Mrs. Harry Heighton), Greeley, Colo.
- Paxton, Lucinda Anna.
- Peck, Ethel G. (Mrs. B. E. Parke)  
502 Hill Ave., Grand Junction, Colo.
- Picket, Luly May.
- Pittman, Alice.
- Porges, Nettie.
- Powell, Olive Elizabeth (Mrs. ....)  
California
- Preston, Chas. W. (see Class of 1914).
- Proffitt, Edward F., Supt. Schools.
- Provis, Dora Mary.
- Radford, Minnie (Mrs. Leroy C. Ferry)  
W. 21 34th Ave., Spokane, Wash.
- Randall, Mrs. Maude Agnes  
Christian Science Practitioner  
1472 Linden Ave., Long Beach, Calif.
- Reedy, Mary B., deceased.
- Rendahl, Martin O.
- Robb, Mary B. (Mrs. Mary Walt)  
Milliken, Colo.
- Robey, Claude.
- Robinson, Blanche, Teacher  
703 Gordon Ave., Spokane, Wash.
- Sanford, Edith D.  
(Mrs. J. Scott Thompson)  
1402 10th Ave., Greeley, Colo.
- Sanford, Margaret St. Vrain  
(Mrs. Lloyd B. Neill)  
Greeley, Colo.
- Saunders, Edith  
(Mrs. Walter Wier Johnston)  
Foundation Co., Rifa 332,  
Lima, Peru, S. A.
- Sayer, Emma (Mrs. Valentine).
- Sayer, Myrtle P. (Mrs. Valentine).
- Schafranka, Ella  
(Mrs. Carlton D. Comstock)  
Silver City, N. M.
- Scheid, Ethel M.
- Scott, Nancy May  
1115 11th Ave., Greeley, Colo.
- Sherry, Lulu. .621 S. 3rd, Missoula, Mont.
- Shumate, Agnes J., Prin. of School  
1634 Lincoln Ave., San Diego, Calif.
- Shumate, Mary D.....tocky Ford, Colo.
- Sibley, Blanche T.  
(Mrs. S. Horace Williams)  
R. 4, Box 116B, Greeley, Colo.
- Sibley, Winifred M.  
(Mrs. Winifred Graces)  
See Class of 1912
- Sites, Florence E.  
(Mrs. P. Creyton Wagstaff)  
Victoria Apts., San Pedro, Calif.
- Smith, Anna P.

Smith, Caroline Estella  
 (Mrs. William R. Kelly)  
 1225 14th Ave., Greeley, Colo.

Snook, Harry J., H. S. Teacher  
 430 E. Vine St., Stockton, Calif.

Stewart, Charles E., Prin. H. S.  
 Akron, Colo.

Taylor, Mary D., Teacher  
 (Mrs. Thomas H. Liggett)  
 308 Broadway, Pella, Iowa

Terry, Earl K., deceased.

Uzzell, Margaret J.  
 (Mrs. G. Aubrey Spear)  
 1515 12th Ave., Greeley, Colo.

Van Buren, Guy Arthur (see Class of  
 1908).

Waggoner, Reba, Teacher  
 (Mrs. Reba W. Haruff)  
 2214 Greenwood St. Pueblo, Colo.

Walsh, Ella P., Teacher  
 516 S. Pearl, Denver, Colo.

Watson, Margaret Reynolds  
 (Mrs. John Rogers Sullivan)  
 462 21st St., San Diego, Calif.

Waxham, Faith Caroline, Teacher  
 1560 Downing, Apt. 18, Denver, Colo.

Webb, Margaret Elizabeth  
 (Mrs. Frederick C. Nichols)  
 1703 San Pedro, Trinidad, Colo.

Webber, Jennie E., Teacher  
 Monte Vista, Colo.

Weeber, Callie, Teacher  
 1524 Detroit St., Denver, Colo.

Wells, Leila M. (Mrs. C. C. Aldrich)  
 Thornburg, Colo.

Wolfe, Clara (Mrs. E. L. Holland)  
 600 4th Ave., Greeley, Colo.

Woodbury, Mary L. (Mrs. G. A. Holmes)  
 R. F. D. No. 1, Laramie, Wyo.

Woods, Hulda Marie  
 1415 Glenarm, Denver, Colo.

Work, Anna D. (Mrs. Ray F. Love)  
 R. F. D. No. 1, Box 219, Rosslyn, Va.

Worley, Victor E. (see Class of 1915).

Yardley, Alice E.  
 (Mrs. John Henry Couture)  
 1106 8th St., Greeley, Colo.

CLASS OF 1907

Ahrens, Hazel V., Teacher  
 919 So. Burlington St., Los Angeles, Calif.

Albert, Ruby Boyd, Teacher  
 2033 Clermont St., Denver, Colo.

Allen, Grace E. .... Greeley, Colo.

Anderson, Eloise  
 612 Marion, Denver, Colo.

Anderson, Mary Elizabeth.

Anderson, Nettie  
 322 N. Foote Ave., Colo. Springs, Colo.

Arbuthnot, Melissa (Mrs. Jack Walker)  
 Rorrance R. D., Los Angeles, Calif.

Armstrong, Mabel  
 2638 Knaline Drive, Honolulu, Hawaii

Augur, Charlotte C.  
 (Mrs. W. G. Bayliss)  
 930 E. Main St., Grand Junction, Colo.

Bailey, Dorothy Lena

Bailey, Mrs. Latilla, deceased.

Bailey, W. L. (Pd. M.) (see Class of  
 1911).

Baird, Olive A.

Baker, Grace, Teacher  
 Glenwood Springs, Colo.

Baroch, Eulalia C., Teacher  
 594 So. Lincoln St., Denver, Colo.

Barry, Lois M.  
 (Mrs. Earl Lynd Johnston)  
 Briggsdale, Colo.

Beardsley, Eugene Darwin  
 Ft. Collins, Colo.

Berkey, Edna (Mrs. Edward Jones)  
 Chandler, Colo.

Berkey, Pearl, Teacher  
 624 S. 10th St., Canon City, Colo.

Besser, Grace B., Teacher  
 2337 Cherry St., Denver, Colo.

Billington, Maud B.

Blaine, William D. (see Class of 1915).

Blake, Helen, Teacher  
 215 E. 11th Ave., Denver, Colo.

Blandin, Ethel I.

Blasei, Mary C. (Mrs. H. A. Jackson).

Boyd, Helen S., Teacher  
 314 Detroit St., Denver, Colo.

Boyd, Sela M. (Mrs. J. H. Kester)  
 Severance, Colo.

Brennan, Lulu May, Teacher  
 1407 W. Boone, Spokane, Wash.

Brown, Benjamin.

Brown, Dessie M.

Brown, Edith Lucile  
 (Mrs. Bailey V. Williams)  
 308 Frink Blvd., Seattle, Wash.

Brush, Ada, Prop. of Art Store  
 1526 11th St., Greeley, Colo.

Budge, Jessie (Mrs. A. I. Clark)  
 1601 8th St., Greeley, Colo.

Byron, Helen Fern (Mrs. Helen Garman)  
 Deceased

Caldwell, Irene M. .... Denver, Colo.

Callison, Cyrus O.  
 c/o State Industrial School,  
 Golden, Colo.

Carlson, Margaret H.  
 (Mrs. Edward C. Spalding)  
 1716 Marion, Denver, Colo.

Carpenter, Anna.

Carroll, Mrs. Ella K. (see Class of 1913).

Cartwright, Edna C.  
 (Mrs. Franklin A. Bogue)  
 7441 Harvard Ave., Chicago, Ill.

Casey, Ethel S.  
 (Mrs. Alex. J. Mitchell)  
 505 So. 52nd, Tacoma, Wash.

Chamberlain, Pansy E.

Chase, Lucile B., Teacher  
 3461 W. 30th Ave., Denver, Colo.

Christopher, Bertha.

Combs, Ethel L. (see Class of 1918).

Connelly, Mary H.

Conner, R. Grace.

Cooke, Gertrude Adelle  
 (Mrs. Gertrude Cooke McCarthy)  
 1030 Merced St., Berkeley, Calif.

Cooper, Isaphine D.

Cox, Helen L. (Mrs. N. K. Huston)  
 Greybull, Wyo.

Cox, Lizzie R. (Mrs. Jas. G. Carwin)  
 La Jara, Colo.

Craig, Carrie M. (Mrs. Chas. Bwyer).

Cronin, Josephine  
 (Sister Sebastian Cronin)  
 Mt. St. Scholasticas Academy,  
 Canon City, Colo.

Cunningham, Carrie C. (Mrs. Huston)  
 Denver, Colo.

Daven, Hazel L. (Mrs. H. W. Farr)  
 1321 11th Ave., Greeley, Colo.

Davis, Juanita L.  
 (Mrs. John E. Austin)  
 323 N. Broadway, Los Angeles, Calif.

Dawson, O. Ima, Teacher  
 1450 Grant St., Denver, Colo.

Dean, Iva Alverna  
 (Mrs. George H. Lowry)  
 1001 Custer, Laramie, Wyo.

Donnelly, M. Celeste. .... Haxtum, Colo.

Doull, Rose M. (see Class of 1919).

Dowling, Katharyn H. (see Class of  
 1909).

Drach, Mary M.  
(Mrs. Denneth C. Heald)  
1300 Park Rd. N. W., Washington, D. C.

Draper, Albert G. . . . . Richfield, Idaho

Dudley, Flora (Mrs. Ferris).  
Duenweg, Rosa A. (Mrs. Ray Wills)  
Mancos, Colo.

Edwards, Ethel (Mrs. C. S. Heislar)  
Box 938, Warren, Ariz.

Estes, Dosa A., Stenographer  
909 White Bldg., Seattle, Wash.

Evans, Charlotte (Mrs. Chas. Shaw)  
Gunnison, Colo.

Flach, Marie I.  
Flint, Ruth L.  
(Mrs. Aubrey W. Reid)  
Roggen, Colo.

Forsyth, Orrin M., H. S. Teacher  
715 4th Ave. N., Seattle, Wash.

Foster, Gertrude M. (Mrs. W. P. Spence)  
Casper, Wyo.

Frederic, Marie A.  
(Mrs. Murdo M. Lyon)  
2427 7th St., Boulder, Colo.

Gehman, Wanda L.  
Gibbons, Marcella A. (Pd. M.)  
(Mrs. Edward Hertzog)  
Box 798, Lamar, Colo.

Gill, Emma, Teacher  
(Mrs. Howard Webster)  
Box 385, Loveland, Colo.

Gilpatrick, Gail L., Teacher  
1325 4th St., Santa Monica, Calif.

Godley, Sophia L. . . . . Edgewater, Colo.

Goodwin, Edna F.  
Gorman, Edith. . . . . Denver, Colo.

Gross, Etta, Teacher  
(Mrs. Clyde Gregory)  
1108 12th St., Greeley, Colo.

Guise, Mabel L., Teacher  
1505 9th, Boulder, Colo.

Hamilton, Mabelle.  
Harrington, E. Mary  
(Mrs. James Mulcare)  
1227½ J St., Sacramento, Calif.

Hecker, Mary M. (see Class of 1914).

Hedstrom, Horace H., Theatre Mgr.  
536 4th Ave. West, Twin Falls, Ida.

Herrington, Edith Pervine  
(Mrs. Howard W. Blackburn)  
La Salle, Colo.

Hewett, Edgar L. (Pd. M.), Teacher  
School of American Research,  
Santa Fe, N. M.

Hildebrand, Miriam E.  
(Mrs. N. R. Wood)  
67 So. Ogden, Denver, Colo.

Hines, Viola.  
Imrie, Harracena  
(Mrs. William Newman)  
Newcastle, Colo.

Irons, Blanche (Mrs. J. O. Custer)  
Greeley, Colo.

Jeffery, Esther M., Teacher  
2129 E. 12th Ave., Denver, Colo.

Jennerick, Burdella. . . . . Pueblo, Colo.

Johnson, Alice M., Teacher  
1541 Lafayette St., Denver, Colo.

Johnson, Anna, Teacher  
1310 Welton St., Denver, Colo.

Johnson, Axel E. (Pd. M.) (see Class of  
1913).

Johnson, Georgie W.  
366 61st St., Oakland, Calif.

Johnson, Ida R., Teacher  
1579 S. Penn., Denver, Colo.

Jones, Ida B. (Mrs. Joseph Engle)  
6210 Claremont Ave., Oakland, Calif.

Jones, Wilhelmina.  
Joyce, Gertrude (Mrs. Joe Hearst).  
Kammerer, Mary D.

Kendall, Mary E.  
(Mrs. William J. Kirsher)  
3272 Stuart St., Denver, Colo.

King, Reta (Mrs. Albert E. Biles)  
209 Hill St., Grand Junction, Colo.

Kirkpatrick, Sadie (see Class of 1916).

Koster, Elizabeth (Mrs. Harry J. Snook)  
430 E. Vine St., Stockton, Calif.

Kouba, Emma T.  
Lafferty, Edith M., Teacher  
2308 Birch, Denver, Colo.

Landrum, Mabel Rivers, Sculptor  
(Mrs. Mabel Landrum Torrey)  
6016 Ellis Ave., Chicago, Ill.

Latson, Frank E., Manufacturer  
Rocky Ford, Colo.

Laughlin, Ethel M. (Mrs. Ethel Schubel)  
Aurora, Minn.

Laughlin, Grace E. (Mrs. Harvey Deane)  
La Salle, Colo.

Laughrey, Leona  
(Mrs. Gus. J. Klingenberg)  
Greeley, Colo.

Layden, Susie A. . . . . Georgetown, Colo.

Lewis, Donna M. (Pd. M.), Teacher  
Knassui Jo Gakko, Nagasaki, Japan

Lillard, Daisy Gertrude  
(Mrs. C. M. Rasmussen)  
Box 34, Deschutes, Ore.

Lillard, Zanelda Belle (Mrs. Glozier)

Linville, Eva Boyle.  
Love, S. Helen,  
622 W. Mountain Ave., Ft. Collins, Colo.

McAfee, Fannie G.  
McCarn, Roccona, Teacher  
Tremont Hotel, 411 16th St.,  
Denver, Colo.

McGowan, Cynthia May, Teacher  
1719 N. 9th St., Canon City, Colo.

Mackey, Druzilla Ruth (see Class of  
1912).

Mahoney, Rebecca. . . . . Denver, Colo.

Markwardt, Alma L. (Mrs. Ellermeier)  
1255 Emerson St., Denver, Colo.

Meddings, Ada M.  
(Mrs. Horace H. Hedstrom)  
536 4th Ave. West, Twin Falls, Ida.

Meeke, Anacantha M. (see Class of 1913)

Meredith, Nora.  
Milligan, Mabel.  
Mills, Carrie T., deceased.  
Mills, Ruth Estes (see Class of 1918).

Moore, Edith M.,  
218 Jackson, Pueblo, Colo.

Morgan, Grace M., Teacher  
4012 Fox St., Denver, Colo.

Morrison, Margaret E.  
Moshier, Edna T. (Mrs. Chast Cook)  
529 N. 9th St., Fredonia, Kans.

Muller, Maude L., Teacher  
2825 Zuni St., Denver, Colo.

Muncaster, Edith A., Teacher  
1460 Corona, Denver, Colo.

Mundy, Florence, Teacher  
502 Walnut Ave., Rocky Ford, Colo.

Nettleton, E. Augusta  
(Mrs. Augusta Whitcomb)  
Eaton, Colo.

Newton, Lillian B., Teacher  
1020 So. College, Ft. Collins, Colo.

Norgaard, A. Marie  
(Mrs. D. Wylie Beard)  
Edwards, Colo.

Nusbaum, Jess,  
Mus. of Amer. Indians, Broadway  
and 155th St., New York City.

Offdenkamp, A. Ruth,  
601 E. Colorado St., Pasadena, Calif.

Okun, Mattie, Teacher,  
Box 263, Georgetown, Colo.

Olney, Nellie,

Pearcey, Lillie, Teacher  
(Mrs. Ora Brotemarkle)  
Macomb, Mo.

Peterson, A. Maria, Teacher  
Maxwell, Calif.

Peterson, Mary V.  
Philip, J. Lonie (Mrs. G. H. Frink)  
Ft. Lupton, Colo.

Poirson, Eugenie, deceased.  
Pressler, Anna W.  
(Mrs. George C. Cochran)  
1210 Illinois St., Golden, Colo.

Pridmore, Eula.  
Proctor, Irene Elizabeth  
(Mrs. Frederic A. Stresen Reuter)  
170 N. Scoville Ave., Oak Park, Ill.

Purdee, Myrtle.  
Redick, Mary E.  
(Mrs. Mary R. Slaughter)  
S. S. Power Co., Bishop, Calif.

Rice, Lucile (Mrs. Boyd Reid)  
Torrington, Wyo.

Robertson, Chrissie G.  
(Mrs. Byron Schaffer)  
Del Norte, Colo.

Robinson, Armena E. (Mrs. Brown).  
Roddy, Gary (see Class of 1914).

Ross, Edwin A., Teacher  
U. S. Motor Transport Training School,  
Camp Holabrid, Baltimore, Md.

Rowton, V. E., Business Manager  
Colorado Springs, Colo.

Salmon, Edith L. (Mrs. John Klusman)  
Las Animas, Colo.

Sawin, Katherine, Teacher  
219 E. St. Vrain St., Colo. Springs, Colo.

Schattinger, Mary L.  
Schillig, Clara (Mrs. Clara Williams)  
400 E. Bayaud St., Denver, Colo.

Schroeder, Helen W.  
Scott, Leta M.  
Shaw, Helen Davie  
(Mrs. Adelbert A. Weiland)  
1910 Court St., Pueblo, Colo.

Sibley, Winifred M.  
(Mrs. Winifred Graves)  
See Class of 1912

Smith, Mrs. Leta A. .... Coleden, Ill.  
Spence, Mary R. (Mrs. Confar)  
Springsteen, Francis.  
Stampfle, Alvane (Mrs. W. R. Hurley)  
Telluride, Colo.

Stannard, Emily M. (see Class of 1917).  
Standard, Laura V.  
Stauffer, Beulah Gray  
(Mrs. Beulah Gray Holland)  
See Class of 1919, Holland, Beulah Gray  
Stiles, Elizabeth, deceased.

Stockton, Guy C. (Pd. M.), Teacher  
Box 717, Shanghai, China

Sullivan, Mary E. (Mrs. H. L. Kaiser)  
3302 Boulevard F, Denver, Colo.

Tabor, Elizabeth  
(Mrs. Raymond Chalmers Hill)  
No. 2 Sentell Terrace,  
Santa Barbara, Calif.

Tierney, M. Bertha (Mrs. I. T. Starbuck).  
Glenwood Springs, Colo.

Towne, Mary E.  
2736 W. 38th Ave., Denver, Colo.

Troutman, Leah (Mrs. E. R. Muirage)  
891 So. Penn., Denver, Colo.

Troutman, May. .... Ft. Collins, Colo.

Tully, Mary Shields.  
Turner, Mrs. Elva M., deceased.  
Tombly, Margaret. .... Ft. Lupton, Colo.

Uzzell, Mary M. (Mrs. Fred N. Plattner)  
1142 Humboldt, Denver, Colo.

Van Winkle, Grace I. (see Class of 1919).  
Wallace, Mary H.  
Webster, Mary R. (Mrs. James A. Keefe)  
77 So. Ogden St., Denver, Colo.

Weyand, Mamie (Mrs. Arthur Phew)  
Craig, Colo.

White, Grace. .... Denver, Colo.

Wilkinson, Mabel (Mrs. Mabel Etheridge)  
See Class of 1911

Wilson, Nora E., (Mrs. A. C. Day)  
12 Ivy Pl., Ivywild, Colo. Springs, Colo.

Wolf, Mrs. Clara, deceased.  
Woodford, Cora Mae, Teacher  
102 Garfield St., Canon City, Colo.

Woodward, Ethel, Teacher  
303 N. 4th St., Cripple Creek, Colo.

Wright, Nell G. (Mrs. Fred V. Larkin)  
14 Hickory St. N. E., Bethlehem, Pa.

Wylie, Eva (Mrs. R. W. Speer)  
Rosedale Branch, R. 5, Box 400,  
Kansas City, Kans.

#### CLASS OF 1908

Alan, Edwina Marie, Teacher  
2500 Bancroft Way, Berkeley, Calif.

Alexander, Elsie Lavinia  
(Mrs. James Haley Neal)  
1145 Clayton St., Denver, Colo.

Allsworth, Brainard H. (see Class of  
1918).

Anderson, Georgina.  
Archibald, Allie E. (Mrs. Howard Miller)  
R. F. D. No. 5, Box 5A, Greeley, Colo.

Bacharach, Bernice, Teacher  
(Mrs. A. F. Falkenberg)  
109 N. Iron Ave., Deming, N. M.

Bailey, Esther M., Teacher, Loveland, Colo.  
Bailey, Mrs. Latilla (Pd. M.), deceased.  
Bailey, W. L. (see Class of 1911).

Baird, Ruth Louisa.  
Barmettler, Alice (Mrs. W. Malm)  
Box 152, Georgetown, Colo.

Barr, F. E.  
Beatty, Mary Emaline, Teacher  
1473 Delaware, Denver, Colo.

Beck, Catherine (Mrs. Geo. T. Davis)  
c/o Colo. Bridge and Construction Co.,  
Gas and Electric Bldg., Denver

Bell, Juanita Anna (Mrs. Harry Furrow)  
R. 2, Hood River, Ore.

Benning, Mabel P. (Mrs. E. J. Twist)  
1013 N. 3rd St., Sterling, Colo.

Berg, Eva Matilda  
2215 Greenwood St., Pueblo, Colo.

Bergstrand, Nellie, Teacher  
759 Galapago St., Denver, Colo.

Blair, Myrtle Loletta (Mrs. I. B. Hards)  
Tollerburg, Colo.

Bonham, Bonnie (see Class of 1918).  
Brainard, Fay Edwin, H. S. Teacher  
634 Pearl St., Denver, Colo.

Brainard, Iona, deceased.  
Brake, Edith L. (Mrs. George F. West)  
Youngtown, Nevada

Brooks, Ella, Teacher  
2112 So. Columbine, Denver, Colo.

Bruns, Cora Carolyn. .... Center, Colo.

Burkitt, Susie (Mrs. Max Bulkley)  
Wray, Colo.

Byron, Blanche Beatrice, Teacher  
1605 E. Madison, Seattle, Wash.

Cain, J. Ellen.  
Callaway, June I.  
(Mrs. Joseph H. Kershaw)  
2648 Adams Ave., Ogden, Utah

Cameron, Truby J. (Pd. M.), Merchant  
1314 11th St., Greeley, Colo.

Carter, Ethel M. .... Paonia, Colo.

Caven, Lois T.  
Chester, Alice M. .... Grand Junction, Colo.

Clark, Nell (Mrs. Frank McMullen)  
524 W. Smith St., Seattle, Wash.

Cleverly, Susan C., Teacher  
1223 Emerson St., Denver, Colo.

Comstock, Bernice Lorena. .... Denver, Colo.

- Comstock, Yolande Bertha, Teacher  
Shirley Hotel, Denver, Colo.
- Cooke, Leonore G. . . . . Denver, Colo.
- Coughlin, Mercedes Irene  
(Mrs. Jasper Loomis)  
Ft. Collins, Colo.
- Cramer, Mary Lina.
- Crawford, Ada Belle  
(Mrs. L. C. Phillips,  
R. F. D., Morgan, Utah)
- Crowell, Edith (Mrs. W. H. Biddall)  
1418 N. Main St., Pueblo, Colo.
- Cumley, Ruby Ruth
- Dailey, Minnie M.
- Dale, Ethel (Mrs. Mills Bunger).
- Dawson, Myrtle, deceased.
- Daven, Luella E. . . . . Burley, Idaho
- Deitrich, Carrie Margaret (see Class of  
1917).
- Delling, Olive (Mrs. Olive Wallace)  
Deceased.
- Dés Jardines, May E., Teacher  
1177 York St., Denver, Colo.
- Desmond, Leona L.  
(Mrs. Van Rennshaer)  
2401 Ave. B, Council Bluffs, Iowa
- Dixon, Barbara Allen (Mrs. Geo. Adams)  
Gunnison, Colo.
- Dobson, Loave, Teacher  
(Mrs. Loave West)  
Canon City, Colo.
- Donaldson, Etta May.
- Douglass, Russie (Mrs. Harry Hanna)  
215 Francis St., St. Joseph, Mo.
- Doull, Frances R. (see Class of 1919).
- Earle, Eva Maude, Teacher  
464 7th St., San Bernardino, Calif.
- Emery, Emily Alice, Teacher  
1435 Washington, Denver, Colo.
- Fiertag, Caroline, Teacher  
(Sister Lareta Clair)  
311 Seimore St., Lansing, Mich.
- Floyd, Brenda (Mrs. A. E. Baylis)  
801 E. 8th, Oklahoma City, Okla.
- Forbush, Edith L. (Mrs. J. W. Preston)  
708 N. 18th St., Pueblo, Colo.
- Force, Jessie, Teacher  
719 Humboldt St., Denver, Colo.
- Fry, Jessie K.
- Gaines, Joysa Pearl (see Class of 1910).
- Gammon, Hallie (Mrs. A. A. Boothroyd)  
Loveland, Colo.
- Gardner, Mrs. Ruby A., Teacher  
26 Beacon St., Roswell, New Mex.
- Geiger, Rosalie. . . . . Idaho Falls, Idaho
- Gibson, F. Emma.
- Gladney, Annie M.
- Goodrich, Annie H. (see Class of 1912).
- Gordon, Jessie (Mrs. . . . .).
- Gruber, Edna E.
- Hamilton, Isabella (Mrs. Ira J. Taylor)  
Paoli, Colo.
- Haney, Mabel (Mrs. F. H. Merton)  
Mercantile Bldg., Denver, Colo.
- Harris, Irma H. (Mrs. J. W. Eck)  
1716 Marion St., Denver, Colo.
- Hemberger, Elizabeth (see Class of 1913).
- Hershey, Janet.
- Higginbotham, Ethel, County Supt.  
Aspen, Colo.
- Hoagland, Hazel (Mrs. A. W. Crain)  
Deceased
- Holderer, Louisa, Teacher  
2345 10th St., Denver, Colo.
- Homburger, C. H. (see Class of 1913).
- Hom, (Miss) Clyde E., Teacher  
242 S. Broadway, Denver, Colo.
- Howard, Mrs. Elizabeth (see Class of  
1919).
- Howard, Sherman H.
- Hubbard, Helen R. . . . . Denver, Colo.
- Hullender, Rutha  
(Mrs. Paul A. Ingledew)  
Minturn, Colo.
- Johnston, Harry E. (see Class of 1917).
- Kingwill, L. Bernice.
- Knapp, Hortense (Mrs. G. C. Davis)  
Rock Springs, Wyo.
- Kouba, Marie E.
- Kyle, Homer Lewis, Lawyer  
216 Richards Block, Lincoln, Nebr.
- Lane, Florence M. (see Class of 1914).
- Lapham, Etta E. . . . Grand Junction, Colo.
- Latson, Irma, Teacher  
Rocky Ford, Colo.
- Lawler, Cecilia (see Class of 1916).
- Lee, Emma.
- Lemmon, Alpharetta  
(Mrs. Alpharetta Sommerville)  
Ft. Collins, Colo.
- Linn, Vera M. (Mrs. Fred Gerhard)  
Dacona, Colo.
- McDonald, Grace (Mrs. Lee Simonton)  
25 Logan St., Denver, Colo.
- McGowan, Florence Eunice  
(Mrs. John Kiddie)  
Morenci, Ariz.
- McKelvie, William, Farmer  
Longmont, Colo.
- Mallaby, Julia B.,  
121 W. 86th St., New York City
- Mallonee, Mary Iva, Teacher  
1011 Lincoln St., Denver, Colo.
- Marron, M. Florence, Teacher  
4952 Raleigh St., Denver, Colo.
- Martin, Clara Lois, Office Clerk  
1535 Grant St., Troy Apt. A-6,  
Denver, Colo.
- Marx, Edith (Mrs. . . . .) . . . Denver, Colo.
- Mau, Loura Emilie.
- Meehan, Maude  
748 S. Flower St., Los Angeles, Calif.
- Miner, Elizabeth (Mrs. Elizabeth Robin-  
son), deceased.
- Money, Mrs. Carrie E. (see Class of 1909)
- Montague, Bessie Belle. . . . Denver, Colo.
- Moore, Attie D.
- Murray, Julia Helena. . . . Denver, Colo.
- Murray, Maye, Teacher. . . . Tulsa, Okla.
- Myers, Sadie M.  
(Mrs. J. F. Klingaman)  
R. 7, Goshen, Ind.
- Newcum, Charles L. . . . . Denver, Colo.
- Noll, Florence Eleanor  
(Mrs. W. A. Wasley)  
El Molino Del Tigri Esqueda,  
Sonora, Mex.
- O'Boyle, Alice Irene  
(Mrs. W. H. Sullivan)  
Grand Junction, Colo.
- O'Connell, Anna (Mrs. E. L. Rice)  
Ft. Huachuca, Ariz.
- O'Connell, Mamie (Mrs. J. P. Keane)  
Cripple Creek, Colo.
- Padget, Mabel (Mrs. A. V. McIvove)  
Big Timber, Mont.
- Parker, Susie  
27 Chilton St., Elizabeth, N. J.
- Parrett, Florence E.  
3043 Meade St., Denver, Colo.
- Phillips, Clarice (Mrs. Bert L. Hayes)  
Kersey, Colo.
- Porter, L. Adelle, Teacher  
529 E. 17th Ave., Denver, Colo.
- Prescott, Bessie A. . . . . Denver, Colo.
- Preston, Florence  
(Mrs. Orlando E. Gould)  
Norton, Kans.
- Purdy, Edna June  
(Mrs. Harvey J. Forward)  
1717 11th Ave., Greeley, Colo.
- Ramsdell, Fred Stanley (see Class of  
1912).

- Redden, Julia B. (Mrs. Thos. A. Huffman)  
Box 429, Willcox, Ariz.
- Reed, Gertrude M.  
(Mrs. Walter M. Slane)  
Saguache, Colo.
- Richardson, Etta E. (see Class of 1915).
- Roberts, Ethel (Mrs. Disharoon)  
Brush, Colo.
- Roberts, Guy H., Teacher..Colona, Colo.
- Robinson, Anna (Pd. M.), deceased.
- Robison, Merna B., Housekeeper  
532 W. 111th St., New York City, N. Y.
- Rosedahl, Victoria.
- Ross, Deborah Anna  
(Mrs. A. L. Mumper)  
Box 320, Greeley, Colo.
- Rowe, Edith, Teacher. . . . .La Junta, Colo.
- Sackett, Anna (Mrs. C. W. Nichols)  
445 Chipeta Ave., Grand Junct., Colo.
- Sampson, Nellie, Teacher  
1221 Sherman St., Denver, Colo.
- Schattinger, Clara B.
- Scott, Mrs. Letitia A.
- Smith, Eula A. (see Class of 1914).
- Smith, Helen.
- Soister, Hazel L.  
4275 Harvard Blvd., Los Angeles, Calif.
- Sopp, Helen, deceased.
- Sperry, Bessie L. (Mrs. J. P. Perazzo)  
Wabuska, Nevada
- Stark, Lela N., deceased.
- Statler, Nellie Margaret (see Class of 1912).
- Stephen, Mabel (Mrs. . . . .).
- Stephens, Elsie (Mrs. W. W. Force)  
1112 13th St., Greeley, Colo.
- Stryker, Mary Madeline.
- Sunnicht, Mollie Elsa  
(Mrs. Thos. Arbuckle)  
Fruita, Colo.
- Taylor, Lola Pearl (see Class of 1911).
- Taylor, Margaret. . . . .Golden, Colo.
- Thoborg, Mabel 224 N. Catalina Ave.,  
Redonda Beach, Calif.
- Thompson, Florence Anna (see Class of 1909).
- Thompson, Leotta G.
- Thompson, Nellie M.  
(Mrs. Newton J. Rice)  
1663 Gilpin St., Denver, Colo.
- Tupper, Ada (Mrs. Roy Maxwell)  
Ft. Collins, Colo.
- Twomey, Iona I.  
4722 15th Ave. N. E., Seattle, Wash.
- Van Buren, Guy A.
- Wade, Bonnie Ethel, Teacher  
(Mrs. Bonnie Wade Engleman)  
223 Lake Ave., Pueblo, Colo.
- Warner, Isabelle  
(Mrs. Ernest Leslie Rhoads)  
1201 So. York St., Denver, Colo.
- Wasley, Mabel (Mrs. Mabel Tuck)  
Deceased
- Watson, Eva. . . . .Canon City, Colo.
- Weber, Lina.
- Wecker, Lillian A.  
(Mrs. Wm. M. Lewis)  
545 Hill Ave., Grand Junction, Colo.
- West, Mae (Mrs. Maurice Corring)  
Walsenburg, Colo.
- Wieland, Pearl (Mrs. Carl Thorne)  
La Junta, Colo.
- Wilkinson, Mabel (Mrs. Mabel Etheridge)  
(See Class of 1911)
- Williams, Dee (see Class of 1913).
- Wills, Edna (Mrs. Ollie Despain)  
Spokane, Wash.
- Wilson, Grace,  
Asst. Dean of Women, C. T. C.  
1118 9th St., Greeley, Colo.
- Wimmer, Edith M.
- Wolfe, Carolyn (Mrs. Edw. J. Dettus)  
1438 Franklin St., Denver, Colo.
- Yoder, Albert Henry (Pd. M.)  
Denver, Colo.
- Zingg, Mrs. Bernice K., Prin. of School  
Holyoke, Colo.
- Zingg, Ottway C. (see Class of 1914)

CLASS OF 1909

- Aldrich, Alice, Teacher  
1210 Orchard Ave., Grand Jnct., Colo.
- Avison, Florence, Teacher  
2418 Nebraska St., Sioux City, Iowa
- Baird, Myrtle.
- Baker, Georgia (Mrs. Hal G. Blue)  
Twin Falls, Idaho
- Ball, Mrs. Mary.
- Baller, Theresa E., Teacher  
2119 So. Union Ave., Los Angeles, Calif.
- Bauer, Flora.
- Beardsley, Edith M.  
(Mrs. Philip H. Boothroyd, Jr.)  
Drake Route, Loveland, Colo.
- Bentley, Keturah (Mrs. . . . .).
- Bernard, C. R. (see Class of 1915).
- Black, W. W. (Pd. M.) (see Class of 1911).
- Boyd, Carrie (see Class of 1918).
- Boyd, Maud (Mrs. C. R. Oglesby)  
McFarland, Calif.
- Bowles, Jessie M.  
(Mrs. Chesley M. Harris)  
Padroni, Colo.
- Bragg, Lottie (see Class of 1918).
- Brown, Mona (Mrs. Jack Brown).
- Brown, Rowena (Mrs. R. D. McClintock)  
618 Roton Ave., La Junta, Colo.
- Burns, Jesse.
- Burns, Pearl M. (Mrs. . . . .). Washington
- Burr, Eleanor (Mrs. M. E. Boyer)  
5728 Washington Blvd., Chicago, Ill.
- Cameron, Deta (Mrs. Harold Easterday)  
701 15th Ave., Greeley, Colo.
- Camp, Myrtle (Mrs. Myrtle Camp Allen)  
(See Class of 1918),  
Allen, Mrs. Myrtle Camp
- Carlson, Emma, County Supt.  
(Mrs. Ida Reich)  
Julesburg, Colo.
- Chatin, Janet, Teacher..Walsenburg, Colo.
- Churchill, Isabel Lovejoy  
(Mrs. Calvin Lester)  
Orange, Calif.
- Cline, E. Rosetta  
(Mrs. Arthur W. Samson)  
1009 E. Street, Salida, Colo.
- Crosby, Jean (see Class of 1911).
- Cross, Flora, Teacher  
260 N. Towne Ave., Pomona, Calif.
- Dannels, Clara (Mrs. L. M. Wagner)  
Alamosa, Colo.
- Davis, Sadie. . . . .
- Dean, Rose, deceased.
- Delling, Evelyn (Mrs. Evelyn Malone)  
Casper, Wyo.
- Dille, Margaret.
- Donovan, Martha, Teacher  
339 Pratt St., Longmont, Colo.
- Dotson, Nellie (Mrs. J. O. Smith)  
LaVeta, Colo.
- Dowling, Katharyn H.
- Draper, Edith (Mrs. B. G. Botkin)  
La Junta, Colo.
- Duenweg, Anna (Mrs. Anna Crain, Jr.)  
R. F. D., Eaton, Colo.
- Easterly, Sara Burch  
(Mrs. J. E. Forsyth)  
211 3rd St., Pacific Grove, Calif.
- Ellerbe, Bettie Pollard, Teacher  
441 Coast Blvd., La Jolla, Calif.



- Ellsworth, Shelia H.  
(Mrs. Harry Burlingame)  
931 Crescent Place, Chicago, Ill.
- Fedde, Agnes, Teacher  
211 W. 5th St., Fowler, Colo.
- Ferrier, Josephine (see Class of 1910).
- Filger, Ilma. . . . . Box 612, Reedley, Calif.
- Finch, Lester R. (see Class of 1915).
- Fisher, Helen Huntington  
(Mrs. Helen Huntington Freeman)  
Box 1814, Miami, Ore.
- Fleming, Gertrude. . . . . Florence, Colo.
- Gjellum, Bertha S., Nurse  
1670 Fillmore St., Denver, Colo.
- Gleasman, Belle (see Class of 1919).
- Godfrey, Hazel (Mrs. W. A. Patterson,  
401 E. Pine St., Santa Ana, Calif.
- Goodrich, Anna (see Class of 1912).
- Gourley, Anna (Mrs. Anna Graer)  
Grand Junction, Colo.
- Grable, Laura  
(Mrs. Granville S. Hamnett)  
1533 11th Ave., Greeley, Colo.
- Granger, Margaret B.  
(Mrs. De Witt A. Horton)  
La Junta, Colo.
- Grant, Marie. . . . . Denver, Colo.
- Greene, B. Raymond, Teacher  
41 So. Logan, Denver, Colo.
- Griffin, L. Luther.
- Happner, Mary F. . . . . Greeley, Colo.
- Hard, Nellie (Mrs. J. L. Townlev)  
960 5th Ave., Longmont, Colo.
- Hartung, Belle G. L. (see Class of 1910).
- Hartung, Louise (Mrs. H. A. C. Eggert)  
2716 Julian St., Denver, Colo.
- Hays, Carrie. . . . . Kansas City, Mo.
- Heenan, Florence (see Class of 1916).
- Hennes, Wilma.
- Hibner, Dee M. (see Class of 1915).
- Hoober, Hazel D.
- Hopkins, Carrie.
- Horton, Nellie.
- Hubbell, Julia (see Class of 1911).
- Hurst, John L.
- Imes, Laura Bonnie, Teacher  
Austin, Colo.
- Ingersoll, Edna (see Class of 1910).
- Johnson, John C. (see Class of 1911).
- Johnson, Mable Anna  
(Mrs. Chas. Hasenkamp)  
Hudson, Colo.
- Johnson, Mildred (Mrs. J. L. Bauer)  
R. F. D. No. 5, Box 48, Greeley, Colo.
- Jones, Alice J. (see Class of 1914).
- Jones, Lynn, Section Foreman  
Hudson, Colo.
- Kelley, Lillian (Mrs. Bernard)  
Raton, New Mexico
- Kenton, Nuna (Pd. M.) . . . . Denver, Colo.
- Kuhnley, Irene Elizabeth (Mrs. Grey).
- Kuhnley, Stella Melvilla  
(Mrs. J. Williams)  
Yuma, Ariz.
- Lace, Mona (Mrs. D. Rice)  
Grand Junction, Colo.
- Lacher, Luella (Mrs. Tracey Phelps)  
U. S. R. S. Burley, Idaho
- Lamma, Clara, Teacher. . . La Salle, Colo.
- Landers, Prudence (Mrs. Geo. Harding)  
Van Nuys, Calif.
- Larson, Gladys, H. S. Teacher  
(Mrs. Guy R. Harkness)  
Lake City, Colo.
- Lewis, Blanche (Mrs. Barbour).
- Lilly, Louise (Mrs. Claude Betson)  
1911 North Mano, Pueblo, Colo.
- Livesey, Mary, H. S. Teacher  
4863 E. 18th Ave., Denver, Colo.
- Lloyd, Philip W.  
R. F. D. No. 1, Box 158, Seattle, Wash.
- Long, Geraldine (see Class of 1912).
- Long, Margaret, Teacher  
Lafayette, Colo.
- Lowe, Naamah, Teacher  
1814 E. Pike St., Seattle, Wash.
- Lucas, Cora (Mrs. Chas. L. Lott)  
Belle Fourche, S. D.
- Lyon, Florence E., Teacher  
1220 So. Sherman St., Denver, Colo.
- Lyon, Mrs. Maude A.
- McLean, Mary. . . . . Denver, Colo.
- McMillan, Mary A., deceased.
- McNicholas, Abbie (Mrs. Homer C. Weed)  
Sun City, Kans.
- McNicholas, Nettie, Teacher. . . Globe, Ariz.
- Mahoney, Elizabeth, Teacher  
E. Denver Schools, Denver, Colo.
- Matzick, Emma  
Gt. Western Sugar Co., Brush, Colo.
- Mays, Josephine.
- Melvin, Harriette. . . . . Santa Cruz, Calif.
- Money, Carrie E. (Pd. M.)  
(Mrs. C. Ellen Money)  
Manzanola, Colo.
- Moore, Catherine, Teacher  
(Mrs. Henry L. Richter)  
Drake University, Des Moines, Ia.
- Moore, Grace Gertrude  
(Mrs. Fred S. Fleming)  
2211 Steinway Ave., Oakland, Calif.
- Moore, Hazel Helen, Teacher  
1444 Fairfax St., Denver, Colo.
- Morrison, Mrs. Kellaphene (Pd. M.) (see  
Class of 1915).
- Newton, Bessie (see Class of 1916).
- Noyes, Frances E. (see Class of 1910).
- O'Connell, Sara, deceased.
- Olsen, Leah, Teacher  
404 S. K. St., Tacoma, Wash.
- Ovren, Josephine (Mrs. J. C. Long)  
2104 College Ave., Indianapolis, Ind.
- Palmquist, Christina M., Teacher  
2364 Clermont St., Denver, Colo.
- Parkinson, Emma (Pd. M.).
- Payne, Bird.
- Pearson, Hazel.
- Piedalue, Laura (Mrs. James Betham)  
Gill, Colo.
- Pierson, Gertrude  
2309 N. Nevada Ave., Colo. Springs, Colo.
- Pittman, Frances.
- Powers, Mary G. (see Class of 1910).
- Purdy, Ethel M. (Mrs. Rex O. Wycoff).  
Pueblo, Colo.
- Quick, Anna (Mrs. George Thomson)  
Heppner, Ore.
- Rayner, Marguerite  
Sillman Hotel, Spokane, Wash.
- Rayner, Mary Eleanor, Housewife  
1132 Mesa Ave., Pueblo, Colo.
- Read, Faye, Teacher  
1425 Vernon Ave., Pueblo, Colo.
- Reed, Ethel B., Teacher  
4082 Ingalls St., San Diego, Calif.
- Reilley, Katherine
- Reno, Alice.
- Robertson, Edna.
- Rockefeller, Edna (Mrs. Tharson)  
Denver, Colo.
- Roe, Anna (Mrs. Alfred Johnson)  
701 W. 18th St., Pueblo, Colo.
- Rogers, Ruth (Mrs. Ralph Henderson)  
909 Arizona Ave., Santa Monica, Calif.
- Rosenburg, Frances (see Class of 1910).
- Sallen, Katherine. . . . . Denver, Colo.
- Sandstedt, Hilma  
(Mrs. J. B. Gulbrandt)  
1947 13th Ave., Greeley, Colo.
- Schenck, Gertrude  
(Mrs. H. W. Hochbaum)  
3015 Lowell Blvd., Denver, Colo.
- Schellabarger, Clara Ethel.

- Schertel, Max.  
 Shreves, Rolla M.  
 Skinner, Edith. . . . . Montrose, Colo.  
 Slater, Catherine M.  
 (Mrs. C. E. Alexander)  
 1859 Lincoln St., Denver, Colo.  
 Slaughter, Elizabeth A. (see Class of 1915).  
 Smith, Alice I.  
 (Mrs. E. P. Beardsley)  
 Cripple Creek, Colo.  
 Smith, Josephine (see Class of 1910).  
 Smith, Louise  
 (Mrs. Reyden Philpott)  
 Lima, Peru, S. A.  
 Snook, Carrie (Mrs. Spencer Turner)  
 (See Class of 1915)  
 Benton, Mrs. Carrie S.  
 Songer, Myrtle, Co. Supt. of Schools  
 Golden, Colo.  
 Stapp, Melvina.  
 Stern, Edith (Mrs. Jorge Blasini)  
 Box 81, Yanco, Porto Rico  
 Stevens, Lawrence B. (Pd. M.), Teacher  
 Loyalton, Calif.  
 Strang, Anna  
 310 N. Maryland Ave., Glendale, Calif.  
 Swart, Frank E., Advertising Business  
 444 Union St., Boonton, N. J.  
 Tandy, Frances, Teacher  
 1346 Sherman St., Denver, Colo.  
 Thill, Estelle.  
 Thomas, H. F. (Pd. M.).  
 Thompson, Florence Anna  
 (Mrs. Eugene M. Cashman)  
 Deer Trail, Colo.  
 Thompson, Laura (see Class of 1912).  
 Tierney, Anna A., Teacher  
 5 Logan St., Denver, Colo.  
 Tohill, Enid. . . . . Monte Vista, Colo.  
 Tracey, Lillian.  
 Tucker, Pearl (Mrs. Roy Wenzell)  
 Sterling, Colo.  
 Twomey, H. Jane (see Class of 1910).  
 Tyler, Cecilia M. . . . . Ogden, Utah  
 Van Dorpen, Anna (see Class of 1911).  
 Van Gorder, Elizabeth  
 (Mrs. Geo. W. Alps)  
 Ft. Lupton, Colo.  
 Walker, Ethel.  
 Walsh, Eva M. (see Class of 1918).  
 Walsh, Lottie E.  
 Weber, Anna.  
 Webster, Ruth (Mrs. Kenneth A. Heron)  
 Chama, N. M.  
 Weeks, Edna.  
 Wesner, Eleanora M., H. S. Teacher  
 919 Jennings St., Sioux City, Iowa  
 White, Ida M. (see Class of 1910).  
 White, Julia Katherine.  
 White, Lois Cramer  
 (Mrs. James Marshall Henderson)  
 1316 Niagara St., Denver, Colo.  
 Wilkinson, Nannie D. (Pd. M.)  
 Colorado Springs, Colo.  
 Wilkinson, Olive Fay (Mrs. Hugh Baker)  
 (Pd. M.).  
 Williams, Sarah A. (see Class of 1916).  
 Wilson, Alma.  
 Woods, Elizabeth M.  
 Wren, Lena (see Class of 1913).  
 Wright, Lois (Mrs. David Bauer)  
 1229 10th St., Greeley, Colo.  
 Yerion, Cena (see Class of 1910).  
 Young, Geo. P. (see Class of 1911).
- CLASS OF 1910
- Allen, Dorothy A. (Mrs. Henry Foss)  
 Golden, Colo.  
 Alley, Urania (Mrs. Lloyd Ellis)  
 Princeton, Mo.
- Almond, Cora B. (see Class of 1911).  
 Alps, George W. (Pd. M.) (see Class of 1914).  
 Amoss, Georginia  
 811 So. Burlington Ave., Los Angeles  
 Anderson, M. Dorothea.  
 Anderson, Myrtle E. (see Class of 1915).  
 Angove, Ethel (Mrs. W. Warnock)  
 Loveland, Colo.  
 Arfsten, Rose (Mrs. Stafford Beckett)  
 3827 Clifton, El Paso, Texas  
 Armsby, Alice M. (see Class of 1911).  
 Armstrong, Ada (see Class of 1911).  
 Ashburn, Mrs. Emma (see Class of 1911).  
 Ashburn, F. E. (see Class of 1911).  
 Aultman, Mrs. L. E. (see Class of 1914).  
 Bagley, Helen Elizabeth, Teacher  
 323 E. Evans Ave., Pueblo, Colo.  
 Bailey, Maud (Mrs. Maud Cline)  
 Grand Valley, Colo.  
 Bailey, W. L. (see Class of 1911).  
 Baker, Mrs. E. M. . . . . Columbia, Mo.  
 Balch, Mabel E.  
 1115 11th St., Greeley, Colo.  
 Beardsley, Leda M. (Pd. M.) (see Class of 1911).  
 Beattie, Jesse F. (see Class of 1915).  
 Bedford, Merton I. (see Class of 1911).  
 Belden, Ethel B. (Mrs. Frank Inlow)  
 Wendell, Idaho  
 Bell, Evelyn (Mrs. Geo. Sheppard)  
 Hood River, Ore.  
 Bennett, Gertrude  
 (Mrs. D. D. Larchin)  
 Telluride, Colo.  
 Bennett, Nellie L.  
 (Mrs. J. Taylor Wilkerson)  
 Dolores, Colo.  
 Benton, Grace, Abstractor  
 Box 151, Okmulgee, Okla.  
 Bernard, C. R. (Pd. M.) (see Class of 1915).  
 Berryman, Dorothy. . . Colo. Springs, Colo.  
 Black, W. W. (Pd. M.) (see Class of 1911).  
 Blumer, Henrietta M.  
 (Mrs. O. Randolph Dungan)  
 1325 Grandview Ave., Boulder, Colo.  
 Boreing, Maud (see Class of 1919).  
 Bradburn, Edith.  
 Britt, Eldora . . . . . California  
 Brown, Elizabeth J. (see Class of 1912).  
 Burkholder, Hazel H.  
 (Mrs. Ralph McAdams)  
 Georgetown, Colo.  
 Burwell, Laura. . . . . Denver, Colo.  
 Cadwell, Alice, Teacher  
 140 Gale Hill, Lindsay, Calif.  
 Cain, Martha J. (see Class of 1911).  
 Campbell, Sadie. . . . . Rocky Ford, Colo.  
 Chapman, Maude Clare, Teacher  
 (Mrs. Maude C. Johnston)  
 967 So. Ogden, Denver, Colo.  
 Chesnut, Robert Asa (see Class of 1914).  
 Cheatley, Emma. . . . . Greeley, Colo.  
 Chilson, Elma M. (see Class of 1919).  
 Clark, Betty (Mrs. Eugene A. Bond)  
 133 W. 8th St., Leadville, Colo.  
 Clark, Katherine  
 (Mrs. Katherine Metsker)  
 Center, Colo.  
 Clendenen, Nellie (Mrs. Byron Byrne)  
 1138 So. Ditman, Los Angeles, Calif.  
 Cochran, Mary Frances (see Class of 1912).  
 Comstock, Geo. A.  
 Conboy, Irene Kathryn (see Class of 1917)  
 Conkright, Josephine.  
 Cook, Alfaretta. . . . . Cleveland, Ohio  
 Coulson, Mrs. Clara G., Prin.  
 Central School, Boulder, Colo.

- Coulson, Marguerite (Mrs. I. J. Parker)  
Van Tassel, Wyo.
- Courtright, Harriette  
(Mrs. Robert Wright)  
404 Park St., Sterling, Colo.
- Craig, Carrie.
- Craig, Maud (Mrs. ....).
- Crosby, Jean (Pd.M.) (see Class of 1911).
- Davis, Grace M. (see Class of 1911).
- Davis, Helen B.
- Deeg, Lena.
- Delling, Mabelle K. (Mrs. J. T. Moots)  
Shelby, Mont.
- Dohner, Jennie (Mrs. F. C. Wiebe)  
1112 Cottage Ct. E, Bakersfield, Calif.
- Dowell, Mrs. Ethel (Pd. M.)  
(Mrs. Harry L. Dowell)  
1202 4th Ave., Greeley, Colo.
- Dubber, Bessie P. Box 936, Electra, Tex.
- Duggins, Florence C.  
(Mrs. Florence Bauserman)  
2050 Birch, Denver, Colo.
- Ernesti, Richard (Pd. M.), Teacher  
Drake University, Des Moines, Iowa
- Ewing, E. F.
- Faris, Mabel.
- Farley, Ruth L., Teacher  
1316 So. Mesa St., San Pedro, Calif.
- Farrar, Mrs. Elizabeth. .... Pueblo, Colo.
- Farrington, Flora (see Class of 1912).
- Felth, Beulah M. (see Class of 1911).
- Ferrier, Josephine (Pd. M.)  
Rawal Pindi, India
- Fitzgerald, Myrtle, Teacher  
Box 2011, Globe, Ariz.
- Flath, Lucy M., Teacher  
952 10th St., Denver, Colo.
- Floyd, Alice T. (Mrs. Smith)  
Denver, Colo.
- Foley, Marie.
- Foley, Nellie (Mrs. Chas. Weskamp)  
Route 1, Manzanola, Colo.
- Frantz, Katherine.
- Frellick, Annie Delma (see Class of 1911).
- Friel, Pauline (Mrs. O. S. Remington)  
Room 16, Federal Bldg., Duluth, Minn.
- Gaines, Joysa P. (Pd. M.), Teacher  
111 West 11th St., Pueblo, Colo.
- Gaines, Louise (see Class of 1915).
- Garrigues, Grace (Mrs. Ross Phillippi)  
590 E. 27th, No. Portland, Ore.
- Gates, Allie. .... Denver, Colo.
- Geizer, Eva (Mrs. W. H. Beck)  
119 McGowan Ave., Houston, Tex.
- Godfrey, Maude E. (see Class of 1911).
- Goodrich, Annie H. (Pd. M.) (see Class of 1912).
- Gordon, Ethel (see Class of 1915).
- Graham, Olivia I. (Mrs. Meyer)  
Red Cliff, Colo.
- Gray, Mrs. Celestine, Teacher  
112 E. Routt, Pueblo, Colo.
- Hale, Katherine (Mrs. John L. McMennamin) (see Class of 1912).
- Hall, Mrs. Grace B. .... Denver, Colo.
- Halsted (Capt), Halcyon, Doctor  
Medical Corps, Amer. Army of Occupation, Bonne, Germany.
- Hanson, Norma (Mrs. ....) Denver, Colo.
- Hartung, G. Belle L. (Pd. M.), Teacher  
2411 Alcott St., Denver, Colo.
- Hayes, Mary.
- Heilman, Mrs. Lulu A., (Pd. M.) (see Class of 1911).
- Henderson, Wilma (Mrs. Chas. Stotts)  
Boise, Idaho
- Hennes, Marie T., Teacher  
Edgerly Court, Santa Barbara, Calif.
- Hennes, Olive (see Class of 1916).
- Hibner, Dee M. (Pd. M.) (see Class of 1915).
- Holden, Erma Ruth.
- Horton, Mamie. .... Pueblo, Colo.
- Howell, Grace G.
- Hubbell, Julia (Pd. M.) (see Class of 1911).
- Hubert, Gladys Reid  
(Mrs. Arthur A. Hauck)  
R. F. D. No. 16, Carrmonte,  
Dayton, Ohio
- Hunter, Calla M. (Mrs. J. V. Johnson)  
Glenrock, Wyo.
- Hurford, Alice (see Class of 1919).
- Hutchinson, Alice. .... Eaton, Colo.
- Hutchison, Morris H. (see Class of 1911).
- Ingersoll, Edna (Pd. M.) Hotchkiss, Colo.
- Inglelew, G. E.
- Inman, Katherine S., Teacher  
1308 9th Ave., Greeley, Colo.
- Jackson, Nellie.
- Joel, Ethel E. (Mrs. Guy Foster)  
Canon City, Colo.
- Johnson, Ella C. (see Class of 1911).
- Johnson, John C. (Pd. M.) (see Class of 1911).
- Jones, Bea (see Class of 1911).
- Jonik, Elizabeth (Mrs. M. A. Eaglen)  
1208 5th Ave., Scottsbluff, Nebr.
- Karnes, Marie Antoinette  
(Mrs. Antoinette Montgomery)  
Silverton, Colo.
- Keating, Mary. .... Pueblo, Colo.
- Keefe, Veronica L. .... Denver, Colo.
- Kenehan, Kate (Mrs. B. H. Miller)  
Box 596, Ault, Colo.
- Kendel, John Clark (Pd. M.) (see Class of 1914).
- King, Alicia G., Teacher  
1704 Gilpin, Denver, Colo.
- King, Anna, Teacher  
510 S. 3rd Ave., Sterling, Colo.
- King, Ellen (see Class of 1914).
- Kistler, Isabelle Alois  
(Mrs. Herbert E. Dailey)  
1359 Corona St., Denver, Colo.
- Kitchel, Jennie L. (see Class of 1911).
- Knight, Marian (see Class of 1914).
- Knight, Myrtle Elizabeth  
(Mrs. Arthur G. Hicks)  
Sargents, Colo.
- Konkel, Anna (see Class of 1911).
- Kramer, Mary Gertrude, Teacher  
2010 Clarkson St., Denver, Colo.
- Kuhnley, Mabel Luella (Pd. M.)
- Kyle, Clover M. (Mrs. E. F. Kelly)  
R. F. D. No. 1, Bancroft, Idaho
- Lace, Jessie Auldyan  
(Mrs R. Hickman Walker)  
955 Ouray, Grand Junction, Colo.
- Ladd, Helen.
- Lamb, Helen (see Class of 1911).
- Lammie, Elizabeth R. (see Class of 1911).
- Landers, Laura.
- Laughead, Myrtle E.
- Law, Bess R. (Mrs. Edwin W. Perry)  
Chappell, Nebr.
- Lawler, Cecilia (Pd. M.) (see Class of 1916).
- Legler, Rosina.
- Levell, Dollina R.
- Levis, Edna D. (Mrs. Elmer Royer)  
1227 11th Ave., Greeley, Colo.
- Little, Rosamond, Teacher  
358 Lincoln St., Denver, Colo.
- Loughran, Loretto, Teacher  
2930 W. 27th Ave., Denver, Colo.
- Lyman, Genevieve M., Teacher  
1280 Elizabeth St., Denver, Colo.
- Lynch, Gladys M.  
1302 Carteret, Pueblo, Colo.

Mabee, Mertie (Pd. M.) (see Class of 1913).

McAllister, Winifred (Mrs. Wm. Gordon)  
1101 Gaylord, Denver, Colo.

McCarthy, Nancy (see Class of 1911).

McClure, Martha, deceased.

McCConnell, Katherine (see Class of 1911).

McCrery, Grace E.  
1002 9th St., Greeley, Colo.

McDonald, Christine M.....Denver, Colo.

McGinn, Margaret M.....Denver, Colo.

McKibben, Edith.

McNair, Ida M.....Colo. Springs, Colo.

McNew, Addie.....Casper, Wyo.

Mansfield, Esther.

Marvis, Grace (see Class of 1918).

Mead, Wilhelmina  
1503 Ninth Ave., Greeley, Colo.

Meads, Mildred.

Mellor, M. Ethel.....Aspen, Colo.

Mickey, John L. (see Class of 1917).

Miller, Katherine, Teacher  
1272 Penn. St., Denver, Colo.

Miller, Nell M.

Monroe, Gussie R. (see Class of 1917).

Mooney, W. B., Mgr. of School Serv. Co.  
328 Empire Bldg., Denver, Colo.

Morris, Clara Evelyn (Pd. M.) (see Class of 1911).

Mosher, Jessie (Mrs. Hugh Wheeler)  
Hattiesburg, Miss.

Moynahan, Minnie, deceased.

Mullen, Elizabeth.

Mulvaney, Alma K.  
(Mrs. Ernest C. Gooch)  
Estes Park, Colo.

Nash, Mary.....Cripple Creek, Colo.

Nelson, Nell.....Howardsville, Colo.

Newcomb, Kate.....Saguache, Colo.

Nichols, Harriet Mabel  
(Mrs. George W. Campbell)  
807 Durbin St., Casper, Wyo.

Nichols, Helen E. (see Class of 1912).

Norris, Lillian, Teacher  
2790 W. 33rd Ave., Denver, Colo.

Norviel, Alma  
Letterman Gen. Hospital,  
San Francisco, Calif.

Noyes, Frances E.

Ogle, Mayme, Teacher  
126 E. 9th St., Pueblo, Colo.

Olin, Marguerite (Mrs. G. W. Cramer)  
2414 West St., Pueblo, Colo.

O'Rourke, Bessie (Mrs. C. E. Sabin)  
614 Carson, La Junta, Colo.

O'Rourke, Justine (Mrs. T. W. Sisson)  
619 Carson Ave., La Junta, Colo.

Ott, Luella.....Ft. Collins, Colo.

Paine, Velma E. (Mrs. Velma P. Sullens)  
See 1918, Sullens, Mrs. Velma P.

Parlow, Mary.....Toledo, Ohio

Paul, Elena T. (Pd. M.)  
(Mrs. G. Beverly Irwin)  
418 Remington St., Ft. Collins, Colo.

Pearson, Jessie  
2309 N. Nevada Ave., Colo. Spgs., Colo.

Peirano, Ruth R., Newspaper Work  
Wilson, Kans.

Peterson, Jennie H.....Greeley, Colo.

Pierson, Sadie L.

Plumb, Vanche Etoil.

Pound, John L. (see Class of 1915).

Powers, Mary G. (Mrs. Arthur Gill)  
1128 16th St., Greeley, Colo.

Preston, Chas. W. (Pd. M.) (see Class of 1914).

Ragan, J. B. (see Class of 1911).

Ramsey, Adele A (Mrs. Dean Babcock)  
Longs Peak, Colo.

Reid, Janet (Mrs. Wm. Lynn)  
Torrington, Wyo.

Richart, Lillian M., Teacher  
634 Kimbark St., Longmont, Colo.

Rider, Ida M. (see Class of 1911).

Robinson, Henrietta.....Pueblo, Colo.

Robinson, Roberta.

Roddy, Gary (Pd. M.) (see Class of 1914)

Rodgers, Grace L. (Mrs. Grace Pope) deceased.

Rose, Julia.

Rosedahl, Charlotte.....Denver, Colo.

Rosenberg, Frances.....Denver, Colo.

Ruffer, William (Pd. M.) (see Class of 1912).

Sale, Luella J. (Pd. M.) (see Class of 1911).

Sammons, Jessie (Pd. M.)  
(Mrs. F. E. Thornburg)  
See Class of 1911

Sanders, Laura, deceased.

Schoppe, Gyp (Mrs. J. M. Dille)  
321 Maple, Ft. Morgan, Colo.

Scoville, Jared M.....Ft. Morgan, Colo.

Seal, Agnes (Mrs. ....).

Seaman, Leila.

Sexson, John A. (Pd. M.) (see Class of 1913).

Shepherd, Frank H. (Pd. M.) (see Class of 1911).

Sievers, Clarinda  
135 E. 2nd St., Pomona, Calif.

Smith, Katherine (see Class of 1911).

Smith, Josephine.....La Salle, Colo.

Smith, Luna I. (Pd. M.) (see Class of 1915).

Smith, Mrs. M.....Georgetown, Colo.

Smith, Mary A.

Snead, Lucy.

Snoddy, Martha B. (Mrs. C. M. Crawford)  
1963 La France, So. Pasadena, Calif.

Sprague, Jessie (see Class of 1912).

Stauffer, Ida May, Teacher  
332 10th St., Portland, Ore.

Stephen, Elsie  
(Mrs. William Wilber Force)  
1112 13th St., Greeley, Colo.

Stevens, Mrs. Eva.

Stiffer, R. Ewing (see Class of 1911).

Stoddard, Mabel (Mrs. T. M. McKee)  
R. F. D. No. 1, Box 116, Loveland, Colo.

Stone, Mrs. Bertha (see Class of 1911).

Strong, Myrta M. (Mrs. Edwin C. Potter)  
Brighton, Colo.

Sullivan, Mrs. Mary S. (See Class of 1914).

Sweetland, Adaline.....Denver, Colo.

Tandy, Helen M. (Mrs. Helen M. Jeffers)  
Deceased.

Thomas, Thurza.....Ault, Colo.

Tidball, Elizabeth (see Class of 1911).

Treadway, Jessie M. (see Class of 1911).

Twombly, Della L.  
(Mrs. Chas. W. Griffith)  
Durango, Colo.

Twomey, Honora Jane (Pd. M.)  
Teacher, Seattle, Wash.

Van Atta, Mary Eleanor, Teacher  
Telluride, Colo.

Van Dorpen, Anna (Pd. M.)  
(Mrs. John Anderson)  
See Class of 1911

Ver Stegg, Helen (see Class of 1911).

Ververka, Madaline M. (Pd. M.) (see Class of 1911).

Veverka, Marie, Teacher...Sterling, Colo.

Vosler, Alba E.

Wagner, Marguerite G., Teacher  
61 Meade, Denver, Colo.

Waite, Helen (Pd. M.) (see Class of 1911)

Waldron, Mary (see Class of 1916).

Wallick, Mary (Mrs. C. W. Swayze)  
Stockyards Station, Denver, Colo.

Walsh, Delia (see Class of 1911).  
 Walz, Mina. . . . . Glenwood Springs, Colo.  
 Waterman, Verna H., Co. Supt. of Schools  
 Gunnison, Colo.  
 Weaver, Inez E.  
 (Mrs. W. E. Weyrouch)  
 Twin Falls, Idaho  
 Welch, Edith C.  
 Weld, Ida M.  
 West, Edna W. (Pd. M.) (see Class of  
 1911).  
 Whetsel, Mrs. Anna L., Teacher  
 108 Rice St., Pueblo, Colo.  
 White, Ida (Mrs. Stuckey)  
 Raton, New Mexico  
 Whitman, Bertha H. (see Class of 1916).  
 Wilkinson, Mabel (Mrs. Mabel Etheridge)  
 (See Class of 1911).  
 Williams, Letha M.  
 (Mrs. Howard K. Arnold)  
 831 Palmer St., Delta, Colo.  
 Wilson, Alice I. (see Class of 1915).  
 Wilson, Minnie (Mrs. E. C. Haas).  
 Silverton, Colo.  
 Wood, Jean. . . . . Salt Lake City, Utah  
 Woodring, Helen (Mrs. Henry F. Blood)  
 464 Lexington Ave., Portland, Ore.  
 Wooley, Emily.  
 Woolf, Mabel. 1115 9th Ave., Greeley, Colo.  
 Wren, Lena (Pd. M.) (see Class of 1913)  
 Wright, Edna F., Teacher  
 1841 6th Ave., Greeley, Colo.  
 Wright, Mrs. G. . . . . Colo. Springs, Colo.  
 Wright, Lora B. (see Class of 1915).  
 Yerton, Cena A. (Pd. M.)  
 (Mrs. Orville L. Wright)  
 Box 297, Pattonsburg, Mo.  
 Young, Mrs. G.  
 Young, George P. (Pd. M.) (see Class of  
 1911).  
 Zilar, Bessie. . . . . La Salle, Colo.

CLASS OF 1911

Abrams, Nelle Ruth  
 (Mrs. Gordon C. Kerr)  
 940 10th St., Boulder, Colo.  
 Almond, Cora B.  
 Alps, George W. (Pd. M.) (see Class of  
 1914).  
 Anderson, Myrtle E. (see Class of 1915).  
 Anthony, Hazyl Katherine, Teacher  
 1242 Race St., Denver, Colo.  
 Armsby, Alice L. (Mrs. D. E. Green)  
 Pleasanton, Kans.  
 Armstrong, Ada. . . . . Long Beach, Calif.  
 Ashburn, Emma.  
 Ashburn, F. E.  
 Bailey, Lula Ethel, Teacher  
 411 E. Thomas St., Apt. 12,  
 Seattle, Wash.  
 Bailey, W. L. (A. B.)  
 Baker, Mrs. Florence T. (A. B.)  
 Beardsley, Inez, Teacher  
 1412 Tenth St., Greeley, Colo.  
 Bedford, Merton I. (Pd. M.),  
 H. S. Teacher, Santa Barbara, Calif.  
 Bell, Currie, Teacher  
 210 W. 13th St., Pueblo, Colo.  
 Bernard, C. R. (Pd. M.) (see Class or  
 1915).  
 Betts, D. Ethel. . . . . Pueblo, Colo.  
 Black, W. W. (Pd. M.), Prin. of Schools  
 611 E. Golden Ave., Cripple Ck., Colo.  
 Bock, Mrs. Minnie, County Supt.  
 Walden, Colo.  
 Bonell, Benjamin Walter (A. B.)  
 Minister  
 1020 9th Ave., Greeley, Colo.  
 Bonham, Madora L. (Mrs. Guy Juchem)  
 Arvada, Colo.  
 Boreing, Maude (see Class of 1919).

Broadbent, Mrs. Bettie L., Teacher  
 (Mrs. H. M. Broadbent)  
 Burley, Ida.  
 Broadbent, H. M. (Pd. M.), Prin. H. S.  
 312 N. Normal Ave., Burley, Idaho  
 Broadbent, Hattie (Mrs. John Rourke)  
 619 Carson, La Junta, Colo.  
 Brown, Emily Virginia, Teacher  
 1829 Franklin St., Denver, Colo.  
 Brown, Julia Merriam, Teacher  
 1829 Franklin St., Denver, Colo.  
 Brown, Harriet Cecile.  
 Budin, Anna J. . . . . Sterling, Colo.  
 Bullock, Anna Mae.  
 Cain, Martha J., Teacher  
 4423 Zuni, Denver, Colo.  
 Carroll, Mrs. Ella K. (see Class of 1913).  
 Carter, Albert F. (A. B.)  
 Librarian C. T. C.  
 1919 10th Ave., Greeley, Colo.  
 Cary, Clara Leta (Mrs. Hugh Girvan)  
 La Salle, Colo.  
 Catren, Mary Louise. Silver Plume, Colo.  
 Chapple, Dora Ethel, Teacher  
 201 15th St. W., Minneapolis, Minn.  
 Chesnut, Robert Asa (Pd. M.) (see Class  
 of 1914).  
 Cochran, Anna M., deceased.  
 Colvin, Hazel M., Teacher  
 850 E. Evans Ave., Pueblo, Colo.  
 Cook, Miriam. . . . . San Francisco, Calif.  
 Cooper, Lena G., Teacher  
 202 S. 8th St., Lamar, Colo.  
 Coughlin, Wilhelmina C.  
 (Mrs. Alan Davidson Fraser)  
 Idaho Springs, Colo.  
 Coulson, Paul. . . . . Porto Rico  
 Crawford, Mary.  
 Crawford, May (Mrs. H. J. Leddy)  
 Box 115, Manitou, Colo.  
 Crosby, Jean Muriel (A. B.)  
 (Mrs. R. O. Hansen)  
 Telluride, Colo.  
 Crow, Leah Helen (see Class of 1913).  
 Cunningham, Anna Gertrude (Mrs. . . . .)  
 Denver, Colo.  
 Curry, Flora (A. B.)  
 (Mrs. J. H. Scoville)  
 Ft. Morgan, Colo.  
 Darby, Emma A.  
 (Mrs. Geo. H. Fitzpatrick)  
 Lime, Colo.  
 Davis, Grace M. (A. B.)  
 (Mrs. A. B. Beaumont)  
 5 Fairview Way, Amherst, Mass.  
 Debler, Mrs. Lavane F.  
 Des Jardines, Clotilda  
 (Mrs. W. F. Russell)  
 Iowa State Univ., Iowa City, Ia.  
 Donavon, Clara (Mrs. Joe Witheron)  
 Doonan, Eva B.  
 1120 32nd St., Denver, Colo.  
 Duescher, Alma.  
 Eades, Emma.  
 Elliott, Minerva E.  
 (Mrs. John Russell Blythe)  
 414 Washington Ave., Charleroi, Pa.  
 Elmer, Marjorie. . . . . Dinuba, Calif.  
 Emens, Ruth Alliene  
 (Mrs. Everett Black)  
 Honolulu, Hawaii  
 Engleman, Muriel Joy. . . . . Greeley, Colo.  
 Ericsson, Anna, Teacher  
 Box 236, Clayton, N. M.  
 Farrar, Mrs. Eliza R. . . . . Pueblo, Colo.  
 Farrell, Hazel C. . . . . Cripple Creek, Colo.  
 Farrington, Flora (Pd. M.)  
 (see Class of 1912)  
 Felteh, Beulah M.  
 (Mrs. Beulah M. Elkins)  
 Wheatridge, Colo.

- Filber, Kittle Mary E. (see Class of 1912)
- Finch, Callie M. (see Class of 1916).
- Finch, Clarence A. (see Class of 1914).
- Florin, Madeline.
- Franke, Louise R., deceased.
- Frellick, Anna Delma. . . . . Denver, Colo.
- Froelich, Virginia Grace (see Class of 1912).
- Gillette, Florence Marie (see Class of 1912).
- Gleeson, Josephine (Mrs. . . . .)  
Denver, Colo.
- Godfrey, Florence (Mrs. N. Ross Whetsel)  
3046 High St., Denver, Colo.
- Godfrey, Maude Corey, Teacher  
637 Park St., Trinidad, Colo.
- Gordon, Mrs. Mary I. B. (A. B.)  
Omaha, Neb.
- Greene, Sarah Margaret  
5 Pitken Place, Pueblo, Colo.
- Gregg, Elizabeth Ann  
(Mrs. Ralph A. Gee)  
Ekalaka, Mont.
- Hale, Katherine L. (Pd. M.) (see Class of 1912).
- Hall, Grace E. (Pd. M.) (see Class of 1916).
- Harmless, Edith M. . . . . Loveland, Colo.
- Harrison, Lorena, Exec. Sec. Y. M. C. A.  
584 Rice St., St. Paul, Minn.
- Harrison, Lucile (Mrs. Harold A. Hanson)  
Brighton, Colo.
- Hart, Dora Evelyn.
- Hart, Z. Rosamond (A. B.)  
Berkeley, Calif.
- Hawke, Vera Leone. . . . . Pueblo, Colo.
- Hawley, Florence E. (Mrs. Carl Wright).
- Hawley, Margaret  
(Mrs. C. A. Richardson)  
701 Baca St., Trinidad, Colo.
- Heath, Edith V. (Pd. M.) (see Class of 1915).
- Heilman, Mrs. Lulu A. (A. B.), Teacher  
Crawford, Colo.
- Hennes, Elizabeth (Mrs. Roy T. Adams)  
(see Class of 1913)
- Hibner, D. M. (A. B.) (see Class of 1915)
- Hillyard, Grace T. (see Class of 1917).
- Hillyard, Sydney, Teacher H. S.  
2730 Virginia St., Berkeley, Calif.
- Hodgson, Caryl R. (Mrs. Bert Annin)  
Columbus, Mont.
- Hong, Theodora C.
- Hopkins, Mildred, Teacher  
1811 Summit Ave., Sioux City, Iowa
- Horton, Mamie. . . . . Pueblo, Colo.
- Horton, Mary Catherine  
(Mrs. George Sehon) Olathe, Colo.
- Hubbell, Julia Bee (Pd. M.), H. S. Tchr.  
Bradentown, Fla.
- Hunter, Helen Josephine (see Class of 1913).
- Hurley, W. R. (see Class of 1917).
- Hutchison, Morris H. (Pd. M.)  
Mercantile Business, Vancouver, Wash.
- Hutton, Jessie (Mrs. Jones).
- Jacobs, Clara M. (see Class of 1916).
- Jenkins, Faith. . . . . Sheridan, Mont.
- Johnson, Anna G., Teacher  
1616 6th Ave., Greeley, Colo.
- Johnson, Ella C. (Mrs. Rausher)
- Johnson, John C. (A. B.), Teacher  
State Normal School, Gunnison, Colo.
- Johnson, Eva V.
- Jones, Bea, Teacher. . . . . Victor, Colo.
- Jones, Emarene.
- Jones, Gertie E. (Mrs. P. H. Nelson)  
Flagstaff, Ariz.
- Jones, Gwladys M., Teacher  
730 York St., Denver, Colo.
- Jones, R. Susan (Mrs. J. Emil Harburg)  
1544 Lafayette St., Denver, Colo.
- Jones, Ruby W. . . . . Longmont, Colo.
- Kennedy, Lyrra (see Class of 1914).
- Kerr, Milton R. (A. B.)
- Kershaw, Leta H. (Mrs. Don J. Morton).  
3022 Euclid Ave., Pueblo, Colo.
- Key, Elizabeth.
- King, Ellen (see Class of 1914).
- Kingwill, Jessie G., Teacher  
Orlands, Calif.
- Kitchel, Jennie L.
- Kitchel, Lena.
- Kleckner, Fannie, Teacher  
Ainsworth, Nebr.
- Klock, Emma J.
- Koeb, Otto  
Claffin Univ., Orangeburg, So. Car.
- Konkel, James. . . . . Canon City, Colo.
- Kutzleb, Mrs. Amanda (Pd. M.) (see Class of 1912).
- Kyle, Henry I., Real Estate  
Box 411, Tacoma, Wash.
- Lamb, Helen, County Supt.  
Brighton, Colo.
- Lammie, Elizabeth R.
- Leibo, Joseph (Pd. M.), deceased.
- Lesslie, Maude E.  
(Mrs. J. W. F. Smith)  
Box 1179, Bisbee, Ariz.
- Mabee, Elsie (Pd. M.) (see Class of 1912)
- McBride, Sallie Belle  
(Mrs. John P. Harvey)  
605 W. 12th St., Pueblo, Colo.
- McCarthy, Nancy (Pd. M.)  
(Mrs. Cecil Hickman)  
Windsor, Colo.
- McCloskey, Anna  
313 E. Abriendo Ave., Pueblo, Colo.
- McCollum, Merriam E.  
(Mrs. Fred E. Selby)  
World, Wyo.
- McConnell, Katherine, Teacher  
911 Macon Ave., Canon City, Colo.
- McCoy, Adelaide N.  
377 Loma Ave., Long Beach, Calif.
- McCunniff, John T. (see Class of 1915).
- McDonald, Elizabeth (see Class of 1913).
- Mackey, Katherine Irwin, Teacher  
756 So. Boyle Ave., Los Angeles, Calif.
- McKissick, Ethel  
(Mrs. Claude H. Smith)  
Republic, Wash.
- McLean, Margaret M.
- Malcolm, Louise A. (Pd. M.)  
(Mrs. William O. Gish)  
Riverton, Wyo.
- Martinez, Elvira.
- Matson, Irene Anna (see Class of 1918).
- Mayhoffer, Frances L.
- Meglasson, Eliza (Mrs. . . . .) . . . Montana
- Mickelson, Alma, Housekeeper  
R. F. D. No. 1, Box 136, Rocky Ford, Colo.
- Milne, Cora Lillian  
(Mrs. Edward A. Theobald)  
Breckenridge, Colo.
- Montgomery, Emma. . . . . Florence, Colo.
- Moore, Hazel Lee Gladys  
(Mrs. Shirley Giddings)  
San Gabriel, Calif.
- Morgan, Dolores Bessie.
- Morgan, Gladys F., deceased.
- Morris, Clara Evelyn (A. B.)  
(Mrs. E. R. Rumball)  
22 Lincoln Ave., Hudson Heights,  
Hastings-on-Hudson, New York
- Morris, Ruth A. (Mrs. W. W. Cafky) (see Class of 1912).
- Morrison, Leah. . . . . Denver, Colo.
- Mott, Irene B. (see Class of 1916).
- Murphy, Eleanor.

Neuman, Edna (Mrs. Tom Brown) Taft, Calif.  
 New, Nellie B. (Mrs. Chester Smith) Deceased  
 Nichols, Helen E. (Pd. M.) (see Class of 1912).  
 Nordstrom, Sylvia....Grand Valley, Colo.  
 Osborne, Myrtle I. (Mrs. W. Anton Elzy) 1440 Milwaukee St., Denver, Colo.  
 Page, Edith May.....Fruita, Colo.  
 Payn, Martha C. (Mrs. J. C. Ferril) 215 N. Leonard St., Liberty, Mo.  
 Pearce, Mabel.  
 Penberthy, Esther.  
 Penberthy, Martha, Teacher 1729 Hope St., S. Pasadena, Calif.  
 Potochnick, Stephy.....Victor, Colo.  
 Poynter, Mary Lee.  
 Pressly, Gladys (Mrs. Walter Daniels) Milliken, Colo.  
 Preston, C. W. (Pd. M.), Teacher Los Angeles, Calif.  
 Pritchard, Henrietta 1028 Kirwod Ave., Iowa City, Iowa  
 Purdy, Rena (see Class of 1912).  
 Quinn, Margaret, deceased.  
 Ragan, J. B. (A. B.).....Denver, Colo.  
 Renkes, Josephine (Mrs. Josephine Hemingway) 1313 University Ave., Boulder, Colo.  
 Rice, Grace G., Teacher 1801 Gower St., Los Angeles, Calif.  
 Richey, Helen S. (Mrs. J. A. Bardwell) R. F. D. No. 1, Box 148, Greeley, Colo.  
 Richey, William Earl (see Class of 1914).  
 Rider, Ida M., deceased.  
 Robinson, Henrietta (see Class of 1917).  
 Roddy, Gary (Pd. M.) (see Class of 1914)  
 Rosenberg, Esther (Mrs. Karl Ramet) (see Class of 1912).  
 Ruffer, William (Pd. M.) (see Class of 1912).  
 Sale, J. Luella (A. B.).  
 Saltus, Charles (see Class of 1913).  
 Sammons, Jessie May (Pd. M.) (Mrs. Frederick E. Thornburg) 1206 Monroe, Wichita Falls, Texas  
 Saunders, Agnes (Pd. M.) (see Class of 1912).  
 Schenck, Mary E. (see Class of 1913).  
 Schillig, Edna (Mrs. Jim Scott) Sterling, Colo.  
 Schweizer, Ellen, Teacher...Denver, Colo.  
 Seeger, May, Teacher 3519 Park Ave., Kansas City, Mo.  
 Seymour, Mrs. Melita, Teacher 1059 Acoma St., Denver, Colo.  
 Shackelford, Lila McClure (Mrs. J. D. Harlan) Breckenridge, Colo.  
 Sheeder, Elizabeth (Pd. M.) (see Class of 1912).  
 Shepherd, Frank H., Teacher 425 No. 13th St., Corvallis, Ore.  
 Shomaker, Edith Irene 1120 Cypress, Pueblo, Colo.  
 Silver, Martha (Mrs. Martha Sheatherman) Cheraw, Colo.  
 Simms, Mrs. Nelle P. (Pd. M.) (see Class of 1915).  
 Smiley, Louise D. (Mrs. T. L. Boye) 1117 10th Ave., Greeley, Colo.  
 Smith, Gertrude H. (Mrs. C. G. Kendeigh) Palisade, Colo.  
 Smith, Katherine.....Denver, Colo.  
 Smith, Luna I. (Pd. M.) (see Class of 1915).  
 Snodgrass, Geneva....Walsenburg, Colo.  
 Spicer, Wilma Olive (see Class of 1916).

Sprague, Jessie (Pd. M.) (see Class of 1912).  
 Stackhouse, Evelyn....Los Angeles, Calif.  
 Stein, Louise.  
 Stemen, Ruth (Mrs. A. W. Hogan) Box 195, Gunnison, Colo.  
 Stiffler, R. Ewing (A. B.) (see Class of 1912).  
 Stone, Mrs. Bertha.  
 Stone, Gertrude 741 Brown Ave., Pueblo, Colo.  
 Streeter, Emma Pearl.  
 Sullivan, Vera Faye (see Class of 1912).  
 Swan, Ruth E., Teacher (Mrs. Fred J. Pennington) 1247 3rd Ave., Los Angeles, Calif.  
 Swanson, Lois Hildegard (Mrs. Martin M. Ward) Wendell, Idaho  
 Taylor, Lola (Pd. M.), County Supt. Mancos, Colo.  
 Terry, Leona (Mrs. E. E. McKittrick) Cananea, Sonora, Mexico  
 Thomas, Thurza T. (A. B.), Stockfeeder Ault, Colo.  
 Tidball, Elizabeth, Teacher Box 243, Goldfield, Colo.  
 Townsend, Alice Juanita.  
 Treadway, Jessie M. First Ave. Hotel, Denver, Colo.  
 Tucker, Mary (Mrs. Robt. M. Boyle) Moab, Utah  
 Turner, Elmer P. R. F. D. No. 3, Box 1, Greeley, Colo.  
 Van Dorpen, Anna (A. B.), Teacher (Mrs. John Anderson) Eaton, Colo.  
 Ver Steeg, Helen.....Colo. Springs, Colo.  
 Veverka, Madaline (Pd. M.), Teacher 709 Security Bldg., Los Angeles, Calif.  
 Waite, Helen (Pd. M.).  
 Walsh, Delia 210 E. Bennett, Cripple Creek, Colo.  
 Waltermire, Leonore M. (Mrs. Leonore W. Self) 3027 Hooker St., Denver, Colo.  
 Warren, Josephine.  
 Weaver, Frances (Mrs. Frank Latson) Rocky Ford, Colo.  
 Weirick, M. Esther.  
 West, Edna W. (Pd. M.), Teacher 1527 E. First St., Long Beach, Calif.  
 Wetmore, Rose A.  
 Wilkinson, Mabel (A. B.) (Mrs. Ellis C. Etheridge) Box 323, Greeley, Colo.  
 Williams, Dee (Mrs. Dee Taggart) (Pd. M.) (see Class of 1913).  
 Williams, Rowena (Mrs. Myron Collins) 10 Alsace Way, Colo. Springs, Colo.  
 Wirtz, Mrs. Wilhelmina Minerva.  
 Wolfer, Nelle R., Teacher Ft. Morgan, Colo.  
 Young, George Prestly (A. B.) Supt. of School Dix, Nebr.  
 Zingg, O. C. (Pd. M.) (see Class of 1914).

CLASS OF 1912

Addington, Bella Draper 352 West Archer Ave., Denver, Colo.  
 Allard, Lucile. 705 W. 11th, Pueblo, Colo.  
 Allen, Aletha M. (Mrs. R. W. Christopher) 925 12th St., Greeley, Colo.  
 Anderson, Myrtle E. (Pd. M.) (see Class of 1915).  
 Annis, Margie Gladys (Mrs. W. W. Stevenson) Tie Siding, Wyo.

Ardell, Georgia (Mrs. Robert Zieger)  
928 So. Union Ave., Pueblo, Colo.

Arnold, Frank (Pd. M.) (see Class of 1913).

Ashton, E. Adelene, Teacher..Nucla, Colo.

Avers, Laura Jane (see Class of 1914).

Avison, Mrs. Jennie.....Greeley, Colo.

Baab, Bertha M. (see Class of 1917).

Baker, Roy Jacob.

Baker, W. L. (see Class of 1917).

Baldwin, Florence Elizabeth  
(Mrs. Charles Henry Brady)  
1007 12th St., Greeley, Colo.

Baldwin, Mildred  
106 Central Park W., New York City

Ball, Katherine Alice  
3045 W. Clyde Place, Denver, Colo.

Bashor, Esta M., Teacher  
828 12th St., Greeley, Colo.

Basse, Marie J. (Mrs. Marie B. Davis)  
Hillrose, Colo.

Baum, Pearl S., Teacher  
3144 Platt Ave., Fresno, Calif.

Beattie, Nettie  
109 Lincoln St., Sterling, Colo.

Beeten, Ruby M. (Mrs. Faye Elliott)  
Ft. Lupton, Colo.

Bell, Rose Isabel (Mrs. ....)  
Scotts Bluff, Nebr.

Bellmar, Marie E., Teacher  
2027 Humboldt St., Denver, Colo.

Bennett, Edna.

Boone, Faye Nelson (Pd. M.)

Borson, Emma E.....Corinne, Utah

Botting, Ethel  
1306 Cheyenne Rd., Colo. Spgs., Colo.

Brainard, Edith (Pd. M.)...Denver, Colo.

Brake, Jane E.  
(Mrs. Jane E. McLachlan)  
2470 Highland Dr., Salt Lake City, Utah

Breene, Lillie Rabe, Teacher  
(Mrs. Leslie William Murphy)  
1409 So. Hope St., Los Angeles, Calif.

Brockway, Alma, Asst. Co. Clerk  
Ouray, Colo.

Brown, Elizabeth J. (Pd. M.)

Brownlee, Theresa (Mrs. Arthur Hoffman)  
Lake City, Colo.

Bunger, Luda.....Wheatridge, Colo.

Bunnell, Clara Elinor.....Trinidad, Colo.

Burgess, Blanche.

Burgess, Madge.

Burns, Margaret V., Clerk  
68 Lane St., Blissfield, Mich.

Butler, Lora (A. B.)

Cage, Laddie A.

Calvin, Nona Adelaide, Teacher  
R. 4, Box 133, Greeley, Colo.

Campbell, Stella Margaret, Teacher  
1835 W. 40th Ave., Denver, Colo.

Cardova, Isabel (see Class of 1915).

Carey, Nettie M. (Pd. M.) H. S. Teacher  
Cheyenne, Wyo.

Carlson (Mrs. Ruben Gustafson)  
1221 Matthews, Ft. Collins, Colo.

Carney, Gen.....Marshalltown, Iowa

Carr, Minnie Pearl (Pd. M.) (see Class of 1914).

Cash, E. C. (Pd. M.) (see Class of 1913).

Castek, Elizabeth (Pd. M.)

Christopherson, Selma (see Class of 1915).

Clark, C. Pearl.

Cochran, Mary Frances (Pd. M.) (A. B.)  
Rep. Pub. Co.  
5552 Bryant St., E. End, Pittsburg, Pa.

Condit, Philippa (see Class of 1913).

Constable, Ethel Dana.

Cook, Katherine M. (A. B.)  
Washington, D. C.

Cozine, Mrs. Fannie Dray (Pd. M.) (see Class of 1919).

Craven, Ina Eleanor (A. B.)

Crow, Leah Helen (Pd. M.) (see Class of 1913).

Croze, Mrs. Anna H.....Ft. Collins, Colo.

Cummings, Fay R.  
(Mrs. Delbert A. Hessick)  
Florence, Colo.

Curd, Margaret, Teacher  
504 W. 10th St., Pueblo, Colo.

Daugherty, Maude.

Davidson, William I. (Pd. M.)

Davies, Edwyna (see Class of 1913).

Deibert, Amy.....Florence, Colo.

Dickinson, Amy, Teacher  
Route A, Sterling, Colo.

Divelbiss, Grace.

Doak, Marie S., Teacher  
221 W. Third St., Pueblo, Colo.

Dotson, Edna (see Class of 1918).

Douglas, Ada....Box 482, Eureka, Calif.

Doze, Hazel Agnes  
(Mrs. T. Burton Hendrick)  
647 N. 2nd St., Montrose, Colo.

Drumm, Anna, Teacher  
1483 Clayton St., Denver, Colo.

Drumm, Eda, deceased.

Dunshee, Faye.

Eades, Nettie, Teacher  
Box 609, Miami, Ariz.

Eaves, Mrs. Bertha.

Eberhart, Pearl.

Edwards, Ruth A.

Eldridge, Myrtle, Teacher  
1461 Alice St., Oakland, Calif.

Elmer, Marjorie (Pd. M.), Teacher  
Dinuba, Calif.

Engels, Bernice (see Class of 1918).

Eubank, Ethel Vista  
1410 N. Weber, Colo. Springs, Colo.

Eyser, Maude, Bookkeeper  
515 E. Platte Ave., Ft. Morgan, Colo.

Falloon, Martha E., Teacher  
209 Washington St., Loveland, Colo.

Farrer, Myrtle Ronald (see Class of 1914).

Farrington, Flora (A. B.)  
(Mrs. E. O. Wilbur)  
801 Marion, Denver, Colo.

Ferguson, Frances Janet  
1184 1st Ave., Salt Lake City, Utah

Filber, Kittie M. E. (Pd. M.)

Fincher, Mabel.

Fleckenstein, Felicia (see Class of 1918).

Forbes, W. Wallace, Real Estate  
La Jara, Colo.

Force, Harriet Louise (see Class of 1916).

Forward, Zoe R. (Pd. M.)  
3906 8th St., Washington, D. C.

Foster, Verda L.

Franklin, G. T. (Pd. M.)

Franks, Wilbert A. (A. B.)  
Supt. of Schools, Ft. Morgan, Colo.

Frantz, Mary.....Georgetown, Colo.

Frink, Amy (Mrs. Joe English)  
Newman Grove, Nebr.

Froelich, Virginia Grace (Pd. M.)

Fuson, Bertha D. (see Class of 1914).

Gardiner, Elizabeth B., Parole Officer  
State Industrial School, Golden, Colo.

Garwood, Estella (Pd. M.)  
Canon City, Colo.

Gary, Ethel R., Stenographer  
(Mrs. A. H. Larson)  
3048 Osceola, Denver, Colo.

Gault, Laura G.  
40 S. Alta Vista, Dubuque, Iowa

Gauss, Charlotte W., Teacher  
1411 11th Ave., Greeley, Colo.

Gauss, Louise, Teacher  
Deming, New Mex.

Gibson, Myrtila I. (Mrs. Albert Tuck)  
(Pd. M.) (see Class of 1912).



Gillette, Florence M. (Pd. M.)  
 (Mrs. De Witt Malcouronne)  
 421 Matthews St., Ft. Collins, Colo.

Gillman, Harriet Evangeline  
 1209 W. Bijou, Colo. Springs, Colo.

Gillmore, William Bruce (Pd. M.) (see  
 Class of 1916).

Godfrey, Mrs. Maude Corey, Teacher  
 Trinidad, Colo.

Golden, Bessie E., Teacher  
 (Mrs. S. D. Decker)  
 127 W. Logan St., Pasadena, Calif.

Goodrich, Annie (A. B.), H. S. Teacher  
 Box 35, La Mesa, Calif.

Gordan, Grace Linzy (Pd. M.)

Graham, Myra K. . . . . Gill, Colo.

Griffin, May, deceased.

Griffith, Emily, Teacher  
 1524 Fillmore, Denver, Colo.

Grimes, Cora M. (Pd. M.)

Gumaer, Mae Louise.

Hale, Katharine Louisa (A. B.)  
 (Mrs. John L. McMenamin)  
 Telluride, Colo.

Hall, Jessie M., Teacher  
 Strubel, Apt. No. 9, Greeley, Colo.

Hall, Suma.

Hammers, George M. (Pd. M.) (see Class  
 of 1915).

Hannas, Winifred (Mrs. George Kleet)  
 Cheyenne, Wyo.

Hansen, Bertha M. (Mrs. Bertha Cones)  
 Deceased

Harris, Lola F.

Hedrick, Mrs. Anna (Pd. M.) (A. B.)  
 Portland, Ore.

Hildinger, Luella E.  
 1273 Race St., Denver, Colo.

Hill, Myrtle, Teacher  
 Box 1327, Globe, Ariz.

Hoberton, Bernice Sibyl  
 (Mrs. Elmer L. Gordon)  
 1503 12th Ave., Greeley, Colo.

Hood, Reba (Mrs. Glen Shaw) (Pd. M.)  
 Barr Lake, Colo.

Hopkins, Helen, Teacher. . . Holbrook, Ariz.

Horning, Noah Orestes (see Class of  
 1916).

Huizel, Jacob Henry (Pd. M.) (see Class  
 of 1916).

Hull, Orlo B. (see Class of 1917).

Hunt, Cara M.  
 4332 Vrain St., Denver, Colo.

Hunter, Helen Josephine (Pd. M.) (see  
 Class of 1913).

Hussong, Mossie B. (Pd. M.)

Johnson, Edna L. . . . . Brighton, Colo.

Jones, Bessie E. (Pd. M.), Teacher  
 639 Dawling Blvd., San Leandro, Calif.

Jones, Grace Ethel, Teacher  
 56 E. Third Ave., Denver, Colo.

Jones, Ione.

Jones, J. W.

Jones, Jessie G. (Mrs. O. O. Churchill)  
 924 13th St., N. Fargo, N. Dak.

Jones, L. Maude (Mrs. L. Maude Gray)  
 Kersey, Colo.

Jorgensen, Olive  
 543 Gunnison, Grand Junction, Colo.

Kauffman, Hazel L., deceased.

Keliher, Miriam G.  
 (Mrs. Frank J. Crowley)  
 1664 St. Paul St., Denver, Colo.

Kerr, Esther (see Class of 1915).

King, Margaret V. C.

Klatt, Minnie A.

Kutzleb, Mrs. Amanda (Pd. M.)  
 922 So. Chestnut St., Casper, Wyo.

Lackore, Lillian (see Class of 1914).

Lamma, Helen Irene (Mrs. M. E. Smith)  
 Ault, Colo.

Lane, Florence M. (Pd. M.) (see Class of  
 1914).

Larkin, Bernice.  
 Lauder, Maude  
 994 So. Wash. St., Denver, Colo.

Law, Elma Olive (Pd. M.)  
 (Mrs. Elma Schroeder)  
 Julesburg, Colo.

Layton, Mrs. Nellie B. (see Class of 1917)

Leeper, Sigel Milburn. . . . Grove City, Ohio

Lewis, Harriet E.

Lister, Ivah M. . . . . Bixley, So. Dak.

Lloyd, Nathaniel (see Class of 1914).

Lockhart, James I. (see Class of 1918).

Lockhart, Mae.

Long, Geraldine M. (A. B.)  
 (Mrs. Elmer S. Bailey)  
 905 Broadway, Henryetta, Okla.

Longan, Anna M.  
 1820 Lafayette St., Denver, Colo.

Lowery, Margaret Ruth (see Class of  
 1914).

Lund, Harriet. . . . . Cheyenne, Wyo.

Lydick, Nora.

Mabee, Elsie (A. B.), Teacher  
 State Normal School, Kent, Ohio

McAllister, Emma.

McClelland, Henrietta (Mrs. Tom Mallet)  
 Wyoming

McCunniff, John T. (Pd. M.) (see Class  
 of 1915).

McDonald, Elizabeth (Pd. M.) (see Class  
 of 1913).

McGrath, Margaret. . . . . Aguilar, Colo.

McGrath, Mary.

McHugh, Margaret J.  
 (Mrs. Margaret J. Kelleher)  
 2552 Bentson St., Edgewater, Colo.

Mackey, Druzilla Ruth (Pd. M.), Teacher  
 Bungalow B, 715 S. Boyle Ave.,  
 Los Angeles, Calif.

McLane, Lucy N. (see Class of 1915).

McMechen, Elizabeth.

McMillin, Mabel J.

McMurtry, Florence (see Class of 1914).

Mahoney, Blanche.

Mallon, Vera Elizabeth (see Class of  
 1914).

Matthews, Anna H. (Pd. M.) (see Class of  
 1914).

Mencimer, Lida M.  
 1410 Washington Ave., Golden, Colo.

Meyer, Edith,  
 604 So. Meldrum St., Ft. Collins, Colo.

Mickelson, Alma B.

Miller, Edna (Mrs. J. A. Anderson)  
 R. F. D. 9, Box 395, Los Angeles, Calif.

Miller, Maude. . . . . Admire, Kans.

Miller, Valeria A.

Milne, Katherine B.

Moore, Jessie R., Teacher  
 528 W. Mt. Ave., Ft. Collins, Colo.

Morgan, Jesse Robert (Pd. M.) (see Class  
 of 1918).

Morris, Hanna P., Teacher  
 R. F. D. No. 1, Box 139,  
 Florence, Colo.

Morris, Ruth Athalia (Mrs. W. W. Cafky)  
 Florence, Colo.

Morrow, Margaret D., Teacher  
 104 2nd St., Ivywild, Colo. Spgs., Colo.

Moynahan, Marguerite.

Mulnix, Maisie (Mrs. . . . .)

Mundy, Jas. H. . . . . Milliken, Colo.

Nash, Margaret A. (Pd. M.)  
 Trinidad, Colo.

Ness, Alice C.

Nichols, Helen Elizabeth (A. B.)  
 (Mrs. Chesney H. Criswell)  
 1410 10th Ave., Greeley, Colo.

Nicholson, B. Pearl, Teacher  
 606 Peterson St., Ft. Collins, Colo.

Norris, A. Lena.  
 Noyes, Mary.  
 Owen, Mary Marguerite.  
 Pearce, Lela E. (see Class of 1915).  
 Pearl, Stella Keith (Mrs. John A. Runge)  
 Box 474, Bend, Ore.  
 Penfield, Edna L., Prin. of School  
 Cameron, Utah, via Castle Gate  
 Phelan, Mercedes C., Teacher  
 (Mrs. Frank Foley)  
 Box 596, Durango, Colo.  
 Phenix, A. May (see Class of 1919).  
 Plumb, Pearl (see Class of 1913).  
 Poirson, Ema, Teacher  
 710 N. Kentucky Ave., Roswell, N. M.  
 Purdy, Rena (Pd. M.), Teacher  
 Belmond, Ia.  
 Ramsdall, Fred Stanley (A. B.)  
 Supt. of Schools  
 Pittsburg, Calif.  
 Read, Hazel U., Teacher  
 1425 Vernon Ave., Pueblo, Colo.  
 Reed, Bessie.  
 Reynolds, Effie E. (Mrs. Jos. Cottingham)  
 2155 California St., Denver, Colo.  
 Rhodes, Lillian Olive.  
 Richardson, Etta E. (A. B.) (see Class of  
 1915).  
 Robb, Roxana (Pd. M.) . . . . . Liberty, Mo.  
 Robbins, Ruth.  
 Roberts, Helen Christanna.  
 Redefor, Mary Frances  
 (Mrs. Oliver Cunningham)  
 The Virginia Ranch, Briggsdale, Colo.  
 Roe, Mrs. Mabel E.  
 Rogers, Ada M. (Mrs. Clarence F. Haaff)  
 135 E. 8th St., Leadville, Colo.  
 Rogers, Hettie M.  
 Rogers, Ora.  
 Rohr, Frieda (see Class of 1916).  
 Rosenberg, Esther (Pd. M.)  
 (Mrs. Karl Ramet)  
 42 Berkeley Place, Brooklyn, N. Y.  
 Ruffer, William (A. B.)  
 Mgr. Rocky Mt. Teachers' Agency  
 326 Empire Bldg., Denver, Colo.  
 Rutherford, Harry H. (see Class of 1914).  
 Saltus, Charles N. (Pd. M.) (see Class of  
 1913).  
 Saunders, Agnes (A. B.), Teacher  
 120 E. Lindburg, Pittsburg, Kans.  
 Saylor, Florence (see Class of 1914).  
 Schenck, Mary E. (Pd. M.) (see Class of  
 1913).  
 Schureman, Lucile, Teacher  
 1351 Grant St., Denver, Colo.  
 Schultz, Nettie H.  
 Scouler, Jessie Elizabeth, Teacher  
 1114 Logan St., Denver, Colo.  
 Sebring, Mabel Esther (Mrs. R. P. Rob-  
 erts), deceased.  
 Seevers, Adalyn L., Teacher  
 Forestry State Normal, Bottineau, N. D.  
 Shambo, Mabel Ruby  
 (Mrs. Lloyd Reynolds)  
 Briggsdale, Colo.  
 Shank, Iva P. (Mrs. David Mitchell)  
 Shoshone, Idaho  
 Sharp, W. A. Seward.  
 Sharpe, Clio Vesta (Pd. M.)  
 (Mrs. J. J. Burroughs)  
 Fruita, Colo.  
 Sheeder, Mrs. Elizabeth (A. B.)  
 Sherman, Jessie, Teacher  
 (Mrs. Jessie Nordstrom)  
 Idaho Falls, Idaho  
 Sibley, Winifred M. (A. B.)  
 (Mrs. Gordon H. Graves)  
 234 Pierce St., West Lafayette, Ind.  
 Sibley, Mrs. Ada Stilson.  
 Simmons, Ruby.  
 Simonson, Thelia Ruth, Teacher  
 Buena Vista, Colo.  
 Smith, Alberta K., Office Clerk  
 (Mrs. Alberta K. McGuire)  
 620 E. 19th St., Cheyenne, Wyo.  
 Smith, Lavina, Teacher  
 No. Side Dist. No. 1, Pueblo, Colo.  
 Smith, Mildred.  
 Smith, Ruth B. (see Class of 1918).  
 Smyser, Fanny Alice (A. B.).  
 Snyder, Rosa E.  
 731 W. Mt. Ave., Ft. Collins, Colo.  
 Spicer, Wilma Olive (Pd. M.) (see Class  
 of 1916).  
 Spillman, Albert R. (see Class of 1915).  
 Sprague, Jessie (A. B.)  
 (Mrs. Richard Trevarrow)  
 Pinos Altos, N. M.  
 Starrett, Adda M.  
 Statler, Nellie Margaret (A. B.)  
 (Mrs. Glen Reed)  
 Hugo, Colo.  
 Steck, Susie M. (Mrs. C. A. Talbott)  
 Craig, Colo.  
 Stiffler, Robert Ewing (Pd. M.)  
 Arch. Draftsman  
 318 Jackson St., Sterling, Colo.  
 Stockover, Catherine  
 (Mrs. Catherine Stockover Bennett)  
 32 William St., Ticonderoga, N. Y.  
 Stribley, Hazel, . . . . . Central City, Colo.  
 Stubbs, Laura Elds, Teacher  
 714 Carson Ave., La Junta, Colo.  
 Sullivan, Georgia F. . . . . Cheyenne, Wyo.  
 Sullivan, Vera Faye (Pd. M.)  
 H. S. Teacher  
 524 Ninth Ave., Greeley, Colo.  
 Sutherland, Clara Belle (see Class of  
 1917).  
 Svedman, Ellen (Mrs. Joseph B. Perry)  
 Morenci, Ariz.  
 Swallow, Grace M. (see Class of 1914).  
 Sweeney, Frances  
 117 W. 5th Ave., Denver, Colo.  
 Tanquary, Ruberta (see Class of 1913).  
 Thompson, Ira Alvan.  
 Thompson, Laura (Pd. M.) (A. B.)  
 (Mrs. I. A. Montank)  
 57 E. 13th Ave., Garfield, Utah  
 Tobias, Ruth (Mrs. Howard Bunger)  
 Wheatridge, Colo.  
 Todd, Lota A.  
 1746 Clarkston St., Denver, Colo.  
 Tohill, Mabel Erline. . . . . Monte Vista, Colo.  
 Trout, Marguerite, Teacher. . . Yuma, Colo.  
 Truman, Grace E., Teacher  
 320 W. 8th St., Pueblo, Colo.  
 Tuggy, Harriet (see Class of 1915).  
 Turner, Erie Amelie. . . . . Boulder, Colo.  
 Tyler, Edna. . . . . Arriba, Colo.  
 Van Meter, Mrs. Susan Hart  
 State Normal School, 608 N. Sprigg St.  
 Cape Girardeau, Mo.  
 Vineyard, Julia M. (Pd. M.) (A. B.).  
 Walde, Gena (Mrs. Wm. A. Wenn)  
 Telluride, Colo.  
 Walker, Ella M. (Mrs. Rodney Snyder)  
 609 Washington, Denver, Colo.  
 Walker, Nannie (Pd. M.), Teacher  
 317 Broadway, Pueblo, Colo.  
 Wallace, Frances R.  
 Wasley, Vera  
 (Mrs. Charles Burritt Scott)  
 Garden Grove, Calif.  
 Wasson, Dell (see Class of 1913).  
 Weaver, Frances (Mrs. . . . .)  
 Rocky Ford, Colo.  
 Weber, Mrs. Angelia W. (Pd. M.) (see  
 Class of 1913).  
 Weed, Helen A. (see Class of 1916).  
 West, W. R. (Pd. M.) (see Class of 1913).

Wheeler, Ina Bell  
 (Mrs. Jas. A. McLaughlin)  
 Box 774, Tonopah, Nevada

Whiteman, Virgin Mary  
 (Mrs. Ray Fitzmorris)  
 (See Class of 1913)

Whitman, Bertha H. (Pd. M.) (see Class of 1916).

Wiley, Anna L.

Williams, Alice E. . . . . Los Angeles, Calif.

Willmarth, Maude E.

Wilson, Ella, Teacher  
 216 12th St., Great Falls, Mont.

Winger, Olive Blanche. Colo. Springs, Colo.

Wood, Mary A. . . . . Pueblo, Colo.

Woodbury, Edith (Mrs. Robert Jones)  
 Harlawton, Mont.

Wyss, Frances M., Teacher  
 2603 Warren Ave., Cheyenne, Wyo.

Young, Wilma.

CLASS OF 1913

Adkinson, Mary E. (A. B.), Teacher  
 1410 Grant St., Denver, Colo.

Adams, Edna Matilda (Mrs. C. G. Pelley)  
 Brush, Colo.

Ahern, Margaret.

Aillinger, Elsie.

Albertson, Dora E. . . . . Boulder, Colo.

Allan, Jamie, Teacher  
 700 Remington St., Ft. Collins, Colo.

Andrew, Geneva. . . . . Boulder, Colo.

Ankeney, Lilly. . . . . Seattle, Wash.

Arnold, Frank J. (A. B.) . . . Cortez, Colo.

Ashby, Carrie M., Teacher  
 920 10th St., Greeley, Colo.

Atkinson, Mary Agnes (see Class of 1914).

Augustine, Mabel (see Class of 1914).

Austin, Mae Lois (Mrs. Hugh Goodhue)  
 1336 N. Weber, Colo. Springs, Colo.

Aux, Minerva, deceased.

Baird, Nellie (see Class of 1918).

Baker, Mrs. Bertha L., Teacher  
 Brighton, Colo.

Baker, Earl G. (A. B.)

Barnes, Katherine E.  
 (Mrs. James B. Dick, Jr.)  
 Box 488, Walsburg, Colo.

Barnes, Mabel (Mrs. W. T. McNeil)  
 Las Vegas, Nevada

Bartholomew, Beula Cornelia  
 Box 474, Rocky Ford, Colo.

Bartlett, Ruella (Mrs. Bruce D. Parker)  
 819 13th St., Greeley, Colo.

Bashaw, Theodore G. (Pd. M.)

Bashor, Mary Alma. . . . . Lyons, Colo.

Baum, Ruth E. (Mrs. H. A. Rector)  
 3144 Platte Ave., Fresno, Calif.

Bean, Elizabeth K. . . . . Lost Cabin, Wyo.

Bear, Ethel. . . . . Grand Junction, Colo.

Benton, Lila (see Class of 1917).

Briggs, Bertha M. (Pd. M.) (see Class of 1914).

Bishop, Ida Flo, Teacher  
 125 Galena St., Lead, So. Dak.

Bishop, Ruth (see Class of 1918).

Blaine, William D. (Pd. M.) (see Class of 1915).

Blair, Bessie B.

Bleasdale, Alice, Teacher  
 921½ 1st St., Great Falls, Mont.

Bleasdale, Lilly L. (Mrs. C. H. Gibbs)  
 2407 W. 32nd Ave., Denver, Colo.

Blickman, Blanche E.  
 (Mrs. Morton Biernbaum)  
 Rapid City, So. Dak.

Boland, M. D. (A. B.)

Borgmann, Frances. . . . . Evergreen, Colo.

Bourke, Edward, Teacher  
 2150 Court Place, Denver, Colo.

Brand, Leonore.

Brink, Marion (see Class of 1916).

Brodbeck, Ada (Mrs. Howard Gillman)  
 McDonald Hotel,  
 Edmonton, Alberta, Canada

Brown, Anna Laura (Mrs. A. J. Turner)  
 724 N. Mariposa, Los Angeles, Calif.

Browne, Doris Owens  
 102 Kaniwald Apts., Los Angeles, Calif.

Bulger, Katherine, Teacher  
 623 University Ave., Laramie, Wyo.

Bunner, Katherine, Office Clerk  
 4511 Iowa Ave. N. W.,  
 Washington, D. C.

Burgin, W. G. (A. B.) (see Class of 1914).

Burns, T. E. (Pd. M.) (see Class of 1915).

Bush, Genevieve  
 (Mrs. Jerome Thompson)  
 310 Grove St., Elmyra, N. Y.

Cagwin, D. C. (Pd. M.)

Campbell, Della (see Class of 1919).

Carder, Ada.

Carlson, Thea, Teacher  
 (Mrs. W. G. Farrington)  
 Guffey, Colo.

Carroll, Mrs. Ella K. (A. B.)  
 H. S. Teacher, Chandler, Ariz.

Cash, E. C. (A. B.), Principal  
 Pinon, Colo.

Celeen, Ida, Teacher. . . . . Butte, Mont.

Center, Gustavus (Pd. M.) (see Class of 1915).

Champion, Ernest.

Churchill, Mrs. Isabella V. (Pd. M.)  
 2170 4th St., San Diego, Calif.

Clark, Anna M.  
 1241 Lincoln St., Denver, Colo.

Clark, Mrs. Nora (Pd. M.)  
 720 Park St., Trinidad, Colo.

Cleveland, Mae, Teacher  
 1415 4th St., Santa Monica, Calif.

Clough, Lillian (see Class of 1914).

Coil, Linnie D. (Pd. M.) (see Class of 1914).

Comstock, George (A. B.)  
 Indianoma, Okla.

Comstock, Salome.

Conboy, Irene Kathryn (Pd. M.) (see Class of 1917).

Condit, Philippa (A. B.) . . . . Delta, Colo.

Cooper, Elizabeth, Teacher. . . Center, Colo.

Cooper, Julia. . . . . Box 82, Henderson, Colo.

Courtney, Julia. . . . . Olathe, Colo.

Cowgill, Mrs. Josephine.

Crawford, Edith.

Crotty, Marie L. (Pd. M.) (see Class of 1914).

Crow, Helen (A. B.)  
 1441 W. 56th St., Los Angeles, Calif.

Culp, Cecelia.

Davies, Edwyna S. (Pd. M.)  
 (Mrs. Wallace I. Hutchinson)  
 467 Ogden St., Denver, Colo.

Davis, Ida (see Class of 1917).

Davis, Leah (Mrs. Dorr Seaman)  
 Wellington, Colo.

Dean, Bessie (Pd. M.)  
 (Mrs. Lee Hunter)  
 Grand Junction, Colo.

Decker, Ina (Mrs. Sireno Huff)  
 Greeley, Colo.

Deibert, Ethel (Mrs. Robert Osborn)  
 Florence, Colo.

Deitrich, Carrie Margaret (Pd. M.) (see Class of 1917).

Donahue, Marie V. (Pd. M.), Teacher  
 (Mrs. Austin F. Murphy)  
 1618 Penn. St., Denver, Colo.

Dotson, Ruth (see Class of 1918).

Douden, Ola.

Douglas, Elma I. (Pd. M.) (see Class of 1914).

Douglass, Lucile.

Drew, Mildred V. (Mrs. Swart).  
Duffy, Rosa Anna, Teacher  
421 So. 6th Ave., Cripple Creek, Colo.  
Elder, Mrs. Edith E.  
Elliott, Gertrude Mae  
(Mrs. Chas. S. Sporleder)  
Box 218, Walsenburg, Colo.  
Emerson, Inez (Mrs. J. A. Reynolds)  
Greeley, Colo.  
Evans, Agnetta A. . . . . Delta, Colo.  
Evans, Florence Alice, Teacher  
Florence, Colo.  
Fankhauser, Nora Nola  
(Mrs. Karl Kent)  
R. F. D., Wellington, Colo.  
Farr, Gladys E. (Mrs. Nelson Reynolds).  
c/o Gottschau Steam Motor Co.,  
Chicago, Ill.  
Farrar, Myrtle R. (see Class of 1914).  
Farrar, Rosalie (Pd. M.), Teacher  
1108 O St., Fresno, Calif.  
Farrell, S. Mary.  
Feast, Sadie Isabella.  
Finch, Clarence A. (Pd. M.) (see Class  
of 1914).  
Force, Harriet Louise (Pd. M.)  
(Mrs. J. W. Gibbs)  
(See Class of 1916)  
Ford, Margaret S. (Mrs. S. J. Friel)  
6232 So. Park Ave., Chicago, Ill.  
Forhan, Marie F. . . . . Trinidad, Colo.  
Forquer, Ellen C.  
Francis, Rose, Teacher  
Breckenridge, Colo.  
Frazier, Olive E.  
(Mrs. Temple H. Cornelius)  
Box 45, Aztec, N. M.  
Fulton, Florence R., Teacher  
1135 St. Paul St., Denver, Colo.  
Gaines, Mary A., Teacher  
1317 Court St., Pueblo, Colo.  
Gallagher, Florence (see Class of 1914).  
Galloway, Norma. . . . . Norwood, Colo.  
Gardiner, Mary Ellen, Teacher  
307 W. 10th St., Pueblo, Colo.  
Garnett, Mrs. Genevieve Cook (Pd. M.)  
Teacher  
1035 Downing St., Denver, Colo.  
Gillin, Selina M., Govt. Clerk  
(Mrs. E. F. Rentfrow)  
Navajo Agency, Ft. Defiance, Ariz.  
Gillmore, William Bruce (A. B.) (see  
Class of 1916).  
Gilmour, Verna.  
Gilpin-Brown, Mrs. Helen (Pd. M.) (see  
Class of 1914).  
Gould, Helen M. . . . . Denver, Colo.  
Graham, Rosa, Teacher  
1310 Welton St., Denver, Colo.  
Gray, Sarah A. (see Class of 1915).  
Greist, Anna L. (see Class of 1917).  
Griffith, Eva Lena.  
Hall, Agnes W. (Mrs. Wayne Andrews)  
Livingston, Tex.  
Hall, Emma M. (see Class of 1914).  
Hanks, May.  
Hasbrouck, Hila (Mrs. Wm. E. Fisher)  
Basis Ranch, Grover, Colo.  
Hayes, Stella (Mrs. Lynn Meloy)  
Globe, Ariz.  
Hemberger, Elizabeth (Pd. M.), Teacher  
1124 So. Gilpin, Denver, Colo.  
Hennes, Elizabeth (Pd. M.)  
(Mrs. Roy T. Adams)  
Box 372, Milford, Utah  
Henson, Julia A. (Mrs. Walter Fisk)  
Denver, Colo.  
Hesler, Lelia E. (Mrs. C. M. Morrow)  
Grand Valley, Colo.  
Hewett, Clara E. (see Class of 1914).  
Hiatt, Margaret. . . . . Denver, Colo.  
High, Maggie E. (Mrs. C. E. McMullin)  
Fruita, Colo.  
Hoffman, Ethel Angenette (Pd. M.) (see  
Class of 1914).  
Holmburg, Helen E. (Pd. M.)  
(Mrs. Chester L. Kaup)  
306 So. Grant St., Denver, Colo.  
Holmes, Agnes (see Class of 1914).  
Holt, Ethelyn.  
Homburger, Edward H. (A. B.)  
Supt. of Schools, Clinton, Okla.  
Hornberger, Etta M., Teacher  
507 W. 11th St., Pueblo, Colo.  
Hounson, Niota B.  
Hugh, Mrs. Anna Heilman (A. B.)  
3508A University Pl., Los Angeles, Calif.  
Hugins, Jane E., deceased.  
Hunt, Grace Ethel.  
Hunter, Helen (A. B.), Teacher  
630 E. 16th Ave., Denver, Colo.  
Hurd, Louise Emily, Stenographer  
2717 Gilpin St., Denver, Colo.  
Ingalls, Clarissa M. . . . . Manzanola, Colo.  
Jenkins, Katherine.  
Johnson, Axel E. (A. B.)  
1020 6th St., Greeley, Colo.  
Johnston, Earl Lynd (Pd. M.) (see Class  
of 1916).  
Johnston, Harry E. (Pd. M.) (see Class  
of 1914).  
Jones, Katherine  
(Mrs. Wallace Cunningham)  
Cliff, Colo.  
Kennedy, Lyrra Harriet (Pd. M.) (see  
Class of 1914).  
Kiefer, Edith Enola (Mrs. Johnny Mock)  
Dragon, Utah  
Kier, Mary E. . . . . Canon City, Colo.  
King, Etta M., deceased.  
King, Mrs. Grace B., Teacher  
1531 W. 23rd St., Los Angeles, Calif.  
Kirkpatrick, Cecil (A. B.)  
Kline, Edna L., Govt. Clerk  
513 13th St., Denver, Colo.  
Kreiner, Marie K. (see Class of 1914).  
Kroeger, Apolonia (Pd. M.)  
(Mrs. Alonza Edwards)  
Walden, Colo.  
Lackore, Lillian (Pd. M.) (see Class of  
1914).  
Laffea, Mrs. Dolly Hale (see Class of  
1919).  
Laird, Leah Florence, Teacher  
1425 Washington St., Denver, Colo.  
Lamb, Grace.  
Lamb, Sylvia.  
La Rose, Dora C. . . . . Utah  
Lawson, Anna.  
Leibo, Joseph (A. B.), deceased.  
Lester, Lucy E., deceased.  
Lichtenwalter, Viola (see Class of 1914).  
Liningar, Mrs. Louise.  
Lloyd, Nathaniel (Pd. M.) (see Class of  
1914).  
Lloyd, Sarah E. (see Class of 1919).  
Loss, Ruth E.  
Loud, Harriet. . . Colorado Springs, Colo.  
Lowrey, Mary (Pd. M.), Teacher  
2502 Hilyard, Berkeley, Calif.  
Lowery, Margaret Ruth (see Class of  
1914).  
Lucas, Ethel Estelle, Teacher  
Ft. Collins, Colo.  
Lycan, Cora E. (A. B.)  
1633 Pine St., Boulder, Colo.  
Lyle, Mrs. Mary (Pd. M.), Prin. of School  
Bradford School, Pueblo, Colo.  
Mabee, Mirite (A. B.)  
Kent Normal College, Kent, Ohio  
McClelland, Helen (Mrs. Jas. C. Nelson)  
Sperryville, Va.  
McCollum, Jessie Cecil (see Class of 1914)

McDonald, Elizabeth (A. B.)  
(Mrs. Robert Asa Chesnut)  
Box 161, El Centro, Calif.

McGee, Grace G.  
(Mrs. Roy L. Cadwallader)  
1014 26th Ave. No., Seattle, Wash.

McGettrick, Ada, H. S. Teacher  
80 Woodruff Apt., Salt Lake City, Utah

McGrew, Amy (Mrs. Amy De Long)  
427 Prospect St., Ft. Morgan, Colo.

McKee, Mabel (A. B.)  
(Mrs. F. O. Bradgon)  
Pengilly, Minn.

McMurtry, Florence (Pd. M.) (see Class  
of 1914).

Mahonee, Margaret. Glenwood Spgs., Colo.  
Mahonee, Theresa. .Glenwood Spgs., Colo.

Malloy, Evelyn H.  
Mangan, Clara B.  
Maroney, May.

Marris, F. M. . . . .Lafayette, Colo.

Marx, Myrtle, Teacher  
1334 Crown Hill Ave., Los Angeles, Cal.

Matson, Edna A., Teacher. . .Wiley, Colo.

Matthews, Lillian E.  
(Mrs. V. L. Glover)  
7338 Elm Ave., Maplewood, Mo.

Maxwell, Mildred E.  
(Mrs. A. S. Walter)  
1115 E. Evans Ave., Pueblo, Colo.

Meddins, Winfred C. P. (A. B.)  
H. S. Teacher  
3311 So. Tacoma Ave., Tacoma, Wash.

Meeker, Anicartha M. (Pd. M.)  
(Mrs. Anicartha Stannard)  
Ortez, Colo.

Merriam, Mrs. Minnie, Teacher  
1537 Elm Ave., Long Beach, Calif.

Metzger, Myrtle M., Teacher  
1760 Pennsylvania, Denver, Colo.

Miller, Agatha M. . . . .Pueblo, Colo.

Miller, Mabel (A. B.), Teacher  
Albion, Idaho

Miller, Nora R. (A. B.), H. S. Teacher  
Hartline, Wash.

Mills, Jessie M. (Pd. M.)  
(Mrs. Jessie M. Elofson)  
1104 Pontiac, Denver, Colo.

Mitchell, M. Alpha (Pd. M.) .Pueblo, Colo.

Moffatt, Marguerite A., Teacher  
814 E. Boulder St., Colo. Spgs., Colo.

Monical, Sara.  
Moon, Etta.

Moore, Neal D. (see Class of 1916).

Morgan, Jesse Robert (A. B.) (see Class  
of 1918).

Morrison, C. Delphine, Teacher  
53 Scott St., San Francisco, Calif.

Morrison, Nellie (Mrs. G. C. Deffke)  
Eaton, Colo.

Morse, Keith C. (A. B.) H. S. Teacher  
Sterling, Colo.

Motheral, Clara (Mrs. E. M. Francis)  
4748 41st St., San Diego, Calif.

Mulvaney, Gertrude Jennie.  
Mulvehill, Reta.

Munro, Edith. . . . .Colorado Springs, Colo.

Murphy, Katherine A., Teacher  
1055 Navajo St., Denver, Colo.

Muse, A. W. (Pd. M.) . . .Montrose, Colo.

Nash, Bessie A. (see Class of 1915).

Nelson, Armorer (Mrs. Albert Boeck)  
Boise, Idaho

Nelson, H. Gilbert (A. B.) (see Class of  
1918).

Newton, Vera E.  
(Mrs. Charles Neel Beckner)  
Eaton, Colo.

O'Brien, Mary Rose, Teacher  
Trinidad, Colo.

Ommanney, Katherine (see Class of 1914)

Orrison, Emma (Mrs. Emma Peterson)  
Deceased

Pavel, Matilda.  
Peeck, Hermina, deceased.

Pelton, Eveline  
912 Lafayette St., Denver, Colo.

Pemberton, Myrtle.

Peterson, Grace A. (see Class of 1918).

Phelps, Mabel.  
Phelps, Mattie (Mrs. Geo. Sinclair)  
215 Pontius Ave., Seattle, Wash.

Phillips, Zelma (Mrs. Frank J. Hess)  
Carl-Leon Hotel, Independence, Kans.

Pierce, Mrs. Anna Laurene.  
Plumb, Pearl (Pd. M.).

Pond, Clarence B. (see Class of 1916).

Porterfield, Lois Eveline  
807 No. C., Indianola, Ia.

Pulliam, Eulalee Isabelle. .Durango, Colo.

Putnam, Mrs. A. E. (Pd. M.), Co. Supt.  
(Mrs. Geo. McAdam)  
Maysville, Mo.

Ramsey, Carrie H., deceased.

Reid, Alice.

Retallack, Gladys, Teacher  
(Mrs. Clyde Wells)  
2216 Ogden St., Denver, Colo.

Rice, Marjorie (see Class of 1916).

Richey, William Earl (Pd. M.) (see Class  
of 1914).

Roberts, Imogene (Mrs. A. B. Cole)  
Dolores, Colo.

Rogers, Ivalon (see Class of 1916).

Rohr, Freida B. (Pd. M.) (see Class of  
1916).

Rohrer, Etta M. (Pd. M.), Teacher  
302 S. Silver St., Paola, Kans.

Ross, Nellie B., Teacher  
715 N. Main St., Ashland, Ore.

Rowell, Eva G. (Mrs. H. C. Lufkin)  
Steamboat Springs, Colo.

Ryan, Lafayette (A. B.) .Antonito, Colo.

Saltus, Charles N. (A. B.), Prin. H. S.  
Sterling, Colo.

Sawyer, Dora (see Class of 1915).

Saylor, Myrtle.

Scandrett, Ina. . . . .Telluride, Colo.

Schenck, Mary E. (A. B.), Phys. Director  
1515 Grant, Denver, Colo.

Schrader, Ruby, Teacher  
1234 Josephine St., Denver, Colo.

Schultz, Nettie H. (Pd. M.)  
(Mrs. Frank J. Scott)  
926 E. 6th St., Oklahoma City, Okla.

Seevers, Adalyn L. (A. B.)  
405 W. 12th, Pueblo, Colo.

Seller, Irene Marie  
(Mrs. Ira E. Tanner)  
Nederland, Colo.

Senecal, Marie (Pd. M.) (see Class of  
1915).

Sexson, John Amherst (A. B.)  
Supt. of Schools, Sterling, Colo.

Shaffer, Dorothy H. (see Class of 1917).

Shank, Iva P.

Shaw, Jesse (see Class of 1914).

Sheeder, Ruth.

Shirley, Hazeldean. . . . .Cortez, Colo.

Shuck, Anna L., Teacher  
Mt. Morrison, Colo.

Sibley, Mrs. Bella B. (Pd. M.) (A. B.)  
Teacher C. T. C.  
1717 10th Ave., Greeley, Colo.

Smith, Eula (see Class of 1916).

Smith, Mrs. Katherine (Pd. M.) (A. B.)  
Teacher  
Univ. of Nevada, Reno, Nevada

Smith, Lilly.

Smith, Nettie (see Class of 1918).

Smith, Rhoda Worthington  
(Mrs. William Francis Drea)  
115 Tyler Place, Colo. Springs, Colo.



Belden, Cora A., Teacher  
(Mrs. P. R. Belden)  
Wendell, Idaho

Belmar, Gertrude.

Benedict, Mrs. Cora Taylor (A. B.)  
(Mrs. Cora Burdick), Teacher  
R. F. D. No. 2, Cedar Falls, Ia.

Bennett, Elizabeth A. (Mrs. Wm. Pond)  
3015 Welton St., Denver, Colo.

Bentson, Hilder. . . . . Haxtun, Colo.

Berger, Evangeline (Pd. M.) (see Class  
of 1915).

Best, Mary W., Teacher  
Wolcott School, Denver, Colo.

Bickett, Mabel M., Teacher. . . . Ideal, Colo.

Biddle, Ruth, 901 Alta St., Longmont Colo

Biggs, Bertha (A. B.), H. S. Teacher  
1814 Webster, Omaha, Nebr.

Bigler, Lydia A., Student, D. U.  
3252 W. 30th Ave., Denver, Colo.

Black, Jane (see Class of 1915).

Blackmore, Lizzie R. (Pd. M.) (A. B.)  
Teacher  
1360 Logan, Denver, Colo.

Blain, Maude (Pd. M.) (see Class of  
1918).

Blanchard, Rae E. (Pd. M.) (see Class of  
1915).

Block, Beatrice W., Teacher  
1043 St. Paul St., Denver, Colo.

Boak, Fannie K.

Boring, Estella E.  
648 S. Grant, Denver, Colo.

Bowland, Edward W.  
Fajaro, Porto Rico

Bowland, Sue C. (Mrs. A. W. Newcomb)  
Carbondale, Colo.

Bowling, Beulah.

Boyd, Florence A.  
323 Main St., Cripple Creek, Colo.

Boyd, Marjorie, Teacher. . . . Saguache, Colo.

Boyle, Myrtle G., deceased.

Briney, Mabel V., Teacher  
626 N. Ross, Santa Ana, Calif.

Broad, Pearl L. (Mrs. Pearl B. Payne)  
Littleton, Colo.

Brooks, Byra. . . Fargo Apts., Pocatello, Ida.

Brooks, Ida Bell.

Brown, George Earl (A. B.)  
Supt. of Schools  
615 18th St., Greeley, Colo.

Brown, Gussie E. (see Class of 1916).

Brown, Ruth A. (Mrs. Harry A. Jenkins)  
114A West Latimer, Tulsa, Okla.

Browne, Mrs. Augusta Erwin, Teacher  
Box 214, Walsenburg, Colo.

Budd, Myrone D. . . . . Victor, Colo.

Budin, Christina  
312 Beech St., Sterling, Colo.

Bulger, Anna M. (Pd. M.)  
University Ave., Laramie, Wyo.

Bunner, Clara.

Burbridge, Edgar (see Class of 1916).

Burgin, William G. (A. M.), Teacher  
1616 Main St., Columbus, Miss.

Burke, Alice, Teacher. . . . . Harlan, Ia.

Burwick, Mrs. Della.

Bushnell, Ama E. Wolfe Hall, Denver, Col.

Butler, Effie (see Class of 1916).

Byron, Melvina (Pd. M.) (see Class of  
1915).

Cadwell, Ella. . . . . Colorado City, Colo.

Campbell, Helen M.  
423 W. 21st St., Pueblo, Colo.

Campbell, John M. (Pd. M.)  
Supt. of Schools, La Salle, Colo.

Campbell, LeRoy E.

Campbell, May C., Teacher  
423 W. 21st, Pueblo, Colo.

Carhill, Araminta. . . . . Burr Oak, Kans.

Carney, Florence. . . . . Boulder, Colo.

Carr, Minnie Pearl (A. B.)  
H. S. Teacher  
1803 10th Ave., Greeley, Colo.

Carr, Lulu V. (Mrs. Carl Marold)  
Saguache, Colo.

Chesnut, Robert Asa (A. B.)  
H. S. Teacher  
Box 161, El Centro, Calif.

Christy, Mary E. (A. B.)  
2800 Federal Blvd., Denver, Colo.

Churchill, H. V. (A. B.), Chief Chemist  
Aluminum Co. of Amer.,  
New Kensington, Pa.

Clough, Edwene (see Class of 1917).

Clough, Lillian D. (Pd. M.)  
(Mrs. Kingman H. Packard)  
1924 Ninth Ave., Greeley, Colo.

Cochran, Ethel (Pd. M.), deceased.

Cochran, L. Grace  
1515 11th St., Greeley, Colo.

Coil, Linnie D. (A. B.)  
1325 11th Ave., Greeley, Colo.

Coghlan, Kathleen D. . . . . Pueblo, Colo.

Connell, Mary V.  
1576 Lincoln St., Denver, Colo.

Connor, Bliss (Mrs. Harry McClintock)  
Richfield, Idaho

Cook, A. B. (see Class of 1918).

Cook, Gracia Adellia (Pd. M.)

Cook, Marguerite. . . . . Lawrence, Kans.

Cooper, Mrs. Julia Erwin, Teacher  
R. F. D. Box 82, Henderson, Colo.

Copeland, Berdella.

Cordova, Isabel (Pd. M.) (see Class of  
1915).

Corkish, Nellie (Pd. M.) (see Class of  
1917).

Cox, Essie May  
721 N. Wahsatch Ave., Colo. Spgs., Colo.

Cox, Gertrude (Mrs. Otto Thiede)  
Box 283, Burlington, Colo.

Craig, Ethel, Teacher. . . . . Evans, Colo.

Crain, Cordelia  
1924 B St., Bakersfield, Calif.

Crandall, Edith M.  
901 Alta, Longmont, Colo.

Crawford, Mabel. . . Colorado Springs, Colo.

Creaghe, Lola F.  
(Mrs. Arthur C. Gordon)  
Lamar, Colo.

Cross, Donzella.

Cross, Ila.

Crotty, Marie L. (A. B.), Teacher  
Los Angeles, Calif.

Culver, Ella P.  
Box 435, Colorado City, Colo.

Curran, Mabel. . . . . Long Beach, Calif.

Currie, Mary Neil, Teacher  
1576 Lincoln St., Denver, Colo.

Daly, Beulah. . . . . Denver, Colo.

Daniels, Winifred (Pd. M.) (see Class of  
1916).

Daugherty, Zona C. (Pd. M.) (see Class  
of 1915).

Davis, Zoe (Mrs. Finley O. Gose)  
Apt. 108, 1376 Pearl, Denver, Colo.

De Busk, Margaret.

Dewitz, Esther P., Teacher  
1738 Pearl St., Denver, Colo.

Dewitz, Gertrude, Teacher  
619 S. Main, Rocky Ford, Colo.

Dickerson, Ella  
R. F. D. No. 3, Box 41, Eaton, Colo.

Dickey, Helen M., Teacher  
638 Heliotrope Drive, Los Angeles, Calif.

Dille, Florence A. (Mrs. Truman J. Reed)  
Junction City, Kans.

Dillon, Bertha (see Class of 1916).

Dillon, Eva M. (Mrs. T. J. Fowle)  
857 So. Clarkson St., Denver, Colo.

- Donahue, Jessie, Teacher  
48 Block V., Pueblo, Colo.
- Doughty, Carrie L. . . . . Alamosa, Colo.
- Douglas, Elma I. (A. B.)  
Colorado Springs, Colo.
- Drake, Hattie.  
3541 Downing, Denver, Colo.
- Drake, Lily Mabel. . . . . Sedgewick, Colo.
- Drtina, Marie  
(Mrs. Geo. Stanley Pierce)  
Athens, W. Va.
- Dudley, Ruth (Mrs. Geo. Stanley Pierce)  
Athens, W. Va.
- Duling, Helen. . . . . Trinidad, Colo.
- Durbin, Augusta P. (A. B.)  
(Mrs. James I. Lockhart)  
1015 So. Union Ave., Pueblo, Colo.
- Elmer, Mrs. Mary Colgate, Teacher  
Greeley, Colo.
- Evans, Gertrude (Mrs. Oscar Wikoff)  
Box 36, Holyoke, Colo.
- Fallis, Edwina, Teacher  
637 Franklin, Denver, Colo.
- Fankhauser, Clara C. (Mrs. V. B. Tye)  
Casper, Wyo.
- Farrar, Myrtle (A. B.) . . . . Evanston, Wyo.
- Fashbaugh, Carrie E. (Pd. M.),  
Teacher, Evans, Colo.
- Fenton, Bess, deceased.
- Finch, Clarence A. (A. B.) . . . . Elko, Nevada
- Fisher, Ruth, deceased.
- Fitzmorris, Ray (see Class of 1917).
- Flansburg, Alda, Teacher  
707 N. Wahsatch Ave., Colo. Springs
- Fleckenstien, Felicia (Pd. M.) (see Class  
of 1918).
- Flynn, Katherine M. (A. B.)  
Red Cliff, Colo.
- Forsyth, Bessie (Pd. M.)  
537 Bross St., Longmont, Colo.
- Fortune, Agnes. . . . . Lamar, Colo.
- Franks, Helen M. (A. B.), deceased.
- Fuson, Bertha D. (Pd. M.) . . . . Topeka, Kans.
- Gaarder, Teola.
- Gallagher, Florence (Pd. M.)  
160 So. Mason St., Ft. Collins, Colo.
- Gardner, Ada E.  
West Court Hotel, Denver, Colo.
- Gardner, C. Pearl  
(Mrs. R. P. Tulles)  
West Court Hotel, Denver, Colo.
- Gibson, Alice H. (Mrs. Edw. Howell)  
121 E. Exposition, Denver, Colo.
- Gibson, Marguerite.
- Gibson, Myrtilia Ivanella (A. B.)  
(Mrs. Albert E. Tuck)  
720 Feld Ave., Detroit, Mich.
- Gilmore, Faith W. (Pd. M.) (see Class of  
1918).
- Gilpin-Brown, Mrs. Helen (A. B.)  
Dean of Women, C. T. C.  
3 Lafayette Apts., Greeley, Colo.
- Gilpin-Brown, Margaret  
(Mrs. Edgar F. Baumgartner)  
303 E. 7th St., Plainfield, N. J.
- Gormley, Anna  
1525 Logan St., Denver, Colo.
- Graham, Ludu D., Teacher  
515 Quincy, Pueblo, Colo.
- Gray, Bertha. . . . . Wray, Colo.
- Gray, Montello (A. B.), Teacher  
Kersey, Colo.
- Gray, Sarah A. (Pd. M.) (see Class of  
1915).
- Green, E. L. (A. B.)  
Green, Minnie L., Teacher  
Gunnison, Colo.
- Grewell, Mary Jane  
(Mrs. Richard E. Evans)  
c/o Tribune, Casper, Wyo.
- Griffin, Reba. . . . . St. Joseph, Mo.
- Griffiths, Elizabeth. . . . . Canon City, Colo.
- Grundy, Ella L. (Mrs. . . . .) . . . . . Utah
- Hadley, Jennie M.  
288 E. Yampa, Colo. Springs, Colo.
- Hagaman, Neva.
- Hall, Emma M. (Pd. M.), Teacher  
(Mrs. Emma May Taylor)  
Box 296, Delano, Calif.
- Hall, Lucy F.  
507 N. Tejon, Colo. Springs, Colo.
- Hall, Luella A., Teacher  
507 N. Tejon St., Colo. Springs, Colo.
- Hall, Pearl M. . . . . Dawson, N. M.
- Hall, Winifred R. . . . . Russell, Kans.
- Hammond, Mrs. Maude Carroll (Pd. M.)  
(see Class of 1916).
- Hanen, Alice (Mrs. Arthur Taylor)  
Fillmore, Calif.
- Hansen, Valborg, Teacher  
213 4th Ave., Longmont, Colo.
- Hanson, Martha (Mrs. Herbert Mann)  
Purcell, Colo.
- Harbison, Sophia Ann, Teacher  
1001 E. 10th St., Pueblo, Colo.
- Harbottle, John (A. B.) . . . . Greeley, Colo.
- Hawley, Olive J. (Mrs. Keith C. Morse)  
410 McKinley St., Sterling, Colo.
- Hecker, Mary M. (A. B.), Teacher  
1522 Penn., Denver, Colo.
- Hed, Emma E., Teacher  
1240 Jones Ave., Pueblo, Colo.
- Hedburg, Agnes (Mrs. Agnes Kitzmiller)  
2212 Downing St., Denver, Colo.
- Heizer, Nelle, Teacher  
Inspiration Point, Eugene, Ore.
- Herren, Ida (see Class of 1915).
- Hewitt, Clara E. (Pd. M.)
- Hilbert, Ethel.
- Hockett, Emily.
- Hoffman, Ethel A. (A. B.), Teacher  
Albion, Idaho
- Holmberg, Alva E.  
424 S. 5th Ave., Pocatella, Ida.
- Holmburg, Frances E.  
217 Langdon, Madison, Wis.
- Holmes, Agnes (Pd. M.) . . . . . Buttes, Colo.
- Horton, Mary E.  
Hotchkiss, Bessie.
- House, Hazelle L. (see Class of 1917).
- Howe, Bonna. . . . . Colo. Springs, Colo.
- Ingle, Ethel M. (see Class of 1915).
- Ingmire, Jessie  
923 6th Ave., Longmont, Colo.
- Jackman, Lena (Pd. M.), Teacher  
18 Cannon St., Poughkeepsie, N. Y.
- Jackson, Carrie E.  
(Mrs. Clifford Davidson)  
275 S. Franklin, Denver, Colo.
- Jansson, Esther, Teacher  
1517 11th Ave., Greeley, Colo.
- Jenkins, Vivian E. . . . . Severance, Colo.
- Johnson, Grace Irene (Mrs. W. R. West)  
Simla, Colo.
- Johnson, Lillian  
1908 No. Tejon St., Colo. Springs, Colo.
- Johnston, Harry E. (A. B.) . . . . Evans, Colo.
- Jones, Alice J. (A. B.)  
630 Roosevelt Ave., Loveland, Colo.
- Jones, Ruth M. (see Class of 1915).
- Joy, Nellie. . . . . 1330 9th St., Greeley, Colo.
- Joyce, Mary E. (Mrs. W. O. Hansford)  
Sugar City, Colo.
- Judd, Effa E. . . . . Manzanola, Colo.
- Keener, Goldie.
- Keirn, Clara M.  
1920 So. Penn. St., Denver, Colo.
- Keiser, Jennie  
2923 W. Pikes Peak, Colo. Spgs., Colo.
- Kellerman, Marguerite, deceased.
- Kendel, Elizabeth H. (A. B.),  
Teacher C. T. C.  
1617 10th Ave., Greeley, Colo.



- Kendel, J. C. (A. B.), Teacher C. T. C.  
1921 8th Ave., Greeley, Colo.
- Kennedy, Lyrra Harriet (A. B.)  
H. S. Teacher  
852 D Ave., Douglas, Ariz.
- Keyes, Margaret Joy (A. B.)  
Teacher C. T. C.  
1615 11th Ave., Greeley, Colo.
- Kiker, Stella..240 S. 5th St., Raton, N. M.
- King, Mrs. Ellen (Pd. M.), Teacher  
320 W. 10th St., Pueblo, Colo.
- Kirk, D. Estelle (Pd. M.)..Pueblo, Colo.
- Klein, Caddie, Teacher..Box 5, Gill, Colo.
- Knight, Marian (Pd. M.)  
4690 Newton St., Denver, Colo.
- Knous, Miriam  
2000 8th Ave., Greeley, Colo.
- Konkel, Olive.....Greeley, Colo.
- Koster, Hattie, Teacher.....Rico, Colo.
- Kreiner, Marie (Pd. M.)  
3554 Marion St., Denver, Colo.
- Kucera, Emily, Teacher  
R. F. D. 4, Box 90, Shawnee, Okla.
- Lackore, Lillian M. (A. B.), H. S. Teacher  
1020 10th Ave., Greeley, Colo.
- Lamont, Margaret (Pd. M.).
- Lane, Florence M. (A. B.), Teacher  
Glenaire Apts., Denver, Colo.
- Lane, Loretto M., Teacher  
(Mrs. E. G. Chappelow)  
Ordway, Colo.
- Larson, Marvel.
- Laubmann, Louise  
(Mrs. William Ioan Jones)  
220 W. Evans St., Pueblo, Colo.
- Laudmann, Mary (Pd. M.).
- Leckenby, Grace  
(Mrs. Otis Elwin Smith)  
Helen Apts., No. 36, Omaha, Nebr.
- Lee, Eva Grace (Pd. M.).
- Leonard, Margaret.
- LeVahn, Esther.
- Libby, Jeanette M. (see Class of 1918).
- Lichtenwalter, Viola (Pd. M.), Teacher  
942 Pine St., Boulder, Colo.
- Linville, Mrs. Mary E. Johnson,  
Housewife  
Motor Route B, Sterling, Colo.
- Lloyd, Josephine.
- Lloyd, Nathaniel (Pd. M.)  
Andes Copper Min. Co., Potrerillos  
Casilla, No. 230, Antofagasta, Chile,  
South America.
- Locker, Vnette.....Denver, Colo.
- Lockhart, James I. (Pd. M.) (see Class of  
1918).
- Loban, Helen  
823 S. 4th St., Canon City, Colo.
- Long, Alta.
- Long, May.
- Lott, Clara D....1637 Wolff, Denver, Colo.
- Lowe, Grace E. (Pd. M.) (see Class of  
1915).
- Lowery, Mrs. Mary T. (A. M.).
- Lowery, Margaret Ruth (A. B.)  
2418 Woodlawn Ave., Chicago, Ill.
- Lyon, Marguerite, Teacher  
(Mrs. Marguerite Martin)  
Box 296, Longmont, Colo.
- McBurney, Belle.
- McClintock, Mrs. Bessie T., Saleslady  
1839 Humboldt St., Denver, Colo.
- McCullum, Jessie C. (Pd. M.)  
(Mrs. J. Edgar Rabb)  
150 Oak St., Butler, Pa.
- McCorkle, Lulu V.
- McGillivray, Harriet A. (Pd. M.).
- McKay, Ethel.
- McKee, Gladys V....Colo. Springs, Colo.
- McKelvey, Eva M. (Pd. M.)  
H. S. Teacher  
2842 York St., Denver, Colo.
- McKinnie, Shirley (Mrs. Neil Wilkinson)  
Winterset, Iowa
- McLain, Lucy N. (Pd. M.) (see Class of  
1915).
- MacLeod, Bernice (see Class of 1918).
- McLin, Alma.
- McMahana, L. Herman, Violinist  
1232 11th St., Santa Monica, Calif.
- McMurtry, Florence (A. B.), Teacher  
Tahlequah, Okla.
- McNair, Nelle..1522 Penn., Denver, Colo.
- McRorey, Laura.....Trinidad, Colo.
- Malles, Nelle  
2001 E. 2nd Ave., Durango, Colo.
- Mallon, Vera Elizabeth (A. B.)  
(Mrs. Earl O. Linger)  
Hooper, Colo.
- Maloney, Margaret A.
- Marker, Edith (Mrs. Joseph A. Akers)  
7 F. A., Camp Taylor, Ky.
- Markham, Verdi (Mrs. G. H. Center)  
Lamar, Colo.
- Marteeny, Ethel Blanche.
- Martin, Carrie.428 Grant, Loveland, Colo.
- Marvin, Grace H. (Pd. M.) (see Class of  
1918).
- Mater, Clara F.
- Matthews, Anna H. (A. B.).
- Meyers, Bertha, Teacher  
604 So. Meldrum, Ft. Collins, Colo.
- Meyers, Gladys.
- Miller, Adolphus (Pd. M.).
- Miller, Anna  
737 E. 16th Ave., Denver, Colo.
- Miller, Geneva.....Denver, Colo.
- Miller, L. W. (A. B.).
- Miller, Loretta K., Teacher..Butte, Mont.
- Miller, Mrs. Mabel G., Teacher  
2211 Washington Ave., Ogden, Utah
- Mitchell, Lula Mae (see Class of 1915).
- Moler, Levita, deceased.
- Monfort, Warren (see Class of 1915).
- Moore, C. E. (see Class of 1917).
- Moore, Marie.  
822 Carson Ave., La Junta, Colo.
- Moore, Neal D. (Pd. M.) (see Class of  
1916).
- Mortensen, L. H. (Pd. M.)..Sanford, Colo.
- Moseley, Eunice (see Class of 1915).
- Moseley, F. Y. (A. M.)  
523 So. Grand Ave., San Pedro, Calif.
- Moses, Mathilda R., Missionary  
Cawnpore, India
- Mulnix, Sara S. (Pd. M.), Teacher  
215 W. Evans Ave., Pueblo, Colo.
- Munson, Mary  
330 Poplar St., Sterling, Colo.
- Murchison, Mina.....Louviers, Colo
- Murphy, Cora Elizabeth  
Walsenburg, Colo.
- Nash, Bessie A. (Pd. M.) (see Class of  
1915).
- Nash, Katherine (Pd. M.).
- Needham, Mrs. Kate S., Teacher  
939 W. 7th, Port Angeles, Wash.
- Neill, Mrs. Myrtle Wilson  
(Mrs. C. T. Neill)  
1715 11th Ave., Greeley, Colo.
- Neitzel, Olga (Pd. M.)  
(Mrs. J. Hitchcock)  
Havelock, Nebr.
- Nicholas, Queen.
- Noce, M. C. Lillian (see Class of 1917).
- Noonan, Edna  
374 So. Logan, Denver, Colo.
- Noonan, Urbana  
374 So. Logan, Denver, Colo.
- Nordstrom, Florence  
(Mrs. Roger R. Robertson)
- 4208 Westminster St., El Paso, Tex.
- Nye, Marie Ellen (Mrs. Bert Lawson)  
Lucerne, Colo.

O'Brien, Camilus E.  
O'Brien, Catherine (Mrs. M. J. Peterson)  
Haigler, Nebr.

Off, Frieda.  
Olds, Hazel, Teacher.....Atwood, Colo.  
Olson, Ellen, deceased.  
Ommanney, Katherine (Pd. M.) (A. B.)  
Teachers C. T. C. Greeley, Colo.

Park, Mary, deceased.  
Patton, Elizabeth, Teacher  
Congress Hotel, Pueblo, Colo.  
Peak, Mrs. Lottie Borum  
1024 E. 18th Ave., Denver, Colo.  
Pease, Ethel (Mrs. C. C. Grover)  
Winslow, Ariz.  
Peery, Clara M. (see Class of 1918).  
Penberthy, Edith.....Greeley, Colo.  
Phillips, Stowe Sylvester (A. B.)  
Co. Supt. of Schools  
507 So. Main St., Rocky Ford, Colo.  
Pierce, Mrs. C. W. (see Class of 1915).  
Pound, John L. (Pd. M.) (see Class of  
1915).  
Preston, C. W. (A. B.), Prin. of School  
Blackstone Apts., Los Angeles, Calif.  
Prince, A. H., Prin. of School  
Linnton, Ore.  
Prince, Mrs. Carrie M. (Pd. M.) (see  
Class of 1917).  
Pritchard, Hazel.  
Puntunney, Harriet.....Oxnard, Calif.  
Ramsdell, Catherine.  
Reichelt, Vera E. (Pd. M.), Teacher  
1608 Poplar St., Denver, Colo.  
Reno, Stella  
1240 C St., San Diego, Calif.  
Repetschnig, Elizabeth  
Box 353, Victor, Colo.  
Richardson, Georgia D.  
Santa Barbara, Calif.  
Richey, William Earl (A. B.)  
Supt. of Schools, Burlington, Colo.  
Riddel, Floy.  
Riddle, Nora, Teacher  
732 Teller, Grand Junction, Colo.  
Riley, Bertha M.  
Ritter, Garnett, Teacher  
721 W. 11th St., Pueblo, Colo.  
Roberts, Prudence Beverly...Greeley, Colo.  
Roche, H. E.....Las Animas, Colo.  
Rockwell, R. E. (A. B.).  
Roddy, Gary.  
Rodgers, Elsy (Mrs. Ralph Gormely)  
405 Custer St., Laramie, Wyo.  
Rosen, Astrid Marie.....Brooklyn, N. Y.  
Ross, Jeanette.  
Rudolph, Elizabeth  
3441 W. 39th Ave., Denver, Colo.  
Russell, S. Alice (see Class of 1918).  
Rutherford, H. H. (Pd. M.)  
Prin. of School, Lewis, Colo.  
Ryan, Frances.  
Ryan, Laura  
1828 N. Corona, Colorado Springs, Colo.  
Saylor, Florence (Pd. M.).  
Schayer, Fannie (Mrs. Morris Lazarus)  
474 8th Ave., San Francisco, Calif.  
Schisler, Pearle  
3925 Sheridan Blvd., Denver, Colo.  
Schultz, Mary D., Teacher  
R. F. D. No. 2, Arvada, Colo.  
Sease, Susie (Mrs. John Cox)  
Aztec, New Mexico  
Sechrist, Bernice (Mrs.).  
Secrest, Florence.....Palisade, Colo.  
Shacklet, Estella (Pd. M.) (see Class of  
1915).  
Sharp, Mable.....Ashton, Colo.  
Shaw, Jesse R. (Pd. M.) (A. B.)  
Ault, Colo.

Shaw, L. T. (A. B.).  
Shultz, Lila J.....Greeley, Colo.  
Smpkins, Florence  
1345 N. Weber, Colo. Spgs., Colo.  
Sinclair, Myra A. (see Class of 1917).  
Skones, Marion H. (Mrs. R. K. Candlin)  
No. Sugar Corp., Mason City, Ia.  
Smith, Eula A. (Pd. M.), Teacher  
1753 Appleton St., Long Beach, Calif.  
Smith, Juanita L. (Mrs. James Kelly, Jr.)  
R. F. D., Box 30, Golden, Colo.  
Spicer, Mabel.  
Stannard, Emily M. (see Class of 1917).  
Starr, Bertha M. (see Class of 1917).  
Starr, Mildred B.  
100 Morningside Drive, New York City  
Stenhouse, Rilla Mae, Teacher  
2960 W. Denver Pa., Denver, Colo.  
Stevenson, Olivia  
Stewart, Marguerite  
(Mrs. T. Myrill Ross)  
33 Ivy Pl., Colorado Springs, Colo.  
Stewart, Marjory (Mrs. David C. Dudley)  
315 Columbine St., Denver, Colo.  
Strack, Caroline (Pd. M.)  
Prin. of School  
215 W. Evans, Pueblo, Colo.  
Strickler, C. S. (A. B.).  
Strock, Mildred.  
Strubble, Nina (Pd. M.), Teacher  
125 No. 8th, Lansing, Mich.  
Stump, Minnie, Teacher  
444 So. 4th St., Raton, N. M.  
Suiter, R. W. (see Class of 1918).  
Sullivan, Mary S. (Pd. M.), Teacher  
524 Ninth Ave., Greeley, Colo.  
Swallow, Grace M. (Pd. M.)  
Student C. T. C.  
1744 7th Ave., Greeley, Colo.  
Swanzy, Linah (Pd. M.).  
Swart, Katherine, Teacher  
Tonopah, Nevada  
Swisher, Belle (A. B.), H. S. Teacher  
Seattle, Wash.  
Switzer, Ella (Pd. M.) (see Class of 1916)  
Sword, Mrs. Flora A.  
Box 205, Laramie, Wyo.  
Tarr, Eldora, Civil Service  
405 21st St., Denver, Colo.  
Taylor, Esther.  
Teller, Maude.....Oklahoma City, Okla.  
Thompson, Daisy.  
Thurman, Geneva Blair, Teacher  
816 4th Ave., Cedar Rapids, Ia.  
Tiffin, Mary.  
Timpte, Caroline, deceased.  
Toothaker, Olive.....Palisade, Colo.  
Tresize, Ethel I. (Pd. M.)  
(Mrs. Geo. H. Wheatly)  
Boulder, Colo.  
Tschiche, Anna, Teacher  
3863 Winona Ct., Denver, Colo.  
Tuggy, Harriet E. (Pd. M.) (see Class of  
1915).  
Turner, Etheline, Teacher  
321 W. 5th St., Pueblo, Colo.  
Turney, Ruby, Govt. Clerk  
Corona, Calif.  
Tyler, Jennie (A. B.)  
Grand Valley, Colo.  
Unger, Egerton I. (Pd. M.).  
Unger, John C. (see Class of 1917).  
Vanderlip, Lorena Belle (Pd. M.)  
(Mrs. J. A. Kellier)  
(see Class of 1915)  
Vickers, Edith M., Teacher  
1717 High St., Denver, Colo.  
Walk, Olive  
700 So. 9th St., Rocky Ford, Colo.  
Walter, Gladys D., Teacher  
1001 E. 10th St., Pueblo, Colo.

Walter, Mary E. (Mrs. Mary Oppie) (see Class of 1918).  
 Watson, Margaret A. (Pd. M.)  
 (Mrs. M. W. Foote)  
 c/o G. P. Watson, R. R.,  
 Greeley, Colo.  
 Week, Helen A. (Pd. M.) (see Class of 1916).  
 Wegerer, Mary C. (Pd. M.) (see Class of 1915).  
 Wegerer, Verona M. (Pd. M.) (see Class of 1915).  
 Weigl, August, Prin. of H. S.  
 Ramona, Okla.  
 Weiser, Grace, Teacher  
 Blackfoot, Idaho  
 Welch, Lyda, Teacher. . . . . La Salle, Colo.  
 Welker, Franklin C. (A. B.).  
 Werbin, Lillian.  
 Whitehurst, Ruth E. . . . . Boston, Mass.  
 Whitlock, Lulu M.  
 4880 King St., Denver, Colo.  
 Wilder, George (see Class of 1916).  
 177 10th St., Idaho Falls, Idaho  
 Wilder, Mrs. Winifred  
 Willard, Sadie E. (Pd. M.) . . Pueblo, Colo.  
 Willard Estella M. (Pd. M.)  
 Pueblo, Colo.  
 Williams, Marguerite, Teacher  
 510 N. Grand Ave., Pueblo, Colo.  
 Wilson, Alice I. (Pd. M.) (see Class of 1915).  
 Wimmer, Elva.  
 Wishard, Mary F.  
 2429 W. 37th Ave., Denver, Colo.  
 Woodruff, Hazel, Teacher. . . Greeley, Colo.  
 Work, Frances, Teacher  
 906 W. 13th St., Pueblo, Colo.  
 Workman, Mildred. . . . . Greeley, Colo.  
 Worley, Victor E. (Pd. M.) (see Class of 1915).  
 Wright, Elizabeth M.  
 Wright, Pearl (see Class of 1917).  
 Wurtz, Ora C., Teacher  
 (Mrs. Sherman F. Lyon)  
 Box 487, Yuma, Ariz.  
 Yardley, Hattie F. (see Class of 1918).  
 Ydren, Nellie  
 (Mrs. Harry C. Jacobson)  
 1014 4th St., Greeley, Colo.  
 Young, Edna A. (Mrs. Geo. S. Lake)  
 Tribune Apt., No. 2, Cheyenne, Wyo.  
 Zahm, Gertrude.  
 Zilar, John I. (Pd. M.) (see Class of 1916).  
 Zingg, O. C. (A. B.) . . . . . Holyoke, Colo.

CLASS OF 1915

Adams, George (see Class of 1917).  
 Adams, Mrs. Susan Gale (A. B.)  
 Housekeeper  
 Apt. 7, 4816 No. Sawyer, Chicago, Ill.  
 Adams, Vera (A. B.)  
 (Mrs. John C. Johnson)  
 Gunnison, Colo.  
 Addleman, Minnie B. (A. B.)  
 2035 E. 18th Ave., Denver, Colo.  
 Alborn, Laura Gretchen  
 (Mrs. O. T. Carpenter)  
 1431 Columbine, Denver, Colo.  
 Allen, Richard (A. B.) (see Class of 1916)  
 Allsworth, Brinard H. (Pd. M.) (see Class of 1918).  
 Anderson, Anna L., Teacher  
 303 Garden Ave., Coeur D'Alene, Idaho  
 Anderson, Esther (Mrs. Albin B. Carlson)  
 R. A. Box 22, Kersey, Colo.  
 Anderson, Myrtle E. (A. B.)  
 123 N. Weber, Colorado Springs, Colo.

Anderson, Virginia Frances  
 (Mrs. Maurice G. Stubbs)  
 315 13th St., Columbus, Ga.  
 Andrews, Sadie. . . . . Pomona, Calif.  
 Angel, Byrda.  
 Arble, Maurine  
 Babcock, Elizabeth B. (A. B.)  
 726 4th Ave., Trinidad, Colo.  
 Baker, Frances  
 (Mrs. George P. Woodbury)  
 1016 12th Ave., Greeley, Colo.  
 Baker, Ruth, Teacher  
 (Mrs. Francis Marshall Andrews)  
 Bridgewater, Mass.  
 Baldauf, Edna. . . . . Minturn, Colo.  
 Barbour, Ethel M.  
 Barker, Myrtle (Mrs. D. L. Taggart)  
 122 So. Institute St.,  
 Colorado Springs, Colo.  
 Barkley, Nell M. (see Class of 1916).  
 Barnard, Floy. . . . . Johnstown, Colo.  
 Barnard, Nell.  
 1313 9th Ave., Greeley, Colo.  
 Bartlett, Mary.  
 Bateman, Kathryn, X-Ray Operator  
 Momovia, Calif.  
 Baxter, Isabelle.  
 Beamer, Alice E.  
 19th and East, Golden, Colo.  
 Beattie, Jesse F. (A. B.), H. S. Teacher  
 Montrose, Colo.  
 Beck, Lillian (Pd. M.) (see Class of 1916).  
 Beck, Lulu Mae (Pd. M.) . . . . Eaton, Colo.  
 Bedford, Mrs. Lora M.  
 Bell, Clara Elizabeth  
 (Mrs. J. H. Humphries)  
 Box 372, Holly, Colo.  
 Bennett, Orpha.  
 Benton, Mrs. Carrie S. (Pd. M.)  
 (Mrs. Spencer Turner)  
 1850 12th Ave., Greeley, Colo.  
 Benton, Lila (Pd. M.) (see Class of 1917).  
 Berger, Evangeline (A. B.).  
 1106 Steele St., Denver, Colo.  
 Bernard, C. R. (A. B.).  
 Bertolett, Effie M.  
 Black, Jane (Pd. M.)  
 (Mrs. J. W. Wightman)  
 Parthena Apt., No. 4, Knoxville, Tenn.  
 Blaine, William D. (A. B.)  
 1103 E. 5th, Pueblo, Colo.  
 Balir, Margaret A.  
 (Mrs. J. R. Oughtred)  
 Galeton, Colo.  
 Blanchard, Rae E. (A. B.)  
 Teacher C. T. C.  
 1717 10th Ave., Greeley, Colo.  
 Botkin, Mabel, H. S. Teacher  
 718 W. 2nd St., El Dorado, Kans.  
 Bourn, Mrs. Frieda E. Z. (Pd. M.)  
 Teacher  
 Light, Cochise Co., Ariz.  
 Brady, Emma C.  
 719 Clark St., Evanston, Ill.  
 Bragg, Bernice E. (Mrs. Fred Ripley)  
 Wanatche, Wash.  
 Briggs, Agnes, Teacher  
 716 16th St., Greeley, Colo.  
 Briggs, Lola Lee, Teacher  
 821 Main St., Delta, Colo.  
 Brown, Alta, Teacher  
 610 N. 7th, Garden City, Kans.  
 Brown, Edith L., Teacher  
 Ft. Collins, Colo.  
 Brown, Grace (see Class of 1917).  
 Bruce, Nellie H. (see Class of 1918).  
 Bryant, Mary Edna (A. B.)  
 Supervisor Correspondence Division  
 L-M Bldg., Washington, D. C.  
 Burchsted, Anna (Mrs. J. W. Gern)  
 Littleton, Colo.

Burchsted, Laura N., Teacher  
507 Lake St., Ft. Morgan, Colo.

Burdick, Madonna, Teacher  
1339 Clayton St., Denver, Colo.

Burns, T. E. (A. B.), Supt. of Schools  
Meeker, Colo.

Bush, Minnie M. (A. B.), Teacher  
1014 18th St., Greeley, Colo.

Butler, Bernice B. (see Class of 1918).

Butler, Maud.

Byron, Melvina (A. B.).

Cairns, Agnes.

Calloway, Esther Alma, Teacher  
3814 Peters Ave., Sioux City, Ia.

Camfield, Gladys M.  
(Mrs. Gladys Hufty)  
Camfield Court, Apt. 4, Greeley, Colo.

Camp, Myrtle (Pd. M.)  
(Mrs. Myrtle Camp Allen)  
(See Class of 1918)  
Allen, Mrs. Myrtle Camp  
Campbell, Hazel, . . . . . Louisville, Colo.

Campbell, John M. (A. B.) (see Class of  
1914).

Campbell, Ruth C. E., Asst. Librarian  
1453 Caylord St., Denver, Colo.

Cannon, Lucie.

Carne, Mildred C. . . . . Arvada, Colo.

Carson, Jennie (see Class of 1916).

Cary, Sue M. (Mrs. Paul J. Mitchell) (see  
Class of 1916).

Cassill, Marguerite, Clerk  
W. 123 4th Ave., Spokane, Wash.

Center, G. H. (A. B.), Dairyman  
Lamar, Colo.

Chamberlin, Julia M. (Mrs. W. A. Gowdie)  
Hooper, Colo.

Chase, Belle.

Christopherson, Selma (Pd. M.)  
(Mrs. R. I. Rosenfield)  
316 Brownlee Ave., Las Cruces, N. M.

Church, Muriel (Mrs. Melvin Morgan)  
Borvie, Ariz.

Clarke, Alta, Teacher  
611 G St., Salida, Colo.

Clarkson, Amelya.

Clough, Edwene (Pd. M.) (see Class of  
1917).

Clune, Helen, Teacher. . . . . Leadville, Colo.

Cochran, Ethel (A. B.), deceased.

Cole, Lavinia A., Teacher  
320 E. 9th St., Cheyenne, Wyo.

Conner, Minnie (Pd. M.) (see Class of  
1916).

Cordova, Isabel (A. B.), H. S. Teacher  
947 Nickelson Ave., Trinidad, Colo.

Coughlan, Kathleen (Pd. M.).

Craig, Dora (Pd. M.), Teacher  
665 Delaware, Denver, Colo.

Crawford, Alice, Teacher  
Lone Tree School, Lucerne, Colo.

Crawford, Grace, Teacher  
Greeley, Colo.

Cressy, Maude (Pd. M.), Teacher  
819 E. 8th St., Pueblo, Colo.

Crie, Robert R.  
1648 8th Ave., Greeley, Colo.

Curran, Catherine Anna, deceased.

Daniels, Mildred (Pd. M.), Teacher  
Florence, Colo.

Darling, Mary. . . . . Juniata, Nebr.

Darnell, Bernice  
701 Sycamore St., Rocky Ford, Colo.

Daugherty, Zona C. (A. B.).

Davis, Mrs. Anna B.  
3106 W. 32nd Ave., Denver, Colo.

Davis, Inda Browne  
University Park, Colo.

Davis, Reginald S. (see Class of 1916).

Davis, Thirza. . . . . Arvada, Colo.

Dehoney, Warren. . . . . New Raymer, Colo.

De Silvestro, Minnie.

Dewey, Cora P., Teacher  
Box 981, Bremerton, Wash.

Dillon, Mary. . . . . Oakview, Colo.

Douglas, Wilhelmina (A. B.), Teacher  
Howes St., Ft. Collins, Colo.

Driscoll, Edna.

Duboff, Anna.

Duffee, Martha  
1729 S. Logan St., Denver, Colo.

Dumke, Emma Charlotte (A. B.)  
Teacher  
403 N. Linn St., Iowa City, Iowa

Durham, Hazel (Mrs. Earl Murphy)  
Loma, Mesa Co., Colo.

Eichel, Mrs. Lucy, Teacher  
Fountain, Colo.

Elder, Helen I.

Ellis, Florence Hope.

Ellis, Grace Irene (Mrs. M. F. Todt)  
Mesa, Ariz.

Elmer, Mrs. Mary Colgate (Pd. M.)  
Teacher  
1303 4th St., Greeley, Colo.

Elston, Mary K. (Pd. M.).

Ericson, Singne  
1053 Chipeta, Grand Junction, Colo.

Evans, Pearl  
725 Jefferson Ave., Loveland, Colo.

Eyer, Myrtle, Teacher  
307 W. Abriendo, Pueblo, Colo.

Farmer, George E. (see Class of 1918).

Farr, Ruth (see Class of 1917).

Farrell, Mayme  
235 W. Carr St., Cripple Creek, Colo.

Filkins, Grace (Pd. M.) (A. B.)  
1009 11th Ave., Greeley, Colo.

Finch, Lester R. (Pd. M.), Farmer  
Greeley, Colo.

Fitz, Theophilus (A. B.), Teacher  
The Bryson Apts., Los Angeles, Calif.

Flaherty, Mrs. Mary.

Flynn, Mary E. . . . . Red Cliff, Colo.

Foote, Amy Rachel (A. B.), Teacher  
Aurora, Colo.

Ford, Mildred E., Teacher  
1571 Ogden St., Denver, Colo.

Foulk, Chas. M. (see Class of 1919).

Frasier, Alice M. (see Class of 1919).

Frerker, Agnes.

Friedman, John L.  
20 Baldwin Court, Pontiac, Mich.

Futvoye, Margaret G.

Gaines, Elizabeth Louise (Pd. M.)  
Teacher  
1317 Court, Pueblo, Colo.

Gibson, May (Pd. M.).

Gilpin-Brown, Frances  
929 Pearl St., Denver, Colo.

Glazier, Winifred G. (see Class of 1916).

Gleasman, Lillian, Teacher  
1630 8th Ave., Greeley, Colo.

Goodale, Frances (Pd. M.), Teacher  
412 W. 2nd St., Santa Ana, Calif.

Gookins, Mrs. Clara (see Class of 1916).

Gordon, Ethel I., Teacher  
1629 N. Nevada Ave., Colo. Spgs., Colo.

Gossage, Thela (Pd. M.) (see Class of  
1919).

Gothard, Eula (Mrs. C. C. Montgomery)  
De Beque, Colo.

Gray, Sarah A. (A. B.).

Grisier, Orville J. (Pd. M.).

Guanelle, Ethel V. . . . . Julesburg, Colo.

Haines, Alice (Pd. M.)  
607 Minnequa Ave., Pueblo, Colo.

Hall, Ermine.

Hammel, Anna.

Hammers, George M. (A. B.)  
Gunnison, Colo.

Hampton, Alice, Student  
847 E. 17th Ave., Denver, Colo.

Hanson, Mary J., Teacher  
Matheson, Colo.

Hardy, Maria.

Harris, Alma C. (Mrs. S. C. Short)  
Aspen, Colo.

Harrison, Maude.

Hart, Dorothea (Pd. M.) (see Class of 1918).

Hatch, Elizabeth  
(Mrs. Lawrence Creiley)  
Golden, Colo.

Hattenhauer, Jessamine, Teacher  
Morrison, Colo.

Haverty, Estella  
814 W. 11th, Pueblo, Colo.

Hazelbaker, Laura A., Govt. Clerk  
Apt. 36, The Mansfield, 1730 M St.,  
Washington, D. C.

Heath, Edith V. (A. B.)  
807 17th St., Greeley, Colo.

Hennes, Olive (Pd. M.) (see Class of 1916).

Herron, C. M. (Pd. M.) (see Class of 1916).

Herren, Ida (Pd. M.)  
(Mrs. Edward Drueger, Jr.)  
Buena Vista, Colo.

Hersum, Evelyn (see Class of 1916).

Heyduk, Esther.....Minturn, Colo.

Hibner, D. M. (A. M.), Supt. of Schools  
Safford, Ariz.

Hicks, Bertha, Teacher  
2128 Pine, Everett, Wash.

Higgins, Thomas C., deceased.

Hise, Henry L.

Hogue, Rose, Teacher  
Salida, Colo.

Holmes, Anne Henrietta (see Class of 1918).

Hooker, Arline  
912 So. Union Ave., Pueblo, Colo.

Hopkins, Wallace (see Class of 1917).

Horn, Ilda.....Akron, Colo.

Humberstone, Myrtle, Teacher  
Wray, Colo.

Hurley, W. R. (Pd. M.) (see Class of 1917).

Hutchison, Alodia (Pd. M.).

Ingle, Ethel M. (Pd. M.) (A. B.)  
(Mrs. Will Neal)  
c/o Sugar Factory, Longmont, Colo.

Irving, Olive M.....Cripple Creek, Colo.

Jocelyn, Emma C.  
2123 Pikes Peak, Colo. Springs, Colo.

Johnson, Irene, Teacher. Loveland, Colo.

Johnson, Rita (Mrs. Jas. Balagna) (see Class of 1916).

Jones, Avis S. (A. B.)  
(Mrs. Donald S. Tucker)  
10 Summit Road, Wellesley, Mass.

Jones, Jeanette (Mrs. John Stark)  
R. No. 1, Ogden, Utah

Jones, Mary E. (Pd. M.), Teacher  
Fountain, Colo.

Jones, Ruth M. (Pd. M.)  
(Mrs. Herbert Son)  
La Salle, Colo.

Keener, Bertha L.  
4220 Raleigh St., Denver, Colo.

Keightley, Margareta  
(Mrs. Gunner Gutormson)  
500 Block Broadway, Pueblo, Colo.

Keiper, Bertha, Teacher  
2130 W. 38th St., Los Angeles, Calif.

Kelly, Chalice M., Teacher  
1917 W. Congress St., Chicago, Ill.

Kenehan, Katherine (see Class of 1916).

Kerr, Esther (Pd. M.) (Mrs.)

Keys, Elizabeth.....Canon City, Colo.

King, Nettie M.

Kiser, Freda.

Klopfenstein, Emma  
530 S. 2nd St., Victor, Colo.

Knous, Lucille.....Greeley, Colo.

Knous, Mildred.....Greeley, Colo.

Kroeger, Margaret, Teacher  
1620 W. 3rd Ave., Durango, Colo.

Druh, Sara, Teacher  
Plateau City, Colo.

Kyle, John Eldon, Prin. H. S.  
Orchard, Colo.

Lackey, Maggie (Mrs. San Osgood).

Landram, Anne B., Teacher  
521 N. 4th St., Sterling, Colo.

Larson, Thyra (Mrs. Orin H. Green)  
La Grange, Wyo.

LaShier, Ethel  
600 So. 8th St., Rocky Ford, Colo.

LaVelle, Irene C., Teacher  
Julesburg, Colo.

Lee Lyndall (see Class of 1916).

Libby, Jeanette (Pd. M.) (see Class of 1918).

Lockerby, Bernice (Mrs. Bernice Smith)  
R. F. D. No. 1, Alamosa, Colo.

Loper, Carrie (see Class of 1916).

Lovelady, Pearl (see Class of 1916).

Lowe, Grace (A. B.), deceased.

Lynch, Ella T.....Erie, Colo.

McClellan, Carrie L.  
513 Animas St., Trinidad, Colo.

McCunniff, John Thomas (A. B.)  
Am. Laundry Mch. Co., Chicago, Ill.

MacDonald, Eva (Mrs. W. E. Coakley)  
314 McKinley St., Sterling, Colo.

McDowell, Maybel, Teacher  
(Mrs. Maybel Ringwalt)  
321 Walnut St., Sterling, Colo.

McLane, Lucy Neely (A. B.)  
Teacher C. T. C.  
1615 11th Ave., Greeley, Colo.

McMenamin, Faye (see Class of 1917).

McQuie, Fannie.

Mahuron, Ida D. 449 Park, Trinidad, Colo.

Maloney, Mrs. Mary E., Teacher  
103 W. Byers Place, Denver, Colo.

Marion, Carrie.

Markley, Bertha (see Class of 1916).

Martin, Anna (Mrs. H. O. Decker)  
Pawnee, Okla.

Masterson, W. G. (A. B.) (see Class of 1918).

Mellor, Florence M. (Mrs. Wm. Williams)  
Aspen, Colo.

Merriam, Dorothy.....Imperial, Calif.

Merrill, Hattiebelle (see Class of 1917).

Miller, Adolph (A. B.).

Miller, Margaret M. (A. B.)  
Douglass, Ariz.

Minks, Elsie.

Mitchell, Lulu M. (A. B.)  
112 Carteret, Pueblo, Colo.

Mitchell, Vera, Teacher  
R. R. 2, Boise, Idaho

Moffett, Maggie. Box 201, DeBeque, Colo.

Monfort, Warren H. (Pd. M.), Farmer  
R. F. D. No. 2, Greeley, Colo.

Moore, Pearl L.  
Mountain Ave. Ft. Collins, Colo.

Morrison, Elizabeth C. (A. B.)

Morrison, Kallaphene (A. B.)  
Gunnison, Colo.

Moseley, Mrs. Eunice (Pd. M.), Teacher  
523 So. Grand Ave., San Pedro, Calif.

Mott, Irene B. (see Class of 1916).

Mundell, Lucy.....Monte Vista, Colo.

Murray, Irene (Mrs. E. J. Gillian)  
Argonaut Hotel, Denver, Colo.

Murray, Rose (see Class of 1916).

Myers, Joyce E. (Mrs. G. L. Carrill)  
Box 817, Lamar, Colo.

Naave, Emma.

Nash, Bessie Anna (A. B.), Teacher  
111 W. 11th St., Pueblo, Colo.

Neville, Anne (see Class of 1917).

Newcomb, Eleanor.

Newman, Lucy.

Nichols, Mrs. Helen.

Nichols, Mary E.

Nicholson, Nell  
305 Grand Ave., Las Animas, Colo.

Nicholson, Nettie B.  
(Mrs. Alfred Bebee)  
407 E. Eaton, Cripple Creek, Colo.

Nordahl, Esther (Mrs. W. J. Edwards)  
Wray, Colo.

O'Bannon, Catherine (Pd. M.), Teacher  
3230 Clay, Denver, Colo.

O'Connell, Mary J., Teacher  
Durango, Colo.

O'Dea, Margaret, Teacher  
228 E. 7th St., Leadville, Colo.

O'Dea, Mary, Teacher  
228 E. 7th St., Leadville, Colo.

O'Kelly, Nellie (Mrs. G. B. C. Mathison)  
Telluride, Colo.

Oliver, Mary Margaret  
(Mrs. C. G. Spanner)  
R. F. D. No. 1, Box 165, Greeley, Colo.

Oliver, Viola W. (Mrs. Rae Laird)  
Central City, Colo.

O'Neill, Alice L.

O'Sullivan, Cornelia.

Oviatt, Hazel (Mrs. H. I. Smith)  
Brighton, Colo.

Oviatt, Helen M. (Mrs. W. H. Jackson)  
Box 176, Shoshone, Idaho

Paden, Grace (see Class of 1918).

Page, Mrs. Alida (Pd. M.) (see Class of 1917).

Park, Mary (Pd. M.), deceased.

Pascoe, Edna J. (Mrs. C. S. Webb)  
Box 122, Sunrise, Wyo.

Patterson, Helen.....Hartford City, Ind.

Pauly, Irene M., H. S. Teacher  
Box 145, Salmias, Calif.

Pearce, Hazel Bonita  
(Mrs. W. Arthur Blundell)  
W. 1114 York Ave., Spokane, Wash.

Pearce, Lela E. (Pd. M.), Teacher  
210 W. Carr St., Cripple Creek, Colo.

Pearson, Genevieve M., Teacher  
Box 312, Hysham, Mont.

Pearson, Helen (Mrs. Edward Turk)

Peery, Clara M. (Pd. M.) (see Class of 1918).

Peters, Leona (Mrs. Claude Wilde)  
(Pd. M.) (see Class of 1916).

Peterson, Grace A. (Pd. M.) (see Class of 1918).

Peterson, Josie L.

Pierce, Mrs. C. W. (Pd. M.)  
230 So. Flower St., Los Angeles, Calif.

Pierce, Kathel M.  
(Mrs. Lewis D. Sebring)  
316 N. Custer, Colo. Springs, Colo.

Poe, Eva (see Class of 1917).

Pool, Annie (Pd. M.)  
26 Block L, Pueblo, Colo.

Porterfield, C. H. (A. B.), Teacher  
1423 Cherokee St., Denver, Colo.

Potochnick, Tracy, Prin. of School,  
Segundo, Colo.

Pound, J. L. (A. B.) H. S. Teacher  
Box 752, Mesa, Ariz.

Prentice, Maggie May, Student  
4949 Indiana Ave., Chicago, Ill.

Quinlan, Agnes (see Class of 1917).

Quinlan, Gertrude.

Rayner, Irene, Teacher  
500 No. Ormau, Pueblo, Colo.

Reath, Sarah E. (A. B.), Supt. of Schools  
Demmon, Mich.

Reed, Truman G. (see Class of 1916).

Reich, Mrs. Ida (see Class of 1916).

Reinhardt, Ida E.  
2801 Fifth Court, Denver, Colo.

Reinkem, Emma.

Rice, Siddle E., Teacher  
Box 47, Timnath, Colo.

Richardson, Etta E. (A. M.), Teacher  
1443 5th St., Greeley, Colo.

Ringle, Helen (Mrs. Jesse Hulbert) (see Class of 1917).

Rink, Ethel O. 425 Grant, Loveland, Colo.

Ritter, Grace S.

Roarke, Estelle.

Robb, Gladys, Teacher  
226 N. 3rd St., Sterling, Colo.

Roberts, Isabel.....Alamosa, Colo.

Robinson, Henrietta O. (Pd. M.) (see Class of 1917).

Ross, Leila E. (Mrs. J. S. Manion)  
N. S. R. S., Pilot, Wyo.

Rote, Orville W.

Rowe, Irene, Housekeeper  
Micanite Route, Canon City, Colo.

Rubin, Ruth P., Teacher  
Chestnut Hall, Parkville, Mo.

Saltus, Mrs. D. (see Class of 1918).

Sansburn, Mrs. Alvin.....Akron, Colo.

Sargeant, C. G. (Pd. M.)  
521 So. Meldrum St., Ft. Collins, Colo.

Sauer, Carrie.

Sawyer, M. Eldora (Pd. M.), Teacher  
1242 Pennsylvania, Denver, Colo.

Senecal, Marie (A. B.)  
Las Vegas, New Mexico

Shacklett, Estella (A. B.)  
414 W. 8th St., Pueblo, Colo.

Shapcott, Edith M., Student  
414 W. 120th St., New York City

Sharp, Elizabeth.

Sholty, Maud  
1209 E. Third St., Loveland, Colo.

Shriber, Joseph H. (A. B.), Teacher  
608 So. Howes St., Ft. Collins, Colo.

Shultis, Frank W. (A. M.),  
Teacher C. T. C.  
1311 11th St., Greeley, Colo.

Simms, Nelle P. (A. B.)  
(Mrs. David W. Houston)  
600 Marion St., Denver, Colo.

Skidmore, Hazel.

Slattery, Mary Alice, Teacher  
221 W. Routt Ave., Pueblo, Colo.

Slaughter, Elizabeth Anderson (Pd. M.)  
Teacher  
705 N. Nevada Ave., Colo. Spgs., Colo.

Smith, Alsina May, Teacher  
4614 Bryant St., Denver, Colo.

Smith, Anna, Teacher.....La Salle, Colo.

Smith, Elizabeth (Pd. M.).

Smith, Eulah.

Smith, Luna I. (A. B.), Teacher  
1513 9th Ave., Greeley, Colo.

Smith, Margaret H. (Pd. M.)  
Longmont, Colo.

Smith, Mrs. Mary B. (Pd. M.).

Smith, Maybelle (Pd. M.).

Smith, Omer DeWitt (A. B.).

Smith, Viva Rita, Teacher  
3773 Meade St., Denver, Colo.

Snively, Lena.

Spencer, Jeannette Stevens, Teacher  
Shirley Hotel, Denver, Colo.

Spethman, Mame.....Garden City, Kans.

Spillman, A. R. (Pd. M.).

Stansfield, Helga, Teacher  
(Mrs. Capt. George Naud)  
Bayview, Alaska

Stephens, Edith F. (see Class of 1917).

Stephens, Gertrude A. (see Class of 1917).

Stevens, Hazel (Mrs.).....Frazer, Colo.

Stevenson, Ethel May.

Stevenson, Walter B. (see Class of 1917).  
 Suiter, R. W. (Pd. M.) (see Class of 1918).  
 Sullivan, Grace.  
 Summ, Anna C. (Mrs. L. C. Jeral)  
 Cleveland, Ohio  
 Sweeney, Margaret. . . . Ft. Thomas, Ariz.  
 Tague, Benarda (Mrs. W. Mechan)  
 Red Cliff, Colo.  
 Teller, Emma. . . . Windsor, Colo.  
 Thomas, Frances M., Teacher  
 1019 Arizona Ave., Trinidad, Colo.  
 Thompson, Lillian (see Class of 1917).  
 Thorpe, Alice E., deceased.  
 Tripler, Grace, Teacher  
 335 So. 5th St., Montrose, Colo.  
 Tuggy, Harriet (A. B.)  
 3600 Clay St., Denver, Colo.  
 Tully, Ethel N., Teacher  
 (Mrs. Ethel T. Barnes)  
 Mesita, Colo.  
 Tully, Isabel (Pd. M.).  
 Turner, Clara (see Class of 1918).  
 Turrell, Mrs. Amy W. (Pd. M.).  
 Van Atta, William Fitch (A. B.)  
 Teacher  
 929 6th St., San Fernando, Calif.  
 Vanderlip, Lorena (A. B.)  
 (Mrs. J. A. Kelihner)  
 Sherman Hotel, Los Angeles, Calif.  
 Varvel, E. L., Dentist  
 Union Natl. Bk. Bldg., Greeley, Colo.  
 Vickers, Florence (Pd. M.) (see Class of 1916).  
 Vogel, Ida Dorothy (Mrs. W. P. Huleatt)  
 Golden, Colo.  
 Voils, Leone (Pd. M.)  
 518 Hill Ave., Grand Junction, Colo.  
 Walker, Jane (Mrs. Guy P. Watson) deceased.  
 Ward, Daniel (A. B.) (see Class of 1916).  
 Watson, Fern (see Class of 1916).  
 Watson, Lillian, Box 214, Louisville, Colo.  
 Weber, Dora (Pd. M.).  
 Weddle, Lulu D.  
 Wegerer, Mary C. (A. B.).  
 Wegerer, Verona M. (A. B.).  
 Wells, Gladys  
 2216 Ogden St., Apt. 1, Denver, Colo.  
 Welsh, Edna F. (see Class of 1918).  
 Werner, Emily (see Class of 1916).  
 Westfall, Meda.  
 Wiedman, D. E. (A. B.).  
 Supt. Bellingham, Wash.  
 Wilder, George (Pd. M.) (see Class of 1916).  
 Wilhelm, Jewel, Teacher  
 1730 Logan, Apt. 14, Denver, Colo.  
 Will, Dorothy (see Class of 1916).  
 Williamson, Jean (Pd. M.)  
 210 Broadway, Pueblo, Colo.  
 Williamson, Mary (Pd. M.), Teacher  
 210 Broadway, Pueblo, Colo.  
 Wilson, Alice I. (A. B.), Teacher  
 2340 Franklin St., Denver, Colo.  
 Wilson, May F., Teacher  
 831 Pine St., Trinidad, Colo.  
 Winburn, Bula  
 1044 Josephine St., Denver, Colo.  
 Wogan, Arthryn  
 130 Wahlen Ave., Cripple Creek, Colo.  
 Wolfe, Beulah. . . . Manzanola, Colo.  
 Wolfe, Hazel D.  
 401 Raton St., La Junta, Colo.  
 Wood, Gladys Elizabeth  
 (Mrs. Tycon Woodruff)  
 La Junta, Colo.  
 Woodruff, Gerta L. (Pd. M.)  
 H. S. Teacher  
 2536 Fowler, Ogden, Utah

Worley, Victor E. (A. B.)  
 Supt. of Schools Mt. Harris, Colo.  
 Wright, Lora B. (Pd. M.), Teacher  
 1425 8th Ave., Greeley, Colo.  
 Wright, Mabel Jane  
 (Mrs. Russell J. Hill)  
 R. F. D. No. 1, Box 126, Greeley, Colo.  
 Yardley, Hattie (Pd. M.) (see Class of 1918).  
 Young, Chas. A. (Pd. M.) (see Class of 1916).

#### CLASS OF 1916

Adams, Mary (see Class of 1917).  
 Agnew, Edna.  
 Allen, Florence (Mrs. Noah O. Horning)  
 1222 S. Quincy, Tulsa, Okla.  
 Allen, Lucretia (Pd. M.).  
 Allen, Richard (A. M.), H. S. Teacher  
 Independence, Kans.  
 Ames, Ida Winifred, Teacher  
 Kai Liang Hueli, 18 Hsiao Po Ko  
 Shih, Hutung, Peking, China.  
 Anderson, Blanche, Teacher  
 Box 113 Malad City, Idaho  
 Baker, Ada A. (see Class of 1917).  
 Baker, W. L. (A. B.) (see Class of 1917).  
 Bakke, Ella E., Extension Sec.  
 1675 Mass. Ave., Cambridge, Mass.  
 Ball, Minnie (see Class of 1917).  
 Barber, Florence (see Class of 1917).  
 Bardwell, Anna (Mrs. Don Eaton)  
 Eaton, Colo.  
 Barkley, Nell (Pd. M.)  
 1205 Lake Ave., Pueblo, Colo.  
 Barnes, Mrs. Abbie C.  
 2911 Sylvanite St., St. Joseph, Mo.  
 Bartholomew, Ione (Mrs. Harley Jones)  
 Trinidad, Colo.  
 Baxter, Beulah (Mrs. Karl M. Warner)  
 Weiser, Idaho  
 Bayles, Maude.  
 Bean, Gertrude  
 R. F. D. Box 68, Littleton, Colo.  
 Beck, Lillian (A. B.)  
 1450 Steele St., Denver, Colo.  
 Bell, Bessie. . . . 212 W. 13th, Pueblo, Colo.  
 Bell, Mrs. Viola  
 421 Sherman St., Ft. Morgan, Colo.  
 Benight, Cecile (Mrs. Everett Hopper)  
 Ft. Collins, Colo.  
 Bentley, Frances.  
 Bergin, Florence.  
 Bickel, Edith  
 8th and Edison, La Junta, Colo.  
 Biggerstaff, Jessie  
 509 Pine St., Trinidad, Colo.  
 Billington, W. Emma (see Class of 1918).  
 Blair, Kate, Teacher. . . . Nucla, Colo.  
 Blaisdell, Edna I., Teacher  
 Grand Junction, Colo.  
 Boggs, Ethel, Teacher. . . . Kirkwood, Mo.  
 Bond, Margaret. . . . Idaho Springs, Colo.  
 Boresen, Martha.  
 Bowman, Lena (Mrs. Ray Pierce)  
 Box 524, Durango, Colo.  
 Branson, Gladys, Teacher  
 609 Prospect St., Trinidad, Colo.  
 Brink, Marian (Pd. M.).  
 Central High School, Minneapolis, Minn.  
 Brody, Nora. . . . Esbon, Kansas  
 Brooks, Mrs. Anna G. (see Class of 1917).  
 Brooks, Berniece, Teacher  
 1211 Washington, Boise, Idaho  
 Brosius, Helen, Teacher  
 (Mrs. Harvey Clayton Kelsner)  
 Oahu College, Honolulu, Hawaii  
 Brown, Alta.  
 Brown, Gussie E. (Pd. M.), Teacher  
 No. 11 Lafayette Apts., Greeley, Colo.  
 Brown, Mary L.

- Bruce, Margaret L.  
(Mrs. Francis Hansen)  
417 E. 23rd St., Cheyenne, Wyo.
- Brunnel, H. P., Asst. Co. Supt.  
Greeley, Colo.
- Brunner, Blanche.
- Bryson, Cleo. 1114 Clayton, Denver, Colo.
- Buckert, Louise. . . . . Hygiene, Colo.
- Buck, Nellie, Teacher. . . . . Salida, Colo.
- Buckland, Gertrude (Pd. M.).
- Burbridge, Edgar (Pd. M.)  
Supt. of Schools  
Milliken, Colo.
- Burke, Lulu (Mrs. Robt. B. Stanard)  
4200 Irving St., Denver, Colo.
- Burson, Viola (see Class of 1919).
- Butler, Effie (Pd. M.).
- Callahan, Catherine, Teacher  
Louisville, Colo.
- Campbell, Vera (A. B.), Teacher  
Ordway, Colo.
- Carson, Alma (Mrs. Sidney E. Smith)  
335 N. Ewing St., Helena, Mont.
- Carson, Jennie B. (A. B.)  
(Mrs. Frank Wilkinson)  
168 So. Emerson, Denver, Colo.
- Carter, Arthur. . . . . Bisbee, Ariz.
- Carter, Ruth F.
- Cary, Sue M. (Pd. M.)\* (A. B.)  
(Mrs. Paul J. Mitchell)  
54 Morningside Ave., New York City
- Case, Bertha.
- Cazin, Frances. . . . . La Junta, Colo.
- Champion, Edith (Pd. M.), Teacher  
843 Steele St., Denver, Colo.
- Chaplin, Ruth, Teacher  
208 E. 21st, Cheyenne, Wyo.
- Clair, Helen (Mrs. Helen Houlihan)  
Casper, Wyo.
- Clement, H. Harman (A. B.), Auditor  
130 1st St. N. W., Washington, D. C.
- Colegrave, Rosa (Pd. M.) (see Class of 1917).
- Collins, Mrs. D.
- Conant, Stanford (A. B.)  
Asst. Supt. of Schools  
Tucson, Ariz.
- Conner, Minnie B. (A. B.)  
(Mrs. E. P. Robinson)  
491 So. Emerson St., Denver, Colo.
- Corlett, Abbie (Pd. M.)  
(Mrs. Harry Stroup)  
Monte Vista, Colo.
- Connell, Helen D. (Mrs. Wm. King) deceased.
- Cornell, Laura E. (A. B.), Teacher  
1904 Logan St., Denver, Colo.
- Corsberg, Esther  
(Mrs. Esther Corsberg Krepes)  
Kersey, Colo.
- Counter, Mildred (Mrs. Harry Behm)  
Brighton, Colo.
- Coverston, Helen.
- Craze, Hyacinth (see Class of 1917).
- Crie, Frankie M.  
(Mrs. Percy R. Candlin)  
Mitchell, Nebr.
- Cummings, Mildred G.  
(Mrs. Edwin W. Crysler)  
3498 S. Broadway, Englewood, Colo.
- Curtis, Ruth.
- Dakens, Irma. 424 Broadway, Pueblo, Colo.
- Daniels, Mrs. Winifred J. (Pd. M.) (A. B.)  
Teacher  
774 So. Penn. Ave., Denver, Colo.
- Dauth, Louise (Mrs. Lee H. Alden)  
Brighton, Colo.
- Davis, Edna Belle  
(Mrs. J. Rankin Arnold)  
524 Main St., Ft. Morgan, Colo.
- Davis, Reginald S. (Pd. M.)  
Arch. Draftsman  
Box 478, Red Bluff, Calif.
- Dempewolf, Jennie (Mrs. Ed. J. Gates)  
Stock Yard Station, Denver, Colo.
- Dillon, Bertha A. (Pd. M.), Teacher  
Wheatland, Wyo.
- Donley, H. H.
- Doran, Marguerite  
2121 Marion St., Denver, Colo.
- Duboff, Sarah. 329 Bannock, Denver, Colo.
- Dukes, Olive  
(Mrs. Harry E. Johnson)  
1102 E. 5th, Pueblo, Colo.
- Durning, Bertha (see Class of 1918).
- Eckhart, Elizabeth  
1101 Grant Ave., Trinidad, Colo.
- Elam, Velma (see Class of 1919).
- Eldridge, Peggy (Mrs. W. F. Morrison)  
(See Class of 1918)
- English, Lillian A.  
(Mrs. Noble S. Sanden)  
R. F. D. No. 1, Ault, Colo.
- Erickson, Ruth  
1902 Eighth Ave., Greeley, Colo.
- Estabrook, Evelyn  
1330 Elizabeth St., Denver, Colo.
- Estus, Albert L.
- Everett, Elva Rae, Teacher  
1417 St. Paul St., Denver, Colo.
- Farr, Jennie (Pd. M.) (see Class of 1918)
- Filson, Emma M. (A. B.), Teacher  
2690 E. 14th Ave., Denver, Colo.
- Finch, Callie M. (Pd. M.), Teacher  
(Mrs. Callie M. Orr)  
Aberdeen, Idaho
- Fink, Jessie Alice (see Class of 1917).
- Fish, Florence (see Class of 1918).
- Fitzmorris, Ray (Pd. M.) (see Class of 1917).
- Flowers, Beulah, deceased.
- Foley, Ruth (see Class of 1917).
- Force, Anna Laura (Pd. M.) (see Class of 1918).
- Force, Harriet Louise (A. B.)  
(Mrs. J. Wesley Gibbs)  
719 Humboldt, Denver, Colo.
- Foss, Evelyn, Teacher  
887 23rd St., Ogden, Utah
- Freed, Ruth (Mrs. Robert Campbell)  
Sedalia, Colo.
- Frink, Hazel. Tri Delta House, Ames, Ia.
- Fuller, Mrs. Hattie, Teacher  
Mead, Colo.
- Gage, Ethel M. (see Class of 1918).
- Galbreath, Edna. . . . . Pagosa Springs, Colo.
- Garber, Vera (Pd. M.) . . . . . Mankato, Kans.
- Gayton, Mrs. Julia H., Teacher  
1025 E. Evans Ave., Pueblo, Colo.
- Gerstle, Regina.
- Gill, Eula B. (A. B.), H. S. Teacher  
(Mrs. N. O. Rucker)  
1259 10th St., Douglas, Ariz
- Gillespie, Mrs. Anna Hall  
(Mrs. W. R. McClellan)  
1022 11th St., Greeley, Colo.
- Gilligan, Pearl (see Class of 1917).
- Gillmore, W. B. (A. M.), Auditor  
Box 77, Arlington, Va.
- Ginther, Eva (Mrs. E. R. Satt)  
R. F. D. No. 1, Broomfield, Colo.
- Glazier, Winifred G. (Pd. M.)  
Stenographer, Greeley, Colo.
- Gloystein, Hope (see Class of 1918).
- Goodwin, Hazel Ruth.
- Gookins, Mrs. Clara (Pd. M.)  
1626 Detroit St., Denver, Colo.
- Gordon, Sarah (Pd. M.).
- Graham, Grant D.
- Gross, Eda. . . . . Greeley, Colo.
- Gulraud, Emma  
1846 12th Ave., Greeley, Colo.



Haaff, Clarence F.  
Hall, Grace Emily, Teacher  
Strubel Apts., Greeley, Colo.  
Hall, Sibbell K. (see Class of 1917).  
Hammond, Mrs. Maude Carroll (A. B.)  
Teacher  
321 Lake St., Ft. Morgan, Colo.  
Hanna, Cornelia M. (see Class of 1917).  
Hanno, Charlotte (Pd. M.) (see Class of  
1917).  
Hanson, Viola (see Class of 1918).  
Hasenkamp, Eleanor L., Teacher  
Metropolis, Nevada  
Hatfield, Mrs. Magdalen W. (Pd. M.)  
Vroman, Colo.  
Hawley, S. Frances (Pd. M.) (see Class  
of 1918).  
Hawthorne, Rebecca (Mrs. Bert Berry)  
Colfax, Ill.  
Hayes, James H. (A. B.) (see Class of  
1917).  
Heale, Florence (Pd. M.).  
Heath, Herbert G. (A. B.)  
Mayor and District Clerk  
Lake City, Colo.  
Hed, Emma, 2119 Spruce St., Pueblo, Colo.  
Heenan, Florence M. (A. B.),  
H. S. Teacher  
41 Mitchell Ave., Clairton, Pa.  
Helm, Marguerite.  
Henderson, Ethel M. (see Class of 1918).  
Hennes, Olive (A. B.)  
(Mrs. David C. Oswald)  
Kit Carson, Colo.  
Herren, C. M. (A. B.)  
909 Bellevue, La Junta, Colo.  
Hersum, Evelyn (Pd. M.)  
431 Pine St., Trinidad, Colo.  
Hicok, Nancy Ebert (A. M.)  
Supervisor of Occupational Therapy  
Napa State Hospital, Napa, Calif.  
Hoagland, Mary A.  
Hoffman, Mary E. (A. B.)  
Private Secretary  
3212 Troost Ave., Kansas City, Mo.  
Hollister, Katherine (Pd. M.) (see Class  
of 1917).  
Hoon, Helen (see Class of 1917).  
Hooven, Mary Eleanor. . . . . Denver, Colo.  
Hopkins, Wallace (Pd. M.) (see Class of  
1917).  
Horning, Noah Orestes (Pd. M.), Teacher  
1222 S. Quincy, Tulsa, Okla.  
Howard, Helen L., Mrs.  
Howe, Nolan. . . . . Akron, Colo.  
Huizel, J. A. (A. B.).  
Hunter, Mabel (Mrs. Elza Haroun)  
R. F. D., Longmont, Colo.  
Irving, Elizabeth (Pd. M.)  
(Mrs. Harvey Meredith)  
1623 E. 33rd St., Oakland, Calif.  
Jacobs, Clara M. (Pd. M.)  
Prin. of School  
129 W. 9th St., Pueblo, Colo.  
Jamieson, Margaret, Teacher  
Plymouth Hotel, Denver, Colo.  
Jay, Nelle, Teacher. . . . . La Salle, Colo.  
Jefferies, Bernice (Mrs. Edward Litch)  
117 Hamilton St., Sterling, Colo.  
Johnson, Ethel.  
Johnson, Huldia. . . . . Burlington, Colo.  
Johnson, Rita (Pd. M.)  
(Mrs. Jas. Balagna)  
Florence, Colo.  
Johnson, Shirley A. (Pd. M.) (see Class of  
1917).  
Johnson, Earl Lynd (A. B.), Farmer  
Briggsdale, Colo.  
Jones, W. R. (see Class of 1918).  
Jordan, Katherine  
(Mrs. Raymond Butts)  
Glenwood Springs, Colo.

Jordan, Mary Arlene (A. B.)  
518 N. 4th St., Sterling, Colo.  
Joy, Pearl (see Class of 1918).  
Kellogg, J. L.  
Kelly, Chas. W. . . . . Beulah, Colo.  
Kelly, Gladys.  
Kelly, Eileen. . . . . Mancos, Colo.  
Kenehan, Katherine (Pd. M.)  
1464 Winona Court, Denver, Colo.  
Kennedy, Bess (Mrs. Chester Greedy)  
Richards & Cunningham Co.,  
Casper, Wyo.  
Kennedy, Rozella R.  
Kermode, Gentile.  
Kessler, F. C. (see Class of 1919).  
Ketner, Sarah P. (A. B.) (Pd. M.)  
Teacher  
2270 Hudson St., Denver, Colo.  
Kirk, Helen C., Teacher  
Box 153, Walsen, Colo.  
Kirkpatrick, Sadie (Mrs. Thomas) (Pd. M.)  
Knowlton, Myrtle, Stenographer  
Torrington, Wyo.  
Konkel, O. C. (Pd. M.).  
Cheyenne Wells, Colo.  
Kyle, Veda M., Teacher. . Bancroft, Idaho  
Kyler, Lela (see Class of 1918).  
Lagershausen, Emma  
(Mrs. Hilding Nordmark)  
Liberty Bell Mine, Telluride, Colo.  
Lahman, Margaret  
(Mrs. Jas. A. Murphy)  
Box 312, Victor, Colo.  
Lambert, Iva, Teacher. . Greenland, Colo.  
Langdon, May.  
Lanning, C. W. (Pd. M.) (see Class of  
1918).  
Latronico, Mary. . . . . Louisville, Colo.  
Lawler, Cecilla (A. B.)  
Recuperation Camp, Aurora, Denver, Colo.  
Lay, Edith, Teacher  
Hotel Peery, Salt Lake City, Utah  
Layton, Nellie B. (Pd. M.) (see Class of  
1917).  
Lee, Lyndall (Pd. M.)  
(Mrs. Edward Irl Varvel)  
1725 12th Ave., Greeley, Colo.  
Levell, Josephine. . . . . Victor, Colo.  
Lewis, Lena Adele  
(Mrs. Joe Kneebone)  
Lafayette, Colo.  
Lewis, Madeline, Stenographer  
1321 Logan St., Denver, Colo.  
Lockhart, Lee (see Class of 1918).  
Loper, Carrie (Pd. M.) . . . Montrose, Colo.  
Lovelady, Pearl (Pd. M.)  
(Mrs. P. B. Lister)  
624 So. Howes St., Ft. Collins, Colo.  
Lyons, Florence (Pd. M.)  
1812 7th Ave., Greeley, Colo.  
Lytle, Ruth, Teacher. . . Rocky Ford, Colo.  
McAllister, Nell, Teacher. . . . . Eaton, Colo.  
McArthur, Lillian (A. B.)  
1461 Logan St., Denver, Colo.  
McCauley, Estella (Mrs. Carl Hay)  
Las Animas, Colo.  
McClure, Ruby M. (Mrs. Arthur Loux)  
Andrews, Nebr.  
McCune, Letha, Teacher. . . . . Ault, Colo.  
McDaniels, Emabel.  
McIntyre, Ruth (see Class of 1917).  
McKee, Genevieve, Bookkeeper  
2557 Cherry St., Denver, Colo.  
McLaughlin, Agnes M. (Pd. M.)  
McLaurin, Mary M. (see Class of 1917).  
MacLeod, Bernice (Pd. M.) (see Class of  
1918).  
McMenamin, Faye (Pd. M.) (see Class of  
1917).  
MacMillian, Mrs. E. P. (Pd. M.)  
Ft. Collins, Colo.

McNamara, Margaret (Pd. M.) (see Class of 1918).

Markley, Bertha (Pd. M.) (Mrs. Lee Lockhart) Rupert, Idaho

Martin, Maude.

Martinson, Emma A. . . . . Lamar, Colo.

Matthews, William Ralph (A. B.) (See Class of 1919).

Meacham, Hazel P. (Mrs. Edgar D. Smyth) Julesburg, Colo.

Menard, Mary Naomi (Mrs. W. F. Manley) 745 E. Castilla St., Colo. Springs, Colo.

Merryfield, Esther (Mrs. H. Raub) Rocky Ford, Colo.

Miller, George C. (A. B.).

Miller, M. Elizabeth (see Class of 1918).

Minns, Effie, Teacher. . . . . Evans, Colo.

Mitchell, Minnie B.

Mitchell, Pearl 217 W. 3rd St., Florence, Colo.

Moore, C. E. (Pd. M.) (see Class of 1917).

Moore, Fannie (Pd. M.).

Moore, Neal (A. B.) . . . . . Brush, Colo.

Morgan, Alice (Mrs. Merry Aylor) Rupert, Idaho, Box 211

Morris, Gertrude.

Morrison, Walter F. Apt. 8, Camfield Court, Greeley, Colo.

Mott, Alphonse 1450 So. Sherman, Denver, Colo.

Mott, Irene (A. B.), Teacher 1450 So. Sherman, Denver, Colo.

Moyer, Bernice Jane, Clerical Work 1340 Ethel St., Cleveland, Ohio

Murphy, Edna Katherine (Mrs. C. H. Silvernail) Bridgeport, Nebr.

Murray, Rose M. (Pd. M.) Prin. of School 222 6th Ave. E., Twin Falls, Idaho

Naeve, Clara.

Neeb, Lenore.

Neil, Jennie (A. B.), H. S. Teacher 724 Harrison, Canon City, Colo.

Nelson, Rose R. F. D. No. 1, Box 125, Greeley, Colo.

Neville, Anne (Pd. M.) (see Class of 1917).

Newton, Bess (Pd. M.), Teacher Globe, Ariz.

Nims, Mrs. Lillian G. (see Class of 1918).

Noble, Iva.

Noce, M. C. Lillian (Pd. M.) (see Class of 1917).

Nordstrom, Olga, Teacher 812 5th St., East Las Vegas, N. M.

Nye, Faye (Mrs. W. P. Hamilton) Santa Monica, Calif.

O'Boyle, Lila M. (A. B.), Teacher 1274 Ogden St., Denver, Colo.

O'Brien, Gladys.

Oehlkers, Mrs. Clara (Mrs. John A. Forbes) Brighton, Colo.

O'Kelly, Kathleen, Teacher Telluride, Colo.

O'Neill, Anna.

Organ, Bertha T., Teacher (Mrs. Bertha Campbell) San Acacio, Colo.

Oster, Martha, Teacher. McClelland, Wash.

O'Toole, Mary.

Painter, Edith G. (A. B.) (Mrs. Edith G. Lavender) 840 Milwaukee St., Denver, Colo.

Parker, Evelyn (Mrs. . . . .).

Parker, Opal (Mrs. James B. Noel, Jr.) La Salle, Colo.

Parsons, Jessalyn L. (Pd. M.), Teacher 426 Corona St., Denver, Colo.

Patterson, Ona Colvin.

Peck, Ruby L. (A. B.).

Peers, Katherine E. 2236 12th St., Boulder, Colo.

Peters, Leona B. (A. B.) (Mrs. Claude C. Wild) 810 5th St., Cicco, Texas

Peterson, Alice (Mrs. Byron D. Hunt) Phippeny, Lucile 1517 10th Ave., Greeley, Colo.

Pond, Clarence B. (Pd. M.).

Pond, Georgia.

Porter, Virginia. . . . . Collbran, Colo.

Potter, Lucia (Mrs. Earl C. Boyle) 111 East Hugo, Casper, Wyo.

Power, Alice.

Priddy, Bessie M., Teacher 907 W. Mountain Ave., Ft. Collins, Colo.

Priest, Zella M., Teacher Fountain, Colo.

Proctor, Mildred 1301 E. 11th, Pueblo, Colo.

Prunty, Iona E., Student C. T. C. R. F. D. No. 5, Box 128, Greeley, Colo.

Quinlan, Mary.

Raber, Carrie.

Ramsay, Bernice E. (Mrs. W. C. Roberts) 11th Ave. and 19th St., Greeley, Colo.

Randall, Bertha.

Ransdell, Gladys (Mrs. Henry Sackett) Telluride, Colo.

Ransom, Lucy.

Rayl, Blanche, Teacher Edgemont, So. Dak.

Rea, Inez (Pd. M.), H. S. Teacher Stockett, Mont.

Reece, Genevieve.

Reed, Truman G. (Pd. M.) (A. B.) 430 W. 7th St., Junction City, Kans.

Reich, Mrs. Ida (Pd. M.), H. S. Teacher Julesburg, Colo.

Reynolds, Naomi E. . . . . Alamosa, Colo.

Rhiner, Ethelyne (see Class of 1918).

Rice, Marjorie (Pd. M.).

Richardson, Leolla.

Riedel, Gladys Anita, Govt. Clerk 2506 K St. N. W., Washington, D. C.

Ringle, Helen (Pd. M.) (see Class of 1917).

Robbins, Esther (Mrs. Thomas S. Farr) Box 277, Walsenburg, Colo.

Roberts, May (Mrs. A. B. Carter) Bisbee, Ariz.

Robinson, Helen K. (Mrs. Helen R. Starr) 130 N. 9th Ave., Phoenix, Ariz.

Robison, Rachel Christy, Teacher 706 High St., Farmville, Virginia

Rogers, Ivalou (Pd. M.), Teacher 1541 11th Ave., Greeley, Colo.

Rogers, Iva Maude (see Class of 1917).

Rohr, Frieda B. (A. B.) Teacher C. T. C. Lafayette Apts., Greeley, Colo.

Ross, A. B. (see Class of 1918).

Rourke, Sophia. . . . . Lamar, Colo.

Russell, Helen G.

St. Clair, Mary (Mrs. William F. Heagney) Lovell, Wyo.

Sansburn, Alvin (Pd. M.) (see Class of 1918).

Sansburn, Mrs. Lena, Teacher Akron, Colo.

Sargent, Lela F.

Scotland, May Proud (Pd. M.) (A. B.) (Mrs. Conrad Young) St. Regis Apts., No. 8, Omaha, Nebr.

Scott, Ethel.

Sedgwick, Myrtle M. (Pd. M.) (see Class of 1918).

Sharpnack, Hazel M., Teacher  
701 S. Main St., Fowler, Colo.

Shelburn, Bessie.

Shepard, Marian, Teacher  
1437 Wisconsin St., Racine, Wis.

Shifflette, Blanche.

Shultis, Lorraine (Mrs. Geo. Owens)  
Box 86, Keota, Colo.

Shultis, Mabel (Mrs. Harry G. Owens)  
Barnesville, Colo.

Skinner, Mary E.  
Convent Holy Child Jesus,  
Cheyenne, Wyo.

Smith, Eula (Pd. M.), Teacher  
1627 8th Ave., Greeley, Colo.

Smith, Flora A. (Mrs. Lee Wogers)  
Box 651, Durango, Colo.

Smith, Mary Olive  
(Mrs. John A. Wadlin)  
1615 10th Ave., Greeley, Colo.

Smith, Miriam (see Class of 1918).

Smith, Robert J. (A. B.) Longmont, Colo.

Smith, Sadie E.

Smith, Sybil .....Watkins, Colo.

Snedden, Jessie.

Spicer, Wilma Olive (A. B.), Teacher  
Santa Cruz, Laguna, P. I.

Stanforth, Della L., H. S. Teacher  
Torrington, Wyo.

Starbuck, Etta.....Mosca, Colo.

Steadman, H. A. (Pd. M.).

Steck, June (A. B.), Teacher  
300 S. 4th St., Montrose, Colo.

Stephens, Edith (Pd. M.) (see Class of  
1917).

Stevens, Hazel (Mrs. R. M. Robbins)  
Fraser, Colo.

Stevenson, Elsie (Pd. M.).

Strong, Ettah.

Sumner, George, Student  
1165 13th St., Boulder, Colo.

Swanson, Anna, Teacher...Fruita, Colo.

Switzer, Mrs. Ella S. (A. B.)  
2830 Raleigh St., Denver, Colo.

Taylor, Alice, Teacher...Louisville, Colo.

Taylor, Mrs. Emma H. (A. B.).

Taylor, Ruth Adeline.

Temple, Juanita (Pd. M.)  
(Mrs. Baryard Bailey)  
4443 1/2 N. Robey St., Chicago, Ill.

Thickens, Thelma (see Class of 1917).

Thomas, Caroline S. (Pd. M.) (A. B.)  
Canon City, Colo.

Thomas, Dora.....Manzanola, Colo.

Thomas, Laura K.....Manzanola, Colo.

Thomas, Mary Ann., Teacher  
1019 Arizona Ave., Trinidad, Colo.

Tilyou, Mabel L. (Pd. M.)  
Galeton, Colo.

Toplitsky, Sadie  
3337 Williams St., Denver, Colo.

Torbit, Pauline.....Fountain, Colo.

Traylor, Ruby M.  
(Mrs. Geo. W. Ballantyne)  
Humboldt, Kans.

Tuck, Fred (Pd. M.) (see Class of 1917).

Turcotte, Adelaide H. V. (see Class of  
1917).

Turner, Clara (Pd. M.) (see Class of  
1918).

Turner, Clarence E.....Greeley, Colo.

Tyler, Mildred, Teacher  
Edgerly Court, Santa Barbara, Calif.

Unger, John C. (Pd. M.) (see Class of  
1917).

Van Atta, Clara, Teacher  
404 Park Ave., Laramie, Wyo.

Vandiver, Maude A., Teacher  
647 No. 2nd St., Montrose, Colo.

Van Winkle, Grace I. (Pd. M.) (see Class  
of 1919).

Veal, Olive (see Class of 1918).

Vezzetti, Mary T.  
(Mrs. John P. Balagna)  
R. F. D. No. 1, Florence, Colo.

Vickers, Florence (A. B.), deceased.

Waldron, Mary G. (Pd. M.), Teacher  
Phillipsburg, Mont.

Walek, Anna (Pd. M.) (A. B.), Teacher  
Sterling, Colo.

Walek, Mary (A. B.)  
(Mrs. Mary Hornicek)  
Box 131, Sunol, Nebr.

Walker, Dexter B., Supt. of Schools  
Redcliff, Colo.

Walker, E. A. (A. B.).

Walker, Erdeena  
521 No. 4th St., Sterling, Colo.

Waller, Marie E.....Big Timber, Mont.

Walter, Nellie (see Class of 1918).

Ward, Daniel (A. M.), Grain Merchant  
516 W. Adams St., Clinton, Ill.

Watson, Fern (A. B.).

Watson, Iva Catherine (Pd. M.)  
Asst. Librarian  
930 W. Mt. Ave., Ft. Collins, Colo.

Weber, Adelaide Rosaline (Pd. M.) (see  
Class of 1918).

Webster, Ellen M.  
1733 7th Ave., Greeley, Colo.

Webster, Lillian C., Teacher  
Walsenburg, Colo.

Weed, Helen Adell (A. B.),  
H. S. Teacher  
Box 556, Calexico, Calif.

Weidman, Blanche (see Class of 1917).

Weld, Amy C. (A. B.), Teacher  
Plaza Hotel, Colorado Springs, Colo.

Weller, William H., Prin. of School  
Ramah, Colo.

Werner, Emily (Pd. M.).

Westen, Georgia (Mrs. John Hughes)  
Hannah, Wyo.

Wharton, Carrie  
Valléjo Hotel, Denver, Colo.

Wheaton, Anna A.  
1118 Eighth Ave., Greeley, Colo.

Wheaton, Esther A.....Windsor, Colo.

White, Hazel  
408 Jackson St., Sterling, Colo.

Whiteman, Virgin Mary (A. B.)  
(Mrs. R. S. Fitzmorris)  
Box 65, La Porte, Colo.

Whitman, Bertha Hortense (A. M.)  
Registrar G. H. S.  
1518 8th Ave., Greeley, Colo.

Wickstrum, Ethel, Teacher..Hudson, Colo.

Wilder, George (A. B.), Supt. of Schools  
Casper, Wyo.

Wilkie, Anna C.

Will, Dorothy (A. B.), H. S. Teacher  
402 W. Jefferson St., Mangum, Okla.

Williams, L. Hazel, Teacher  
1515 Cedar St., Pueblo, Colo.

Williams, Sarah A. (Pd. M.), Teacher  
419 N. 3rd St., Sterling, Colo.

Williams, Velma.

Williams, Mrs. Vida Ventres, Teacher  
405 W. 12th St., Pueblo, Colo.

Wilson, Jessie M.

Woodley, Vera (Mrs. Emil Vonalt)  
Mead, Colo.

Wyckoff, Dorothy Helen (Pd. M.) (see  
Class of 1917).

Young, Chas. A. (A. B.).

Young, Mildred M. (Mrs. Harold Booth)  
459 Acoma St., Denver, Colo.

Yust, Dorothy L.

Zilar, John (A. B.).

CLASS OF 1917

Ackerman, Lloyd (Pd. M.) (see Class of  
1918).

Adams, Geo. D. (Pd. M.)  
1427 9th Ave., Greeley, Colo.

Adams, Mary Anna (Pd. M.), Teacher  
Wasatch Academy, Mt. Pleasant, Utah

Adams, Roxana M. (Pd. M.)  
Haddon Hall, Linwood Bldg.,  
Kansas City, Mo.

Alexander, Lucille  
(Mrs. Paul H. Barth)  
Barr Lake, Colo.

Alexander, Mae.....La Veta, Colo.

Allen, Harland H. (A. B.) (see Class of  
1918).

Allen, Mary Agnes, Teacher  
105 W. Cheyenne Rd., Colo. Spgs., Colo.

Allman, Clifford.....Clayton, N. M.

Anderson, Edna  
152 S. Clarkson St., Denver, Colo.

Anderson, May (Pd. M.)  
2411 West, Pueblo, Colo.

Anthony, Florine, Teacher  
1242 Race St., Denver, Colo.

Arkwright, Charlotte  
1801 N. Culebra Ave., Colo. Spgs., Colo.

Arnold, Emily (Pd. M.), Teacher  
749 4th Ave., Durango, Colo.

Arnold, Gertrude, Clerical Work  
1375 Lincoln, Denver, Colo.

Austin, Muriel Amy  
24 E. 11th Ave., Denver, Colo.

Baab, Bertha M. (Pd. M.)  
1830 8th Ave., Greeley, Colo.

Babcock, Helen Amelia, Teacher  
316 W. Elm St., Lodi, Calif.

Baker, Ada A. (Pd. M.), Housekeeper  
(Mrs. Sterling Miner)  
503 11th Ave., Greeley, Colo.

Baker, William Elwood (Pd. M.)  
Supt. of Schools  
Telluride, Colo.

Baker, W. L. (A. M.) Idaho Springs, Colo.

Ball, Minnie (Pd. M.).....Akron, Colo.

Barber, Florence (A. B.)

Barker, Miriam Evelyn (A. B.) (see Class  
of 1919).

Barnard, Gladys P., Teacher  
117 W. 2nd St., Florence, Colo.

Bartels, Gertrude, Teacher  
1144 Pennsylvania St., Denver, Colo.

Bartholomew, Minnie A.  
(Mrs. LeRoy Baird)  
1802 7th Ave., Greeley, Colo.

Bateman, Mabel.....Salida, Colo.

Baxter, Elizabeth, Teacher  
Ludlow, Colo.

Bayer, Mamie.

Beavers, Mrs. Etta.....Wheatridge, Colo.

Bechtolt, Nora.....Nunn, Colo.

Belschner, Pauline, Teacher  
1342 N. El Paso St.,  
Colorado Springs, Colo.

Bennett, Dorothy (Pd. M.)  
Colorado Springs, Colo.

Bennett, Pearl (Pd. M.).....Palco, Kans.

Benton, Lila E. (A. B.), Stenographer  
Strubel Apts., No. 33, Greeley, Colo.

Biebusch, Beatrice.....Fort Collins, Colo.

Biggs, Isa Mae.

Billington, W. Emma (Pd. M.) (see Class  
of 1918).

Bispham, Anne N., Teacher  
Protestant College, Beirut, Syria

Blair, Clara M. (Mrs. Carl H. Bement)  
Redvale, Colo.

Blair, Mrs. Minnie D.....Galeton, Colo.

Blake, Alta Maria, Teacher  
Imogene, Ia.

Booth, Mrs. Florence, Teacher  
218 Jackson, Pueblo, Colo.

Boston, Ina.....Elizabeth, Colo.

Bourg, Mamie (Pd. M.).....Watson, Colo.

Bowman, Emily W. (A. B.)  
Matheson, Colo.

Bragg, Lottie (Pd. M.) (see Class of  
1918).

Bragg, Stella, Teacher.....Walsen, Colo.

Briggs, James A. (A. B.), Prin. H. S.  
Courtenay, No. Dak.

Briggs, Nellie  
1437 E. 4th St., Pueblo, Colo.

Brodie, Frances.....Denver, Colo.

Broman, Anna Rae  
2036 8th Ave., Greeley, Colo.

Brooks, Mrs. Anna G. (Pd. M.)  
Teacher  
1223 13th St., Greeley, Colo.

Brown, Grace (Pd. M.), Teacher  
Peyton, Colo.

Browning, Violet  
1355 Bellane St., Denver, Colo.

Brubaker, Irma, Teacher  
1108 8th St., Greeley, Colo.

Bruckner, Clara  
(Mrs. Glenn H. Seelinger)  
1418 7th Ave., Greeley, Colo.

Bruckner, Grace, Teacher  
413 11th St., Sioux City, Iowa

Brunner, Ruth (Mrs. E. L. Maddox)  
Box 112, Columbia Falls, Mont.

Bryce, Marie B. (Mrs. H. E. McKeever)  
Holly, Colo.

Buck, Vera H. (see Class of 1918).

Budd, Ruth, Teacher.....Rawlins, Wyo.

Bunker, Ada.....1108 8th St., Greeley, Colo.

Burch, Emma B.  
2136 Irving St., Denver, Colo.

Burgess, Elizabeth (Pd. M.)  
1023 N. 8th St., Canon City, Colo.

Burgess, Louise M.

Burks, Wm. B. (A. B.)  
Cain, Florence  
408 E. Oak St., Lamar, Colo.

Cain, Leona.....Lamar, Colo.

Caldwell, Hester M., Teacher  
1824 Clermont St., Denver, Colo.

Calkins, Savilla (Mrs. Paul V. Songer)  
Briggsdale, Colo.

Callahan, Bessie Mary (Pd. M.)  
Teacher  
Box 141, Keota, Colo.

Campbell, Ruth  
1453 Gaylord St., Denver, Colo.

Candlin, Percival R., Battery Service  
Mitchell, Nebr.

Carlson, Anna.....Windsor, Colo.

Carlson, Rose Mary, Teacher  
1760 So. Logan St., Denver, Colo.

Carrel, Mary Imogene, Teacher  
Box 168, Safford, Ariz.

Carson, Myra A. (A. B.), Teacher  
1229 Cook St., Denver, Colo.

Casey, Josephine C., Teacher  
Box 345, Ft. Lupton, Colo.

Casey, Veronica E., Teacher  
Box 345, Ft. Lupton, Colo.

Castle, Edith.....Delta, Colo.

Caverly, Edna  
311 E. Magnolia St., Ft. Collins, Colo.

Chandler, Miller (A. B.), Teacher  
Butte, Mont.

Chapman, Sophia H.....Hillrose, Colo.

Charles, Catherine W. (Pd. M.) (see Class  
of 1918).

Chase, M. Bernice, Asst. Postmistress  
Burlington, Colo.

Chase, Margaret (A. B.)  
2205 19th St., Bakersfield, Calif.

Cheek, Emma (Mrs. Chas. New), de-  
ceased.

Cheney, Lucy.....Fairplay, Colo.

Close, Vera Madeline, H. S. Teacher  
920 3rd Ave., Longmont, Colo.

Clough, Edwene (A. B.)  
327 So. 2nd St., Alhambra, Calif.

Clough, Gertrude (see Class of 1918).

Coffey, Kathryn A. .... Denver, Colo.

Colegrove, Rosannah (A. B.)  
Great Bend, Kans.

Collins, Mrs. F. W., Teacher  
Boyero, Colo.

Collins, La Rita, Teacher  
Preston, Idaho

Conboy, Irene Kathryn (A. B.), Teacher  
Weldona, Colo.

Conover, Lou Etta (Pd. M.).

Corkish, Nellie (A. B.) .... Pueblo, Colo.

Corlett, Maude. .... Monte Vista, Colo.

Corydell, Jesse, H. S. Teacher. Malad, Ida.

Cotham, Una (A. B.).

Couch, Mrs. Gertrude T. (Pd. M.)  
Teacher, Grand Lake, Colo.

Cox, Grace, Teacher. ... Burlington, Colo.

Craig, Edna M., Teacher  
3243 E. 27th Ave., Denver, Colo.

Craton, Lily (Mrs. Lily Osmer)  
Prin. of School, Alma, Colo.

Craze, Hyacinth (Pd. M.)  
1406 7th St., Greeley, Colo.

Crenshaw, Kate.

Crist, Alma. .... Georgetown, Colo.

Crocker, Martha. .... Greeley, Colo.

Cummins, Mary J., Deputy Co. Clerk  
683 4th Ave., Durango, Colo.

Curtiss, Frances J., Teacher. Paonia, Colo.

Czaplinski, Lydia. .... Caldwell, Kans.

Dalbey, Cora (see Class of 1918).

Damon, J. C. (see Class of 1919).

Davis, Bess. 1 So. Pearl St., Denver, Colo.

Davis, Ida (A. B.), Teacher  
1822 Morris, Cheyenne, Wyo.

Davis, John E.  
Prop. Auto Accessories Store  
2005 7th Ave., Greeley, Colo.

Davison, Pearl, Teacher  
R. F. D. No. 1, Riverside, Calif.

Day, Anna P. .... Denver, Colo.

Deitrich, Carrie (A. B.)  
Monte Vista, Colo.

Demmel, Margaret (see Class of 1919).

Desky, Catherine. .... Brush, Colo.

Devinney, Ruth, Teacher  
R. F. D. No. 2, Olathe, Colo.

Dewey, Jane Lloyd  
(Mrs. Charles C. Brewer)  
Co. Court Apts., No. 53,  
Bremerton, Wash.

Diggs, Chas. A. (Pd. M.) (see Class of  
1918)

Dodson, Kathleen  
North Union St., Des Moines, Ia.

Dotson, Ruth (Pd. M.) (see Class of 1918)

Downes, Irma, Stenographer  
612 14th St., Golden, Colo.

Downing, Todd (A. B.), H. S. Teacher  
1421 Wash. Ave., Golden, Colo.

Drummond, Mrs. Mary. .... Victor, Colo.

Dunn, Casadia, Teacher. .... Brighton, Colo.

Earhart, Nell R. .... Durango, Colo.

Eason, Za. .... Holly, Colo.

Edmundson, Ruth I., Teacher  
Strasburg, Colo.

Eliason, Clarence, Student. Sterling, Colo.

Elliott, Nellie. .... Sterling, Colo.

Elmer, Colgate, Student  
Box 1, Iowa City, Iowa

Engels, Bernice (Pd. M.) (see Class of  
1918).

Erdbrugger, Elsa. .... Greeley, Colo.

Estus, (Mrs.) Mary Mizener  
Colorado Springs, Colo.

Evans, Elsie A., Teacher  
Strasburg, Colo.

Everett, Z. Lodice  
1421 N. Corona, Colorado Springs, Colo.

Farr, Ruth (Pd. M.) .... Thompson, Utah

Farrelly, Clara, H. S. Teacher  
2611 Williams, Denver, Colo.

Fink, Jessie Alice (Pd. M.), Teacher  
1445 11th St., Greeley, Colo.

Fisher, Mrs. Otto M. (Pd. M.) (see Class  
of 1918).

Fisher, Virginia, deceased.

Fitzmorris, Ray S. (A. B.)  
Supt. of Schools, La Porte, Colo.

Fleming, Bernice E., Teacher  
Casa Grande, Ariz.

Fleming, Carrie A., Teacher  
773 Boulevard, Ashland, Ore.

Fleming, Edna B., Teacher  
1705 Franklin St., Denver, Colo.

Floyd, M. R. (A. B.),  
Supt. of Schools, Vinita, Okla.

Foley, Ruth (Pd. M.)  
(Mrs. H. O. Whowell)  
R. F. D. 1, Johnstown, Colo.

Foster, Harriet. .... Mesa, Colo.

Fowler, Alice. .... Cripple Creek, Colo.

Frazier, Eileen Lucile.

Freedle, James Casper, Prin. H. S.  
Saguache, Colo.

Fugate, Mrs. Emma, Teacher  
1802 12th Ave., Greeley, Colo.

Gallup, Ruth, Teacher  
125 E. 18th Ave., Denver, Colo.

Gannett, Anne (Mrs. F. F. Joel)  
Brooklyn, N. Y.

Gardiner, Anna L., Teacher  
18 E. Caramillo St., Colo. Springs, Colo.

Gardiner, Kathryn, Teacher  
18 E. Caramillo St., Colo. Springs, Colo.

Gardner, Amy G., Teacher  
818 Thornburg, Laramie, Wyo.

Gardner, Laura Martin, H. S. Teacher  
Fountain, Colo.

Gerkin, Marie, Office Clerk  
112 Magnolia, Long Beach, Calif.

Gibson, Grace (Mrs. O. F. Torgas)  
Aurora, Colo.

Gilchrist, Eleanor C. (Pd. M.)  
H. S. Teacher  
615 Pine St., Trinidad, Colo.

Gildea, Mary. .... Leadville, Colo.

Gill, Elizabeth (A. B.), Teacher  
618 Union Blvd., St. Louis, Mo.

Gillette, Vera Faye, Teacher  
Grover, Colo.

Gilligan, Pearl (Pd. M.)  
12th Ave., Denver, Colo.

Gilmore, Mary E. (see Class of 1918).

Girvan, Mina (Mrs. Earl Todd)  
La Salle, Colo.

Glassey, Helen F. R. ... Ft. Morgan, Colo.

Gleeson, Anna Catherine, Teacher  
1140 Mariposa St., Denver, Colo.

Glenn, Lela. .... Minneapolis, Kans.

Gorman, Helen. .... Cripple Creek, Colo.

Graham, Katherine (Mrs. John McCun-  
niff), deceased.

Gray, Ruth Margaret  
(Mrs. Ruth Margaret Beam)  
1117 11th Ave., Greeley, Colo.

Green, Jenny Lind (A. B.)  
Norris City, Ill.

Green, Myrtle  
1642 7th Ave., Greeley, Colo.

Greener, Jewel H. .... Aspen, Colo.

Greenlee, Ethel. .... Paso Robles, Calif.

Greist, Anna L. (Pd. M.), Teacher  
Congress Hotel, Pueblo, Colo.

Griffiths, Catherine  
(Mrs. Ralph McKinley)  
Cañon City, Colo.

Gunnison, Esther, Govt. Clerk  
216 E St. N. E., Washington, D. C.

Haines, Mary Elizabeth, Teacher  
Sugar City, Colo.

- Hall, Kathryn  
1270 Josephine St., Denver, Colo.
- Hall, Sibbel K. (Pd. M.)  
1132 Washington St., Denver, Colo.
- Hallberg, Ida (Mrs. J. O. Wilson).  
Holloway, Adeline  
546 Fox St., Denver, Colo.
- Hammond, Louise, Teacher  
Rawlins, Wyo.
- Hanna, Cornelia M. (Pd. M.), Teacher  
1019 10th Ave., Greeley, Colo.
- Hanna, Winifred, Teacher. Rawlins, Wyo.
- Hanno, Charlotte (Mrs. Adam Alles)  
H. S. Teacher  
1945 9th Ave., Greeley, Colo.
- Harbison, Mildred C.  
129 W. 9th St., Pueblo, Colo.
- Harbottle, Mrs. Florence E.  
Greeley, Colo.
- Hardenbergh, Hilda  
Box 444, Green River, Wyo.
- Harker, Annie. . . . . Florissant, Colo.
- Harris, Luella. . . . . Eagle, Colo.
- Hathaway, Cecelia. . . . . Montrose, Colo.
- Hayes, James H. (A. M.), Prin. H. S.  
913 Tascosa St., Trinidad, Colo.
- Head, Mrs. Twyla. . . . . Jefferson, Colo.
- Heckert, Mabel. . . . . Olathe, Colo.
- Hedeem, Alice L.  
720 Elizabeth St., Denver, Colo.
- Helm, Marian F.  
621 San Juan Ave., La Junta, Colo.
- Hemingway, Ruth R.  
(Mrs. Myron O. Miller)  
Erie, Colo.
- Henderson, Ethel M. (Pd. M.) (see Class  
of 1918).
- Herndon, Ruby C.  
(Mrs. Ernest E. Smith)  
Norwood, Colo.
- Herrick, Anita L. (Pd. M.), Teacher  
1344 Gaylord St., Denver, Colo.
- Higgins, Gladys. . . . . Eaton, Colo.
- Hikes, Lennie T. . . . . Windsor, Colo.
- Hill, Inez F. . . . . Pendleton, N. M.
- Hill, Marian.
- Hillyard, Grace Tanquary (A. B.)  
(Mrs. Sydney N. Hillyard) Teacher  
2430 Virginia St., Berkeley, Calif.
- Histed, Ruth. . . . . University Park, Colo.
- Hollister, Kathryn Pullen (A. B.)  
(Mrs. Rufus N. Keller)  
Los Angeles, Calif.
- Holloway, Adeline (Pd. M.)  
Denver, Colo.
- Hoon, Helen Mae (Pd. M.), Student  
418 E. Kiowa St., Colo. Springs, Colo.
- Hopkins, Wallace (A. B.)  
R. F. D., Greeley, Colo.
- Horn, Ella B. 602 Walnut, Trinidad, Colo.
- House, Hazelle L. (A. B.)  
Westminster, Colo.
- Housman, Virginia, Teacher  
366 Walnut Ave. S. W., Roanoke, Va.
- Houston, (Miss) Butler. . . . . Checotah, Okla.
- Howard, Edna E., Teacher  
Box 84, Wellington, Colo.
- Huffman, Murl, Teacher  
821 State St., Trinidad, Colo.
- Hull, Orla B. (Pd. M.).
- Hunter, Margaret. . . . . Denver, Colo.
- Hurley, W. R. (A. B.) . . . . . Telluride, Colo.
- Hutchinson, Ethel, Store Manager  
Synder, Colo.
- Hutchison, Katherine (Mrs. K. Ketcham)  
Broomfield, Colo.
- Isbill, Cecile E.  
(Mrs. A. Fitzmorris)  
(See Class of 1919)
- Jackson, Lois (Mrs. Ira B. Stark)  
Lincoln, Nebr.
- Jackson, Rae L. (Pd. M.) (see Class of  
1918).
- Jacobs, Charlotte M. (Pd. M.)  
Eads, Colo.
- Jennings, Mary Fentress, Teacher  
Wray, Colo.
- Johnson, Alma. . . . . Cheyenne, Wyo.
- Johnson, Alta. . . . . Akron, Colo.
- Johnson, Augusta. . . . . Wauneta, Wyo.
- Johnson, Bevie (see Class of 1918).
- Johnson, Edith. . . . . Akron, Colo.
- Johnson, Edna B., Teacher  
Brighton, Colo.
- Johnson, Everett. . . . . Checotah, Okla.
- Johnson, Laura  
1757 S. Lincoln St., Denver, Colo.
- Johnson, Shirley A. (A. B.)  
Merino, Colo.
- Johnston, Florence, Teacher  
Box 41, Ft. Morgan, Colo.
- Jones, Gladys. 730 York St., Denver, Colo.
- Jones, Lura. . . . . Boulder, Colo.
- Joyce, Ellen Lee. . . . . Antonito, Colo.
- Judson, Mrs. Beulah Lee. . . . . Greeley, Colo.
- Kane, Katherine A. (A. B.), Teacher  
East Las Vegas, N. M.
- Kasten, Irma, Teacher  
530 Virginia St., Vallejo, Calif.
- Kennedy, Anna (Pd. M.)  
Hot Sulphur Springs, Colo.
- Kennedy, Jennie. . . . . Okmulgee, Okla.
- Kidder, Ethel M., Teacher  
R. F. D. No. 1, Stockyards Station,  
Denver, Colo.
- Kimball, Phyllis, Teacher  
1416 12th St., Greeley, Colo.
- King, C. Harold, Teacher. . . . . Sterling, Colo.
- King, Kathryn. . . . . Denver, Colo.
- Kussart, Jeannette (see Class of 1918).
- Laffae, Mrs. Dolly Hale (see Class of  
1919).
- Latas, Carolyn, Teacher  
114 N. Chestnut St.,  
Colorado Springs, Colo.
- Lawrence, Helen. . . . . Arvada, Colo.
- Laws, Irene. . . . . Denver, Colo.
- Laylander, Virda (A. B.) . . . . . Pueblo, Colo.
- Layton, Mrs. Nellie B. (A. B.)  
Teacher  
1295 N. Sierra Bonita, Pasadena, Calif.
- Lee, Homer J.  
1607 8th Ave., Greeley, Colo.
- Le Master, Gladys (Mrs. Lloyd G. Moses)  
Olathe, Colo.
- Leonard, Gene, Teacher. . . . . Valdez, Colo.
- Leshar, Mabel G. (A. B.) . . . . . La Junta, Colo.
- Lockhart, Lee (Pd. M.) (see Class of  
1918).
- Lohman, Mabel D. . . . . Wray, Colo.
- Looney, Ethel, Teacher  
451 N. Miller St., Vinita, Okla.
- Loveland, Ethel (Mrs. Orrie Fryberger)  
Box 332, Telluride, Colo.
- Lowenhagen, Elsie, Teacher  
R. F. D. No. 1, Grand Junction, Colo.
- Ludwick, Samuel Miller (A. B.)  
Supt. of Schools  
Louisville, Colo.
- Lundy, Kate (Pd. M.) . . . . . Ft. Morgan, Colo.
- McBee, Mary. . . . . Florence, Colo.
- McClintock, Alva. . . . . Ashland, Ohio
- McClintock, Mildred (see Class of 1918).
- McCurdy, Mary B. . . . . Pictou, Colo.
- McCutcheon, Frances C., Stenographer  
1223 11th St., Greeley, Colo.
- McFarland, Mary  
605 E. Platte St., Ft. Morgan, Colo.
- McGuckin, Irene, Prin. of School
- Beebe Draw Teacherage, La Salle, Colo.
- McIntyre, Ruth (Pd. M.) . . . . . Hotchkiss, Colo.

McKelvey, Kathryn (Pd. M.)  
2842 York St., Denver, Colo.

McLaurin, Mary M. (Pd. M.)  
Jacksonville, Fla.

MacLean, Mae Zela, Teacher  
2116 Evans, Cheyenne, Wyo.

McMenamin, Faye (A. B.), Teacher  
Eaton, Colo.

McNair, Madge, Teacher  
2033 11th St., Boulder, Colo.

McNeel, Mabell G. ....No. Platte, Nebr.

McNutt, Sarah A. (Pd. M.), Teacher  
Mayher Apt. No. 1, Greeley, Colo.

Madrid, Sofia, Teacher. ....Weston, Colo.

Mallot, Pauline, Teacher  
(Mrs. Pauline Merchant)  
319 E. 3rd St., Delta, Colo.

Magor, Iris. ....Rifle, Colo.

Markle, Hazel May, Teacher  
La Salle, Colo.

Marron, Bernice L.  
4952 Raleigh St., Denver, Colo.

Martin, B. F. (A. B.), Supt. of Schools  
Newton, Kans.

Mason, Luella (Mrs. A. O. Anderson)  
5826 Holden St., Pittsburg, Pa.

Matson, Edna (Pd. M.), Teacher  
Wiley, Colo.

Mazzoni, Freda. ....Walsenburg, Colo.

Merriam, Ruth. ....Imperial, Calif.

Merrill, Hattie Belle (Pd. M.)  
1861 10th Ave., Greeley, Colo.

Meyers, Rosa V. ....La Junta, Colo.

Mickey, J. L. (Pd. M.)  
Supt. of Schools, Craig, Colo.

Miller, Evelyn Watson, Teacher  
Frederick, Colo.

Miller, Florence D. ....Arvada, Colo.

Miller, Gladys M. (Pd. M.)  
314 N. 2nd, Sterling, Colo.

Minniss, Nellie. ....Sugar City, Colo.

Mohrbacher, Florence (Pd. M.)  
622 N. Corona, Colorado Springs, Colo.

Monroe, Gussie R. (Pd. M.)  
(Mrs. Paul Henerson)  
Hoehnes, Colo.

Moore, C. E. (A. B.)  
Wenatchee, Wash.

Moore, Chas. T. (A. M.), Teacher  
Carr, Colo.

Morand, Earle G. (A. B.)  
State Supervisor of Rural Schools  
State House, Denver, Colo.

Morrison, Mary M., Teacher  
Box 255, Fountain, Colo.

Munroe, Marcella, Prin. of School  
Bancroft, Ida.

Murchison, Irene Alice. ....Arvada, Colo.

Myers, Elizabeth.

Neeland, Mary (see Class of 1918).

Neely, A. S., Supt. of Schools. Carr, Colo.

Nelson, Gertrude E., Teacher  
Broomfield, Colo.

Nesbitt, Mrs. Winifred. ....Rocky Ford, Colo.

Neutze, John W. ....Roy, Wash.

Neville, Anne (A. B.). ....Sterling, Colo.

Newsome, Ruth (Mrs. Rose)  
N. Corona St., Colo. Springs, Colo.

Nichols, Stella, Teacher  
North Platte, Nebr.

Nisbet, Louise  
4299 Federal Blvd., Denver, Colo.

Noble, Viva H. ....Longmont, Colo.

Noce, M. C. Lillian (A. B.), Teacher  
3726 Vallejo, Denver, Colo.

O'Boyle, Mrs. Georgia M., Teacher  
1440 Clarkson St., Denver, Colo.

O'Connor, Agnes L. ....La Junta, Colo.

O'Connor, Florence (see Class of 1918).

O'Neal, Emma Frances  
Wichita Falls, Texas

Onstine, Geraldine, Teacher  
Box 94, Basin, Wyo.

Paden, Mary. ....Carr, Colo.

Page, Mrs. Alida E. (Mrs. W. H. Page)  
623 14th Ave., Greeley, Colo.

Page, Helen  
5342 University Ave., Chicago, Ill.

Pancake, Florence. ....Berthoud, Colo.

Parker, Palmer, Salesman  
1814 Cumberland Ave., Rockford, Ill.

Patterson, Anna (A. B.) (see Class of  
1919).

Peck, Elvira. ....Grand Junction, Colo.

Pengra, Ray F., Farmer. ....Buffalo, S. D.

Pettigrew, Abbie H., Teacher  
Wheatridge, Colo.

Phillips, Edith L. (Pd. M.)  
923 N. Weber, Colo. Springs, Colo.

Phippeny, G. O., Teacher. ....Ordway, Colo.

Pickett, Blanche  
(Mrs. V. R. Houston) Gilcrest, Colo.

Pierce, Fanny. ....Pleasanton, Kans.

Pingrey, Jennie N.  
605 Matthews St., Fort Collins, Colo.

Piper, Grace E., Teacher  
612 E/ Del Norte St., Colo. Spgs., Colo.

Pixley, Denova. ....Cripple Creek, Colo.

Poe, Eva Lucy (Pd. M.)  
1301 E. 7th, Pueblo, Colo.

Porter, Harriet  
(Mrs. Harry A. Anderson)  
Powell, Wyo.

Porter, Mary (Pd. M.). ....Grover, Colo.

Priddy, Roy N., General Agent  
1218 Foster Bldg., Denver, Colo.

Prince, Carrie M. (A. B.), Teacher  
2339 E. 29th Ave., Denver, Colo.

Pughe, Charlotte. ....Boulder, Colo.

Quinlan, Agnes (Pd. M.) ....Gypsum, Colo.

Ramsay, Edith (see Class of 1918).

Randol, Josephine. ....Salida, Colo.

Rapp, Leila.

Rardin, Florence (see Class of 1918).

Ray, Zoia. ....Lamar, Colo.

Reed, Erika. Carr Ave., Cripple Ck., Colo.

Reese, Benita. ....Longmont, Colo.

Reid, Janet (Mrs. William Lynn)  
Torrington, Wyo.

Reitzel, Fern. ....Colo. Springs, Colo.

Rhodes, Esther A., Teacher  
Box 642, Ft. Morgan, Colo.

Richart, Miss L. M.

Ricketts, Blanche (A. B.)  
522 Arapahoe Ave., Boulder, Colo.

Riley, Laura V., Teacher. ....Haxtum, Colo.

Ringle, Flora Helen (A. B.)  
(Mrs. Jesse Frank Hurlbut)  
301 E. Poplar St., Stockton, Calif.

Rissman, Gertrude H.  
(Mrs. Jesse E. Sprague) California

Roach, Marie. ....Cripple Creek, Colo.

Robinson, Henrietta (A. B.), Teacher  
2012 Elizabeth, Pueblo, Colo.

Roe, Myrtle A., Teacher  
116 Phelps, Sterling, Colo.

Rogers, Iva Maude (Pd. M.)  
Trinidad, Colo.

Rosebrough, Vera  
206 So. 3rd St., Lamar, Colo.

Rosell, Flossie. ....Oakwood, Okla.

Rowen, Gladys (Mrs. Sidney T. Reeder)  
545 Collier St., Longmont, Colo.

Ruecan, Elsa Von, Teacher  
516 Lincoln St., Sterling, Colo.

Rundquist, Winona, Teacher  
222 6th Ave., Twin Falls, Idaho

Saltus, Mrs. C. N. (Pd. M.) (see Class of  
1918).

Sandberg, Edith, Teacher  
423 Dartmoor Apt., Omaha, Nebr.

Sandine, Agnes (Mrs. Carl T. Brunson)  
71 Nat'l Bank Bldg., Colo. Spgs., Colo.

- Sandoval, Mrs. Rafaelito V.  
 Scamlan, Alice (see Class of 1919).  
 Schrader, Bonita M., Teacher  
     1234 Josephine, Denver, Colo.  
 Schwyn, Luella A. .... Flagler, Colo.  
 Scott, Chas. E. .... Timnath, Colo.  
 Scribner, Bonnie. .... Lamar, Colo.  
 Sellers, W. A. (A. B.) .... Weldona, Colo.  
 Shaffer, Dorothy H. (Pd. M.)  
     (Mrs. Charles A. Matheson)  
     R. F. D. No. 1, Box 121, Greeley, Colo.  
 Shattuck, Dorothy  
     1705 7th Ave., Greeley, Colo.  
 Shattuck, Marian  
     (Mrs. Edgar Atkinson)  
     R. F. D., Greeley, Colo.  
 Sherar, Ethel S. .... Rochester, N. Y.  
 Shillady, Miriam E. .... Greeley, Colo.  
 Shriber, Esther, Teacher. .... Ault, Colo.  
 Sless, Ermie (see Class of 1918).  
 Sinclair, Myra A. (Pd. M.), Teacher  
     1215 Elizabeth, Denver, Colo.  
 Skinner, C. E. .... Colo. Springs, Colo.  
 Smith, Mrs. Clara Gulliford (see Class  
     of 1918).  
 Smith, Della, Teacher  
     210 N. Meldrum, Ft. Collins, Colo.  
 Smith, Edith M. .... Greeley, Colo.  
 Smith, Gratia Hyde  
     525 E. Second St., Jamestown, N. Y.  
 Smith, Hazel. .... Brighton, Colo.  
 Smith, Miriam E. (Pd. M.) (see Class of  
     1918).  
 Smith, Rena L. Teacher. .Pasadena, Calif.  
 Smith, Vivian (Mrs. Clifford W. Adee)  
     Watkins, Colo.  
 Sonner, Verna (Mrs. E. D. Faulkner)  
     601 10th Ave., Greeley, Colo.  
 Stannard, Emily M. (A. B.), Housekeeper  
     709 American Ave., Long Beach, Calif.  
 Starr, Bertha McClure (A. B.), deceased.  
 Stein, Mrs. Ethel E. .... Akron, Colo.  
 Stephens, Edith F. (A. B.)  
     Asst. Librarian C. T. C.  
     1830 7th Ave., Greeley, Colo.  
 Stephens, Gertrude Alice (Pd. M.)  
     Teacher  
     1736 Race St., Denver, Colo.  
 Stephenson, Elizabeth. .... Denver, Colo.  
 Stevens, Dorothy J., Teacher  
     Estes Park, Colo.  
 Stevenson, W. B. (Pd. M.)  
 Stewart, Mildred, Teacher  
     1101 Swink Ave., Rocky Ford, Colo.  
 Stewart, Eugene (Pd. M.) (see Class of  
     1918).  
 Stimson, Helen, Teacher  
     1514 8th Ave., Greeley, Colo.  
 Stockham, Ima, Teacher  
     Durango, Colo., Box 31  
 Stodghill, Corine  
     (Mrs. W. T. Wilson)  
     421 Broadway, Pueblo, Colo.  
 Stolt, Edna.  
 Stone, Geneva. .... Eaton, Colo.  
 Stone, Hattie (Mrs. R. H. Berry)  
     1266 John St., Seattle, Wash.  
 Stone, Martha. .... Colo. Springs, Colo.  
 Stout, Opal (Pd. M.) .... Laramie, Wyo.  
 Strawbridge, Vera P.  
     (Mrs. William Warren)  
     Meeker, Colo.  
 Sullivan, Mrs. Mary S. (A. B.)  
     524 9th Ave., Greeley, Colo.  
 Sutherland, Clara Belle  
     (Mrs. Stanford Conant)  
     Box 122, Tucson, Ariz.  
 Sutton, Mrs. Julia M.  
     (Mrs. Getchell)  
     Walsenburg, Colo.
- Svedman, Lillian (Pd. M.), Teacher  
     1017 4th Ave., Longmont, Colo.  
 Swendensky, Frances. .... Iliff, Colo.  
 Tandy, Edna. .... Carbondale, Colo.  
 Taylor, Edith, Teacher  
     990 14th St., Boulder, Colo.  
 Taylor, Laura. 802 W. 13th, Pueblo, Colo.  
 Taylor, Mattie  
     1812 7th Ave., Greeley, Colo.  
 Taylor, Opal  
     1020 Filmore St., Denver, Colo.  
 Thickens, Thelma (Mrs. Thelma Moran)  
     Quarters 75, Ft. Douglas, Utah  
 Thomas, Elizabeth R. (Pd. M.)  
     1019 Arizona Ave., Trinidad, Colo.  
 Thompson, Homer C. (Pd. M.)  
     1335 E. 5th, Pueblo, Colo.  
 Thompson, Lillian (Pd. M.)  
     Durango, Colo.  
 Tobey, Frances (A. B.), Teacher C. T. C.  
     Greeley, Colo.  
 Tohill, Elizabeth (Pd. M.) (see Class of  
     1918).  
 Tomlin, Reba (A. B.) .... Cameron, Mo.  
 Towle, Elizabeth. .... Henderson, Colo.  
 Townsend, Beryl, Typist  
     1103 10th Ave., Greeley, Colo.  
 Tracey, Irene (see Class of 1919).  
 Trachsel, Bernice (Mrs. ....)  
     Denver, Colo.  
 Travis, Marian, Teacher  
     Harvard Hotel, Denver, Colo.  
 Treadwell, A. Florence  
     Box 133, Walsen, Colo.  
 Trent, Gertrude (Pd. M.), Teacher  
     2102 G St., San Diego, Calif.  
 Tuck, Fred (A. B.), Farmer, Wray, Colo.  
 Turcotte, Adelaide H. V. (Pd. M.)  
     (Mrs. Wm. E. Gabelman) Teacher  
     1137 So. New Hampshire  
     Los Angeles, Calif.  
 Turnbull, Elizabeth. .... Hobart, Okla.  
 Turney, Mary E., Teacher. .Orosi, Calif.  
 Tyrrell, Florence. .... Arvada, Colo.  
 Tyvold, Helen Louise, Teacher  
     319 So. 6th St., Laramie, Wyo.  
 Unger, John C. (A. B.)  
     Supt. of Schools  
     Hugo, Colo.  
 Vanderlip, Verner V. .... Greeley, Colo.  
 Van Gorder, Gladys. .... Greeley, Colo.  
 Van Ullen, Lois, Auditor  
     1314 C St., N. C., Washington, D. C.  
 Vertress, Rhea C. (Mrs. M. Canavan)  
     315 S. Academy Ave., Provo, Utah  
 Voris, Mrs. Jessie Wright.  
 Wallace, Alberta. .... Leadville, Colo.  
 Walter, Nellie (Pd. M.) (see Class of  
     1918).  
 Walters, Alice, deceased.  
 Warberg, Anna, Teacher  
     Ft. Collins, Colo.  
 Warnock, Katherine. .... Ft. Morgan, Colo.  
 Webber, Helen. .... Creede, Colo.  
 Weber, Adelaide Rosaline (A. B.)  
     (See Class of 1918).  
 Weidman, Blanche (Pd. M.), Teacher  
     Greeley, Colo.  
 Weirich, Edna Genevieve, Teacher  
     4795 Federal Blvd., Denver, Colo.  
 West, Helen. .... Denver, Colo.  
 Wheeler, Alice E., Teacher. Bayfield, Colo.  
 Wheeler, Winnie E., Teacher  
     Laramie, Wyo.  
 Whistleman, Ruth (Mrs. Glenn Kinghorn)  
     1253 Grant St., Ft. Collins, Colo.  
 White, Esther L. (see Class of 1918).  
 Whitehead, Josephine (Pd. M.), Teacher  
     461 Pennsylvania, Denver, Colo.  
 Whitehouse, Pattie, Teacher  
     Omaha, Nebr.  
 Wickmann, Irene P. (see Class of 1918).



Wilson, Bertha E. .... Hoyt, Colo.  
 Wilson, Edna. .... Purcell, Colo.  
 Wilson, Martha (Pd. M.)  
 1566 Cook St., Denver, Colo.  
 Wilson, Stella. .... Erie, Colo.  
 Winger, Bert Z. (Pd. M.)  
 Deputy Co. Supt.  
 Office of Co. Supt., Greeley, Colo.  
 Woland, Julia  
 1215 12th Ave., Greeley, Colo.  
 Wood, Cora V. .... Florence, Colo.  
 Worth, Elizabeth, Teacher  
 620 So. First St., Tacoma, Wash.  
 Wright, Pearl (Pd. M.)  
 1841 6th Ave., Greeley, Colo.  
 Wyckoff, Dorothy Helen (A. B.),  
 Teacher, Cameron, Mo.  
 Youberg, Lois C. (Mrs. J. W. Abel)  
 2014 W. 43rd Ave., Denver, Colo.  
 Young, Della A. (see Class of 1918).

CLASS OF 1918

Ackerman, Lloyd (A. B.)  
 Colorado University Instructor  
 Boulder, Colo.  
 Adams, Ella B., Prin. of School  
 4301 So. Fox, Englewood, Colo.  
 Ahlberg, Ingrid. .... Mosco, Colo.  
 Allen, Harland H. (A. M.), Teacher  
 University of Chicago, Chicago, Ill.  
 Allen, Louise T. (A. B.)  
 Supt. of Schools, Nunn, Colo.  
 Allen, Mrs. Myrtle Camp (A. B.),  
 Teacher, Clarkdale, Ariz.  
 Alles, Adam (A. B.), Student  
 Oberlin College, Oberlin, Ohio  
 Allsworth, Brainard H. (A. B.)  
 Supt. of School, Primero, Colo.  
 Amsbary, Jeannette, Teacher  
 Delta, Colo.  
 Anderson, Addie A. (A. M.)  
 Anderson, Bessie  
 111 E. Cemarín, Colo. Springs, Colo.  
 Anderson, Florence. .... Eaton, Colo.  
 Anderson, Ida M., Teacher  
 710 Kalamath St., Denver, Colo.  
 Andrew, Margaret (Mrs. E. C. Cox)  
 Hillrose, Colo.  
 Annett, Olive B., Teacher. .... Ault, Colo.  
 Aultman, Lela May, Student  
 5440 Walnut St., Pittsburgh, Pa.  
 Baird, Nellie (Pd. M.), Prin. of School  
 513 E. 2nd St., Trinidad, Colo.  
 Baker, Beulah (Mrs. Karl Warner)  
 Weiser, Idaho  
 Baldwin, Ruth M., Teacher. Hudson, Colo.  
 Bardwell, Esther. .... Eaton, Colo.  
 Barnes, Frances M. .... Trinidad, Colo.  
 Barton, Minnie Agnes (A. B.)  
 Prin. of School  
 110 N. Sherwood St., Ft. Collins, Colo.  
 Bate, Helen L., Teacher  
 642 Grant St., Denver, Colo.  
 Bates, Helen Louise  
 (Mrs. Elvin B. Lockhard)  
 Lafayette Apt. No. 7, Greeley, Colo.  
 Beamer, Clara, Teacher. .... Hailey, Idaho  
 Bennett, T. Ralph, H. S. Teacher  
 Rifle, Colo.  
 Benson, Miriam E., Teacher  
 821 Forest Ave., Canon City, Colo.  
 Bergen, Marjorie (see Class of 1919).  
 Berliner, Belle B. (A. B.), Teacher  
 405 W. 10th St., Pueblo, Colo.  
 Berner, Ola E., Teacher  
 624 W. 5th St., Loveland, Colo.  
 Billington, W. Emma (A. B.)  
 H. S. Teacher  
 1014 Lake Ave., Pueblo, Colo.  
 Birkins, Grace M., Stenographer  
 Romeo, Colo.

Bishop, Ruth (Pd. M.)  
 1241 Lincoln St., Denver, Colo.  
 Blain, Mrs. Maud (A. B.), Teacher  
 215 W. 12th, Pueblo, Colo.  
 Blair, Martha. .... Rock Springs, Wyo.  
 Bliefernich, Elizabeth.  
 Bohn, Nellie  
 1388 Xavier St., Denver, Colo.  
 Bonds, Flora. .... Durango, Colo.  
 Bonham, Bonnie (Pd. M.)  
 American Red Cross,  
 Bucuresti, Roumania  
 Boyd, Carrie C. (Pd. M.), Teacher  
 Alamosa, Colo.  
 Boyer, Monta J. (A. B.)  
 Prin. of School  
 1648 Washington St., Denver, Colo.  
 Boyle, Helen Talbot, Teacher  
 732 Tillotson Ave., Trinidad, Colo.  
 Brady, Agnes Heath (A. B.), Teacher  
 911 12th Ave., Greeley, Colo.  
 Bragg, Lottie (A. B.), Teacher  
 Box 136, Casper, Wyo.  
 Briggs, Eunice E., Teacher  
 440 Howard St., Delta, Colo.  
 Brodie, Angie, Teacher  
 3631 Eliot St., Denver, Colo.  
 Brown, Lucile (Mrs. Vera W. Meyers)  
 Altamont, Mo.  
 Brown, Marjorie Sue, Teacher  
 2918 Benton Blvd., Kansas City, Mo.  
 Brown, Sadie Margaret Britton (A. M.)  
 Prin. of H. S.  
 Box 88, Berwind, Colo.  
 Bruce, Helen I., Teacher. .... Paonia, Colo.  
 Bruce, Maude  
 Stockyards Station, Denver, Colo.  
 Bruce, Nellie H. (Pd. M.), Teacher  
 Clarkdale, Ariz.  
 Brunton, Jessie, Teacher. Ft. Collins, Colo.  
 Brush, F. Thelma  
 (Mrs. Herbert L. Johnson)  
 R. F. D. No. 1, Box 34B, Salida, Colo.  
 Buck, Vera (Pd. M.) (A. B.), Teacher  
 Kingfisher College, Kingfisher, Okla.  
 Bugger, Edith M., Teacher  
 322 E. 4th St., The Dalles, Ore.  
 Bull, R. Lucile (Mrs. Tibbitts)  
 701 E. 12th St., Oklahoma City, Okla.  
 Burbridge, George. .... Platteville, Colo.  
 Burfield, Gail (Pd. M.) (see Class of 1919)  
 Burks, A. L. (A. B.)  
 Weatherford, Okla.  
 Butler, Bernice B. (Pd. M.), Dietitian  
 U. S. P. H. S. Hospital,  
 Palo Alto, Calif.  
 Butler, Marian D.  
 1755 Lawrence St., Denver, Colo.  
 Butler, Mary J., Teacher  
 Box 55, Berthoud, Colo.  
 Cadwell, Gladys, Teacher  
 420 Greenwood Ave., Canon City, Colo.  
 Canfield, Mary, Teacher  
 769 Lincoln, Denver, Colo.  
 Capps, Evalyn, Teacher. .... Lester, Colo.  
 Carlson, Eloise, Teacher  
 217 Jefferson, Pueblo, Colo.  
 Carroll, Mrs. Katherine. .... Byers, Colo.  
 Charles, Catherine W. (A. B.)  
 Teacher  
 51 So. Pearl St., Denver, Colo.  
 Choury, Amade.  
 Churchill, Lillian M., Teacher  
 231 22nd St., Denver, Colo.  
 Christeson, Lulu.  
 Clough, Gertrude (Pd. M.), Teacher  
 327 So. 2nd St., Alhambra, Calif.  
 Clough, Ruth E.  
 327 So. 2nd St., Alhambra, Calif.  
 Cochran, Mrs. Charlie P.  
 Co. Supt. of Schools  
 306 Prospect St., Ft. Morgan, Colo.

Cochran, Mabel  
1515 11th St., Greeley, Colo.

Collins, Frederick Wallace (A. M.)  
Supt. of Schools Boyero, Colo.

Combs, Ethel L. (Pd. M.), Teacher  
2923 W. 28th Ave., Denver, Colo.

Connally, Mrs. Sadie.  
Conner, Maude E., deceased.

Cook, A. B. (A. B.).....Seibert, Colo.

Coolidge, Elizabeth G. (A. B.),  
H. S. Teacher  
Box 211, Fallon, Nevada

Cooper, Clara, Teacher.....Golden, Colo

Corbin, Leila.....Delta, Colo.

Corlett, Jane.....Monte Vista, Colo.

Cornett, Esther (Mrs. Jack Pickett)  
919 11th Ave., Greeley, Colo.

Cosgrove, Anna Josephine (see Class of  
1919).

Cowgill, Marian, Teacher  
431 Pine St., Trinidad, Colo.

Cox, Hazel.....Burlington, Colo.

Cratzer, Ruby, Deputy Co. Treasurer  
1311 E. 4th St., Pueblo, Colo.

Crawford, Grace, Teacher  
1434 11th St., Greeley, Colo.

Crawford, Julia L.....Leadville, Colo.

Crawford, Mrs. Myrtle  
(Co. Supt. of Schools)  
Akron, Colo.

Crie, Robert R. (Pd. M.), Student  
1648 8th Ave., Greeley, Colo.

Crittenden, Mabel Mary, Teacher  
New Temple Hotel, Salt Lake City

Cunningham, Alice E., Teacher  
Box 94, Meeker, Colo.

Curtis, H. W. (Pd. M.)  
Supt. of Schools, Wray, Colo.

Dahlgren, Alice.....Eaton, Colo.

Dalbey, Cora Nancy (A. B.), Teacher  
Coldwater, Kans.

Damon, J. G. (Pd. M.) (see Class of  
1919).

Darlington, Helen, Teacher  
R. F. D. No. 1, Berthod, Colo.

Daugherty, Merle A., Stenographer  
Ft. Morgan, Colo.

Davis, Beulah, Teacher...Loveland, Colo.

Davis, Claudia, Teacher...Walsen, Colo.

Davis, Elizabeth Shirley (Pd. M.)  
Teacher  
424 E. 4th St., Alton, Ill.

Davis, Genevieve L., Teacher...Ault, Colo.

Davis, Lillian G.....Holly, Colo.

Dawson, Alma (Mrs. Howard Vrooman)  
Greeley, Colo.

Della, Josephine, Teacher  
Howard, Colo.

Demmel, Margaret (Pd. M.) (see Class of  
1919).

Dempsey, Blanche Gertrude, Teacher  
327 Quincy St., Pueblo, Colo.

Desmond, Margaret, Teacher  
1055 Navajo St., Denver, Colo.

De Weese, Blanche....Canon City, Colo.

Diggs, Charles Albert (A. B.)  
Supt. of Schools, Ainsworth, Nebr.

Dillon, Agnes.....Pagosa Springs, Colo.

Dillon, Thos. F., Teacher...Safford, Ariz.

Dodge, Elizabeth Mays (A. B.)  
(Mrs. Chalmers Shaffer)  
Safford, Ariz.

Donald, Mildred MacLaren  
New Harmony, Ind.

Donley, H. H. (Pd. M.)...Englewood, Colo.

Doolittle, Mary Tilton  
2401 Fifth Ave., Pueblo, Colo.

Dotson, Edna (A. B.), Govt. Clerk  
1425 21st St., Washington, D. C.

Dotson, Ruth (A. B.), Govt. Clerk  
1425 21st St., Washington, D. C.

Durkee, Clara.....Manitou, Colo.

Durning, Bertha (A. B.) (A. M.)  
Kalispell, Mont.

Dwyer, Elizabeth (Mrs. Glenn O. Raikes)  
904 Center St., Anaheim, Calif.

Dyer, Helen, Student C. T. C.  
Greeley, Colo.

Dyer, Mrs. Josephine Seely (Pd. M.)  
Teacher  
333 E. 3rd St., Long Beach, Calif.

Eagleton, William H. (A. B.)  
Prin. of School  
2275 Elm St., Denver, Colo.

Easton, Virginia, Teacher...Valdez, Colo.

Egerton, Iva.....Carbondale, Colo.

Edwards, Grace E., Teacher  
624 Macon Ave., Canon City, Colo.

Eldridge, Peggy Bemia (Pd. M.)  
(Mrs. W. F. Morrison)  
Camfield Court, Greeley, Colo.

Elias, Minnie.....Rock Springs, Wyo.

Elliott, Erma Julia  
351 5th Ave., Durango, Colo.

Engels, Bernice (A. B.), Teacher  
Box 363, Rocky Ford, Colo.

Epple, Florence B., Teacher  
Roggen, Colo.

Erickson, Clara Louise  
(Mrs. Homer Thompson)  
Masters, Colo.

Erwin, Eva Marie.

Evans, Phillis  
1925 Greenwood, Pueblo, Colo.

Everett, Geary E. (A. M.), deceased.

Farmer, Geo. E. (A. B.)  
Sec. Intercollegiate Prohibition Assn.  
289 4th Ave., Room 51, New York City

Farr, Jennie Ridenour (A. B.)  
H. S. Teacher, Wiggins, Colo.

Ferguson, Mrs. Lillian Heilman  
(Pd. M) (A. B.) H. S. Teacher  
211 Animas St., Trinidad, Colo.

Finn, Nora C., Teacher  
4039 Vallejo St., Denver, Colo.

Fish, Florence (Pd. M.) (A. B.)  
H. S. Teacher  
1125 12th Ave., Greeley, Colo.

Fisher, Annie C., Teacher  
1051 Downing St., Denver, Colo.

Fisher, Elizabeth.....Akron, Colo.

Fisher, Mrs. Otto May (A. B.)  
Dean of Women  
Marshall College, Huntington, W. Va.

Fleckenstein, Felicia (A. B.), Teacher  
Telluride, Colo.

Flood, Mary L., Teacher  
200 W. 2nd Ave., Denver, Colo.

Fluharty, Ada D., Teacher  
Mancos, Colo.

Foley, Irene (Mrs. Ernest R. Ashton)  
Evanston, Wyo.

Force, Anna Laura (A. B.)  
Prin. of School  
216 Sherman St., Denver, Colo.

Foresman, Sue E., Teacher  
605 So. 12th St., Rocky Ford, Colo.

Foster, Arthur J. (A. B.)  
Supt. of Schools, Delta, Colo.

Foster, Fern.....Loveland, Colo.

Foulk, Lola, Teacher  
Argyle Apts., No. 11, Ogden, Utah

Freedle, Mary Alma, Teacher  
Hudson, Colo.

Freeland, Mrs. George E. (Pd. M.)  
State University, Seattle, Wash.

Fry, Esther G., Teacher...Plainview, Nebr.

Fuller, Louanna, Teacher  
Berthoud, Colo.

Gage, Ethel M. (Pd. M.), Teacher  
220 E. 7th St., Riverside, Calif.

Gale, Mae A. (Mrs. A. P. Vermillion)  
Teacher, Keyser, Colo.

Gammill, F. I., Supt. of Schools  
Mead, Colo.

Garinger, Edna R., Teacher  
2224 Spruce, Pueblo, Colo.

Gearhart, Orpha (Pd. M.)  
(Mrs. Robert Malcolm Cochrane)  
Arapahoe, Nebr.

Gibbeon, Lota  
1217 8th Ave., Greeley, Colo.

Gigax, Agnes, Prin. of School  
Grand Junction, Colo.

Gigax, Minnie, Teacher  
902 Colorado Ave., Grand Jct., Colo.

Gilbert, Arthur (A. B.) . . . . Johnson, Nebr.

Gilbert, Pauline (Pd. M.) . . . . Lamar, Colo.

Gilmore, Faith W. (A. B.) . . . . Denver, Colo.

Gilmore, Mary E. . . . . Berthoud, Colo.

Gloystein, Hope (Pd. M.), Teacher  
Ludlow, Colo.

Gooch, Sarah  
1429 Emerson St., Denver, Colo.

Gookins, Helen, Teacher  
111 No. 25th St., Omaha, Nebr.

Gould, Willie Ann  
(Mrs. Robert F. White)  
Box 1415, Hurley, N. M.

Grant, Xina M., Teacher  
Turtle Lake, Wis.

Grass, Florence  
2371 Elm St., Denver, Colo.

Gray, Mayme S.  
Cheyenne Canon, Colo. Springs, Colo.

Greene, Mrs. Anna Scheffler (A. B.)  
1238 Gaylord St., Denver, Colo.

Grout, Stella S., Teacher  
818 E. 10th St., Pueblo, Colo.

Guillet, Lucile . . . . . Cortez, Colo.

Haggerty, Avis . . . . . De Beque, Colo.

Hamilton, Catherine Louise (Pd. M.)  
2309 Ash St., Denver, Colo.

Hamilton, Vera, Student C. T. C.  
1328 6th St., Greeley, Colo.

Hammond, Helen G. (Mrs. Helen Chester)  
Hansen, Katherine  
445 E. 13th Ave., Denver, Colo.

Hansen, Marie  
445 E. 13th Ave., Denver, Colo.

Hanson, Viola (Pd. M.), H. S. Teacher  
Carbondale, Colo.

Harrington, Alice, deceased.

Harrington, Mae . . . . . Butte, Mont.

Harris, Ruth, Teacher . . . . . Warren, Wyo.

Harrison, Shirley V. (Pd. M.) (see Class  
of 1919).

Hart, Dorothea (A. B.), Teacher  
Box 1012, Aspen, Colo.

Haruff, Mrs. Reba (A. B.)  
2214 Greenwood, Pueblo, Colo.

Harvat, Helen . . . . . Grant, Denver, Colo.

Harvey, Sarah J., Teacher  
149 K St., Rock Springs, Colo.

Hauptman, Ruth (Pd. M.), Teacher  
3047 W. 29th Ave., Denver, Colo.

Hawes, Josephine (A. B.) (see Class of  
1919).

Hawley, S. Frances (A. B.), Teacher  
701 Baca St., Trinidad, Colo.

Hay, Helen M., Teacher  
1527 High St., Denver, Colo.

Hayton, Mrs. Kate W.  
Box 31, La Jara, Colo.

Henderson, Ethel (A. B.) . . . . Lucerne, Colo.

Henley, Bessie, Teacher  
(Mrs. Curtis Rundquist)  
Central City, Colo.

Henley, Pearl (A. B.).

Hennick, Anna B., Teacher  
Sharon Springs, Kans.

Henry, Martha (A. B.)  
McAllister, Okla.

Hickman, Lois G. (see Class of 1919).

Hicks, Marie L., Prin. H. S.  
(Mrs. Charles A. Diggs)  
Ainsworth, Nebr.

Higgins, Marjorie F. (Mrs. Edgar Nichols)  
Montrose, Colo.

Hile, Belle D. (A. B.), H. S. Teacher  
3046 Newton, Denver, Colo.

Hill, Azelia (Pd. M.) (see Class of 1919).

Hinkley, Winifred, Teacher  
(Mrs. C. E. Veden)  
R. F. D. No. 1, Ault, Colo.

Hoffman, Myrtle (Pd. M.) . . . Swink, Colo.

Holland, Beulah Gray (Pd. M.) (see Class  
of 1919).

Hollister, Evaline  
414 E. 3rd St., Leadville, Colo.

Holmes, Mrs. Anne Henrietta  
(A. B.) Teacher  
2435 Williams St., Denver, Colo.

Horner, Irene, Office Clerk  
514 Oak St., Sterling, Colo.

Houghton, Mrs. Louise P. (see Class of  
1919).

Howard, Lavina Jane  
4805 Stuart St., Denver, Colo.

Howard, Mary M. (Pd. M.), Teacher  
Diamondville, Wyo.

Hulme, Ida May . . . . . Stroud, Okla.

Hultquist, Mabel . . . . . Laird, Yuma Co., Colo.

Humes, Mrs. Inez (Pd. M.).

Humphrey, Alice . . . . . Twin Falls, Idaho

Hurley, Ethel . . . . . Blanca, Colo.

Huston, Mrs. Mabel Bennett, Office Clerk  
U. S. Land Office, Denver, Colo.

Irvine, Lois (A. B.), Teacher  
2418 Gaines St., Little Rock, Ark.

Isbill, Cecile E. (Pd. M.) (A. B.)  
(Mrs. A. Fitzmorris)  
(see Class of 1919)

Ivey, Mattie M. (A. B.), deceased.

Jackson, Mrs. Rae L. (A. B.), Teacher  
Shirley Hotel, Denver, Colo.

James, Mary . . . . . Alamosa, Colo.

Jepperson, Bessie, Teacher  
R. F. D. No. 2, Loveland, Colo.

Job, Henry I. . . . . Rockvale, Colo.

Johnson, Bevie T. (Pd. M.) (A. B.)  
Teacher, Hugo, Colo.

Johnson, Mrs. Georgie, Teacher  
Blanca, Colo.

Johnson, Hannah, Teacher  
1306 Elizabeth, Denver, Colo.

Johnson, Loustalet, Stenographer  
Hugo, Colo.

Johnston, Helen Anita, Teacher  
(Mrs. Helen Anita Cavnar)  
3117 Columbine St., Denver, Colo.

Jones, Bertha . . . . . Brush, Colo.

Jones, Carl M., H. S. Teacher  
Box 111, Kansas City, Kans.

Jones, Mary Esther, Teacher  
Kemmerer, Wyo.

Jones, Victor W., Teacher  
Box 1177, Tonopah, Nevada

Jones, W. R. (Pd. M.).

Jordan, Beulah M., H. S. Teacher  
317 So. 4th St., Raton, N. M.

Joseph, Beatrice.

Joy, Pearl (Pd. M.), Teacher  
1330 9th St., Greeley, Colo.

Joyce, Elizabeth (Mrs. O. N. Hansford)  
Sugar City, Colo.

Justice, Hazel Irene  
(Mrs. O. B. Emerson)  
Box 474, Fowler, Colo.

Karlson, Lottie . . . . . Gothenburg, Nebr.

Keller, Elizabeth M., Teacher  
1540 Grant St., Denver, Colo.

Kelley, Esther . . . . . Ordway, Colo.

Kelly, Howard  
1124 7th St., Greeley, Colo.

Kennedy, Eunice, Teacher  
Colorado Agricultural College  
Fort Collins, Colo.

Kessler, Mrs. Kate E.

Kinsey, Helen J. (Pd. M.).  
Ft. Lupton, Colo.

Kirke, Irene (Pd. M.) (see Class of 1919)

Knott, Dorothy Elizabeth  
(Mrs. A. Ernest Titley)  
Box 445, Logan, Utah

Kohen, Nora I. (A. B.)

Kussart, Jeanette (Pd. M.) (A. B.)  
Clayton, N. M.

Kyler, Lela (A. B.), Teacher  
413 N. 25th St., Omaha, Nebr.

Labbo, Frances.....Grover, Colo.

Labriola, Elizabeth (Mrs. James De Rose)  
1822 W. 33rd Ave., Denver, Colo.

Laing, Margaret Ann  
(Mrs. Ray C. Dazey)  
Ramah, Colo.

Lamma, Mary Ann, Teacher  
Nunn, Colo.

Landers, Hazel.....Eaton, Colo.

Lanning, C. W. (A. B.)  
Supt. of Schools, Paonia, Colo.

Lappin, Georgia E.  
1225 E. 10th St., Pueblo, Colo.

La Shier, Virginia, Teacher  
Rocky Ford, Colo.

Layden, Marie.....Delta, Colo.

Leavenworth, Helen, Teacher  
3405 Wyandotte St., Kansas City, Mo.

Leavenworth, Marian  
1602 11th Ave., Greeley, Colo.

Lenau, Bertha B.

Lewis, Mrs. Ivy Yeaton, Teacher  
1124 8th St., Greeley, Colo.

Libby, Jeannette M. (A. B.)  
H. S. Teacher  
25 No. Roberts Blvd., Dayton, Ohio

Lillie, Agnes F., Teacher  
2714 E. 12th Ave., Denver, Colo.

Lilley, Vina (A. B.).....Redlands, Calif.

Linn, Irene F.....Denver, Colo.

Littrell, Helen.

Lloyd, Martha, Teacher...Rockvale, Colo.

Lockhart, J. I. (A. B.), H. S. Teacher  
1015 So. Union Ave., Pueblo, Colo.

Lockhart, Lee M. (A. B.)  
Rupert, Idaho

Longenbaugh, Bertha.....Cortez, Colo.

Loughery, Catherine M., Teacher  
612 E. 2nd St., Trinidad, Colo.

Love, Josephine  
Accadia Hotel, Colorado Springs, Colo.

Lowe, Gridotta Muntzine (A. B.)  
Akron, Colo.

Lowe, Lillian (Mrs. C. G. Miller)  
Rifle, Colo.

Loy, Mrs. Anna B. (A. B.), Teacher  
Larkio, Mo.

Lyons, Anna B. (Pd. M.)

Lyons, Mildred  
918 11th St., Greeley, Colo.

McAndrew, Ellen, Teacher  
3641 E. 27th Ave., Denver, Colo.

McCarty, Anna.....Briggsdale, Colo.

McClelland, Alvin J., H. S. Teacher  
Box 521, Evanston, Wyo.

McClintoek, Mildred (Pd. M.), Teacher  
523 E. 18th Ave., Denver, Colo.

McClurg, Alice (Pd. M.)....Brush, Colo.

McCray, Blanche (A. B.)  
Co. Supt. of Schools  
Telluride, Colo.

McCutcheon, Marjorie  
St. Martha's Hall, Boise, Idaho

McGirr, Lucy, Teacher  
Pagosa Springs, Colo.

McIntyre, Mary L., H. S. Teacher  
Pueblo, Colo.

McKelvey, Eva M. (A. B.)  
2842 York St., Denver, Colo.

McKinley, Ruth.....Canon City, Colo.

McLean, Beryl M.....Lamar, Colo.

McLean, Gladys, Teacher  
Lamar, Colo.

MacLeod, Bernice (A. B.), Teacher  
Merrian Hotel, Omaha, Nebr.

McMurtry, Elithe, deceased.

McNamara, Margaret (A. B.), Teacher  
640 Columbine St., Denver, Colo.

MacNee, Harriet (Mrs. Melvin C. Blake)  
R. F. D. No., Eaton, Colo.

MacNeil, Georgia Evelyn, Teacher  
El Vado, New Mexico

McVey, Romaine, Teacher  
(Mrs. Irvin J. Littrell)  
Kimball, Nebr.

Madison, Mrs. Harriet.....Gill, Colo.

Maize, Nellie.....Akron, Colo.

Mallon, Mrs. Maud.....Ravenwood, Colo.

Marshall, Helen T.

Marvin, Grace H. (A. B.), Teacher  
617 16th St., Greeley, Colo.

Mason, Alice Darling (A. B.), Teacher  
Ft. Collins, Colo.

Mason, Grace (Mrs. Ed. Fagerberg)  
Eaton, Colo.

Mason, Lela H., Teacher....Grover, Colo.

Massey, Joyce, Teacher  
724 4th Ave., Trinidad, Colo.

Masterson, W. G. (A. M.),  
Supt. of Schools, McAlester, Okla.

Matson, Irene A. (Pd. M.), Teacher  
315 13th Ave., Greeley, Colo.

Mayer, Lena C., H. S. Teacher  
1530 10th Ave., Greeley, Colo.

Mayes, Mildred, Teacher....Antlers, Okla.

Miller, M. Elizabeth (Pd. M.), Teacher  
1019 17th St., Greeley, Colo.

Miller, Maggie.

Mills, Ruth Esther (Pd. M.), Teacher  
1856 Pearl St., Denver, Colo.

Monsch, Hester U., Student C. T. C.  
1736 8th Ave., Greeley, Colo.

Montgomery, Mabel F., Teacher  
West Court Hotel, Denver, Colo.

Morgan, Edna Georgaena  
(Mrs. Lewis Verne Sweat)  
2995 Quitman, Denver, Colo.

Morgan, Jesse R.  
Asst. Vocational Officer  
3404 Alcott St., Denver, Colo.

Morrison, Benj. H. (Pd. M.), (A. B.)  
1802 Bonita Ave., Berkeley, Calif.

Morrow, Alice M.....Rock Springs, Wyo.

Morrow, Mary E., Teacher  
Box 296, North Platte, Nebr.

Mowery, Gertrude, Teacher..Brush, Colo.

Muir, D. A.

Nankervis, Leota (Mrs. Vern Earl)  
Idaho Springs, Colo.

Neeland, Mary (Pd. M.)  
703 So. 8th St., Laramie, Wyo.

Nelson, Grace Elizabeth, Teller at Bank  
Box 382, Windsor, Colo.

Nelson H. Gilbert (A. M.),  
Long Beach, Calif.

Nelson, Maybelle C. (Pd. M.), Teacher  
1941 Blake St., Berkeley, Calif.

Nevins, Frances....Grand Junction, Colo.

Newton, Florence, Teacher...Holly, Colo.

Nichols, Mrs. May J., Teacher  
1133 Lincoln St., Denver, Colo.

Nims, Mrs. Lillian G. (Pd. M.)  
1610 9th Ave., Greeley, Colo.

Nott, Helen, Deputy Co. Clerk  
Kiowa, Colo.

Nowlin, E. W., Prin. of School  
Bristol School, Webster Groves, Mo.

Nusbaum, Nelda  
(Mrs. Frederick Lamerton Horton)  
Newcastle, Wyo.

O'Conner, Florence (Pd. M.)  
Oldfather, Mrs. Carrie....Loveland, Colo.  
O'Rourke, Mary Agnes, Teacher  
319 Bross St., Longmont, Colo.  
Oviatt, Inez.....Brighton, Colo.  
Paden, Grace (Pd. M.) (A. B.)  
Carr, Colo.

Page, Mildred (see Class of 1919).  
Palm, Frances T., Teacher  
Petaluma, Calif.

Palm, Helen E., Teacher....Rouse, Colo.  
Parsons, Alice (Mrs. Leonard Hudnall)  
Las Animas, Colo.  
Pate, Ethel.....Hobart, Okla.  
Pearce, Ruth (Mrs. Paul King)  
Camfield Court, Greeley, Colo.

Peery, Clara (A. B.)  
Apt. 4, 401 W. 118th St., New York City  
Penley, Hazel E. (Mrs. Joe B. Dyer)  
River Ranch, Deet, Nevada  
Perry, Edith Lucile, Teacher  
Braymer, Mo.

Perkins, Birdie (see Class of 1919).  
Peterson, Grace A. (A. B.)  
Phelps, Mrs. Eleanor Phillips (A. B.)  
(Mrs. Kenneth G. Phelps)  
46 Glen Ave., Oakland, Calif.

Phenix, Florence, Teacher...Timnath, Colo.  
Phippeny, Lael.....Plateville, Colo.  
Pingrey, Maria Z. (A. B.), Prin. H. S.  
Corwith, Iowa

Pomeroy, Miriam M.  
(Mrs. Clifford Bledsoe)  
Burns, Wyo.

Porter, Ralph M. (Pd. M.)  
Prin. of School, Kemmerer, Wyo.

Potter, A. Bernice, Teacher  
Box 294, Idaho Springs, Colo.

Potter, Helen A.....Arvada, Colo.  
Prosser, Georgiana (A. B.)  
H. S. Teacher  
317 8th Ave. So., Nampa, Idaho

Quayle, Margaret S. (A. B.)  
Reconstruction Work  
Methodist Mission Board,  
Brussels, Belgium

Quinn, Alice (Pd. M.), Teacher  
385 Durkee Ave., Kenosha, Wis.

Raichart, Eva, Teacher  
212 Logan St., Denver, Colo.

Ramsay, Edith (Pd. M.)...Burley, Idaho  
Randin, Florence (Pd. M.), Teacher  
324 E. 3rd St., Delta, Colo.

Rawlings, Edna.....Monte Vista, Colo.  
Reed, Barbara, Teacher  
R. F. D. No. 2, Montrose, Colo.

Reh, Agnes Louise.....Durango, Colo.  
Reid, Benita.....Dearborn, Mo.  
Rennolds, C. E. (A. B.), Supt. of Schools  
Formoso, Kans.

Reynolds, Pauline, Teacher  
1565 Garfield St., Denver, Colo.

Rhiner, Ethelyn (Pd. M.), Teacher  
1533 9th Ave., Greeley, Colo.

Richardson, Mildred Ruth, Teacher  
1306 Carteret Ave., Pueblo, Colo.

Ricketts, Elizabeth (A. B.)  
Boulder, Colo.

Ridley, Marian, Teacher  
Lake Mills, Iowa

Riley, Ione, Teacher.....Tempe, Ariz.

Roberts, Mabel.  
Robertson, Alverna, Teacher  
Box 204, Segundo, Colo.

Robinson, Beulah Estella, Govt. Clerk  
924 14th St. N. W., Washington, D. C.

Roche, Mary, Teacher  
Box 88, Rock Springs, Colo.

Rodgers, Blanche I.  
(Mrs. Clifford C. Hyde)  
La Salle, Colo.

Roman, Edith.....Aspen, Colo.

Romick, Nell  
2205 Eudora St., Denver, Colo.

Rose, Florence, Teacher  
1717 10th Ave., Greeley, Colo.

Rose, Lila May (Pd. M.)  
Teacher C. T. C.  
1717 10th Ave., Greeley, Colo.

Rosenthal, Minnie.....Jamesport, Mo.

Ross, A. B. (A. B.)  
Supt. of Schools, Ordway, Colo.

Rupp, M. Ethel.....Brandon, Colo.

Russell, S. Alice (A. B.), deceased.  
Salberg, Eleanor.....Boulder, Colo.

Saltus, Mrs. C. N. (A. B.),  
H. S. Teacher, Sterling, Colo.

Sanden, Edith, Teacher  
3017 Mormon St., Omaha, Nebr.

Sansburn, Alvin (A. B.), H. S. Teacher  
Akron, Colo.

Scanlan, Alice (Pd. M.) (A. B.) (see Class  
of 1919).

Schenk, Erich, Teacher  
1110 So. Columbine, Denver, Colo.

Schlupp, Julia.....Longmont, Colo.

Schneider, A. Marie, Teacher  
3280 Raleigh, Denver, Colo.

Schurman, Mary E., Teacher  
306 E. 7th St., Trinidad, Colo.

Scott, Crystal M., Teacher...Hanna, Wyo.  
Scott, Fern Ave., Teacher...Hanna, Wyo.  
Scott, Marie, Teacher...Platteville, Colo.

Searway, Irene  
1425 Logan St, Denver, Colo.

Sedgwick, Myrtle M. (A. B.)  
Selberg, Edith, Teacher  
R. F. D. No. 3, Box 83, Greeley, Colo.

Shank, Hazel F., Teacher  
Richfield, Idaho

Shields, Faye.....Lodi, Calif.

Shields, Gertrude, Teacher  
Westwood, Calif.

Shriber, Eva Ruth.....Ft. Collins, Colo.

Siess, Ermine (Pd. M.)  
Grand Junction, Colo.

Sipple, Mrs. Carrie Parks, Teacher  
R. F. D. Box 48, Greeley, Colo.

Slindee, Agnes, Teacher...Silverton, Colo.

Smith, Carrie (Mrs. J. T. Sprowell)  
Rock Springs, Wyo.

Smith, Mrs. Clara Gulliford  
(A. M.) (A. B.) Teacher  
530 Lake Ave., Gulliford Academy,  
Pueblo, Colo.

Smith, Cora Jean, Teacher  
Valley City, N. D.

Smith, Eleonore P., Teacher  
S. C. Ranch, Meeker, Colo.

Smith, Kathryn E.....Greeley, Colo.

Smith, Lucille E.  
(Mrs. E. A. Hoagland)  
Center, Colo.

Smith, Miriam Elberta (A. B.), Teacher  
413 No. 25th, Omaha, Nebr.

Smith, Nettie (Pd. M.), Teacher  
407 Poplar St., Sterling, Colo.

Smith, Ruth (Pd. M.)  
1020 10th Ave., Greeley, Colo.

Snedgen, Alfred.....Coblentz, Germany

Sonne, Margaretha  
2016 Ogden St., Denver, Colo.

Staley, Hazel, Student C. T. C.  
1537 11th Ave., Greeley, Colo.

Stapleton, Joan.Box 63, Rocky Ford, Colo.

Stuaffer, Mrs. Myrtle (Pd. M.)  
Rifle, Colo.

Stewart, Eugene (A. B.), Grocer  
822 10th St., Golden, Colo.

Stobbs, Edna (Pd. M.) . . . . . Fowler, Colo.  
 Stoddard, Helen A., H. S. Teacher  
 620 W. 24th St., Pueblo, Colo.  
 Stone, Blanche . . . . . Swallows, Colo.  
 Stone, Helen, Teacher . . . . Windsor, Colo.  
 Stone, Lulu M.  
 3768 Perry St., Denver, Colo.  
 Stout, Ruth . . . . . Paonia, Colo.  
 Suess, Olive A., Teacher  
 1131 Steele St., Denver, Colo.  
 Suiter, R. W. (A. B.), Teacher  
 Proctorville, Ohio  
 Sullens, Mrs. Velma P. (Pd. M.),  
 Teacher  
 723 6th St., Greeley, Colo.  
 Summ, Johanna, Teacher  
 R. F. D. No. 2, Ft. Collins, Colo.  
 Swanson, Emma, Teacher  
 611 Macon Ave., Canon City, Colo.  
 Swenson, Frances (Pd. M.)  
 H. S. Teacher  
 2558 Marion, Denver, Colo.  
 Swett, Lorraine (Pd. M.), Teacher  
 1320 Cleveland Blvd., Caldwell, Ida.  
 Taylor, Beulah M., Bookkeeper  
 Wenatchee, Wash.  
 Taylor, Florence Marie  
 1020 Filmore St., Denver, Colo.  
 Taylor, Lela E. (Pd. M.) (see Class of  
 1919).  
 Taylor, Vena M. (A. B.)  
 (Mrs. Charles A. Neal)  
 Box 676, Miami, Okla.  
 Thomas, Eleanor Carlisle, Teacher  
 Castle Rock, Colo.  
 Thomas, Ruth H.  
 (Mrs. Edward C. Peterson)  
 Colorado Springs, Colo.  
 Thompson, Louise . . . . . Hollywood, Calif.  
 Thrall, Evelyn  
 112 E. Unitah, Colo. Springs, Colo.  
 Tinch, Mildred Louise  
 (Mrs. Ivan E. Peterson)  
 529 N. Weber St., Colo. Springs, Colo.  
 Titsworth, Mary  
 626 N. Franklin St., Colo. Springs, Colo.  
 Tobias, Ruby (Mrs. Ruby Henderson)  
 Camfield Court, Greeley, Colo.  
 Tobin, Louise.  
 Todd, Christie A. (Pd. M.), Teacher  
 1711 E. Hodge, Tulsa, Okla.  
 Todd, Vera . . . . . Goodrich, Colo.  
 Tohill, Elizabeth G. (A. B.)  
 H. S. Teacher  
 219 N. 3rd St., Sterling, Colo.  
 Towne, Isabelle  
 (Mrs. Lynn Edwin Kinner)  
 2134 W. 29th Ave., Denver, Colo.  
 Travis, Mary C.  
 Argyle Apt., No. 11, Ogden, Utah  
 Tressel, Jennie L. (A. B.)  
 H. S. Teacher  
 1117 15th St., Greeley, Colo.  
 Trimmer, Helen Littrell  
 Beuna Vista, Colo.  
 Tucker, Jennie.  
 Turner, Clara (A. B.), H. S. Teacher  
 1415 10th Ave., Greeley, Colo.  
 Underhill, Harlen A., H. S. Teacher  
 Burlington, Colo.  
 Veal, Olive (Pd. M.) . . . . . Aspen, Colo.  
 Vialpando, Ramoncita, Teacher  
 Tercio, Colo.  
 Vories, Emma S. Box 173, La Veta, Colo.  
 Waddingham, Mrs. Nellie Knight  
 1217 7th St., Greeley, Colo.  
 Wall, Pauline J. (Pd. M.)  
 2343 Vine St., Denver, Colo.  
 Walsh, Eva M. (Pd. M.)  
 1242 Ogden, Denver, Colo.

Walsh, Helen McGirr  
 (Mrs. Lewis Hopkins)  
 Kuner, Colo.  
 Walter, Anna Laura . . . . . Windsor, Colo.  
 Walter, Mary E. (Pd. M.) (A. B.)  
 (Mrs. E. H. Oppie)  
 Teacher, Peetz, Colo.  
 Walter, Nellie, Teacher  
 Box 796, Brush, Colo.  
 Warren, Winifred, Stenographer  
 St. Anthony, Idaho  
 Watkins, Beulah . . . . . Muskogee, Okla.  
 Weber, Adelaide R. (A. M.) . Hugo, Colo.  
 Welborn, Anne Action, Housekeeper  
 1028 So. 1st St., Evansville, Ind.  
 Welsh, Edna F. (Pd. M.), Teacher C. T. C.  
 1833 10th Ave., Greeley, Colo.  
 West, Wallace P. . . . . Trinidad, Colo.  
 Westlund, Nellie . . . . . Center, Colo.  
 Wetherald, Estella M., Teacher  
 2071 Clarkson, Denver, Colo.  
 Wheatley, Esther L., Teacher  
 704 N. Tejon St., Colo. Springs, Colo.  
 Wheaton, Libbie.  
 White, Mrs. Edna, Teacher  
 119 N. Division Ave., Sterling, Colo.  
 White, Esther (Pd. M.)  
 (Mrs. Ray C. Van Aken)  
 Julesburg, Colo.  
 White, Mabel A.  
 White, Mary Eleanor . . . . . Wellington, Kans.  
 Whitehouse, Pattie (A. B.), Teacher  
 116 W. 25th St., Omaha, Nebr.  
 Wickmann, Irene, Student  
 562 Gilpin St., Denver, Colo.  
 Wickham, Esther (Pd. M.)  
 Wilbur, Marian  
 1014 N. Weber, Colo. Springs, Colo.  
 Wilder, Ruth Mrs.  
 2126 Grand Ave., Pueblo, Colo.  
 Wilkinson, Eleanor M., Teacher  
 362 University St., Salt Lake City, Utah  
 Willis, Mrs. Anna Adams  
 Sec. of Home Service, A. R. C.  
 Chandler, Okla.  
 Willsea, Mary A.  
 3239 Valajejo St., Denver, Colo.  
 Wilson, Florence . . . . . Mt. Morrison, Colo.  
 Wilson, Lillian . . . . . Wellington, Colo.  
 Wilson, Mary Stuart (Pd. M.) (see Class  
 of 1919).  
 Witter, Nellie (Pd. M.)  
 Wolfe, Lily Valentine, Teacher  
 Sugar City, Colo.  
 Wolfe, Rosa L., Teacher  
 Lennox Hotel, Florence, Colo.  
 Wolfer, Dora C., Teacher . . . . . Globe, Ariz.  
 Wood, Myra (A. B.), Teacher  
 La Salle, Colo.  
 Woods, Alberta, Teacher  
 1219 Lake Ave., Pueblo, Colo.  
 Woodward, Flora Bernice, Teacher  
 (Mrs. Bernice W. McMillin)  
 114 S. Center St., Shawnee, Okla.  
 Yardley, Hattie F. (A. B.), Teacher  
 Greeley, Colo.  
 Young, Della A., Teacher  
 921 S. 3rd, Bozeman, Mont.

CLASS OF 1919

Akey, Ethel . . . . . Ft. Morgan, Colo.  
 Allen, Mrs. Mary E. (A. B.), Student  
 University of Chicago, Chicago, Ill.  
 Aller, Blanche C., Teacher  
 Lincoln Apts., Hastings, Nebr.  
 Amsberry, Katharine, Teacher  
 Delta, Colo.  
 Anderson, Agnes (Pd. M.)  
 Castle Rock, Colo.  
 Anderson, Hazel  
 345 York St., Denver, Colo.

Augustine, Mrs. Irene W., Teacher  
39 Wilkes Circle, Santa Cruz, Calif.

Aultman, Mrs. L. E. (A. B.)  
Teacher C. T. C.  
Colonial Apt. No. 6, Greeley, Colo.

Axtens, Stephen Arthur (A. B.)  
Rawlins, Wyo.

Baker, Winifred.....Lawton, Okla.

Barker, Anna  
211 Warren Ave., Seattle, Wash.

Barker, Miriam Evelyn (A. M.), Teacher  
231 22nd St., Denver, Colo.

Bean, Estella, Teacher  
1411 Exchange Ave., E. St. Louis, Ill.

Beck, Olive, Teacher  
452 Elati St., Denver, Colo.

Benjamin, Heber C. (A. B.), Minister  
Ft. Lupton, Colo.

Bergen, Marjorie (A. B.), Teacher  
Wellington, Colo.

Bigham, Helen Gould, Teacher  
Sterling, Colo.

Blagg, Blanche, Teacher  
Le Roy, Kansas

Blank, Martha Evelyn  
4047 Madison St., Denver, Colo.

Boreing, Maud (Pd. M.), Teacher  
924 E. 8th St., Pueblo, Colo.

Brandhorst, Lillie (Pd. M.)  
(Mrs. L. F. Hennig)  
323 W. 2nd St., Newton, Kans.

Browning, Fern Evelyn, Teacher  
705 E. 8th St., Cherryvale, Kans.

Burfield, Gail A. (A. B.), Teacher  
Nabors Hall, Montevallo, Ala.

Burson, Viola (Pd. M.)  
211 N. Union, Pueblo, Colo.

Burtis, Louise.....Montrose, Colo.

Campbell, Della (Pd. M.)  
Acacia Hotel, Colo. Springs, Colo.

Carey, Elam Agnes  
545 S. 26th St., Omaha, Nebr.

Carney, Elizabeth, Student C. T. C.  
1845 11th Ave., Greeley, Colo.

Case, Ruby, Teacher.....Ordway, Colo.

Chilson, Elma (Pd. M.), Supt. of School  
M. E. Mission, Barvoda, Indta

Clark, Laura D., Teacher  
R. F. D. No. 4, Longmont, Colo.

Clasbey, Elizabeth (A. B.)  
Teacher C. T. C., Greeley, Colo.

Clausen, Mayme, Teacher  
1248 Bannock St., Denver, Colo.

Cline, Mrs. Linna, Teacher...Eads, Colo.

Cobb, Jessie, Teacher  
R. F. D. No. 1, Box 77,  
Rocky Ford, Colo.

Cole, Cassie M., Teacher  
320 E. 9th St., Cheyenne, Wyo.

Conant, C. B. Stanford (A. M.) Teacher  
Box 122, Tucson, Ariz.

Conway, Agnes Cornelia.

Cosgrove, Anna Josephine (Pd. M.)  
Meriden, Iowa

Cozine, Mrs. Fannie Dray (A. B.)  
Teacher  
118 Locust Ave., Long Beach, Calif.

Criswell, Lillian M., Teacher  
Gilcrest, Colo.

Crosby, Grace D., Teacher  
Box 85, R. F. D. No. 1, Brighton, Colo.

Culp, Ruby Lee  
405 N. C., Muskogee, Okla.

Dakin, Dorothy (A. B.), H. S. Teacher  
Box 843, Clayton, N. M.

Damon, J. G. (A. B.)  
Supt. of Schools, Weldona, Colo.

Daniel, Aria Roberts (A. B.)  
H. S. Teacher  
502 Santa Fe Ave., La Junta, Colo.

Decker, Elizabeth Ann (A. B.)  
Crownpoint, N. M.

Demmel, Margaret (A. B.)  
Prin. of School  
605 Matthews, Ft. Collins, Colo.

Devlin, Melda.....Wray, Colo.

Doull, Frances R. (Pd. M.), Teacher  
4154 Umattilla, Denver, Colo.

Doull, Rose M. (Pd. M.), Teacher  
4154 Umattilla, Denver, Colo.

Dunlavy, Lucile, Teacher  
623 Colorado Ave., Trinidad, Colo.

Elam, Velma (Pd. M.)  
Gables Apt. No. 2, Greeley, Colo.

English, Dorothy, Teacher...Pueblo, Colo.

Farnsworth, Lucinda (A. B.)  
(Mrs. Arthur Axtens)  
Rawlins, Wyo.

Finch, Alice Carolina, Teacher  
505 E. Boulder St., Colo. Springs, Colo.

Foster, Lucy B. (A. B.), Teacher  
1055 Lincoln St., Denver, Colo.

Fouk, Chas. M. (Pd. M.),  
Teacher C. T. C.  
1917 8th Ave., Greeley, Colo.

Frasier, Alice M. (A. B.), Teacher  
Ordway, Colo.

Fulton, Harriet.....Dickey, Idaho

Gedney, Beatrice (Pd. M.)  
1585 Bellaire, Denver, Colo.

Gleasman, Belle (Pd. M.)  
Tucumcari, N. M.

Gossage, Thela (A. B.), Teacher  
512 W. First St., Los Angeles, Calif.

Graham, Mary Edna...Ft. Morgan, Colo.

Green, Prudence V., Teacher  
Elsinore, Calif.

Griffin, Agnes M. (Mrs. Hugh Lynn)  
Hurley, N. M.

Guenzi, Julia, Teacher  
So. Superior, Wyo.

Haley, Idabelle, Teacher  
527 N. 2nd St., Rockford, Ill.

Harrison, Shirley V. (A. B.)  
Burlington, Colo.

Hawes, Josephine (A. M.)  
Teacher C. T. C.  
Greeley, Colo.

Haynes, Alice K., Ticket Clerk  
949 F St., Salida, Colo.

Heitzman, Kathryn Remington  
Valdez, Colo.

Henry, Elizabeth  
4404 W. 36th Ave., Denver, Colo.

Hickman, Lois G. (Pd. M.) (A. B.)  
Teacher  
215 3rd Ave. N., Twin Falls, Idaho

Higgins, Ada, Teacher  
501 N. 7th St., Rocky Ford, Colo.

Hill, Azalie (A. B.).....Beloit, Kans.

Holland, Beulah Gray (A. B.)  
1019 E. 82nd St., Seattle, Wash.

Houghton, Mrs. Louise P. (Pd. M.)  
Silver City, N. M.

Howard, Mrs. Elizabeth (Pd. M.)  
Teacher  
202 N. 14th St., Albuquerque, N. M.

Hunter, Annie  
Okmulgee Ave., Muskogee, Okla.

Hunter, Emily  
Okmulgee Ave., Muskogee, Okla.

Hurford, Alice (A. M.), H. S. Teacher  
1205 Lake Ave., Pueblo, Colo.

Isbill, Cecile E. (A. B.), Teacher  
(Mrs. Arthur E. Fitzmorris)  
1637 7th Ave., Greeley, Colo.

Jensma, Anna M., Teacher  
424 First St. So., Newton, Iowa

Johnston, Helen J., Teacher  
Auburn Demonstration,  
R. F. D. 4, Greeley, Colo.

Kennedy, Ruby Hazel (Pd. M.) (A. B.)  
Teacher  
1018 17th St., Greeley, Colo.

Kessler, F. C. (Pd. M.).....Swink, Colo.  
 Kibby, Ira W. (A. B.)  
     715 60th St., Oakland, Calif.  
 King, Frances (A. B.).....Otis, Colo.  
 Kirke, Irene (A. B.).....Walsen, Colo.  
 Kouns, Zella, Teacher.....Fowler, Colo.  
 Kronen, Margaret.....Greeley, Colo.  
 Laffea, Mrs. Dolly Hale (A. B.).  
 Lambie, Jean Dorothy, Teacher  
     4755 W. 29th Ave., Denver, Colo.  
 Lambie, May Constance, Teacher  
     4755 W. 29th Ave., Denver, Colo.  
 Larson, Ruth, Teacher  
     Grand Junction, Colo.  
 Lawler, Catherine Ann, Teacher  
     409 Ash St., Trinidad, Colo.  
 Lee, J. Walter (A. B.)  
     Director Bureau of Records  
     Univ. of Colorado, Boulder, Colo.  
 Lloyd, Jane (Mrs. Jane L. Powell)  
     Rockvale, Colo.  
 Lloyd, Sarah E. (Pd. M.)  
     (Mrs. Elmer Rizer)  
     Walsen, Colo.  
 Love, Mrs. R. Homer (Pd. M.)  
     Mead, Colo.  
 McCullough, A. M. (A. B.)  
     Supt. of Schools, Wilson, Kans.  
 McFadden, L. E. (A. B.)  
     Supt. of Schools, Fallon, Nev.  
 McKennie, Alice, Teacher  
     440 W. Lockwood Ave.,  
     Webster Groves, Mo.  
 Matthews, William Ralph (A. M.)  
     Supt. Limon, Colo.  
 Mayer, George James (A. B.)  
     Supt. of Schools, Oak Creek, Colo.  
 Michaels, Hollis, Govt. Clerk  
     Washington, D. C.  
 Missimore, Alma May  
     115 W. 10th St., Okla. City, Okla.  
 Montague, Joel Benjamin (Pd. M.)  
     Ideal, Colo.  
 Moomaw, Helen Frances  
     South Worth, Wash.  
 Naylor, Bernice...Box 33, Ordway, Colo.  
 Nelson, Esther E.  
     76 Lincoln St., Denver, Colo.  
 Nelson, Ruth J.....Delta, Colo.  
 Page, Mildred A. (A. B.), Teacher  
     R. F. D. No. 2, Box 106, Greeley, Colo.  
 Pantall, Myrta, Teacher  
     515 3rd Ave., Sterling, Colo.  
 Paterson, Anna (A. M.), H. S. Teacher  
     417 N. 5th St., Independence, Kans.  
 Perkins, Birdie (A. B.), Teacher  
     Newton, Kans.  
 Perkins, Lillie Coles  
     3017 Mormon St., Omaha, Nebr.  
 Petit, Avis, Teacher.....Ault, Colo.  
 Phelps, Lona J., Teacher  
     311 E. 5th St., McCook, Nebr.  
 Phenix, A. May (Pd. M.)  
     1623 17th Ave., Greeley, Colo.  
 Pick, Gladys A., Teacher.....Otis, Colo.  
 Pierce, Pansy Edythe  
     (Mrs. Joseph H. Hankins)  
     Longmont, Colo.  
 Potter, Emerson Carlisle  
     1803 7th Ave., Greeley, Colo.  
 Rafferty, May, Teacher...Red Lodge, Mont.  
 Reynolds, Nona.....Alamosa, Colo.  
 Rhoades, Helen E.  
     (Mrs. J. W. Norcross)  
     Camfield Court, Apt. 9, Greeley, Colo.  
 Richardson, Ruth.....Pueblo, Colo.  
 Ritter, Blanche.  
 Rumley, Maude.....Loveland, Colo.  
 Saathoff, W. H. (A. B.)  
     H. S. Teacher, Silver City, N. M.  
 Scanlan, Alice (A. M.)  
     H. S. Teacher, Mounds, Okla.

Scanlan, R. Ella.....Aspen, Colo.  
 Scott, Malvina S. (A. B.), Teacher  
     712 W. 22nd St., Kearney, Nebr.  
 Seiss, Ermie (A. B.)  
     Grand Junction, Colo.  
 Simpson, Lettie, Teacher  
     1712 11th Ave., Greeley, Colo.  
 Smiley, Josephine.....Broomfield, Colo.  
 Smythe, Adah (Pd. M.), Teacher  
     (Mrs. Verne C. Fryklund)  
     1531 9th Ave., Greeley, Colo.  
 Stewart, Lulu.....DeBeque, Colo.  
 Swift, Jessie F. (Pd. M.), Teacher  
     Box 325, Laramie, Wyo.  
 Taylor, Edna Ruth, Teacher  
     747 Jefferson Ave., Loveland, Colo.  
 Taylor, Lela E. (A. B.), Teacher  
     807 E. 2nd St., Trinidad, Colo.  
 Tobin, Lucile Helen, Teacher  
     Box 264, Center, Colo.  
 Tracey, Irene (Pd. M.), Teacher  
     224 E. 7th St., Leadville, Colo.  
 Van Meter, Sara H. (A. B.), Teacher  
     209 S. Orange St., Medford, Ore.  
 Van Winkle, Grace (A. B.), Teacher  
     Daniel, Wyo.  
 Vegher, Mary R., Teacher  
     Rockvale, Colo.  
 Vermillion, Mildred, Teacher  
     Yuma, Colo.  
 Voeltz, Eva Geneva.  
 Walter, Lavernia, Teacher  
     Windsor, Colo.  
 Whelpley, Dorothy.....Tremont, Nebr.  
 White, Fern, Teacher....Norwood, Colo.  
 Williams, Helen (Pd. M.).....Silt, Colo.  
 Williams, Yvette, Teacher  
     2442 Whitmore St., Omaha, Nebr.  
 Wilson, Mary Stuart (A. B.)  
     Denver, Colo.  
 Wyckoff, Marie (A. B.)...Littleton, Colo.  
 Young, Edith  
     604 N. Lincoln, Loveland, Colo.

**THREE-YEAR COURSE**

Calvert, Pearl Annette.....Oshkosh, Neb.  
 Dyer, Helen Orr.....Pueblo, Colo.  
 Fleming, Zela.....Greeley, Colo.  
 Ringle, Margaret  
     St. Normal School, Albion, Ida.  
 Saathoff, W. H.....Trenton, Ill.  
 Slindee, Agnes.....Longmont, Colo.  
 Walek, Louise B.....Ainsworth, Nebr.  
 Walker, Mrs. Vella R. Wichita Falls, Tex.  
 Woodruff, Hazel.....Greeley, Colo.

**TWO-YEAR COURSE**

Akers, Lucille Sue.....Longmont, Colo.  
 Alderman, Edith LeProuse  
     Idaho Springs, Colo.  
 Allman, William.....Clayton, N. M.  
 Alpert, Dorothy E.....Ft. Collins, Colo.  
 Anderson, Olga Hildagard...Victor, Colo.  
 Anderson, Louise.....Rock Springs, Wyo.  
 Anderson, Ruth.....Kokoma, Colo.  
 Anderson, Ruth H.....Aspen, Colo.  
 Arfsten, Innies.....Denver, Colo.  
 Arnold, Genevieve.....Paonia, Colo.  
 Arnold, Gladys Persis.....Denver, Colo.  
 Babcock, Mary Eudora....Trinidad, Colo.  
 Baldwin, Fred H.....Grover, Colo.  
 Batchelet, Ethel.....Panora, Iowa  
 Bastedo, Cozette.....Denver, Colo.  
 Beach, Helen Cordelia.....Akron, Colo.  
 Beattie, Mary E.....La Salle, Colo.  
 Bradford, Lenore  
 Brady, Mildred Evelyn.Colo. Springs, Colo.  
 Brooks, Christena....Rock Springs, Wyo.  
 Brown, Amy Olive.....Grand Junct., Colo.  
 Bunnell, Inda Katherine...DeBeque, Ida.



Cage, Mary L. . . . . Hillrose, Colo.  
 Calhoun, Gladys Rachel  
     224 Bannock St., Denver, Colo.  
 Calvin, Lenna M. . . . . Greeley, Colo.  
 Carpenter, Margaret L. Ida. Springs, Colo.  
 Carr, Dorothy Edith. . . . . Holly, Colo.  
 Cassin, Ruby Rae. . . . . Winslow, Ariz.  
 Clark, Margaret. . . . . Rock Springs, Wyo.  
 Colwell, Ruth E. . . . . Loveland, Colo.  
 Cinnamon, Elsie. . . . . Boulder, Colo.  
 Cooper, Margaret. . . . . Colo. Springs, Colo.  
 Crippa, Josephine. . . . . Rock Springs, Wyo.  
 Croft, Bernice. . . . . Greeley, Colo.  
 Cutting, Nora B. . . . . Green River, Utah  
 Davis, Miriam Augusta  
     (Mrs. Percy Murray) Eaton, Colo.  
 Davis, Verna. . . . . Ordway, Colo.  
 Denson, Mildred A. . . . . Rocky Ford, Colo.  
 Doyle, Gladys  
     453 Hayland St., Boulder, Colo.  
 Drtina, Rose J. . . . . Denver, Colo.  
 Dupuy, Genevieve. . . . . Timnath, Colo.  
 Ellis, Carolyn M. . . . . Fountain, Colo.  
 Ericson, Agnes Margaret. . . . . Ouray, Colo.  
 Ericson, Neoma. . . . . Rocky Ford, Colo.  
 Everett, Mary Leona. . . . . Aspen, Colo.  
 Fleming, Zela. . . . . Greeley, Colo.  
 Ford, Myrtle. . . . . Greeley, Colo.  
 Gard, Agnes B. . . . . Loveland, Colo.  
 Griffith, Blodwen. . . . . Delagua, Colo.  
 Hale, Agnes  
 Hastings, Marie A. . . . . Clayton, N. M.  
 Hayes, Ethel  
 Hill, Florence Eleanor. . . . . Florence, Colo.  
 Hoag, Ruth Gilberta. . . . . Lamar, Colo.  
 Hogan, May C. . . . . Denver, Colo.  
 Hunt, Raymon H. . . . . Greeley, Colo.  
 Inge, Marie Sophia. . . . . Holly, Colo.  
 Jacobson, Olivia Violet  
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 Yard, Mary Corinne. . . . . Casper, Wyo.

## SUMMARY

Class of 1891.....	12
Class of 1892.....	16
Class of 1893.....	23
Class of 1894.....	35
Class of 1895.....	32
Class of 1896.....	31
Class of 1897.....	45
Class of 1898.....	58
Class of 1899.....	75
Class of 1900.....	70
Class of 1901.....	69
Class of 1902.....	74
Class of 1903.....	82
Class of 1904.....	87
Class of 1905.....	107
Class of 1906.....	155
Class of 1907.....	202
Class of 1908.....	180
Class of 1909.....	187
Class of 1910.....	287
Class of 1911.....	253
Class of 1912.....	315
Class of 1913.....	354
Class of 1914.....	459
Class of 1915.....	405
Class of 1916.....	429
Class of 1917.....	494
Class of 1918.....	533
Class of 1919.....	156
Total.....	5225















# Colorado State Teachers College BULLETIN

SERIES XX

AUGUST, 1920

NUMBER 6

## Sections One and Two of the Educational Survey of Colorado State Teachers College

- I. ADMINISTRATIVE CONTROL
- II. EDUCATIONAL ORGANIZATION



GREELEY, COLORADO

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# Colorado State Teachers College Bulletin

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Sections One and Two  
of the  
EDUCATIONAL SURVEY  
of Colorado State Teachers College

- I. ADMINISTRATIVE CONTROL  
II. EDUCATIONAL ORGANIZATION
- 

AUGUST 1920

Published by the Board of Trustees  
GREELEY, COLORADO



## FOREWORD

The following account of Administrative Control and Educational Organization in the State Teachers College of Colorado represents the first section of the contribution of this school to a nation-wide movement of schools for teachers to pool their knowledge and experience for the improvement of the preparation of teachers.

The growth of the scientific attitude toward the general problems of public education has gradually made it evident that the curricula of Normal Schools and Teachers Colleges contain much that is merely a "traditional deposit from past experience" and without special relevance to the characteristic problems of the preparation of teachers. It has come to be seen that Normal Schools and Teachers Colleges are properly "institutions supplementary to the public schools," and that their immediate problem is to develop curricula that will insure "the realization of the social purposes of the public schools."

It has also become clear from numerous careful studies of both public schools and higher schools that the complexity of modern educational activities involves the need of the most careful co-ordination or organization of all phases of activity. The chances of waste and duplication of effort are great in proportion to the range of the educational work attempted by a school.

As a result of this new attitude and the fresh knowledge that has been made available through numerous critical studies of the actual operation of schools, Normal Schools and Teachers Colleges have entered upon a most promising period of frank and impersonal self-examination and self-criticism.

The modern technique for the self-examination of schools is the school survey. It is to education what stock-taking and scientific accounting are to modern business. It is for the sake of finding out what the successful practices are, what the loose ends are, and what the immediate problems are. The purpose is never the discrediting of persons or achievements, but the discovery of the existing needs of the school as a guide to an educational program.

In this spirit the faculty of the State Teachers College of Colorado has delved into every phase of the activities of the school and has set forth with painstaking care and impartiality its findings. And in the same forward-facing attitude the faculty has mainly co-operated in the difficult work of making use of the information gained from the careful exploration of the various phases of the school's activities. There have been objections, of course, but on the whole not unreasonable or unreasoning ones. The opposition to this or that change has in all cases been as valuable in forcing the completest justification of each change recommended as it has been vexatious to those already convinced of the need of the specific change contemplated.

The careful reader will note the conspicuous absence of captious criticism. He will note also that conditions still existing in the school are not spared by the authors of the several sections of the survey. This is as it should be. Honest critics are not interested in whitewashing themselves. The college expects to continue to profit from the critical evaluation of its work, whether by its own faculty or by the public school leaders.

The survey was begun in the year 1917-1918, and the data upon which

the conclusions were built were all collected at that time. The comprehensive study planned by the Survey Committee involved a great amount of difficult labor for the members; and the impossibility of absolving them from their regular duties as teachers, accounts for the delay in publication of the results.

In the meantime for two years, the college has been steadily and co-operatively applying itself to the work of utilizing the information gained in regard to the specific needs of the school. It would be useful to the readers of this survey to extend every section of the study sufficiently to indicate the specific readjustments that have been made as a result of information gained through this exploration into the various phases of the school's work. These, however, are a matter of common knowledge to the members of the faculty.

Finally, the school-men who read the several sections of this analytical report will not imagine that there is anything peculiar in the defects that are disclosed. Schools for teachers the world over have much in common—including characteristic faults into which they have grown. Even a school in so many particulars unique as Colorado State Teachers College is well-known to have been, has nevertheless much in common with other schools of its sort. There is not the slightest doubt, for example, that a similarly close and impartial report of other schools for teachers would disclose in them similar defects.

Other sections of this survey will be published as soon as they can be made ready. These are:

Section III—The Courses of Study, Etc.

Section IV—The Training School.

Section V—The Total Load of Teachers, Etc.

Section VI—Accounting and Costs.

Section VII—Length of Courses, Etc.

J. G. CRABBE,  
President

## CONTENTS

Foreword .....	3
Preliminary Explanations.....	7
Administrative Control .....	9
Several Plans and Point of View of the Survey.....	12
Data on Departmental Functions and Organizations.....	19
Academic Departments.....	19
Professional Departments.....	22
Special Subjects and Departments.....	35
Training Schools.....	46
Discussion of Departmental Functions and Organizations.....	50
Discussion of Functions and Interrelations of Courses.....	56
Data on Barriers to Departmental Efficiency.....	58
Changes Made Up to 1917-18.....	62
Changes Needed.....	71
Data on Interdepartmental Co-operation.....	75
Most Important Problems of the College.....	75
Committees of the Faculty.....	90
Discussion of Committee Work.....	94
The Faculty Meeting.....	113
Student Government.....	114
The General Assembly.....	115
The Publications of the College (1917-18).....	122
Extension Service to 1917-18.....	124
Concluding Remarks.....	148





## PRELIMINARY EXPLANATION

E. D. RANDOLPH

### The Initiation of the Survey

On October 4th, 1917, in the first year of his administration, President Crabbe announced the appointment of a Survey Committee consisting of nine members of the faculty representing the varied activities of the Colorado State Teachers College. At the same time he set forth concisely the immediate occasion of the proposed educational inventory, and distributed to the committee the typed *Instructions for a Survey of a State Normal School* which were prepared by the *National Council of Normal School Presidents and Principals*, requesting that they be carefully studied with the view of making a deliberate investigation which would meet not only the purposes of the *National Council*, but also our own needs of specific information about our own educational situation, for guidance in our own program of reconstruction. His final note of sympathetic warning that the work would be heavy and time-consuming was sufficiently prophetic. The committee entered upon a long series of laborious explorations which are not yet completed when the first sections of the report go to press.

The committee spent a month in listing and discussing such additions to the several topics of the *National Council's* plan as seemed desirable from the point of view of efforts already under way. As far as possible the several topics of the *National Council's* plan were parceled out by the chairman to sub-committees on the basis of their interests as revealed in their contributions in the first few meetings—with instructions that each sub-committee should

1. Report at the next meeting of the committee as a whole the additions needed in its topics in order to make the final report most useful in forwarding the plans of the College.
2. Formulate a plan of procedure for gathering its data; distribute its work over its membership as seemed best; and formulate the general sequence of topics for its own report—for comparison in determining the final arrangements of the sections of the report as a whole; and that each should
3. Take full cognizance of all useful work already available in the scope of its topic.

This was done and then in open discussion the committee as a whole decided tentatively upon the general features of the final report. It was to consist in each topic of

#### 1. *An Introduction:*

Each topic was, so far as its nature made such discussion desirable, to be introduced by a general discussion calculated to give perspective; and, so far as its nature made such discussion desirable, by a critical statement of standards—or the need or absence of standards; and finally, by reference to the available literature bearing upon or relevant to the topic.

Each sub-committee was to make a full and clear statement of its problems, giving such critical comment as could be useful either as interpretation or as illustration of *point of view*. (This was eventually to supply some data for the analysis of organization.)

Each sub-committee was to state clearly the special difficulties faced in attempting an adequate report of its topic in the Colorado State Teachers College.

And finally, whatever the additions to the *National Council's* plan required, all the information asked for in the council's plan should be fully given.

## 2. A Critical Analysis of Our Educational Situation:

As the body of the report, each sub-committee was to submit a critical interpretative analysis of its topic as conditioned in this school—with comparisons wherever possible or useful; and with references to desirable comparisons for which data do not exist; etc.

Finally, the tone of all reports was to be impersonal, judicially critical.

The sub-committees were then placed upon their own initiative for the completion of the first stage of the work, which was satisfactorily done without loss of time. The proposed additions were reported to the President and approved by him, with the assurance of all the stenographic and office assistance needed—and with regret that other work of the committee could not be greatly lightened during the investigation.

Since the full co-operation of the faculty would be essential to the investigation the matter was discussed in the two faculty meetings, and the interest of the faculty was sought in the progress of the work. A bulletin board was conveniently placed in the Dean's offices, and the notices of meetings, the topics to be discussed, etc., were religiously posted throughout the year. In due season the chairman's analysis of the functions of schools for teachers, their implied activities, and necessary corollary activities was also posted on the bulletin board for the faculty's reaction.

The information for which questionnaires were necessary was formulated early in the committee as a whole, and the questionnaires were framed by sub-committees and promptly printed and distributed to faculty, students, alumni, public school people, etc., and duly posted along with the other illustrative material on the bulletin board.

Progress was rapid up to this point. The slow returns to the questionnaires from outside the school, and in some cases inside, brought the first check and revealed deficits in the organization of the College: *e. g.*, its mailing list. While returns were coming in there was time to work out the initial generalizations. By that time the returns from the general questionnaire of the faculty, and the separate returns from the questionnaires of faculty committees were in, and the chairman of the committee, to whom fell the topic *organization*, was able to begin his exploration at once. The sub-committees that were not dependent on questionnaires for their material were likewise unimpeded.

In conclusion of this brief introductory statement two factors should be mentioned that complicated the work at every stage:

1. The fact that active reconstructions were already well under way through the work of various faculty committees established by the President in the first year of his service here. For example, the committee on *The Courses of Study* had made substantial progress before the *Survey Committee* was established.
2. The usual shifting of faculty personnel embarrassed the work seriously on several occasions; and with the entrance of the United States into the war not only the passing of members of the faculty into war service but also the added burdens of war duties upon the College made progress very difficult. For example, three changes in the superintendency of the Training Schools, the departure of the Director of Extension Service, and of the Instructor in Accounting for Army service permanently hampered important sections of the work.

Finally, by way of transition to the body of this report, the reader will need to be reminded that the plan adopted by the committee at the suggestion of President Crabbe called for an *initial statement of standards or formulation of principles*, and such discussion as would be useful in *clarifying points of view* and in *facilitating the College's program of readjustment*. The National Council's first topic, *Organization*, had reference only to *Administrative Control*, which, though important, did not bear particularly upon the problems in the foreground here at present. So, the committee added to the topic the matter of the College's immediate concern: namely, *Educational Organization*, with which several committees appointed by the President were already

working. In order to unify the Survey Committee (and later the faculty) a detailed analysis was made covering (1) the functions of schools for teachers (from the point of view of their supplementary relation to the public schools), (2) the various socio-economic and historical factors that complicate the fruitful operation of schools for teachers (custom, tradition, use and wont, the factors selecting teachers, deposits from past experience on lower levels of knowledge, etc.), (3) the implied activities of schools for teachers (especially their courses of instruction and training and the machinery for focussing them upon their most pressing problems,—committees of *research*, etc.), and (4) the necessary corollary activities. It was the intention of the Survey Committee and the President to print this basic set of standards as an introduction to the several sections of the survey report; but its bulk (some 70 close-knit pages of theses with their supporting arguments) led to the abandoning of this plan. The brief allusion that is made to this basic set of standards at the beginning of the section on Educational Organization in the State Teachers College of Colorado may not be sufficient to carry the reader at all points with the following discussion of organization.

The following sections of this pamphlet present President Crabbe's report on the topic *Administrative Control*, and the Chairman's report upon the *Educational Organization* in the State Teachers College of Colorado.

## I. ADMINISTRATIVE CONTROL

J. G. CRABBE

For a clear analytical discussion of the four general types of administrative control now in force for Normal Schools and Teachers Colleges in the United States, the reader is referred to chapter 4 in the United States Bureau of Education Bulletin, 1916, No. 12: Problems of Standardizing Normal Schools. The characteristic features of each type are there set forth with more or less critical comment on the advantages and disadvantages of each. No purpose would be served by repeating that discussion here.

Colorado's Administrative Control of Normal Schools is of the second type: viz., Authority to control is vested with a Board of Trustees having no relation to other educational institutions.

The major questions concerning Administrative Control are the following:

1. What is the statutory definition of the function of the school?
2. What are the statutory provisions concerning control and direction?
  - a. How many members are there on the Board of Trustees?
  - b. How are they chosen, and what are their qualifications?
  - c. How long is the period of service?
  - d. What are the statutory powers of the Board of Trustees?
  - e. How is the Board organized?
    - (1) For the customary routine?
    - (2) For bearing on recurring administrative problems?
  - f. What is the relation of the President and the rest of the faculty to administrative control?

These several matters will be set forth in the following paragraphs:

### I. Statutory Definition of Function

In Section 1 of the act of 1889, the function of the school is briefly expressed as "instruction in the science and art of teaching, with the aid of a suitable practice department and in such branches of knowledge as shall qualify teachers for this profession."

This section remained in force after the act of 1911 designating the school as "The State Teachers College of Colorado," as indeed have most of the original sections of the original act. The most important statutory changes relate to the method of support of the school by the state: to wit, its securing (in common with the other educational institutions) a millage.

### II. Statutory Provisions Concerning Control and Direction

In Section 2 of the act of 1889 (M. A. S., Sec. 6921) begins the definition of Administrative Control: "Said schools shall be under the control of a board

of six trustees; the said board shall be and is hereby declared a body corporate by the name and style of the Trustees of the State Normal School, and as such and by its said name may hold property for the use of said school, be a party to all suits and contracts, and do all things thereto lawfully appertaining, in like manner as municipal corporations of this state."

Section 3 of the act of 1889 (M. A. S., Sec. 6922) defines the method of selection of the trustees and their terms of service: "The Governor shall, upon the approval of this act, appoint, by the advice and with the consent of the Senate, the six trustees mentioned and provided in this act, two of whom shall be appointed for the term of two years, two for the term of four years and two for the term of six years. Their terms of office shall begin from their appointment and qualification and shall continue for the period for which they shall be appointed and until their successors are appointed and qualified. Every two years after the first appointment aforesaid, two trustees shall be appointed in like manner to succeed those whose terms are first thereafter to expire. Every trustee so appointed shall take and subscribe the oath of office of the Secretary of State. The Superintendent of Public Instruction shall be, *ex officio*, a member of the Board of Trustees of the said state normal school."

It will be noted that there is no definition of the qualifications of the members.

In Section 4 of the act of 1889 (M. A. S., Sec. 6924) "Said normal school is hereby constituted an integral part of the public school system of the state and shall be subject as such to the general supervisory powers vested by the constitution in the State Board of Education."

These "general supervisory powers" of the State Board of Education are merely nominal. The State Board of Education consists of the State Superintendent of Public Instruction, the Secretary of State, and the Attorney General.

Section 5 of the act of 1889 (M. A. S., Sec. 6925) begins the enumeration of the specific powers and responsibilities of the Board of Trustees. There are few limitations upon the board. They are given "general supervision" and "the control and direction of its funds and the appropriations therefor." They may appoint the faculty and dismiss them. They may fix salaries and prescribe the duties of the faculty. They may make all needful rules, regulations and by-laws "for the good government and management" of the school. "With the advice and consent of the faculty they shall prescribe the books, and the courses of study and instruction, which in no case shall cover a period of less than three years." They may fix the standards of admission and the fees to be paid by pupils in the Training School and by students not citizens of the state.

The board is charged with numerous specific responsibilities of the usual sort: viz., the providing of grounds, buildings, apparatus, etc. They must make to the State Superintendent of Public Instruction and to the Governor an annual report covering such important matters of information as are needed for the statistical reports of the superintendent: *e. g.*, "classified enrollment, attendance, curricula, teachers," etc., and such matters as "other employes, full classified and itemized financial statement, estimate of the coming year's expenditures and a statement of the work and general condition of the institution."

The general organization of the board is defined in the act. At each annual meeting they must elect from their members a president; and from without their members, a secretary who shall give such bond as may be designated by the State Superintendent of Public Instruction. The State Treasurer is, *ex officio*, treasurer of the school.

To meet recurring situations of administration the board has formally distributed itself over four standing committees: The Executive Committee, the Committee on Teachers, the Library Committee, the Committee on Buildings and Grounds.

The functions of the Executive Committee are to approve and countersign all regular monthly pay rolls and in general to act for the board in all matters

of an emergency nature that occur in the intervals between meetings of the board.

The function of the Committee on Teachers is to pass upon all recommendations for members of the faculty as presented by the President of the school.

The Library Committee makes irregular inspections of the library and reports to the board.

The Committee on Buildings and Grounds have general direction of the buildings and grounds, which are directly managed by a "superintendent of buildings and grounds."

It is clear from the account of the statutory functions of the board that, like the boards of education of city school systems, it is vested with complete authority to control and direct. In organization, also, like the best city school boards of education, it at the very beginning adopted the practice of delegating its educational prerogatives to the executive head of the school, the President. This, indeed, is the universal distribution of functions in the higher schools, and under the leadership of Professors Cubberley and Strayer is swiftly becoming the practice of city school boards. No lay board anywhere is equipped to direct educational policies, but lay boards are as a rule well-equipped to direct business and financial aspects of school administration.

It will have been noted, however, that aside from the provision making the State Superintendent of Public Instruction a member (*ex officio*), the Board of Trustees is potentially *either a lay board*, like those of the cities of the United States, or a board *with just any proportion of professional members*—teachers, in short. For, since the state superintendency is in Colorado an elective position it is conceivable (though nothing is less likely) that the office of State Superintendent might come to be filled by an essentially political and non-professional incumbent; and theoretically at least, it would be possible for the other members of the board all to be chosen from the ranks of teachers. There is no statutory limitation in regard to the composition of the board.

In practice the State Superintendent has always been an able representative of the professional interests of the schools; and frequently able schoolmen and women have been appointed to the board. At the present time (1917-18) for example, two members of the board besides the State Superintendent are from the ranks of active teachers, so that nearly half the board is professional. It is not, in short, a lay-board. For those who are familiar with the theory of administration this fact will have considerable significance. We may add that in practice the board has always been constituted with a majority of members from the ranks of successful business men of liberal views. While there is no provision in the act concerning the distribution of the membership of the board over the state, in practice every geographical division of the state has been represented.

#### The Faculty in Administrative Control

It will have been obvious from the earlier summary of the statutory powers of the Board of Trustees that, here as elsewhere, their control is (and properly) very complete. It is also true that, here as elsewhere, in the actual operation of the school the Board of Trustees follows the precedent established through long experience in higher schools, and delegates its educational prerogatives to the President of the school. By custom or precedent the President is the shaper of educational policies and organization as well as the executive head of the school. The board leaves to the President the shaping of the curricula, and the President in turn delegates to the Faculty Committee on *Courses of Study* (of which he is *ex officio* a member) the specific tasks of analyzing the established courses, criticizing such flaws as may be found, consulting with the rest of the faculty, recommending changes, etc. The curricula now in force in the College are in large measure the outcome of the work of the committee, their conferences with other members of the faculty, and of open discussion in the faculty meeting. Syllabi of required courses, though not absolutely required, are usually provided and serve to define content sufficiently to ensure covering the topics intended for each course.

The nature of the work of the President of a school for teachers is hardly

suggested in the foregoing brief statement of his function, however. In some important respects at least, his task is more complex than that of the president of a liberal arts college. The traditions of the institution of teacher-preparation, for example, are less firmly established than those of liberal arts colleges; and the preparation of teachers has, moreover, a professional purpose not involved in the purposes of liberal arts colleges. Schools for teachers are institutions supplementary to the public schools and are brought definitely to bear upon the changing social situation with reference to which the public schools are established.

The educational problem of the president of a teachers college involves among other things, the difficult task of co-ordinating the work of a large group of specially trained teachers so as to *promote the characteristic purposes of the modern preparation of teachers*. His teachers will, in the first place, be specialists in various fields and ordinarily each of them will have the peculiar biases of his own field. The tendency of the specialist (as is pointed out in the following report on educational organization) is ordinarily "to assume that the proper goal of every student that enters his classes is the same kind and amount of knowledge and technique that he himself possesses"—whereas, in reality the proper goal of the students in a school for the preparation of teachers is "such knowledge and technique as are directly relevant to the realization of the social purposes of the public schools." Comparatively very few university and college graduates have had professional training and consequently most of them lack a properly social point of view for effective work in a teachers college. In the second place, the teachers in teachers colleges are selected from a dozen or two universities and teachers colleges and each will reflect more or less clearly the peculiarities of his Alma Mater. So, the president of a school for teachers has a peculiarly complex task of unifying and coordinating teachers for the characteristic purposes of teacher preparation.

The necessary work of unification is in reality a phase of training in service. The end in view is not merely unity of procedure or of external effort, but a fundamental unity of purpose. Consequently it involves an organization of the faculty for purposes of discussion and deliberation. The educational policies of a school are or should be, matters of the greatest concern to the faculty; and in the interests of efficiency *it is the obligation of the president to involve the faculty in the shaping of educational policies and their organization*.

In short, the President represents the rest of the faculty to the Board of Trustees, and the Board of Trustees to the rest of the faculty. The Faculty Meeting is accordingly a *deliberative assembly* for considering educational matters of the greatest importance as well as for dealing economically with the ordinary matters of routine. It is supplemented by the work of several faculty committees dealing with such important concerns as changes in the courses of study, for example; and by numerous conferences with numerous groups of teachers.

In the end, the President reports and recommends to the Board of Trustees the policies and procedures that seem to promise the completest efficiency of the school. Thus in a real sense the administrative control is co-operative and democratic.

## II. EDUCATIONAL ORGANIZATION IN COLORADO STATE TEACHERS COLLEGE\*

E. D. RANDOLPH

### Introduction

The dependence of organization upon conceptions of purpose was clear from the beginning of this study. To get any very useful statements of the *differentiating or characteristic purposes* of schools for teachers, however, seemed impossible. The diverse practices of such schools seemed mainly to

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\* Special acknowledgments should be made to Dr. J. D. Heilman for the critical reading of this report, and for valuable suggestions.—E. D. R.

illustrate unconscious or evolutionary adjustments to regional peculiarities in the development of public and higher education, compromises with local and historical factors in public education, the varying educational philosophies of the presidents of the schools, etc., rather than any generally applicable conception of the most fruitful relation of schools for teachers to the public schools. Considerable warrant could be found for concluding that in essence normal schools illustrate followership of the public schools, rather than leadership. Their "professional" studies, for example, appear *mainly* to acknowledge no responsibility much beyond that of "putting over" the usual public school studies; in other words, they for the most part appear to accept uncritically the traditional subject matter of both their own and the public school curricula, and to regard both as satisfactory. A very considerable part of their effort has no visible distinction from that of high schools and liberal arts colleges. They do not very generally or very fully acknowledge responsibility for securing a dynamic relation between public school work and the typical pressures of modern life, or for reshaping such phases of public school work as are obviously *adjustments either to past conditions of life or to past levels of knowledge; and so on*. It was necessary to work out a full statement of the supplementary character of schools for teachers as a starting point. This was done.

The Survey Committee after a detailed analysis of the public school situation, especially in the West, adopted the view that aggressive leadership in public education is the obligation of schools for teachers. Since this initial analysis with its supporting argument and criticism amounted to some seventy pages it seemed impracticable to print it, as had been planned. A brief statement may serve at least to make connections. Schools for teachers are institutions *supplementary to the public schools*. In this relation they have *characteristic responsibilities differentiating them from secondary schools and liberal arts colleges and directing scholarship into special channels*. They are to realize the social purposes of the public schools. (1) They are to discover through systematic and thoroughly supported research the typical unsuccesses of the public schools in their treatment of established subject matter, and to shape courses of instruction, professional and otherwise, to meet effectively the typical unsuccesses. (2) They are to build up through relevant professional courses a dynamically social view of public school education to facilitate the selection of the material of the greatest social value in each of the school studies. (3) And similarly they are to orient teachers with regard to the historical effectives, or deposits from past experience in school education, which operate more or less obstructively in the presence of changed conditions of life, new levels of knowledge, etc., so that their graduates may escape being submerged in traditionalism and be able to co-operate with progressive superintendents in the needed reconstruction of school education. In short, they are to fit teachers not merely into the existing public school situation, but also into the larger social situation to which, in a democracy, in a cosmopolitan era, the public schools are supposed to have a conscious and dynamic relation.

Likewise the peculiar elements in the educational situation, which make educational organization more complicated and difficult than business organization, were clear. In a business the unifying idea may be the possession solely of the *entrepreneur* and his division chiefs—perhaps not necessarily of the latter. The other workers in a business, however, need not have a vision of larger ends than the skills of their own special activities; they need not be conscious of the relationships they bear to the whole; they may be efficient though inert so far as the general ends of the business are concerned. In educational work, however, the nature of the task calls for a somewhat complete diffusion of a unifying purpose. And when the educational work is of a leadership type—seeking to promote desirable changes in public education in response to needs developing in so complex a set of new operating forces and traditional activities as are involved in modern life in a democracy in a cosmopolitan era—then a general diffusion of a common purpose among all the workers becomes pretty clearly a condition of successful endeavor. In a school for the preparation of teachers to meet the responsibilities of public school education, the teacher of history must know much more than history

in order to promote the purposes of the school; he can not properly shift the task of selecting appropriate material and determining emphases to the public school teacher; he can not discharge his responsibility by fitting the teacher to carry on the prevalent type of public school history teaching. His problem is not so simple; he must also know *education*; he must thoroughly understand the supplementary relation of schools for teachers to the public schools, the limitations of public school children, and the social needs that history may be expected to serve. The same holds true of teachers of geography, biology, chemistry, physics, literature, mathematics, and so on.

The difficulties of achieving such a diffused unity of purpose and endeavor were also clear enough, and the means were also, in general outline fairly clear. Under the present conditions of preparation for the teachers who are to meet the leadership responsibilities inherent in normal schools and teachers colleges, the present scale of pay, the present vagueness of objectives, the present unpurposefulness of organization, the present impermanence of service, especially in the less desirable positions—it may without great reproach have come about that, in a school for teachers, as in a business, the unifying idea has resided mainly in the president of the school and his division chiefs, the heads of departments. Consciousness of the *requirements of such a situation*, however, ought to be manifest in the organization of the school to offset these disintegrative influences.

In the initial analysis of the public school situation the function of schools for teachers was analyzed and their end found to be the preparation of teachers for the promotion of the social purposes of the public schools and the offsetting of the obstructive factors in the educational situation. The task of the Survey Committee was to discover whether and to what extent a particular school for teachers operates to this end.

In examining an established school for teachers to see what its organization is like, where should one look for evidences of the ends that are operating, the mechanisms in use, etc.?

#### Points of Attack

1. One might inquire more or less successfully into the faculty's ideas of the function of the school, the purposes of their departments, the major problems of the school, the barriers to the success of their work, the needed changes, and so on, thus hoping to arrive at a critical estimate of the amount and quality of the conscious unity of the faculty. This has been done, none too satisfactorily of course, and the results of the inquiry will be presented in this section of the report.
2. One might examine the faculty committees to see to what extent they represent a focussing of the faculty upon the most important problems of the school, and what provisions are in force to stimulate and capitalize their work; to what extent they are formal, etc. This has been attempted, also, and will be reported in this section.
3. One might examine the Year Book and the various publications of the College—especially hopefully the latter. Year books are largely conventionalized; but presumably the bulletins put forth by a school for teachers both somewhat express its values, and somewhat reveal its activities. This also has been attempted and will be reported in this section.
4. One might examine the practices of the school—its representative or typical class-room work, for example—to see whether the emphases are in line with the purposes set up in departmental statements of functions and in the declared ends of the school. The known diversity of class-room procedure or method in the college classes of this school pointed to this from the beginning as desirable; but the difficulty of engaging a stenographer able (in vocabulary as well as in speed) to report a sufficient amount of work to make generalizations very useful, joined with the committee's feeling that such material would only confirm what is already known of diverse procedure (without giving a better basis for judgment) to prevent this sort of inquiry. Examinations are fairly general throughout the school,—though not com-



ing at stated intervals,—and the results are open to inspection. This seemed more feasible than the stenographic reports. The results of supervision would have been useful for this end, but the only supervisory work done in the College is that carried on by the President,—and (sporadically) by heads of departments in their own fields. Indirect supervision is more extensive and systematic. The syllabi of required courses in the College afford abundant opportunity to examine the declared intentions of courses,—as the statements in the Year Book do not. Beyond this, the detailed study directions in the Correspondence or Home Study division of the Extension Department throw considerable light on the characteristic aims and emphases of class work in a wide range of the College's instruction. These clues have been followed up and will be reported by the sub-committee on courses of study.

5. One might examine the courses of study and curricula of the school,—in the light of accepted statements of the social purposes of the public schools and of their characteristic unsuccesses; in the light of existing statistics of Colorado public schools and school population—numbers and distribution (rural, village or town, and city); in the light both of statistics of the heterogeneous nationality composition of important educational units in Colorado, and of studies of characteristic deficiencies of such nationality groups as are numerous in Colorado; in the light of statistics of the permanence (or impermanence) of service of Colorado teachers; in the light of statistics of the average equipment of Colorado teachers; in the light of what teacher-preparation is done by other schools in the state; and so on. As much of this as is possible will be done by the sub-committee on courses of study.
6. In addition to these sources there are the several divisions of the College's established activities, their interrelated functions and activities for the common end of the school; and the various accessory activities for all sorts of purposes relevant to the life of the school. Such report as can at present be made of these will be given in this section. The sub-committee on the training schools will give a detailed analysis of the present (1917-18) organization of training.
7. Finally, as a clue to the amount of organization that it is reasonable to expect, one might examine the structures existing in representative normal schools and teachers colleges for the correlating of established activities. The amount of conscious unity existing at a given time in a school for teachers will depend somewhat upon the degree of organization already effected in schools for teachers. Lack of faculty unity in a given case might be explained by *general lack of effort* on the part of schools for teachers to attain a *corporate consciousness*. But organization must at present be experimental,—in part at least a means to the clarification of ends as well as for the unification of faculties in an ever more conscious program (whose progress will be marked by some shifting of objectives). This has not been attempted. It is fair to expect local consciousness of the problem.

For the sake of convenience this report will begin with the committee's groping effort to discover the nature and amount of conscious unity of purpose and effort in the faculty of Colorado State Teachers College at Greeley.

How might the matter of faculty unity of purpose and effort have been effectively explored? A data sheet might have been prepared and taken to each member of the faculty in turn. Such a procedure would probably have provided more level conditions of response and more even returns than were secured. But the members of the Survey Committee were themselves teaching full time and most of them serving on several other committees. The procedure adopted had to be one that did not interrupt class work. The committee might have attempted to enumerate the typical and other possible attitudes toward such matters as the functions of schools for teachers, the nature of the relevant courses of instruction, the most effective sequence of courses, the proper relations between departments, means of supervision of college work, elective courses, the size of classes, the grading system, etc., etc.,

and have asked for the checking of the approved attitudes. This apparently might have given much more reliable results than were secured; but it did not occur to anyone until much later, when obvious faults of the committee's procedure became evident.

The method adopted was a general questionnaire. A sub-committee was set to prepare it, and the committee as a whole revised it. The questions were shaped with the two-fold purpose of getting thoughtful statements about the most important phases of the operation of a school for teachers without suggesting the critical intent of the inquiries. This procedure was a compromise. A small minority of the committee (the sub-committee that framed the initial questionnaire) wished to ask specifically for the faculty's conception of the characteristic or differentiating responsibilities of schools for teachers, so as to get the most highly conscious answers possible. To the rest it seemed that such direct procedure might be in danger of getting responses more defensive and sophisticated than sincere; that the returns would be more reliable if the data were sought less directly.

Thus, an inevitable inequality of interest behind the returns was possibly accentuated by some unnecessary inequality of fore-knowledge of an important part of the uses to be served by the returns. The members of the committee should be expected to "make a better showing" by their own standards than the rest of the faculty.

This vitiating factor, however, was probably considerably reduced by the open discussions of purposes and plans in two long faculty meetings. In the first enough well-defined suspicion of invidious purposes was revealed to make a second meeting for further discussion and assurance seem desirable. The President opened both meetings with a very clear, frank, and friendly statement of the need the school had for an educational inventory as a guide to shaping its educational program, and an appeal for complete co-operation. The chairman then explained the plan in detail, and the scheme for keeping the faculty in intimate touch with the work of the committee. The National Council's plan for a survey was put before the faculty and its defects for the purposes of this school were pointed out. The proposed additions were fully indicated, and the attention of the faculty was invited to the bulletin board in the Dean's office where all this material was posted. The National Council's plan was at once posted there, and from week to week the detailed notices of committee meetings and their topics of discussion were displayed. These showed quite explicitly the purposes and program of the committee. Finally, when the chairman's detailed analysis of the functions and organization of schools for teachers was typed for the committee's consideration it was posted on the bulletin board also and the attention of the faculty called to it. *This analysis was a close-knit discussion of every phase of the educational organization of schools for teachers, and covered with careful deliberateness every problem and policy that was considered in the committee meetings.* In short, the faculty was as fully informed as publicity could accomplish. It is the opinion of the author that inequalities of fore-knowledge were no greater as between the committee and the rest of the faculty than as between a part of the committee and the rest of it; that as a matter of fact the only effective differences were the *inevitable difference of interest*, which would of course be in favor of the committee. Considerable support could be found for more positive assertion. If the faculty do any reading of current educational literature they should be familiar with discussions of the sorts of problems dealt with in the questionnaire. It is permissible to assume that they do such reading,—and to penalize them if they do not. Beyond this, it is clear that there are returns from teachers not on the committee that illustrate more awareness of differentiating purposes and problems of schools for teachers than some of the returns from members of the committee. Some of the returns in both groups were written overnight. Most came within a few days; but some in both groups were a month delayed.

With so much critical introductory comment we pass to the questionnaire. If faculty unity of any sort existed either on the level of custom or of consciousness it apparently would be somewhat revealed by statements of the function of departments and departmental courses. If the unity were on the level of consciousness it would be somewhat revealed both in statements

of departmental functions and in a summary of the most important problems of the school. And if organization were somewhat achieved on any level, answers to questions about the interrelations of courses and departments and about changes made or needed would apparently somewhat reveal it; while the method of accomplishing changes would also have a bearing.

#### GENERAL QUESTIONNAIRE OF THE FACULTY

A thoroughly frank and completely independent response is desired.

1. Make a complete but concise statement:
  - (a) of the function of your department;
  - (b) of its organization to accomplish that function.
2. What are the chief barriers to realizing your department's function?
3. Make a complete but concise statement:
  - (a) of the function of each of your courses;
  - (b) of the interrelations of your courses.
4. What are the chief barriers to realizing these functions?
5. List *all the changes* made in the last two years in either the organization of your department or in the emphases with established activities of the department (including new courses framed, old courses abandoned or changed, stating in each case the reasons for the changes or abandonment and the method of accomplishing the changes (e. g., whether by co-operative effort or otherwise).
6. List all the changes which in your opinion should be made in the organization of your department, and in the emphases within the established activities of your department.
7. To what extent do the activities of your department co-operate with the activities of other departments? To what extent should they be co-operative?
8. List what seem to you the most important problems of the College.

Items 1, 3, 5, and 8 were counted on to reveal *indirectly* something useful concerning such faculty unity of purpose and effort as existed. Comparison of responses to the first part of 1 and 3 and to 8, it was thought, would yield a good deal of unpremeditated but relevant information. In addition to this, items 1, 3, and 7 explicitly required a statement of organization. The idea of organization might not be very clear, yet the thing itself might exist to a considerable extent. It was thought that these assignments would reveal the most unconscious organization, and that 8 would afford perhaps some correction of incomplete responses to the other topics. Items 2, 3, 6, and 8 would afford information in regard to the "sore spots" of the school as well as the matter of unity and awareness of the College's supplementary relation to the public schools.

The returns were not quite complete. They could have been made so, but there seemed to a majority of the committee at the time to be no point to urging full responses from new members of the faculty. This was a mistake—because it would have been very useful to attempt to discover to what extent new members of the faculty were less well adjusted to the characteristic problems of the school than members of several years of service in the school. In business and industry *the cost of labor turnover is greatest with skilled labor*. There is a tendency in schools to assume that at a given salary one college- or university-trained teacher is about as good as another; that a shifting personnel involves no especial loss (which seems to imply that one administrator's program is *as good as another's* or even that *there is no program*). Further deficits occurred as a result of the assumption by various teachers that in deference to their chiefs they should not presume to answer certain questions; and in other instances, where assistants thoroughly disagreed with departmental aims and policies, fear was perhaps an effective check upon responses. On the whole, however, deficits in the returns were inconsiderable. In most cases 55 of the faculty (22 heads of departments and 33 other teachers) responded. In a few cases two to five more responded. In working out percentages the whole number responding has been regarded as "the faculty." The effect of this is to make the results a little more favorable than they actually were.

The problem faced in reporting the returns to this questionnaire merits some explanation. It would have been satisfactory, for the purposes of the survey, to this school, merely to study the returns and report the conclusions.

The full returns are on file and open to any teacher's examination. But even so, the conclusions are open to revision through discussion; and it is desirable to make dissent as easy as possible,—for the sake of the best revision possible. It occurred to the chairman to separate the returns of the committee from those of the rest of the faculty and evaluate them separately,—by way of somewhat meeting the inequalities of interest and fore-knowledge of uses. There would have been no way of dealing with the chairman's biases and special interests, however, except by omitting his responses,—which he did not consider doing. There is no way of making imperfect data quite reliable, so the extra trouble was not taken.

The value of the report to other schools, however, would obviously depend largely upon the presentation of the material upon which the conclusions are based. From this point of view it would have been desirable to print all the returns. But for various reasons this could not be done. It was not expected by the faculty, for one thing. Many of the returns were written overnight. Such a procedure could be defended, however, on the ground that all the questions asked might fairly be regarded as dealing with commonplaces to teachers in a school of this kind, and if they read current educational literature at all they must be somewhat acquainted with such matters as the questionnaire dealt with. The bulk of the returns, however, made selection necessary.

The plan adopted was, briefly, as follows:

1. To quote the statements—
  - a. of *Departmental Function* and organization (Fig. 1—*a* and *b*); and
  - b. of the most important problems of the College (8).
2. To summarize the discussions—
  - a. of departmental courses and their interrelations (3—*a* and *b*);
  - b. of barriers to departments and courses (2 and 4);
  - c. of changes made and desired (5 and 6);
  - d. of departmental co-operation (7).

The first group inevitably reveals authors in the first item; but its material is mainly impersonal. The second group presents the faculty's critical reactions to the various activities of the College, and though there would be no objection from any member of the faculty to having his sharpest criticisms printed, it seems better on the whole to use the most impersonal method of report.

The order of the topics will be as follows:

1. Report of the faculty's statements of *Departmental Functions and Organization*.
2. Report of the faculty's statements of the functions and *Interrelations of Their Courses*.
3. Report of the *Barriers to Realizing the Functions of Departments and Courses*.
4. Report of the *Changes made in Departments* in the two years preceding the survey.
5. Report of the *Changes thought by the Faculty to be most needed*.
6. Report of the *Faculty's Statement of Co-operative Relations*.
7. Report of the *Most Important Problems of the College* as conceived by the faculty.
8. Report of the *Faculty Committees*.
9. Report of the *Use of the Faculty Meeting*.
10. Report on *Student Government*.
11. Report of the use of the *General Assembly*.
12. Report on the *Publications of the College*.
13. Report on the *Extension Department*.

## FACULTY STATEMENT OF DEPARTMENTAL FUNCTIONS AND ORGANIZATION

If there were in the school such unity as could be said to amount to a corporate consciousness, then it might fairly be expected that statements of departmental functions would be made somewhat with reference to the characteristic purposes of the school. If the unity were less complete, it might be expected that statements of function would be more or less independent of the characteristic ends of the school. Similarly, if there were a high degree of unity of purpose and effort in the faculty, statements of departmental organization might be expected to reveal it somewhat.

To facilitate examination and comparison of the statements they are roughly classified in five groups in the following order: (1) Academic Departments; (2) Professional Departments; (3) "Special" Subjects and Departments; and Training; (4) Elementary School and (5) High School. Item 1, *a* and *b*, is quoted and the responses follow.

"*Make a complete but concise statement of (a) the function of your department, and (b) of its organization to accomplish that function.*" Each Roman numeral indicates the response of one teacher.

### 1. Academic Departments

#### I. CHEMISTRY:

1. *Function*—The function of the Department of Chemistry is to present the general principles of Chemistry, together with a study of the elements and their most important compounds. Laboratory courses, intended to apply the laws and theories of the subject, accompany each course and are to be elected with the course which they supplement.
2. *Organization*—Only one teacher is required in this department, so there is no organization established to accomplish the above function.

#### II. PHYSICS:

1. *Function*—In order to give any sort of intelligent answer to the question, I believe one must have a very definite idea of the function of this Teachers College; and I shall first endeavor to give my conception of the function of the College: If we turn to the revised statutes of Colorado we find there a brief statement of what the state considered the use or purpose of the schools: viz., The purpose . . . shall be instruction in the science and art of teaching, and in such branches as shall qualify the teachers for their profession." See also section 8 of the statutes: "Said normal school is hereby constituted an integral part of the public school system of this state." We may differ somewhat as to the stress to be placed upon certain studies. But what I have quoted from the laws of Colorado clearly states the function of the College.

That its graduates should be well-informed in the subject matter to be taught in the public schools, needs no argument. An examination of the courses of study of the public schools of the state readily shows us that there are several of the studies which rest upon a knowledge of the laws of physics. It would be out of place here to attempt, in any exhaustive way, to show this. I shall merely mention examples in a few studies. The physiology-hygiene-sanitation group will furnish one illustration; and the agriculture-geography-nature-study group will furnish a second illustration.

2. *Organization*—It seems to me that I cannot do better than attach hereto the course of study from the 1917-18 Year Book of the school. (See returns on functions of courses and interrelations between courses.)

#### III. MATHEMATICS:

1. *Function*—The function of the Department of Mathematics is to give such instruction in the various branches of Mathematics, and in methods of teaching the same, as will prepare students to be efficient teach-

ers along this line in the common schools and in the high schools of the state.

2. *Organization*—The department consists of three members: The head of the College Department, and the colleague who teaches accounting, and a teacher of high school mathematics.

#### IV. ACCOUNTING:

1. *Function*—Accounting was added to the Department of Mathematics in September, 1914, to supply teachers for commercial courses in Colorado high schools.
2. *Organization*—Three consecutive courses in bookkeeping and a course in theory of accounts are offered. In addition to these courses one course in commercial arithmetic and one in commercial law are offered. Opportunity is given after sufficient academic training to do practice teaching in the training high school.

#### V. FOREIGN LANGUAGE:

1. *Function*—To impart a sufficient reading, written, and spoken command of the three leading romance languages, French, Spanish, and Portuguese, to satisfy the demands of the Pan-American Union, the Hispanic Society, the Modern Language Association of America, and the Association of Teachers of Spanish of the United States.  
*Reading*, as here intended, covers a fair survey of the leading works of at least seven standard authors in the language studied.  
*Written*, as here intended, covers ability to translate anything of ordinary difficulty, barring technical papers, from English into the three above languages; and also covers commercial Spanish and Portuguese.  
*Spoken*, as here intended, covers ability to use the language studied as a second language with as fair a degree of fluency as can be acquired without foreign residence.
2. *Organization*—The latest methods are used each year, and every possible auxiliary, such as clubs, dramatic scenes and short plays learned and presented, either publicly or before class. The dictaphone and records are used from time to time.

#### VI. GEOGRAPHY:

1. *Function*—The function of the Geography Department is a three-fold one:
  - a. To give every teacher of the grades some knowledge of the subject matter of geography and the methods of applying this subject matter.
  - b. To give persons who desire a special training in geography an opportunity to do such work.
  - c. To give certain courses which articulate from the geographic side with other cultural or vocational courses of the course of study of the College.
2. *Organization*—To accomplish the work mentioned above varied courses must be given; the method and required courses for the general work, the special courses like climatology and geology for persons who desire geography departmental work, and courses like human geography for those who desire the general cultural side of the course, or commercial geography for those who desire it to round out their commercial work.

#### VII. HISTORY AND POLITICAL SCIENCE:

1. *Function*—To promote professional efficiency in the teaching of history and civics in the schools which employ teachers trained in teachers college, to the end that good citizens will be produced.
  - a. Who are able to think intelligently with regard to the conditions in which they live, and
  - b. Who are co-operatively active in their community (local, state, national, and even international).

This professional efficiency implies (of concern to this department particularly):

- a. A knowledge of the subject matter which shall be taught. The teacher needs a larger view of the subjects than is obtained in elementary or secondary school courses. The most frequent complaint offered by the training school in past years has been that the student teachers know little about the subject which they teach.
  - b. A knowledge of the modern treatment of the subject matter for the various grades of work; in other words, the adaptation of subject matter to the various grades of children.
  - c. Ability to make proper selection of material.
2. *Organization*—The organization of the department for accomplishing the above function is seen in the character of the courses offered:
- a. Courses which cover the field of history and of civics which will be taught by teachers;
  - b. Courses which especially emphasize a phase of history that is supplementary to the older forms of political history, designed for those who would like a short course giving a new point of view; *e. g.*, Industrial History of the United States;
  - c. Courses which tend to give emphasis to recent developments; *e. g.*, Spanish-American History, Contemporary History.
  - d. Courses which tend to break down provincialism and give an understanding of such terms as "making the world safe for democracy," *e. g.*, Comparative Government, International Relations.
  - e. Courses which are more directly professional, as the Teaching of History, the Teaching of Civics.

#### VIII. ORAL ENGLISH:

1. *Function*—The aims of the Department of Oral English are of two types, closely inter-related: those which have reference to personal culture, and those which pertain to the development of teaching power and resource. The department strives (a) to promote habits of ready and insightful realization of beauty and truth in the world of books, through establishing open channels of expression, under social stimuli, (the assumptions being that soul-sensitiveness is promoted by expressiveness and that literature, owing part of its charm to its beauty of form, should not be divorced wholly from speech, through which such beauty is revealed); (b) to make the individual the more efficient social servant by helping him to gain free and confident possession of his personal powers of presence and address; (c) to make him, through the development of personality, of teaching power and resource, (grounded in ability and inclination to organize content discriminately and constructively and to motivate it in the life of the child), at once a rational and an inspirational teacher.
2. *Organization*—The courses offered in the department are organized and conducted to afford directed practice in luminous oral interpretation of a varied range of literature, in the careful assembling and accurate and forceful presentation of the pupil's own thought, and in technical (not mechanical) exercise, bodily and vocal, adapted to help free the physical agents involved in the speech arts.

#### IX. LITERATURE AND ENGLISH COMPOSITION:

1. *Function*—
  - a. Assuming that Colorado State Teachers College is a vocational school for the training of teachers for every type of school in the state, the English Department holds that the College should not

issue a certificate to any student whose spoken and written language does not meet the simple test of clearness and of confident and easy correctness. The department offers instruction to students who need direction in the use of the English language.

- b. Courses of study in the public elementary schools include simple studies in reading and literature. To direct such studies graduates of the College need to know the literary materials directly involved as the teachers' larger background.
- c. Since the College turns out teachers with the A.B. and A.M. degrees who seek employment as high school teachers, it follows that the English Department should offer literary courses to include all the work commonly offered in the high schools of the state plus others which supply the teachers' larger background as stated above under *b*.
- d. The College must not only meet conditions as they now are, but must "project the educational future." To this end the English department feels that it must offer courses to acquaint the students with the materials available for use in both elementary and high schools, with rational methods of presenting these materials; and finally, it must present such materials and teaching plans as will better present practice and become a part of the practice of the schools of the immediate future.

This statement assumes that one function of the College is to train elementary, high school, and normal school supervisors and directors.

- e. One of the readiest means of coming into touch with the thought and culture of the world, past and present, is through the world's literature. Although no course is included in the English list frankly for its cultural value alone, I hold that certain courses might be justified on the ground that they serve as an introduction to the best thinking of the world and as an induction into the standards of thinking and action winnowed out of the experience of mankind through the centuries.

#### COMPOSITION:

1. *Function*—The general aim of the several courses in composition may be stated as follows: to teach the student to think, and then, to express himself simply, naturally, and with a fair degree of accuracy and ease.

In detail, I might add that the department aims to teach certain principles and provide exercises for drill or training. Briefly stated, the student should learn what is good use with regard to diction, sentence structure, paragraphing, punctuation, etc. Some essential facts of grammar are emphasized, so that the student may be able to check up his own errors, and be able to say *why*.

2. *Organization*—The department has the following courses designed to fulfill its function as stated above:
  - a. Courses in Oral and Written Composition.
  - b. Courses in Materials and Methods for Elementary Schools.
  - c. Courses in Materials and Methods for High Schools.
  - d. Literary Courses.

#### Professional Departments

##### I. EDUCATION:

1. *Function*—The main function of the Department of Education is to equip the prospective teacher with the educational theory, method, and material which will be of service to him in solving the problems which will confront him in the teaching position which he finally accepts.



This the department endeavors to do not only by giving the fundamental theories underlying the educative process, but also by pointing out the practical application of these theories to the work of the school.

Every teacher needs to have clearly presented to him the various aims of education and the best methods of attaining these ends in the school room; he needs to acquire a critical attitude toward the material he presents; he needs to have some rather definite ideas in regard to educational values; he should have some acquaintance with economical methods of school and class management; he should secure a historical background for his teaching; besides having in mind definite means of measuring his own work and that of his pupils. Furthermore, if a teacher is to be progressive he should have a knowledge of current movements in education today. Through its various courses, the Department of Education makes an effort to meet these various needs.

2. *Organization*—There is a head of the department and six or seven other faculty members offering one or more courses in the department. The two persons who give their entire time to the Department of Education have frequent conferences as to the courses to be offered, the material to be presented in the various courses, etc.

## II. EDUCATION:

1. *Function*—The function of the Department of Education is:
  - a. To introduce the student to the fundamental principles that underlie the educative process, and to point out to him what other sciences contribute to the theory of education, and to what extent.
  - b. To give the student a thorough knowledge of the history of education, including foreign school systems of today.
  - c. To study the American educational system of the present, including:
    1. Educational problems of today.
    2. Recent movements in education.
    3. The newest literature on education.
    4. Possible improvements in present conditions; and
  - d. To train students in research on educational questions.
2. *Organization*—To accomplish these functions, the department has two teachers who conduct courses in the theory and philosophy of education, the history of education, including comparative school systems, the organization and administration of our school system, current movements in education, problems and suggested solutions, recent literature on educational subjects, and a course in research.

## III. PSYCHOLOGY:

1. *Function*—Perhaps the clearest statement of the function of our department can be made by beginning with a description of those activities which our College and the Department of Psychology are supposed to serve. As living is the ultimate activity which our College is supposed to serve through the agency of the public schools, we may begin with a statement of the nature of living. Living is one continuous series of adjustments. Old adjustments are repeated and new ones are made and perfected by changing both the individual and the environments to which the adjustments are made. It is in making the adjustments involved in living that the public schools find their function. The schools have been created to assist the child in making the necessary adjustments involved in his immediate and future living. They render this assistance by helping the child to develop such responses of thought, feeling, action, and attitude as are required for a good adjustment between himself and the several environments of life. In order that this assistance may be rendered most effectively and economically, a careful selection of activities and their organization and ad-

ministration are essential. It is in this work of the public schools that teachers' colleges find their chief function.

Normal schools and teachers' colleges have been established for the purpose of assisting the public schools in every phase of their work. The teacher-training school should assist the public school in defining its functions and in selecting such activities and materials and determining such organization and administration of activities as are best suited to the most perfect and economic realization of the functions of the public schools.

The department of psychology in a teachers college finds its function in the larger function of the college, in helping with the tasks of defining aims, selecting and adapting materials, determining the most useful responses and the best methods of controlling them, and securing such organization and administration as are most favorable to realizing the defined aims with the materials and methods at command in the case of every individual child. What contributions our department makes to these various phases of public school education I shall endeavor to show in the following brief and general statements. These will reveal the functions of our department.

We are endeavoring to assist the public schools both directly and indirectly; directly by working with the school child and indirectly by assisting other departments of our institution, educational organizations of the public school systems, and school officials and teachers, and by aiding through instruction in the preparation of students for service in the public schools.

The direct function: This consists in determining the mental status of the children of the training school and of the state by means of clinical examinations, and in making to school officials recommendations for their subsequent treatment in accordance with the results obtained from the clinical examinations. The physical conditions of the children insofar as these are involved in their mental development and efficient behavior are also determined.

The indirect functions:

1. Assisting other departments of our school, public school organizations, and school officials, and teachers in the psychological aspects of their work.
2. Instructing students in—
  - a. General psychology.
  - b. Child hygiene and child development.
  - c. Educational psychology or in those contributions which psychology has made to the solution of all kinds of educational problems. A brief elaboration of our work in instructing students follows:
3. Brief elaboration of our work in instructing students—
  - a. I believe that every phase of public school work—educational aims and the selection of materials, the instruction and care of the school child and the organization and administration of schools and school systems—does or might receive valuable assistance from an account of the progressive development of educational practice and theory. Such an account can, however, not be written without a knowledge of modern psychology, especially educational psychology, which has the function of helping to determine what is and what is not progressive. Moreover, after the account has been written students will be unable to interpret it correctly without a knowledge of the history of psychology, for the account will be suffused with psychological theories and doctrines of the past. Our department should teach the history of psychology which it has thus far failed to do because our school pays very little attention to the history of education. The teaching of the history of psychology would be of service in interpreting the history of education as it is now written.

- b. **Materials and Aims of Education:** In selecting the materials and aims of education psychology has a function to perform. It is involved in determining the school curriculum from the standpoint of its developmental and disciplinary value. The whole question of the adaptation of school tasks to the child's stage of development falls essentially within the function of child psychology. Psychology has also been of service in changing the emphasis placed upon educational aims. For example, increased attention to the child's health was in part a consequence of the psychological studies which demonstrated to what extent the child's mental development and school progress were dependent upon his health. The function of teaching this relationship our department performs in the course on child hygiene. Through a study of children's capacities and the nature of their development, psychology makes evident the fact that education must not endeavor to realize the aims of education with equal completeness for all children if the best results are to be obtained.
- c. **Organization and Administration of School Systems:** In order to show what some of the functions of our department are in connection with the organization and administration of school systems, I shall enumerate some of the tasks of this phase of public school education and show what assistance they have received from psychology. It is, of course, assumed that one of the functions of our department should be to instruct students in the contributions which psychology has made and is making to school organization and administration.
1. **Supplying All Kinds of Equipment, Desks, Books, Apparatus, etc.:** It is impossible to make the best selection without a knowledge of child hygiene and the methods of instruction to be followed, many of which are determined wholly or in part by the psychological analyses of the mental processes involved in the several school subjects and by the many experimental studies on method which have been made by educational psychology.
  2. **Establishing Schools of Various Kinds:** The psychological studies of children's varying capacities and the effect upon them of offering materials which are either too easy or too difficult, have been instrumental in securing the establishment of schools for the feeble-minded, the backward and the bright or supernormal.
  3. **Checking Up the Efficiency of the School System:** This has been done by determining the amount of pedagogical retardation, a method which psychology has done most to develop and put before school officials. The efficiency of a school system may be determined more completely by the application of educational tests, most of which are the outgrowth of educational psychology.
  4. **Selection of Teachers:** Evidently a knowledge of educational psychology is an asset in the evaluation of the efficiency of a teacher. However, we believe that psychology is going to play a more prominent role in the future in the selection of the best teachers. The proposed method is to determine the child's native equipment by means of mental tests and his proficiency in the school subjects by means of educational tests. This would in large part measure the teachers' efficiency through the results obtained.
  5. **Fixing the Compulsory Attendance Requirements:** The development of the child's learning ability as taught by child psychology is a fact which has its significance in establishing the compulsory attendance term.

6. The Establishment of Psycho-educational Clinics: The demand for these clinics is growing and their usefulness has been demonstrated. Preparing students to do clinical work and rendering assistance in the establishment of clinics fall within our function.
- d. Organization and Administration of Schools: Here as under the last heading I shall enumerate some of the tasks of the internal organization and administration of schools and show how they are dependent upon psychology and child study. If they have anything to contribute to this phase of education, we shall assume that it is one of the functions of our department to instruct students in these contributions.
1. Avoiding Absences and Tardiness: This task is much facilitated by a knowledge of children's instincts and native interests and by a knowledge of the relationship between school attendance and the various kinds of defects found in school children.
  2. Maintaining Hygienic Conditions of the School: Studies in child hygiene have shown the bad effects of unhygienic conditions upon the child's health, mental and physical development and school progress. They have also done much to show what the necessary hygienic conditions are. Our department has the function of giving the student much needed information on this subject and of developing the right attitude toward it.
  3. Maintaining Order and Discipline: There is much literature in psychology on the elimination and prevention of undesirable acts, on the determinants of conduct and on the best methods of developing right conduct.
  4. Arranging the Daily Program: The arrangement of the daily program is to a large extent dependent upon the studies on mental fatigue and fitness for mental work.
  5. Graduation and Classification of Children: A knowledge of mental and educational tests and the ability to administer them properly would be of much service here.
  6. Provision for Individual Work: Psychological studies on individual differences in capacity and ability are at the very foundation of such school organization as allows for more individual instruction and attention.
  7. Systems of Promotion: The best scheme for promoting children must be in large part based upon a knowledge of the nature of the child and the causes of mental arrest.
  8. Requirements of Home and School Work: Psychological studies have been made on the relative value of home and school work for children of varying ages or stages of development.
- e. Teaching or Instruction: Psychology has its largest contribution to make to that phase of school work known as teaching or instruction. The most effective teaching implies a knowledge of—
1. The child's native equipment and how he learns.
  2. The effect of mental fatigue on learning.
  3. The significance of individual differences in teaching.
  4. The mental processes involved in each of the school subjects; which should be stressed the most for a given subject; and how to secure the most effective mode of their co-operation.
  5. The experimental studies on methods of instruction.
  6. The psychological studies on the moral behavior of the child.

- f. **Original Investigations by School Officials:** Our department should assist school officials in the making of original studies or in the solution of some of their problems by offering courses in the application of psychological and statistical methods to education.
- g. **Other Courses in Our Program of Instruction:** Provision should be made for adding numerous other courses in psychology such as social, vocational, and experimental psychology in order to perform our function of instruction more completely, but the fact that practically all of our students take only the two-year course makes this provision impracticable in our school.
2. **Organization—For Direct Function or Clinical Work:** The work in the clinic is scheduled in the same way as regular class work. This term two hours per week are assigned for the study of the juvenile court cases and six hours per week for the examination of the training school children. Other children of the state are examined by appointment and no regular time is set apart for the work. I shall not give a full description of the organization of the clinical work unless it is called for by the chairman of the survey committee. The general organization may be described as follows:
- a. **Physical examination of all of the children of the training school.**
1. **Function:** Detection of such physical defects as may interfere with the child's physical and mental development, health, and school progress, with the purpose of having them removed or of improving the child's pedagogical treatment.
  2. **Nature of Examination:** This will be adequately shown by the record blank given below.
  3. **Amelioration or Removal of Defects:** This is accomplished by having the principal of the training school send written statements to the parents of defective children. The statements describe the defects and recommend that the parents place the children under medical care in accordance with the the Colorado school law.
  4. **Improved Pedagogical Treatment:** The cases are often described to the teachers with suggested treatment. The records of the results of the examination are always kept on file where they may be consulted by the teachers.
  5. **Nature of Records—**

a. Name	Age	Grade
R. eye		
L. eye		
R. ear		
L. ear		
Teeth		
Tonsils		
Naso-pharynx		
Nutrition		
Other defects.		
- b. **Clinical examination of special cases in the training school and of the juvenile court cases.**
1. **Function:** Determination of the child's mental status by means of mental and physical examinations with the purpose of making to school officials, juvenile court officers, and teachers recommendations for the child's subsequent treatment as indicated by the results of the examination.
  2. **Nature of Examination:** This will be shown by the record blank summarizing the case, which is given below.
  3. **Securing Desired Treatment:** By consultations with teachers, officials and parents, and re-examinations.

#### 4. Records—

- a. Full records of examination kept in filing case.
- b. Summary of the complete record kept in card filing case.  
The following is a sample of the blank—

Name	Age	Date of Exam.
Reasons for Examination		
Physical		
Mental		
Hereditary		
Developmental		
Environmental		
Recommendations		
Subsequent History.		

#### For Indirect Functions:

- a. Assisting Other Departments of the College, etc.: There is no organization for rendering this assistance. It is usually given upon invitation from the other departments, teachers, and school organizations. We have assisted the training school by lecturing on the common branches and by putting into the hands of the principal and teachers of the training school outlines of methods of instruction. Teachers of the state have been assisted by means of conferences and by written communications. School organizations have been assisted through lectures.

#### For Instructing Students: It is assumed that the organization for extension instruction will come from the extension department.

- a. Function: (This was described above.)
- b. Selection of Courses: Those courses are selected which are most adequate to realizing the teaching function under the conditions of our general school organization.
- c. Placing Courses in Yearly Program: They are placed in such a way as to enable the students to take first those courses a knowledge of which is presupposed by the following courses. They should also be so placed in the program that the students who wish to take them could do so without having conflicts, but over this matter our department has no control.
- d. Avoiding Repetition: The unnecessary repetition of materials in succeeding courses we endeavor to avoid by giving each teacher in the department a general outline or conception of the nature of all of the courses of the department.
- e. Organization of Class Work: It is assumed that a description of the organization of the class work is not called for under this caption.

### IV. EDUCATIONAL PSYCHOLOGY:

#### 1. *Function*—

1. To offer courses in psychology designed to give students a body of knowledge and point of view which will enable him to better understand the mental activities of the average and the exceptional child, and of the conditions physiological and environmental which affect mental development and mental functioning.
2. To conduct a psychological clinic where practical applications of psychological methods to the study of the individual child will be made for the benefit of students. The clinic has also a broader function than this, the demonstration of methods to students; it is the demonstration by actual work with the children of the training school, of the great service such a clinic can render to a school system. This is accomplished by the examination of all retarded and particularly troublesome children, and by the following of advice founded on the results obtained by these examinations. The function of the clinic might well be still further broadened by the

extension of its services to the children of the community. This could only be accomplished by conducting the clinic three or four days every week and would require the time of one person.

2. *Organization*—To accomplish this function the department offers courses in child hygiene, educational psychology, child development, clinical psychology, the psychology of school subjects, abnormal psychology, mental tests, educational tests and measurements, and clinical practice, and conducts a psychological clinic at which the children of the training school and children from the juvenile court are examined.

#### V. EDUCATIONAL BIOLOGY:

##### 1. *Function*—

- a. To prepare teachers of the subject for high school and grade work.
- b. To prepare nature study teachers for the schools.
- c. To supply, in the required courses, the necessary biological background for the teacher.
- d. To supply the biological training needed in other departments, *i. e.*, Domestic Science, etc.
- e. To work out the fauna and flora of this region for the teachers of the schools.
- f. To aid in working out any problems in this field needed by other departments.

##### 2. *Organization*—

- a. The work is arranged in five groups:
  1. Required courses (Bionomics).
  2. Elective courses
  3. Nature Study
  4. Zoology; Botany
  5. Bacteriology.
- b. This work is done by two instructors.

#### VI. EDUCATIONAL BIOLOGY:

##### 1. *Function*—

1. To give one of the three necessary professional foundations for the development of the well-informed, well-balanced teacher. Without the foundation of a Sociological, Psychological, and Biological training a teacher has no adequate basis on which to build. Needless to say he should be able to speak and write the English language correctly. I consider the above four subjects necessary for every type of teacher. Later courses in Education, Teaching, and other specialized fields can follow because then the proper background will have been acquired.
  2. To give academic training in Botany, Zoology, Nature Study, and Bacteriology, to the general student.
  3. To give academic training to students majoring in the Biological Sciences.
  4. To co-operate with the training school, especially in Nature Study work.
  5. To train high school Biology teachers. (The high school Biology class is used for this purpose.)
2. *Organization*—The head of the department handles about half of the Biology 2 classes, nearly all of the Zoology courses, and half of the Nature Study classes. The other member of the department handles about half of the Biology 2 classes, all of the Botany and Bacteriology courses, part of the Zoology classes, half of the Nature Study classes, and one high school Biology class.

#### VII. EDUCATIONAL SOCIOLOGY:

1. *Function*—A complete Sociology would be a complete philosophy of human living, and as such would assume the function of constructive, purposive effort in the direction of general social progress. I consider

the function of Sociology in a university to be a general clearing house for ideas, a place for the appraisal of the social value of knowledge taught in the institution, a comparative social evaluation and classification of the various fields of scientific thought, both theoretical and applied.

The general trend in society is toward a fuller recognition of Social Science as a body of knowledge and principles on which society, social institutions, and communities may rely for guidance toward progressive change. In fact, so far is this true that at present nearly all prospective comprehensive effort at social change is preceded by a scientific inventory or survey of social conditions as a basis of comparison and estimation of needs and potentialities.

The inference here intended is clear: Sociology has become a great basal science having no less a purpose than the guidance of purposive, constructive thought toward social progress.

a. In a teachers' college the function of Sociology may be defined:

1. *Within the limits of its specific relation to the Science of Education;*
2. *It may be defined as a general basal science within which all aims, activities, and purposes of teachers' colleges may be appraised.* It will possibly serve the purposes of this committee best if I confine my discussion largely to the first viewpoint.

The three basal sciences on which the Science of Education rests are necessarily Biology, Psychology, and Sociology. The order here stated is the historical order of their sequence in time and development. Each has appeared in response to social need and not by reason of the demand of any educational system or educational science. Modern education is an eclectic science and is largely dependent on the above trinity of sciences for its material, its theories, and its viewpoints. In short, there was no true science of education until the advent of the other three; and the growing modern demand for a restatement of educational aims, purposes, and possibilities is due to the remarkable development in recent years of these three basal sciences.

Biology as it evolved gradually gave over parts of its field of research to Psychology. Psychology in its development has evolved two large phases of work, viz., biological psychology and social psychology. Social psychology is the body of knowledge out of which modern educational sociology has largely evolved, but it has also developed within the environment of the general body of knowledge which has been in process of growth since 1832 or before the days of either Darwin, the Biologist, or Spencer, the Sociologist, and before any rational attempt to create a Science of Education.

Biology has probably already made its largest contributions to education in that it has set the fixed physical limits beyond which the process of education may not proceed. Its further contributions will probably be carried on through biological psychology and in the more common field of physical education and in Eugenics.

Psychology has made great contributions to education from the standpoints of individual capacities and methods of instruction. These will probably continue to be the fields of work in which psychology will continue to make its contributions.

Social psychology was originally an evolution on the border lines between psychology and sociology, but the growing tendency is to consider group study as within the boundaries of Sociology. Group study so far as it pertains to education is entirely within the province of educational sociology. This particular phase of Psychology has been clearly differentiated into the field of Sociol-



ogy. The study of groups as such will hereafter be considered by educational systems and authorities as scientifically a sociological study.

Sociology is the latest in its evolution and also the most comprehensive in scope of the three basal sciences here discussed. Pure Sociology studies the social evolution of races, peoples, and institutions, historically and anthropologically; and seeks for principles of social continuity, change, and progress. It is necessarily a comparative study in the social evolutions of peoples and civilizations. Applied Sociology is strictly the study of modern social change and progress, and the purposive application to these social processes of the knowledge and principles adduced from Pure Sociology.

Educational Sociology is a differentiation of applied sociology and takes as its major viewpoint *one* social institution, viz., Education. In its wider aspects Educational Sociology should *show the relation of Education to all other important social institutions, including the family, religion, law, industry, commerce, and particularly proposed changes or reforms relative to social-economic institutions and activities.*

In a more restricted sense it *should show the relation of the elementary school and the high school of the average community to the social and economic life of such communities.* This necessitates some methods of group study both of the school and of the various social groups of the community.

In a teachers' college the function of Sociology ought to be liberally conceived and generously executed. In the training of teachers the aim of education should be made distinctly clear, and it can be made clear only by a scientific study of social needs, and of potential rational social change. Such study lies distinctly within the field of Sociology. The aim of education can be determined only through systematic study of social groups and organizations. The Science of Education may state the aim, but the definition must rest squarely on facts furnished by Sociology.

The aim of education, when once defined, necessitates the formulation of a curriculum, and here again the Science of Education is dependent on Sociology. Sociological study only can determine what are the needs, the deficiencies, and the potential powers of any community, either local or general. When the social diagnosis has been made, and the needs of the curriculum stated, then it becomes the business of education to classify and arrange the materials of the curriculum, and to devise modes of educational procedure, and not before. In modern social life it becomes daily more apparent that the work of the educator must be preceded by the work of the sociologist.

Social control through education is one great purpose of educational systems, but it probably is not the greatest purpose. It must always remain as one great conservative aim of education, but social progress is not induced merely through social control. The greater purpose of education is to teach a rational scientific public attitude toward social change for betterment. Truly progressive education is comparatively new and only partially established; and in this present age of social reconstruction the degree of change which we may safely attempt must be advised only after a sociological survey of the conditions we seek to alter. Hence, all the great changes that are to be effected in modern education are already firmly dependent on sociological research. Thus only can the Science of Education become "a conscious process of social evolution." Sociology insists on a scientific investigation of social needs and possibilities before changes shall be made in educational theory and procedure.

The function then of Sociology in a teachers' college is to *give to prospective teachers a scientific social view point by which to estimate in general terms:*

1. *The relation of Education to social and economic life; and to make this vivid through the diagnosis and analysis of social needs and potentialities, and the habitual evaluation of the curriculum with respect to ascertained social needs; and to thus obviate the traditional conservative attitude of teachers and the consequent isolation of the school; and to create in school systems, superintendents, principals, and faculties an intelligent co-operative organized effort toward social improvement through scientific education.*
2. *Organization*—Three years ago the work of this department was re-organized, the head of the department retaining in general the field of pure Sociology and Economics, and the other member of the department was given the work in Applied Sociology, which we have designated in particular as Educational Sociology and Social Economy.

This is a very general classification and only roughly indicates the division of our fields of work.

All courses in this department are courses in Educational Sociology, Social Economics, Social Economy, or Educational Anthropology. The subject matter of all courses is taught in its relation to Education. We have in reality no courses in either pure Sociology, Economics or Anthropology.

#### VIII. EDUCATIONAL SOCIOLOGY:

1. *Function*—This can not rationally be stated except with reference to the function of teachers' colleges in the system of Education. This is too complex to be *analyzed* in a reply to a questionnaire, and is too important to be assumed as clear. A bare indication of its scope is a necessary compromise under the conditions.

*The Function of Teachers Colleges*—To realize, for society, the social purposes for which the public schools were established and are maintained; hence, to insure to society that public school teachers shall be completely equipped for the discharge of the two-fold obligations of the public school:

- a. To Society,—in way of giving the *specific knowledge, the specific attitudes, and the developed interests* needed in all individuals for the sake of social solidarity, social progress and social survival in the presence of competing civilizations; and
- b. To the Individual,—in way of *specific capitalization* of his capacities for the sake of his own efficiency and happiness as well as for the sake of society. In a word,—to put and keep the public schools abreast of the spirit and the technique of modern education; to *readjust the public schools* to the needs of society and the individual,—through prospectively trained teachers.

The spirit of *modern* education is unqualifiedly *socially* utilitarian. Education is viewed as an instrument or agency of society for the efficient adjustment of the young to the most important situations of life, and for lifting the matter of social progress to the level of *consciousness*. It is conceived as *consciously taking its cues from the conditions of life*, which are regarded as indicating both the proper knowledge to teach and the proper emphasis to give within established subject matter; and which, likewise, indicates what matter should be abandoned in favor of material more relevant to life. It finds the problems of education in *the nature of the problems of society*; and seeks to secure for the sake of society the necessary harmony between individual ends and social needs.

The technique of *modern* education is *scientific method*,—as over against *rule-of-thumb* procedure. In determining the proper emphasis to give within established fields of subject-matter it con-

sults the practices of society in the use of this subject matter. In determining new knowledge to be taught, it looks to the deficits, the failures, the implied needs of individuals and society,—which reflect the specific knowledge needed. And in the organization of instruction it consciously applies what is known to science concerning the nature of the learning process and the capacities and effective interests of children. It tests the efficiency of its work by objective standards, and seeks the causes of unsuccess by the inductive methods of its basic sciences,—sociology, psychology and biology.

The function of the Department of Sociology in a teachers' college is to make to education the peculiar contributions of Sociology.

- a. As the science which discloses the subtle methods whereby control and progress operate at every stage, Sociology stands with Biology and Psychology as one of the three basic sciences of Education,—since Education is *one of the methods of social control and of social progress.*

1. In dealing with the nature of society and the process of Education, Sociology shares with Biology and Psychology the *function of formulating the problems of Education.*

The problems of Education are discovered in (a) *the nature of the individual and the method of his development both physical and psychical,*—which Biology and Psychology treat of; and (b) in the ends, methods, and barriers to social activity in the direction of progress,—which Sociology expounds.

- b. As the science which explains the *Nature of Society,*—the inner structure of its many activities, and the causes which affect its evolution,—Sociology holds the central position in the professional studies of a teachers' college.

1. In Sociology alone can the aim of Education be found. The aim of Education is the same as the aim of society. Accordingly, *it is one of the major functions of Sociology to formulate the aims of Education,*—and to define these in each of the school subjects.

2. In Sociology alone can the "values" of education be found. The "values" of Education are the same as the values of Society. Accordingly, *it is one of the major functions of Sociology to formulate the "values" of education,*—in each of the school subjects.

- c. As the guiding science of Education, Sociology has the peculiar *function of checking the too radical and visionary proposals of the "fool-fringe" of educational reformers.* It alone is able to do this authoritatively where those proposals relate to radical changes of subject matter, the abandonment of established activities or structures, extensions of school functions, and the like; for *it alone can furnish a scientific explanation of the nature and structure and functions of institutions, the nature of their origin and service to society, the method of their evolution, and the methods whereby institutional practices may be successfully changed.* Since the "school" is a social institution it is subject to the general laws of social evolution. Teachers who hope to *co-operate* with what is *sound* in the movement for educational readjustment can not be permitted to avoid all study of Sociology. They have a choice between *being intelligent participants in the movement, or of being passive instruments.* We may restate the function of Sociology from this angle. It is to *stabilize the teacher's mind by knowledge of the value of established structures of society as well*

as to enable the student to co-operate intelligently with modern efforts to readjust those structures to the pressures of the time.

- d. As the science preeminently dealing with the *results of human associated activities*, the standards whereby the results are evaluated, and the methods whereby control and progress are secured, Sociology has as *one of its important functions the transmitting of a social point of view* (functional or instrumental) and a *scientific method of working upon the problems, offered by the associated activities of human beings*, including, of course, school education.

## 2. Organization:

- a. The two members of the department in the beginning systematically analyzed the relation of Sociology to the field of teacher-training and for the sake of focussing upon the intricate problems more effectively divided the field *roughly into two major sections*: Pure Sociology and Applied Sociology.

1. The nature of the science of Sociology, however, and the exigencies of short curricula, immature students, and the peculiar educational problems of a teachers college combine to make a sharp division between the fields impossible and undesirable. For example, in the field of Applied Sociology the generalizations of Pure Sociology must be drawn upon; and in the field of Pure Sociology the illustrations must come from the field of Applied Sociology. Beyond this it goes without saying that in a vocational school for teachers all courses must be strictly adjusted to the *characteristic* responsibilities and problems of modern *teachers*. Roughly, however, the more advanced courses are given by the division of Pure Sociology and look especially to the needs of senior college and graduate students. In each division some courses are given which strictly would be classified in the other division.

- b. The second step in organizing the department was to determine what courses in each field would best serve the ends of a teachers' college. This was done in conference between the members of the department. Members of the Department of Education were asked to suggest courses that they thought should be included in the offerings of the Sociology Department. Two such courses were suggested.
- c. The third step was to distinguish between the courses most needed by resident students and those most needed and most feasible to give to non-resident students.
- d. The fourth step was that of avoiding duplications within the Department. It consisted mainly in a division of the books and material to be used as student references in the various courses; and in a rough statement of the field to be covered by each course.
- e. The fifth step was that of considering the general methods of class work that were best suited to achieving the ends of the department and College,—establishing the standards of the subject, building up a sense of the nature of evidence, a method of working on problems, *et seq.*
- f. The sixth step was to provide for a constant pooling of data relevant to each field,—the mutual listing of new books, pamphlets, movements, *et seq.*, and the systematic sifting of these. The greater part of this work has always been done by the senior member of the department.
- g. The seventh step was to divide equitably the money available for the department's material equipment. This was done by agreement,—on the basis of the book needs of the two divisions, and the current output of published material relevant to each field. The President was then asked to furnish in addition to the depart-

- ment's allotment a postage fund to be used by the division of Applied Sociology in collecting pamphlet material. This was done.
- h. The later phases of the department's organization consist in its extension of its services to outside fields, *e. g.*, co-operation with the county court and the Associated Charities in the social investigation of families, which has been, by agreement, largely left to the division of Applied Sociology.
  - i. By agreement the two members of the department "take care" of pressing non-resident work in each other's stead,—*e. g.*, the working out of syllabi for courses unexpectedly called for.

But when all has been said the organization of the department appears most clearly in the dovetailing of courses prepared to meet specific conditions in the field of teacher-training. This is the essence of departmental organization in a small school.

### "Special" Subjects and Departments

#### I. INDUSTRIAL ARTS:

##### 1. *Function:*

- a. To prepare teachers for the teaching of industrial subjects in public schools.

This preparation should consist of training in industrial fields already being used in public schools, and should be sufficient to give the student teacher a comprehensive knowledge of needs and demands.

I thoroughly believe that a successful teacher of industrial subjects should be able to do creditable technical work in his special field.

1. The training then implies technical work of a high order.
2. An educational background that will give the student teacher a view of what has been done in a particular industrial field.
3. The relation of this particular type of work to other industrial work.
4. The relation of the whole plan of industrial education to the general organized educational scheme.
5. A view of demands of organized society in order that the work may be so organized and directed that children leaving school may have training of a type that will give them a knowledge of the fundamentals in some particular type of work.

All this implies research in industrial fields in order that we may know types of training in particular industrial or technical fields. Also we must know the fundamental changes that are constantly going on in great industrial groups in order that this training of our student teachers may agree with the best practices in industrial life.

This implies that we do not have: *viz.*, the organization of a permanent committee of the College composed of a number of people who are conversant with the practices in general education, know the technical materials that are used to measure efficiency, are acquainted with the whole subject of education from a social-historical point of view, and understand fundamental demands in the industries or occupations whose rudiments are now being given in public schools.

Such a committee would be a power in our Teacher Training College and should be able to collect much valuable data on not only the value of what is now being done in public education, but they would also be able to suggest new and valuable experiments that might be carried on in the schools, and direct research problems that would be of interest to the institution, the state, and the nation.

2. *Organization*—The organization to accomplish these functions enumer-

ated is entirely inadequate and does not, of necessity, all lie within the industrial field, but we are, I feel, doing much of a constructive nature along the lines mentioned.

- a. We try first to keep in the library of the College the best literature that is coming out, that refers to or has a bearing on industrial phases of education in general or in particular.
- b. Watch experiments that are being conducted in other institutions, such as practical experiments in class room work with children, or definite research problems that are being conducted by organizations, such as foundations, or individuals in the larger social industrial world.
- c. Are functioning in the elementary and high schools of the College giving courses to the children that have been or are being worked out by the department or by some other institution.
- d. Are relating the industrial courses given to children to life or other courses in the school insofar as is possible.
- e. We are supplying as rapidly as we can adequate equipment of a technical type to do the work in a thorough way.
- f. We supervise the work of student training teachers who are doing practice work in our elementary and high school.

All of the lines of work enumerated above give students an opportunity to view the industrial education field from a fairly wide standpoint.

## II. COMMERCIAL ARTS:

1. *Function*—The function of this department is to train teachers of commercial subjects. The teachers of Commercial subjects in the majority of high schools of the country have received their commercial education in the private business schools. This type of commercial school has no entrance requirements and no uniform standard of accomplishment is required; therefore, the training received in these schools is frequently poor and not adequate to the needs and demands of the educational program of today.

Most of the high schools of this state as well as other states now demand that a teacher of high school subjects have an A.B. degree, or the equivalent. This means that some institution of learning with adequate standing and vested authority must give this training. No institution of the state is attempting this kind of program except the Colorado State Teachers College.

Our field as I see it is to prepare teachers for:

- a. The Elementary Schools: Many of the elementary schools of the country are putting in the elementary commercial branches. The junior high school movement is demanding many trained teachers for the commercial branches.
- b. The High Schools: Most high schools of this state are employing one, and in most cases, two teachers who give their time to the commercial branches.
- c. The private and technical schools are coming to us for trained teachers.
- d. The normal schools, universities and colleges have been seeking and will continue to seek our product. Nine state institutions came into line last year and offered extensive courses in commercial education of some kind. These demand highly trained experts.

The function of this department is to meet existing and future conditions so far as teachers of Commercial Education are concerned.

2. *Organization*—Our largest field (the high schools) demands that we furnish teachers well trained in commercial branches, usually along two lines. The secretarial or stenographic, and the accounting. With

these may be grouped such subjects as: Business English, Business Correspondence, Advertisement Writing, Salesmanship, Commercial Arithmetic, etc. The department is not only organized to handle the subjects mentioned carefully, but is in touch with the practical business world by up-to-date magazines and actual experience and observation in business houses and commercial institutions that deal practically with what we give theoretically.

An opportunity is given to Junior College students to do practice teaching (Typewriting) in the seventh and eighth grades of the Training School and Shorthand and other commercial subjects in the high school. The work done in the grades is supervised by the head of the Commercial Department and the work in the high school is supervised by the head of the High School Commercial Department.

### III. PRINTING:

#### 1. *Function*—

a. The function of the Printing Department is the teaching of the principles underlying the printing art, that the student may receive the educational benefits resulting from practical work in one of the world's greatest industries; that he may, in case he decides from such practical acquaintance with the art to enter the printing industry, receive needful vocational training; or, if he be a prospective teacher, that he may receive training in a useful manual training subject.

2. *Organization*—The following courses are organized for College students: Printing I, Printing II, Printing III, and Printing IV. Much the same work is offered to Industrial High School students, and at present classes of seventh and eighth grade boys are given work in printing. The teaching of high school and grade classes is open to qualified College students.

### IV. WOODWORKING:

1. *Function*—The function of the Woodworking Department is to prepare teachers to intelligently teach woodworking as one of the several lines of work included in what is commonly known as manual training.

2. *Organization*—The Woodworking Department is organized into three different sections,—the Training School section, the High School section, and the College section.

In the Training School section there is sufficient equipment to handle classes of seventeen students to the class; in this department only bench work is done.

The High School section is conducted in the regular Woodworking Department in Guggenheim Hall and there is ample provision for one class of twenty students per day in bench work and six students in wood turning.

The College section is sufficiently equipped to handle on an average of three double period classes per day; these classes can be as many as twenty students in wood turning.

### V. BOOKBINDING:

1. *Function*—To give the student a systematic and thorough training in repairing, binding, and care of books and acquaint him with the theory and underlying principles of a trade, correlated with practice work under conditions as nearly resembling those of the shop as possible.

2. *Organization*—A well-equipped laboratory is provided for this department. The library of the C. T. C. furnishes the books and magazines for binding.

### VI. HOME ECONOMICS:

1. *Function*—The function of the Home Economics Department is to teach

the ideal of the home, and all things pertaining to its care and management; to teach girls to teach this to others.

2. *Organization*—The courses in the department are planned toward that end; the Domestic Art department taking care of the buying, planning and furnishing of a home from both the economic and artistic standpoint; the Domestic Science department taking care of the sanitation, provision of food for table use, care of members of family in health and sickness, and both departments striving to present the function of the home.

#### VII. HOME ECONOMICS:

1. *Function*—The function of the Home Economics Department is primarily to prepare girls in that department to teach this subject. To do this adequately the following aims are necessary:
  - a. To awaken within the student a feeling of the responsibility of every individual to self, to family, and to society, or in other words, the responsibility of every individual as a positive member of society. The ability to meet this obligation involves a knowledge of:
    1. The fundamental laws of health.
    2. The production, transportation and consumption of food; its composition and nutritive value and the changes taking place in the process of digestion and assimilation.
    3. Conditions in the economic world.
    4. Conditions in the social world.
  - b. To inspire the student with a feeling of the need of work of this kind in the majority of homes.
  - c. To give to the student the ability to impart this knowledge to others.
2. *Organization*—The department is divided into two parts: Household Science and Household Arts, which treat of respectively different phases of the work in foods and phases of the work in clothing and shelter. Related subjects in other departments are required.

#### VIII. HOME ECONOMICS:

1. *Function*—To stimulate and develop interest in a home and its administration.

To prepare women students for the solution of home problems, particularly those concerning the shelter and clothing of a family.

To develop an understanding of relative values as related to the purchase of home furnishings and clothing from economical and ethical standpoints.

To present such subject matter to students enrolled in the department as to properly stimulate such interests and also to prepare them to teach these things.
2. *Organization*—Courses are planned to develop in a logical and consecutive method, ability in the subjects presented in the foregoing statement.

All courses are planned primarily for their teaching content, meeting in the Junior College as far as possible the needs of elementary schools, in the Senior College the needs of secondary schools.

#### IX. MUSIC:

1. *Function*—The function of the Music Department is a six-fold one which may be briefly classified as follows:
  - a. To prepare teachers for grade work in music.
  - b. To prepare supervisors of music in public schools.
  - c. To prepare teachers of voice and instruments.
  - d. To prepare public singers and instrumentalists.
  - e. To prepare directors of band and orchestra.
  - f. To provide music for all functions of the College.
2. *Organization*—In order to accomplish this function, the Music Depart-



ment is made up of a faculty of six teachers, all experts in their particular line.

To prepare teachers for grades in the public schools the director of the department and one assistant are giving competent and skillful directions to all students enrolled in that department.

To prepare supervisors in public schools, the director and one assistant give the students hoping to become supervisors careful and constant guidance in the hope of preparing them adequately for that service.

In the department of training teachers of voice, the director of the department and another assistant are giving the work.

In the instrumental department a director of pipe organ and piano and one assistant are building up a department that will attract students and the attention of the entire West.

In the violin department an unusually competent and a well prepared teacher is creating interest in the violin that is proving one of the main assets of the department.

In providing music for social affairs of the College, the entire Music Department co-operates with any department wishing their aid and is very glad upon request to provide musical numbers from the Conservatory or Music Department which will prove a welcome co-operation with all departments.

The training school and high school provide one of the most essential cogs in the wheel of the organization of the department to accomplish its functions. There the students gain practical experience and observation that proves of the utmost value in their preparation as prospective teachers and supervisors. There they gain through daily practice and observation that experience so necessary for the preparation of young teachers which can be gained in no other way except through hard experience which the state is loathe to provide without this previous training in the training school of the College. One other very important adjunct of the organization of the department is the orchestra and band, for practical work in directing is provided for those students capable of doing the work.

#### X. MUSIC:

1. *Function*—To give student an opportunity to know the literature, art and history of music. To enable the student, through a knowledge of music, to become an intelligent, appreciative listener. To teach teachers methods of teaching music to children in public schools.
2. *Organization*—To accomplish the above functions, classes are organized in history of music, harmony, appreciation, methods of teaching, methods in music supervision, chorus singing, and orchestra.

#### XI. MUSIC:

1. *Function*—The development of students in organ and piano in the best possible way.
2. *Organization*—All instruments and facilities for use in the department are furnished by the College and are most admirable.

The work is well organized and seems flourishing throughout the Conservatory.

#### XII. MUSIC:

1. *Function*—The function of the piano teacher is to endeavor to make artistic pianists of the advanced pupils; to teach the beginner in piano work to read and play public school music, songs, and marches.
2. *Organization*—The work is arranged to suit the needs and the ability of the individual.

#### XIII. PHYSICAL EDUCATION:

1. *Function*—The aim of the Physical Education Department is to help

the student to form regular habits of exercise for his own sake; and to teach him to supervise the physical training of his own school in playground work, as play leaders, etc.

2. *Organization*—The organization is complete insofar as adequate equipment is concerned.

#### XIV. PHYSICAL EDUCATION:

1. *Function*—The functions of this department are: first, to promote health; second, to develop grace and self-expression; and, third, to give material so that teachers may conduct play activities for their children; and, fourth, to supply material for programs.
2. *Organization*—Every student in the Junior College is required to take four terms out of six in Physical Education or two-thirds of the time in residence.

Training to teachers of the subject is accomplished by the work done in class and the practical working out of the methods and ideas in the Training School under supervision.

#### XV. EXTENSION:

1. *Function*—The function of the Extension Department is fully described in the word "extension." The work carried on within the walls of the College is, in the functioning of the Extension Department, carried out into the state. This work falls into two main groups:
  - a. Academic training;
  - b. Professional training (covering mental tests and educational measurements).
2. *Organization*—To accomplish function (a), academic training, we have classes organized in various parts of the state. These classes are under the direction (1) of members of the faculty; (2) regularly appointed extension instructors who must have the training and experience that would justify their employment in the College as regular teachers of the subjects in which they give instruction; and (3) group leaders who conduct the work of classes under the supervision of the department offering the course and the Extension Department. In addition to these methods of instruction, we offer academic courses by correspondence. The instructor offering a course outlines this course in fifteen study units, each unit constituting what is the equivalent of a week's work in residence. These units are sent to the student as follows: when he registers three units are sent with instructions to prepare the work required in the first unit and mail to the department and then proceed with the work of the second unit. When the first unit is corrected by the department offering the course it is returned to the student and with it the fourth study unit. In this manner the student always has work on hand and has the benefit of the criticisms of his instructor as he proceeds with his course.

To accomplish function (b), professional training, the department is organizing classes that meet once a month for two purposes: first, they consider the work that is expected of them by their supervisory officer or officers for the next month; and, second, they take some course that is intended to give them an outlook on the large field of education. This course is often the State Reading Circle Course. In addition to this students are encouraged to select some problem in teaching and, under the supervision of a training teacher of the College, study this problem as she finds it in the school in which she is working. This work may be in any field of teaching and is conducted as a correspondence course, the method of which has been given.

Mental measurements or testing intelligence requires the establishment of psychological clinic stations at various points in the state in co-operation with the local school authorities. One of these has been arranged for in Denver and others will be established as rapidly as funds will permit.

Testing results is a function of the survey committee of the de-

partment (consisting of members of the faculty from the departments of Education, Sociology, and Psychology, with the Director of Extension as chairman) which is conducting co-operative surveys in various school systems of the state. This survey is not limited to the application of educational tests but may go into any phase of public school study which local conditions may suggest or permit. Bulletins setting forth the findings of this committee are published from time to time.

In addition to these (which may well be termed major lines of work) the department has the direction of the Community Co-operation work. This is a plan to bring the students of the College into closer relationships with the community in which they are living as students and prepare them for such work when they become members of other communities. This work consists of teaching Sunday School classes, supervising playground work, telling stories to children, teaching citizenship classes, business and professional men's and women's classes in languages and physical training, campfire girls' classes, etc. This work may well be classed as a phase of professional training.

Colorado has many teachers who have not completed their high school courses. In co-operation with the High School Department of the Training School the Extension Department is seeking to get such persons to undertake to complete high school courses as rapidly as possible. This work is given by correspondence and is conducted in the same manner as the correspondence courses of the College.

## XVI. COUNTY SCHOOLS:

1. *Function*—The function of the County School Department is to train teachers for country schools so that the numerous characteristic difficulties of management, administration, and teaching may be met effectively; to adapt the subject-matter to the experience of country children; to apply knowledge of the sociological conditions prevailing in country sides; to assist country folks to hold their own against the artificial attractions of town and city by supplying factors for making country life adequately satisfying; and finally, to help enrich and increase the sources of good by conserving the life-blood of the nation.
2. *Organization*—
  - a. *Rural Demonstration Schools.*
    1. Four one-teacher country schools near the College are being used very successfully for training teachers for rural and village schools.
    2. There is a teacher's cottage for each school, built upon the grounds and furnished by the school district at a total cost of approximately \$1,200.
    3. The student-helper spends four weeks in these schools, lives with the regular teacher, and shares the expense of living. The cost to her is \$16 per month. Four hours' credit is given for this work,—a total of 120 hours' work.
    4. All students in their senior year who anticipate teaching in the country are required to take their first term's practice in the Training School and the second term in the Demonstration School. A student who desires to specialize in rural education may elect a second term in the Demonstration School.
    5. These schools have been in operation during the past year and a half and have provided, each year, training for 36 prospective teachers in their senior years. The student-helper is to act as an assistant or helper to the regular teacher, and to assume such regular duties of a teacher as her capabilities warrant.
    6. The school board, employing a regular teacher for a demonstration school in co-operation with the College, pays a minimum salary of \$70 per month, for nine months. No schools pay less at this time than \$75 per month.
    7. The Teachers College supplements this salary of \$70 per

month with a minimum of \$10 per month for nine months in the year, according to the necessities of the individual case. One teacher is now receiving \$15 per month from the College.

8. The Teachers College is granted in view of its supplementing the teacher's salary, the privilege of using these country schools for observation purposes and the training of teachers for the country schools of the state.
  9. *Supervision*—The Demonstration Schools are under the direction of the regular teacher, the school board, the county superintendent of schools, and the Department of County Schools. The director of the County Schools Department assumes direct and active supervision.
  10. The Departments of Agriculture, Manual Training, Music, and Domestic Science are giving weekly lessons in their respective lines in these schools in order to vitalize and motivate the usual subjects taught.
  11. Student teachers are rated at the end of four weeks' training in the Demonstration Schools by the regular teacher and the Director of County Schools, upon the following general points, each having from six to eight specific ratings:
    - a. Physical and Native Efficiency . . . . . 130 units
    - b. Measure of Instruction . . . . . 130 units
    - c. Preparatory Efficiency . . . . . 130 units
    - d. Acquired Efficiency . . . . . 110 units

The rating system tends to intensify effort and encourage a definiteness of purpose and aim which should characterize the work of the rural teacher especially.
- b. *Colorado Rural Club:*
1. *Function*—
    - a. To further the interests of present and prospective teachers in third class districts of Colorado.
    - b. To develop a leadership that will function in the lives of children and parents of rural communities.
    - c. To so direct the club activities that its members will be capable of initiating rural social progress and education through the school,—to the end that country life may be made adequately satisfying.
    - d. To keep alive the interest necessary to solve a most difficult problem in a comparatively new and untried field.
- c. *County School Exchange:*
1. *Function*—
    - a. To disseminate the activities of the department as a new field of endeavor.
    - b. To publish short articles of interest to rural teachers which are pertinent to this line of work.
    - c. To learn through correspondence with county superintendents about the best work that is being done by rural teachers in the various counties and to receive the written account of this work for publication.
- d. *Course of Study:*
1. *Description*—
    - a. Rural Seminar (Rural School Problems) . . . . . 2 hrs.
    - b. County School Methods . . . . . 3 hrs.
    - c. Administration of Rural and Village Schools . . . . . 3 hrs.
    - d. Rural Education . . . . . 3 hrs.
    - e. Rural Sociology . . . . . 3 hrs.
    - f. Rural School Curriculum and the Community . . . . . 3 hrs.
    - g. Observation (1) in West Side School . . . . . 4 hrs.
    - h. Teaching in Rural Demonstration Schools . . . . . 4 hrs.
    - i. Observation (2) in Demonstration Schools . . . . . 1 hr.
    - j. Public School Subjects.

e. *Faculty:*

1. Director of County Schools—

- a. Teaches the subjects indicated under Course of Study—  
Enrolled last year, 245.
- b. Miss Salburg, Ashton School.....38 pupils
- c. Mrs. Hunt, Hazelton School.....48 pupils
- d. Miss Riley, Bracewell School.....62 pupils
- e. Mrs. Reynolds, New Liberty School.....56 pupils

XVII. FINE ARTS:

1. *Function—*

- a. To furnish the major part of the training of those students who wish to be supervisors of art in public schools.
- b. To offer the art training needed by students who are to become regular teachers in the schools.
- c. To furnish the training needed by students specializing in departments in which a knowledge of a certain branch of art is essential, such as in the Home Economics Department.
- d. To offer courses calculated to give any student the opportunity to gain the knowledge and appreciation of art that is functional in living.
- e. To plan, direct, and supervise the teaching of the fine and applied arts in our training schools.
- f. To assist the President and any department of the College in work which involves technical knowledge or skill in the field of this department.
- g. To take part in faculty and student activities in the manner that is regular and professional for College teachers and professors.
- h. To be as useful as possible to the city and state and to uphold national ideals.

2. *Organization—*

- a. The courses offered are practically all directly related to the public school room. A course in Supervisor's Methods is offered and should come late in the student's course. Adequate senior and graduate college courses are offered. Good supervisors cannot be trained with less than four years of major work unless the student has had extensive previous training. The work is graduated according to courses, on a synthetic plan based on technicalities, which will be explained upon request.

The Senior and Graduate courses permit of increasing freedom in research and original work, conference courses being offered.

In order that the future supervisor may see the relation of his work to certain other fields a close correlation with the Household Arts Department has been established by interchange of professors, interdepartmental credit, and teachers' conferences. This condition should prevail in a more extensive manner, reaching into other departments.

- b. Since the student who is to be a general teacher cannot hope to be widely skilled in art work he is offered two kinds of courses, as follows:
  - 1. The main principles of public school art, to give the student a knowledge of what school art ought to be, so that correct ideals may be held up before the children in the school when the student later becomes a teacher, whether or not actual demonstrations can be given. As much practice is given as time will permit.
  - c. A course is offered meeting the needs of the students in Household Arts, and the science departments.
  - d. Courses in the history of the arts and in Art Appreciation, are offered.
  - e. In some institutions of this character, one instructor is responsible for the training school work alone while one or more others teach

- in the college classes only. In this department each professor functions in both departments in order to insure co-operation.
- f. The co-operation of the Art Department can be made of value to almost every other department.
  - g. No special organization exists for the general co-operative activities.
  - h. Exhibitions to be imported, writing for publications, addressing organizations, are some of the means of gaining a wider influence.

#### XVIII. FINE ARTS:

##### 1. *Function*—

- a. The courses are planned primarily to meet the needs of students wishing to teach drawing in the public schools.
- b. To give the student a background in order that she may fully appreciate the Fine and Applied Arts.
- c. To give the student every opportunity to develop her powers of observation, originality, imagination, and expression.
- d. To give to those who are not specializing in drawing some conception of the usefulness of drawing in the grades.

##### 2. *Organization*—Special Courses and General Courses.

#### XIX. LIBRARY:

##### 1. *Function*—

- a. To see to the proper selection of books, pamphlets, and other forms of literature, and to make requisition for same to be purchased.
- b. To apportion the same through the different sections of the library as needs and funds permit.
- c. To properly check in from invoices, to accession, classify, label, catalog, and otherwise prepare the above for the use of the readers.
- d. To keep proper record of all books and materials belonging to the library and to show their institutional history.
- e. To check out and keep a complete record of books and other materials loaned to readers and to see that same are returned at the proper time.
- f. To aid readers in the use of the above and in the use of the various indexes, catalogs, etc., as commonly found in a library.
- g. To properly classify and to keep a record of all stereopticon slides belonging to the institution and to check same to individuals as required.
- h. To gather, arrange, and classify pictures, plans, maps, etc., and to keep same for use as required.
- i. To have care of the electrotypes belonging to the institution and to keep a proper record of the same.
- j. To maintain a quiet and orderly room for the purpose of reading and study.
- k. To provide books for all non-resident students of the College and to mail same to them as requested and to keep a proper record of all such students with their addresses, books forwarded, rental charges, etc.
- l. To make bibliographies, reading lists, etc., on special subjects as time and circumstances permit.
- m. To aid teachers and students in the selection of books, the use of publishers' lists, and to answer inquiries often received by mail from teachers, superintendents, club workers and others regarding books, prices, publishers, etc.
- n. To receive through the mail all periodicals, newspapers, circulars, etc., addressed to the library, to keep a check list of the same and record all as received.
- o. To prepare magazines, pamphlets, bulletins, etc., for the bindery and to provide for the re-binding of used books, and to prepare for shelves when returned.
- p. To maintain and operate a juvenile library in the Training School and to keep same open at convenient hours during the school day.

- q. To conduct a book room for the sale of all textbooks used in the College and High School and to repurchase the same subject to certain conditions.
- r. To take a complete inventory on all books and equipment as often as requisite,—generally once a year.
- s. To teach a College class in library methods four hours per week and a High School class one hour.
- t. To attend to other duties too numerous to mention that devolve upon a librarian.

2. *Organization*—

- a. The librarian and four assistants are employed.
- b. The library is open seventy-three hours per week.  
7:30 A. M. to 9:00 P. M., Monday to Thursday, inclusive.  
7:30 A. M. to 6:00 P. M., Friday.  
8:30 A. M. to 5:00 P. M., Saturdays and Holidays.  
and open through vacation and holidays with but few exceptions.
- c. The juvenile library is kept open a definite time, three hours per day for each school day.
- d. An attendant is in charge of the bookroom at least two hours per day with additional time at the opening and close of the terms.
- e. The time of each assistant is adjusted so that the greatest number are on duty at the most necessary times so far as it is possible, each being on duty forty-two and a half hours per week during college sessions and a proportionate time during vacations.
- f. Provision is made for the use of the material gathered by a proper supply of book stacks, tables and other equipment, for the proper handling of the books and the various records to be made.

XX. DEAN OF WOMEN:

- 1. *Function*—(a) The Department of the Dean of Women is organized for the purpose of guiding the women of the student body in matters pertaining to behavior, health, and the maintenance of good living conditions while at college.
- 2. *Organization*—The Dean of Women is counsellor at any time for the women of the student body. She may be called upon either personally or by telephone, at all hours of the day or night. Her judgment is allowed to stand, in most cases which pertain to the women of the student body. In the event of a serious matter being brought up for consideration, one which affects very greatly the morals or character or future standing of the student involved, the Dean of Women acts invariably only with the advice of the President of the College.

The assistant to the Dean of Women takes charge of the rooming and boarding accommodations for the women students. She personally inspects the rooms offered for rent, and reports to the Dean of Women. The boarding houses and clubs are also looked into and reported upon at intervals, by the assistant to the Dean of Women.

Much stress is laid upon the proper placing of needy women students in positions where they may earn all or a part of their expenses. Work by the hour is solicited for these girls, and a file and record kept of places to be had by the hour, with addresses; and corresponding to this record of girls who desire such work. A very successful system has been evolved.

The assistant to the Dean of Women is also official secretary for the Y. W. C. A. and Newman Club. This position helps to bind the greater number of girls in the College into a friendly group, and ties up the work of these religious organizations with the activities of the office of the Dean of Women.

The rules and regulations of the College, as found necessary to fit existing needs, are made at the suggestion of the Dean of Women, and always with the approval of the President of the College.

## XXI. DEAN OF WOMEN (ASSISTANT):

1. *Function*—To advise young girls away from home.
2. *Organization*—
  - Adviser.
  - Calling committee.
  - Meetings.
  - Class advisers.

### Training—High School

#### FACULTY STATEMENTS OF DEPARTMENTAL FUNCTIONS AND ORGANIZATION

1. *Function*—The primary function of the High School Department is to train that group of teachers who expect to enter the field of secondary education. The way in which this purpose is being realized is best expressed, perhaps, in a report submitted to the President last spring and approved by him.

This report, among others, was recently sent to all the members of the faculty. The essential features of the report are incorporated in certain courses of study which are found in last year's catalogue. (See pp. 62, 63.)

The Industrial High School acts also as a feeder for Teachers College. This is a secondary, though important function. Last year's catalogue contains names of ninety-four graduates of our own high school who were resident students of Teachers College during the three winter quarters. This number is considerably increased by non-resident and summer school students.

I believe that our High School Department meets the needs of the young people who expect to enter the profession of teaching, more perfectly than any other high school in the state. The growth of the school is rather a convincing evidence of this fact. The enrollment in 1913-14 was 156; in 1916-17, 389. The latter number includes the summer school students but does not count any student twice. The enrollment for the winter term of 1917-18 is thus far 304. If the summer enrollment should be added the total passes substantially beyond the 400 mark.

2. *Organization*—The question of organization is fully given in the high school bulletin, a copy of which is herewith attached. (See pp. 14-22, inclusive.) The only course here given which has not been realized in part is the Short Course.

## II. HISTORY:

1. *Function*—To develop responsible ideals of citizenship through the study of social evolution.
2. *Organization*—
  - History I: Survey of the great movements of antiquity for beginners.
  - History II: Detailed specialized work in English History.
  - History III: Survey of Europe from 1815, presenting emergence of modern problems and modern governments.
  - History IV: Survey of Industrial History as background for social disturbances between capital and labor.

## III. ENGLISH:

1. *Function*—
  - a. To teach the students to speak and write *correct* and, when possible, *effective* English.
  - b. To develop imaginative sympathy, admiration, aspiration, and to stimulate a love for the right kind of reading.
2. *Organization*—The organization of the English work is based on its two-fold function. We have distinguished between the more practical courses and those which have literary or esthetic values. We feel that these two aspects of English are equally important, and try to give the same emphasis to each. We have placed these courses, as you will see below, according to the needs, interests, or maturity of the students.



#### IV. MATHEMATICS:

1. *Function*—The function of Mathematics in the high school is both theoretical and practical.
  1. Theoretically it is to train an appreciation of the science of Mathematics as carefully selected reading trains an appreciation of art in literature.
  2. It is also to develop powers of analysis, abstraction, and interpretation of symbols.
  3. It is to prepare the way for higher mathematics.
  4. And most important of all is that it is to give the student a *practical working knowledge* of the fundamental elements of Mathematics.
  5. To train practice teachers.
2. *Organization*—Classes in Mathematics are so organized that pupils not only receive drill in book work but are given practice in dealing with actual problems. The first part of the work is largely theoretical although practical problems are brought in wherever possible. After the fundamental principles are clearly developed the work is extended to take up "Applied Mathematics." That is the students work out practical problems for themselves, and by so doing get more than a mere formal drill in memory.

Practice teachers observe and assist and are trained to take classes in Mathematics and make them something more than formal, routine, memory drills.

#### V. MODERN FOREIGN LANGUAGES:

1. *Function*—The function of the Department of Foreign Languages of the High School is to teach students to read, understand and speak the particular language studied. By means of the study to give a fuller appreciation of the life and thought of the people speaking the language. To give practice teachers the opportunity to observe and later teach under supervision of the training teacher.
2. *Organization*—To accomplish the above function the following classes are taught at present: German I, German II, and Spanish I.

#### VI. ORAL ENGLISH:

1. *Function*—The function of the work in Oral English in the High School is to establish in the students good speech habits, to give them an appreciation of literature and a keener conception of it by means of oral interpretation.
2. *Organization*—To accomplish that function the following courses are offered this year:
  - Public Speaking (3 terms).
  - Shakespeare (2 terms).
  - Senior Class Play (Intensive study of one play and the reading of several) (1 term).
  - Oral Composition—English II (1 term).
  - History of English and American Literature—English II (1 term).
  - Modern Plays—English II (1 term).

#### VII. ENGLISH:

1. *Function*—
  - a. To have the children gain the distinctive values of oral and written composition.

Organization of material to accomplish this function:

  - a. Grammar
  - b. Oral and Written Composition
  - c. Public Speaking
2. *Organization*—To give the children such a taste for literature and such a knowledge of it that they will crave the better sort.

Organization of material to accomplish this function:

- a. English and American Literature
- b. Plays
- c. Novel
- d. Short Story
- e. Essay
- f. Lyric Poetry.

VIII. COMMERCIAL ARTS:

1. *Function*—To train efficient stenographers and typists, and to give them a knowledge of general office work and business methods.
2. *Organization*—  
A two-year course in Gregg Shorthand.  
A two-year course in Typewriting.

Training—Elementary School

FACULTY STATEMENTS OF DEPARTMENTAL FUNCTIONS AND ORGANIZATION

I.

1. *Function*—The function of the Training School is to train young people in the art of teaching. This should be at the heart of the institution. I take it that the ultimate aim of each department in this institution is to contribute something to the teaching power of those who go out from its portals.

While the Training School constitutes but one department out of many, all aiming at the same end, it holds the unique position of being most closely related to each department.

Some departments contribute content or subject matter in their courses. Other departments contribute methods and principles of teaching as well as content.

In the Training School content and children are brought together under the direction of certain methods and teaching principles that have been accepted and approved by the best educational thinkers of the day. Here both content and teaching principles are judged by the reaction of children.

Here standards for judging classroom instruction should be worked out and applied.

This is the educational laboratory where young people learn, through practice, the art of teaching children how to study.

2. *Organization*—The organization consists of:
  1. A typical elementary school system composed of one elementary school unit, including kindergarten and the eight elementary grades.
  2. Nine training teachers.
  3. The heads of the College departments.
  4. Director of the Training School.
  5. President of the Teachers College.

II.

1. *Function*—The function of the kindergarten is to train teachers in the principles and practices of Kindergarten, to give primary teachers an understanding of the work of the Kindergarten, and to demonstrate the value of Kindergarten experience for children.
2. *Organization*—Courses in the different subjects of Kindergarten are given first, then a course in the organization and relationship of these different subjects is given in the second year, and an application and test of these principles made in teaching the children.

III.

1. *Function*—The function of the Primary teacher in a training school is to prepare primary teachers.
2. *Organization*—This work is organized to give observation half the time and actual practice teaching half the time to students in training.

Consultation periods are arranged for every day after the regular school hours, as well as Saturday afternoons.

#### IV.

1. *Function*—The function of the Training School is (1) the training of teachers, (2) the serving as laboratory for trying out new methods and theories, (3) the instruction of children.

2. *Organization*—The organization for accomplishing this consists of a training teacher for the kindergarten and each of the eight grades and an assistant for each training teacher. The assistants spend two hours a day in their respective rooms.

The training teacher has charge of the children in her room, and has the training of the student teachers who do their practice teaching in her room, excepting those who teach the special subjects.

These student teachers write plans for the lessons which they are to teach, and the plans are corrected by the critic teacher before they are used.

The training teacher spends about one-half her time teaching for the students, and the other half of the school day is spent in observing and criticizing the student teachers.

There is a principal of the school who has the final word to say in all matters regarding the training school. He, with heads of departments, is endeavoring to make a new course of study for the Training School.

Training teachers have no part in planning or teaching special subjects.

#### V.

1. *Function*—The function of the Training School is (1) to train teachers, (2) to teach children, (3) to lead the community and state in new educational methods, (4) to provide a laboratory where educational experts may experiment.

2. *Organization*—The Training School is organized into a kindergarten and eight grades, with a training teacher for each grade. The work of the grade is outlined and directed by the training teachers and approved by heads of departments. Practice teachers work under close supervision.

#### VI.

1. *Function*—The function of the Training School is: (1) to build up and maintain an advanced Twentieth century public school, modern in every respect and worthy of a great educational clinic, (2) to train teachers for the elementary schools of our country.

2. *Organization*—The organization to accomplish this function consists of:

1. The Department of Public Schools as stated above under (1).
2. The Department of Observation.
3. The Department of Student Teaching.

#### VII.

1. *Function*—The function of a training school it appears should be that of a leader in advanced educational thought and practice; therefore, its purpose would be threefold: (1) An experimental school, (2) a model school, (3) and a practice school. It seems then that the chief function is to test theory or theories of the most modern thinking and the ability to teach with *sustained effort* and *insight* on the part of college students.

2. *Organization*—The catalog states that students are required to teach two terms five hours each—credit hours per term four hours. The year book also states that specific courses having to do with special departments of teaching, Primary, Intermediate and Grammar grades—such as concrete method courses designed especially to lead to efficiency in classroom instruction in the Training School shall be required of all students. At present Training School I is the only course really held to along these catalogued requirements as far as methods are concerned.

#### VIII.

1. *Function*—The business of a teachers' college, it seems to me, is to pre-

pare teachers of high ideals, of wide knowledge of educational problems and progress, and of keen professional interest to teach with the greatest possible efficiency.

The function of a training school, I take it, is (1) to give practical training for such efficiency of service; (2) to raise the student's standards of what can be actually accomplished in the development of the child's mind and character in an up-to-date school; (3) to test the practicability of the best educational theory. An ideal training school is therefore three schools in one,—a practice school, a model school or school for observation, and an experimental school.

2. *Organization*—In general, the training school requires of every student one period of actual teaching and observation for two terms, and often provides a third term of such work. It holds itself open to the working out of problems suggested by the departments of the college or by the training teachers subject to the approval of the director.

The work in each room is organized with especial attention to the carrying out of the first and second of these aims by a program which is in itself an effort to realize, in part, the third or experimental aim. This program in its ideal development, aims to give each student practice teaching every day; observation every day; criticism of teaching, and conference on plans every day. This ideal has been impossible to realize in my room. It has been more nearly reached in the fourth grade, and I believe the committee will find the program in that grade worthy of their consideration as presenting the nearest approach to the ideal set up. This program further aims to enlarge the teaching experience by changing the subject taught by each teacher from four to five times during a term; such a "sliding program," as it is called, giving a student an opportunity for observation of the most important school subjects, and some ideas regarding the presentation of the same, so as to secure teaching, up-to-the-standard of a given training teacher; and to confer with them at definite, stated times. I refer you to the Superintendent's "Directions to Critic Teachers" for any further information you desire of the organization of the work in the Training School.

## IX.

1. *Function*—To train teachers for the elementary schools.
2. *Organization*—The Training School is under the direction of the Director of the Training School. The Training School is composed of eight grades. Each grade is under the direct supervision of a critic teacher. In most of the grades the pupils are divided into two sections, the one reciting while the other studies. This is done in order to give the critic teacher an opportunity to do part of the teaching while the student teacher observes this teaching and to give the critic teacher an opportunity to give close supervision while the student teacher is teaching.

## DISCUSSION

The major difficulties faced in the attempt to evaluate material of the sort just quoted have been suggested already. Even if there had been no faults in procedure, however, it would still be impossible to classify such data with sufficient certainty to make conclusions quite undebatable. For example, one could not arrive at perfectly sure judgments as between the facile statements that are only verbally satisfactory and others, less polished, that are perhaps worth considerably more than face value. Context often seemed sufficient to decide, but not always. Unequal personal knowledge of the teachers and their attitudes may have led unconsciously to some inequalities in the evaluation of what seemed to be on the whole rather inapprehensive responses to some inquiries. And, of course, the standards set up by the analyst are always open to improvement. The conclusions reached and set forth in this discussion, however, may safely claim the values of suggestion.

Perhaps one ought not expect a more useful statement of departmental functions than that a given department is to *prepare teachers to teach the work of that department*. Perhaps the absence in any case of statements of

specific ends toward which instruction is directed ought not to be taken to imply absence of awareness of such ends. But there is surely warrant for the assumption of characteristic and effective differences between the functions of teachers' colleges and liberal arts colleges. And if such differences exist presumably they should receive recognition from teachers in a teachers' college. Presumably teachers in such schools should be aware of anything characteristic of the responsibilities of their work. Schools for teachers ordinarily rank themselves as "professional" schools, and thereby imply characteristic or peculiar or differentiating responsibilities. It would seem fair, therefore, to conclude that failure to exhibit either in statements of function or of organization some awareness of the nature of such characteristic responsibilities is evidence of lack of professional consciousness; and, of course, a professional school in which such unconsciousness was found to be prevalent could not in any reasonable sense be said to be organized; its purposes could not be generally effective.

Accordingly, it was expected that if the faculty of the school possessed a clear conception of the differentiating function of schools for teachers the statements they would make of the functions of their departments would show more or less specific awareness of the differentiating purposes and characteristic responsibilities of such schools; and that their statements of departmental organization could hardly avoid recognition of structural needs,—something in way of *planned means of serving their purposes under the existing conditions*. In evaluating each response of a teacher his full returns were read,—in order that full credit might be given for everything relevant to each inquiry. If, in view of all this, the expectation above stated was fair, it may be said that the returns indicate pretty clearly that in this school at best the recognition of anything peculiar or characteristic or differentiating in the responsibilities of schools for teachers is unduly *localized*,—i. e., is the possession of too few of the faculty. From a member of the faculty a close analysis of the responses would clearly be inappropriate. The following analysis, however, is by no means close, and remains impersonal and detached!

First, its reader is reminded that the intention of this general questionnaire was to arrive at some notion of the amount of faculty unity of purpose and effort. Unity of this sort is the result of organization on some level or other; and the lack of considerable unity of this sort is evidence of the lack of organization.

Second, the criteria applied to the responses have already been suggested. They may be made somewhat more definite. Roughly they were (1) in the statements of departmental function, *whether there was any recognition of the supplementary relation of schools for teachers to the public schools and of the major implications of this relation*,—recognition of anything in way of a *differentiating function of schools for teachers as over against liberal arts colleges*. With this should go recognition of the *resistant or obstructive operation of such factors as tradition, custom, use and wont, and the like in either public school or school for teachers or both; and more or less explicit indications of awareness of the social purposes of public school education, and of such characteristic deficits and unsuccesses in public school activities as might be removed by specific instruction in this or that field*. (2) In the statements of departmental organization, *whether there was some account or indication of conscious planning to meet the characteristic purposes of schools for teachers, to offset known deficits in public school work, for example; or in the absence of this, some recognition of the need of establishing activities to ascertain the most useful emphasis in the scope of the department's work*.

The two should go together, of course. Division of ends and means is disorganization.

A thoroughly adequate response would cover a clear definition of the situation in terms of (a) the College's function in relation to the public schools; (b) the social purposes of the public schools and their deficits, unsuccesses, etc., and (c) anything obstructive in either college or public school,—in way of tradition, custom, use and wont. But much less highly conscious responses than this might still indicate a very favorable condition,—considering the sources from which teachers for normal schools and teachers' colleges are drawn, and the shifting personnel of the typical faculties of schools for teachers. It should

be kept in mind, however, that no such complete response as above indicated was expected. All that was sought was just any awareness or indication of awareness of the characteristic purposes of schools for teachers, and of the desirability of definite plans to make the purposes effective.

In scoring the returns on departmental functions, the standard was separated into its elements and the responses were classified as follows:

### DEPARTMENTAL FUNCTION

Each of the responses was examined with reference to (1) whether it indicated recognition of the differentiating function of teachers' colleges; and whether it defined the departments' function in terms of (a) the characteristic purposes of teachers' colleges and (b) the needs or deficits of the public schools. And (2) whether it indicated recognition of the presence and obstructive operation of such factors as tradition, custom, use and wont in public school or teachers' college or both. The close analytical study of the responses with reference to the first test led to classifying them into six groups distinguished as follows:

1. (a) Explicit and comprehensive statement of the differentiating functions of teachers' colleges; (b) Complete and specific analysis of departmental function in terms of the characteristic purposes of teachers' colleges and the needs and deficits of the public schools.
2. (a) Clear, implicit assumption of differentiating function for teachers' colleges; (b) Fairly complete analysis of departmental function with considerable recognition both of the characteristic purposes of teachers' colleges and of the typical needs and deficits of the public schools.
3. (a) Explicit but general, incomplete or undetailed recognition of differentiating functions for teachers' colleges; (b) Incomplete or fragmentary analysis of departmental functions, with only suggestions of either departmental adjustment to the characteristic purposes of teachers' colleges or typical needs and deficits in the work of the public schools.
4. (a) Implicit assumption of warrant or justification of the department; (b) clear suggestion of unsatisfactory conditions to be met,—implying recognition of some characteristic functions of teachers' colleges in relation to the public schools.
5. (a) Implicit assumption of warrant or justification for the department; (b) vague suggestion of unsatisfactory conditions to be met,—implying perhaps a feeling that there may be characteristic functions for teachers' colleges.
6. (a) No indication of awareness of differentiating functions for teachers' colleges or of anything unsatisfactory in the situation.

In making this classification the material covered in the item on organization was always taken into account wherever it bore directly on the topic, and the other responses of the teacher were searched for relevant material.

Similarly, analytical study of the responses with reference to the second test led to their classification into four groups,—as follows:

1. Explicit recognition of the obstructive operation of "historical effectives" in both public schools and schools for teachers.
2. Implicit but fairly clear recognition of such factors.
3. Implicit and quite vague indications of awareness of such operative factors.
4. No recognition of anything in way of established structures of practices that operate more or less obstructively.

By abbreviating these descriptions the results of the analysis may be presented in the following table:

TABLE I

Criteria	Responses Classified	Distribution of Teachers	Per Cent. of Faculty
A. Definition of departmental function in terms of the supplementary relation of Teachers Colleges to the public schools. Anything characteristic in the responsibilities of Teachers Colleges,—awareness of the social purposes of the public school, their typical deficits and unsuccesses, etc.	1. (a) Explicit statement of differentiating purpose of T. C. (b) Complete specific analysis of departments' functions in terms of College's purposes.	3	5
	2. (a) Clear implicit assumption of differentiating functions of T. C. (b) Fairly complete analysis in these terms.	3	5
	3. (a) Explicit but general and incomplete recognition of differentiating functions of T. C. (b) Incomplete or fragmentary analysis of department's functions.	4	7
	4. (a) Implicit assumption that the work of the department is justified. (b) nevertheless, clear implication of recognition of some differentiating functions for Teachers Colleges.	5	8
	5. (a) Implicit assumption of justification for the existence to department prevalence of worn formulae, apparently formal. (b) Only quite vague implication that there may be differentiating functions for Teachers Colleges.	11	19
	6. (a) No indication of awareness of differentiating functions for Teachers Colleges or of anything unsatisfactory in the situation.	31	54
B. Recognition of the presence and frequently obstructive operation of such factors as custom, tradition, use and wont, in either public school or T. C. or both.	1. Explicit recognition of the obstructive operation of "historical effectives" in both public school and school for teachers.	3	5
	2. Implicit but fairly clear recognition of such factors.	6	10
	3. Implicit but quite vague indications of awareness of such operative factors.	9	15
	4. No recognition of anything in way of established structures or practices that operate more or less obstructively.	39	68

Four responses classified in this table should be omitted. For example the professional responsibilities of *teachers* are not so clearly involved or essential in the work of the department of bookbinding, printing, library, and Dean of Women as in the other departments. The omission of these will not appreciably change the result indicated.

Possibly, also, the responses of a few departmental teachers in the secondary training school should have been omitted because instead of defining the function and describing the organization of the training school they responded with reference to the field in which their teaching is done. Instead of omitting them they were evaluated as if they were teachers in the College departments involved; but in so doing, however, the fact was not overlooked that they were apparently not aware of the primary function of the secondary school in which they work: *viz.*, training for secondary school teachers.

#### DEPARTMENTAL ORGANIZATION

A similar analysis was made with reference to the matter of departmental organization. Each of the responses to the inquiry about departmental organi-

zation to realize declared departmental functions was examined with reference to (1) whether any account or indication was given of conscious planning to accomplish purposes stated, to offset deficits, etc., and (2) in the absence of this, whether there was recognition of the need of activities to ascertain the proper emphases of the department's work or to correct wrong emphases.

TABLE II

Criteria Applied	Responses Classified	Number of Teachers	Per Cent. of Faculty
1. Some account or indication of existent plans for accomplishing the characteristic purposes of Teachers Colleges through the department meeting needs, offsetting deficits, etc., or in the absence of plans or established structures of the sort, recognition of the need of activities to ascertain the proper emphases of the department's work, to correct wrong emphases, etc.	1. Explicit statement or clear indication of plans or practices definitely related to the differentiating purposes of Teachers Colleges and the corresponding departmental functions.	4	7
	2. Statement or indication of plans pretty incomplete or else mainly implicit.	10	17
	3. Statement of plans or practices full enough but lacking in suggestions of conscious relation of the department to the differentiating purposes of Teachers Colleges.	9	15
	4. Little or no indication of plans of any sort frequently mere enumeration of teachers or of courses. Sometimes mere statement of formal divisions of work in the department usually not supported, sometimes contradicted.	34	59
	Five college teachers with varying emphasis or conviction mentioned the need of research upon school problems. In the elementary training school, four especially speak of the training school as a "laboratory," a place of "experiment" or "test of theory," and the like.		

Having, though very roughly, analyzed the statements of departmental function and organization the general impression left by close reading of these returns may be set down.

1. There are quite wide variations in outlook and point of view,—often, of course, in matters more or less indifferent, but also often in essentials. One might say, of course, that these may indicate variations in interest, in time spent in answering, in readiness to express, in ability to compose, etc. But it would hardly be assumed that this is their main significance. Even within departments there are wide variations in apparent points of view. The reader may judge what weight should be attached to these. Unity is not important except in essentials.
2. It is obvious enough, at all events, that if the prefatory assumptions (pp. 12-16) are valid, and if the foregoing statements of departmental functions may fairly be accepted as evidence, there is in the faculty of this school nothing like a diffused or widely distributed consciousness of the supplementary relation of the College to the public schools. There are statements that formally affirm the common purpose of all departments; but close at hand are other statements that specifically describe with approval, the division of "academic" from "professional" purposes, the concern of some departments solely with *content*, and of others with both *content and principles of teaching*, etc. The idea of leadership is occasionally affirmed, but usually without suggestion of what might be involved in it.
3. One could roughly make a group of departments in which apparently no



distinction is perceived between the work of teachers in a teachers' college and teachers in a Liberal Arts college,—as if properly enough under different names the two customarily do the same thing. (For example, see groups 5 and 6 under *a*, p. . . . .) In this group the statement of functions seems to assume that there is no special procedure; either of selecting material or of improving attitudes and procedure; the material, apparently, has been satisfactorily evaluated or justified by experience, and the work of teachers is simply to prevent it. Apparently there is nothing disquieting in the fact that in various instances the material has been presented before,—in the public schools. *Reteaching* would seem to require explanation or justification,—which might be found in a difference in point of view, something suggesting characteristic responsibilities and difficulties of teachers, recognition of incomplete success of the public schools, changes to be sought, and the like. In certain departments, if not in all, it would seem imperative to know the characteristic weaknesses of public school instruction,—as a clue to the framing of more relevant and useful courses of study; but there appears to be little recognition of a problem of this sort. The statements of organization (which it was thought would call forth something on this point) very frequently imply recognition of the need of ascertaining the *nature*, extent, and *causes* of unsucess in the public school use of the school subjects. One finds occasionally (implicit only) the suggestion that students in a school for teachers may not all or most be preparing to be teachers, but may merely need “academic training.” This, of course, implies two sets of objectives and modes of procedure; but the need of framing *teachers' courses in all the school subjects* receives very little explicit recognition. Recognition of the need of fostering changes in the public school use of the school subjects is too seldom even implied. In short, there is too much in the statements of departmental function that suggests that subjects are ends; that the proper goal of all the students that come before a given teacher is the same kind and amount of knowledge that the teacher possesses.

On the other hand, one could make a group of departments in which the professional attitude is exhibited in considerable degree. (For example, see groups 1, 2 and 3 under *a*, p. . . . .) It is reassuring to see that these have representatives in all the general divisions of the College. In this sense the professional attitude or consciousness might be said to be somewhat widely distributed through the College. It does not, however, dispel the definite impression of *localization of the professional spirit*. This is not good. In a school exclusively for teachers, if anywhere, one might fairly expect a wide diffusion of professional consciousness. The excerpts indicate clearly that it is considerably isolated. Unity of effort could not under the circumstances be very great.

4. The responses to the request for statements of departmental organization to accomplish declared purposes are pretty generally vague. Hints of co-operative effort do occur; and there is now and then a suggestion that more organization exists than is described. This would be expected, of course. The idea of organization may not have been clear; there is little to be read upon it, and outside sociology classes there is almost no discussion of it. Nevertheless, it seems fair to expect that if ends were clear at least to heads of departments the means employed to reach them would be somewhat in evidence, though not necessarily clearly in consciousness throughout any department. Structures or activities would presumably be established to meet characteristic problems, and responses to this inquiry ought to reveal something of the purposefulness of departmental effort.
5. To evaluate the situation thus revealed one needs to press the analysis further. The first question to ask after having discovered that the faculty of a school might be classified into two groups—one “conservative” or “stand-pat” and the other “progressive;”—is obviously *where are the teachers located?* Even a very small number of thoroughly modern and dynamic teachers may provide occasion for greatest hopefulness *if they occupy the strategic positions in the school*; while even

a larger number than reveal themselves in the foregoing statements of departmental function and organization would, if distributed at random, give no great warrant for optimism. The strategic positions are those occupied by heads of departments, by chairmen of the faculty committees that deal with the most vital concerns of the College, and by administrative officials. Finally, of course, the effectiveness of these depends upon the president, who, by virtue of his power to initiate and direct is the most important member of the faculty. No one will think that his is a simple problem,—that the deploying of faculty members for greatest usefulness is uncomplicated. Nevertheless, the second question is necessarily, what steps the president has taken to unify the faculty with reference to the problems and responsibilities of a school for teachers. Upon this a number of quite relevant things can already be said. The reconstruction of faculty committees (q. v. . . . . .) and the initiating of such important activities as those of the committees on *Courses of Study*, *Research*, and *Survey* could hardly help bringing the faculty to bear upon their common problems as members of a school for teachers. They in this case tended directly toward the creating of a corporate consciousness. Aside from these activities which the President vigorously and consistently stimulated, should be mentioned the President's manifest disposition to use the faculty meeting for purposes of deliberation over the important problems of the College, and his successive steps toward the democratization of administration. All who are at all open-minded must have been quite aware of these promising omens.

With this very general discussion we pass to the next task,—that of presenting the results of the inquiry about the functions and interrelations of the courses offered in the College.

#### DISCUSSION OF FACULTY STATEMENTS OF THE FUNCTION AND INTERRELATIONS OF COURSES

This discussion also may be prefaced by quotation of the topic it deals with: "Make a complete but concise statement (a) of the function of each of your courses, and (b) of the interrelations of your courses."

1. It will be remembered that this assignment (3 a and b) was supplementary to the inquiry about departmental functions and organization. For the sake of concreteness, it was hoped that the response to this topic might also be printed in full. But when the material was assembled it was clear that it would not be feasible. It involved, for instance, printing over 400 descriptions of courses and statements of functions, as well as the numerous statements of the interrelations of courses. It could have been shortened somewhat by omitting duplicate statements,—which, however, were sometimes most illuminating, since they frequently showed the lack of unity within departments. In the greater number of cases, indeed, the material given in response to this topic reveals nothing more of the justification or interrelations of courses than the Year Book's unilluminated descriptions provide. But the very fact that in response to the specific request for statements of the functions and relations of courses (following the specific request for statements of the functions and organization of departments) so much opaque material should be offered constitutes the most revelatory data possible for the purpose of an inquiry into faculty consciousness of ends and means. To print it all for the reader, however, would be to demonstrate *ad nauseam* the lack of faculty unity of purpose and effort for a common end. To place in pairs the most unconscious and the most highly conscious formulations of statements of the functions and interrelations of courses would be the logical method of exposition; but for obvious reasons such selection is not possible. The best that can be done under the circumstances is merely to present in general and impersonal terms the impression left by a close study of this section of the returns.

This method of treating such material affords perhaps the second

- good illustration we have provided of the disadvantages or inconveniences of a "self-survey." To offset these, however, is easily within the power of the school, since the full material is at hand and assembled for convenient study.
2. The general effect of the statements of the functions and interrelations of courses is only to accentuate sharply the impression given by reading the statements of departmental function and organization. Insofar as it is fair to base conclusions on such data one may say that it appears that the faculty is not a unit in purpose or conception of the functions of schools for teachers; and the various divisions of the work do not as a rule appear to be at all consciously correlated for a common end. Even within departments it is not highly unified. As with the statements, of departmental function and organization two unequal groups could be made, one exhibiting throughout very little conception of the supplementary relation of schools for teachers to the public schools, very little conception of characteristic responsibilities for normal schools and teachers' colleges; and the other in varying degree exhibiting a promising awareness of the characteristic responsibilities of schools for the preparation of teachers.
  3. In the first group, the function of courses is ordinarily stated merely in terms of *what is done by the teachers*, without attempt at justification, or explanation of why the course in question should be included in the work of a school existing exclusively for the preparation of teachers to realize the social purposes of public education. The material taught is apparently accepted uncritically as needing no justification. Even if it did not need justification, however, such responses could not be taken to indicate a satisfactory condition. Such justification as occasionally appears incidentally is usually that the course is "a preparation for more advanced study in the field,"—presumably for its own sake in cases where nothing is less likely than it would be applied to the uses of life; occasionally it is specifically "to give culture." Even the obvious (though incomplete) justification of advancing margins of knowledge in the case of teachers who might be preparing for departmental work in the public schools hardly appears explicitly; and there is no recognition of "teaching" problems in the secondary schools. In this large group there is practically no reference to the public school situation to which presumably the work of a teachers' college should be consciously related. Apparently the work taught is viewed largely as an end in itself. The assumption seems to be made that though the time be short, still the best use to make of it is to start as if it were abundant,—because it would be good for everyone to know the whole field as intimately as the college teacher does. There is, in short, little to suggest the existence of the professional spirit, and less to hint at its actual operation; the modern social point of view has apparently not touched the teachers in this group. So far as these statements show, the responsibility of a teachers college are apparently not viewed as making demands upon it for adjustments different from those customarily made in liberal arts colleges. The need of "teachers'" courses in every subject taught in the secondary schools does not get recognition. The supplementary relation of schools for teachers to the public schools is not apprehended.
  4. In the other group, as before, sometimes very explicitly and in detail, and in numerous cases by implication, there is abundant evidence of sensitive awareness of the requirements of the public school situation into which graduates are to pass. A good many courses have been shaped with a high degree of consciousness of public school deficiencies in the use of particularly important subject matter. Though the analysis upon which such courses rest is obviously often *a priori*, still in the absence of inductive studies such an attitude is definitely more promising than the other,—especially when, as is sometimes the case, the need of inductive studies is explicitly recognized. Evidence of departmental isolation, however, is about as good in this as in the other group. Departmental offerings seriously overlap in several cases; and

within a given department considerable repetition of topics can easily be found. The expansion of departmental work is sometimes more conspicuous than the studied effort to meet public school needs. Duplication of courses and departmental isolation are both excellent indications of the lack of a corporate consciousness in the school. While there is obviously a good deal of forward-facing effort in various departments, there is clearly not a consensus or unanimity. Professionalism is only sporadic.

5. In this general situation the critic must find his grounds for cheerful or other forecasts. As before, the first question to ask after having reached the conclusions above set down is *whether the strategic positions are occupied by the teachers who show most awareness of the nature of the responsibilities of teacher-training; and then, what steps have been taken by the President to unify the faculty with reference to the responsibilities of a professional school for teachers.* If it is found that the distribution of teachers is strategic with reference to the realizing of the ends of the College, then the small number of these teachers is no warrant for discouragement; if not, then even a much larger number of "professionals" than have revealed themselves in the foregoing returns would be no warrant for congratulation.

So far as reliable conclusions can be reached from such casual data as these thus far examined, it is clear that the faculty of the State Teachers College is not highly unified with reference to the characteristic purposes of teachers' colleges. We turn now to analysis of the returns that set forth the barriers most felt by the teachers.

### BARRIERS TO DEPARTMENTAL EFFICIENCY

*"What are the chief barriers to realizing your department's functions? What are the chief barriers to realizing the functions of the courses offered in your department?"*

It was expected that this and the inquiry in regard to the most important problems of the College would go far toward disclosing the chief "sore spots" in the organization of the College. Incidentally the amount of unity of point of view, it was thought, would be suggested.

The following rough summary gives a glimpse of the matters which seem to concern the twenty-two heads of departments most.

TABLE III

Barriers Mentioned	No. of Teachers	Percentage
1. Lack of equipment and room.....	14	63%
2. Lack of co-ordination of departments; competition	10	40%
3. Lack of recognition of the College's function.....	4	18%
4. Low initial equipment of students.....	4	18%
5. Inconsecutive courses; too free election.....	3	13%
6. No time for laboratory or research work.....	4	18%
7. Lack of connection with public school teachers...	3	13%
8. Too heavy teaching schedule.....	3	13%
9. Shifting personnel in department.....	3	13%
10. Inadequate time allotment for courses.....	2	9%
11. Small classes.....	1	4%
12. Immaturity of students.....	2	9%
13. Too many elective courses.....	1	4%
14. Division of teacher's work between High School and College.....	1	4%
15. Lack of dormitories.....	1	4%
16. Lack of medical advisers.....	1	4%
17. Lack of cafeteria.....	1	4%
18. Lack of administrative recognition of peculiar conditions.....	1	4%
19. Irregular dismissal of classes by teachers.....	1	4%
20. No Senior College requirement in department...	1	4%

The following digests of statements made by heads of departments concerning barriers to departmental effectiveness will help to give concreteness to the discussion that follows. Each item represents one teacher.

1. The importance of a department has always been and still is judged

- mainly by the number of students enrolled in it (under a highly elective system). Hence, competition for students has lowered the standards of work in all departments and has prevented the school from working out the best course of study that could be made. The best way to get students is to manage to have your courses required for graduation,—whether the function of the college calls for it or not. This situation is made worse by the students' lack of knowledge of their needs, which is a result partly of poor teaching in the public schools.
2. Student teachers are "placed" in the training school with little reference to what courses they have taken in the College.
  3. The student who remembers having had a course in a subject in elementary or high school feels that another course in the subject is not justified when 190 courses are before him to select from. Often he has acquired a distaste for the subject,—as a result of poor teaching. New titles attract. He makes up his course from the quarter program-slip rather than from a study of the Year Book; and the help of the faculty advisers is not sought.
  4. Inconsecutiveness of courses elected by the students is the chief barrier. It is added to the failure of elementary and secondary schools to establish serviceable habits of study.
  5. The lack of understanding, on the part of the other departments, of the relation which their work has to the work of this department joins with the lack of a functional attitude on the part of other teachers in this department, and the failure of the College to set proper graduation requirements with regard to the subject matter of this department.
  6. Insufficient time allotment to accomplish the purpose for which the course given by this department is required. The abstruseness of the subject and the immaturity of the student are both overlooked, so that to a considerable extent the effort of the department is wasted, and the lack of inter-departmental organization maintains the condition.
  7. Classes in required subjects are too large to admit of effective instruction; and the courses taken by the students make the work inconsecutive.
  8. The inadequate time allotment for the immature Junior College students and the absence of any requirement of work in the department for Senior College students is the chief barrier. The elective basis is not adequate.
  9. Technical courses demand technical equipment, and we lack this.
  10. Perhaps the chief barrier is the lack of close and sympathetic relations between the members of the department. This is largely the fault of the head of the department.
  11. Lack of appreciation by other departments of the value of the work of this department.
  12. A too heavy teaching schedule joins with the lack of appreciation by the community of the value of the work of this department, to prevent the fullest realization of the function of the department.
  13. The difficulty of securing and holding competent teachers hampers the department both in working out a policy and putting it into operation. Low pay and lack of freedom to carry out policies are the chief barriers.
  14. There are three chief barriers: lack of departmental organization, lack of unity of effort, and lack of room and equipment.
  15. Lack of appreciation by other departments of the value of the work of this department, and the consequent discouragement of students from further work in it. Small classes are a result.
  16. Lack of appreciation of the administrative difficulties involved in dividing the work of a teacher between high school and College courses.

To these may be added statements made by other teachers in the departments.

1. The shortness of the term and the extent of the material to be covered makes the work necessarily superficial and of doubtful effectiveness.
2. The amount of time required in this field is so little that the work amounts only to a superficial summary.
3. One of the chief barriers is the lack of organization within the departments. Little is known of the material presented in courses offered in the departments by teachers not belonging to this department.
4. The faculty is not as a whole focused upon the educational problems of the school. There is a conspicuous lack of an active functional attitude.
5. The faculty is not a unit in its attitude toward a considerable number of the most important results of modern educational thought,—even in matters upon which there can hardly be two acceptable attitudes.
6. The overcrowding of required courses is a serious obstruction to the efficiency of class work. It definitely prevents forming the kinds of judgments about students that are needed either to rank the students or to assist the placing bureaus. Hence our grades are badly distributed.
7. The character of the preparation afforded to our students in their public school work,—their conspicuous lack of knowledge of the world of affairs,—makes a great deal of elementary work necessary and further shortens the time allotment in required courses. Beyond this, they have apparently been accustomed to rote work and memorization, so that interest in active inquiry is somewhat atrophied. Much patient class work is needed to coax them back into some degree of self-reliance.
8. Insufficient teaching force and lack of room give almost impossible conditions for effective work. For example, in one room of twenty students, five are in the most elementary course, five in the second course, two in the third course, three in the fourth course, two in the fifth course, and three in the sixth course.
9. Mine being double or laboratory periods, create a problem of scheduling the courses of students who must meet the general College requirements in various subjects. No attention is given to this; so College students electing courses in this department must do their second hour of work at any free hour they have. Thus in a given hour there may be several students finishing up work begun in some other period.

## DISCUSSION

By way of introduction to the discussion, it may be announced that greater faculty unanimity of thought occurs in the responses to this than to any other inquiry made in the general questionnaire; and that at the same time the lack of organization of the College appears with unusual definiteness.

Two fundamental deficits are implicitly made very clear in the many specific statements of the heads of departments concerning the barriers to departmental efficiency.

1. The lack of a common or unifying point of view among the teachers of the College; or in other words, the absence of what might be called *corporate consciousness of the distinctive or differentiating purposes of schools for teachers.*
2. The ineffectiveness of such co-ordinating machinery as has been established.

In the absence of the primary requisite of organization (clear and well-distributed consciousness of purpose) it would not be expected that diverse activities would be correlated with a high degree of consciousness.

The lack of a common unifying point of view among heads of departments prevents any systematic analysis of what the distinctive purposes of the school and the characteristic deficits in the educational situation require in way of courses or curricula. Reconstruction or readjustment, any focussing on the characteristic problems of the school, is constantly checked and hampered by the feeling of rivalry and the necessity, under the circumstances, of each man's

striving to hold present gains and maneuvering for extensions. This is a condition of long standing. There is a consequent isolation of departments and an over-individualization of teachers, which leads to active, overt competition for students and the automatic perversion of the faculty advisory system. Consequently the courses in students' programs are frequently inconsecutive, and general requirements are made grudgingly without considering the importance of requiring enough to accomplish the ends of requiring anything at all.

In short, the outstanding characteristic that appears in these analyses is that of departmental isolation, intensified by a loose elective system and the absence of a very conscious machinery for co-ordinating the work of departments or teachers within departments. This, of course, is a result of the lack of a fairly clear definition of the supplementary function of the school (its relation to the public elementary and secondary schools) and the consequent absence of provisions for unifying the faculty or focussing them upon their peculiar responsibilities and problems. The school is at least not closely organized for the purposes of a college for teachers. It has apparently not considered very attentively either the initial attainments of its student body or the initial detachment of its teachers,—who inevitably come to it with the unconscious points of view and biases of their specialization and have an immediate need of unification for the distinctive purposes of a vocational school for the preparation of teachers. The over-crowding of required courses, which in the Junior College are filled by immature, inexperienced students, ignores the requirements of effective instruction and indicates further the absence of recognition of the characteristic or differentiating functions of schools for teachers.

The tabulations of responses from the other teachers may be introduced and dismissed with the mere statement that though new "*sore spots*" are revealed the general situation displayed in the statements made by the heads of departments is only accentuated. Lack of organization is patent.

TABLE IV

Thirty-Three Other Teachers

Barriers	No. of Teachers	Percentage
1. Lack of equipment and rooms.....	13	39%
2. Inadequate time allotment for courses.....	6	18%
3. Classes too large.....	4	12%
4. Lack of co-ordination of work of teachers in the department .....	4	12%
5. Lack of recognition of the function of the College. Disunity .....	3	9%
6. Lack of laboratory work.....	2	6%
7. Need of more teachers.....	2	6%
8. Initial lack of equipment in the students.....	2	6%
9. Inconsecutive courses in students' programs.....	2	6%
10. Overlapping of departments in course offerings. Duplication .....	1	3%
11. Lack of connection with public school leaders....	1	3%
12. Too heavy teaching schedule.....	1	3%
13. Poor text books.....	1	3%
14. Inequalities of students at entrance.....	1	3%
15. Too much clerical work.....	1	3%
16. Two years inadequate for preparation of teachers	1	3%

Agreement on Barriers

Agreement in regard to the barriers to departmental efficiency is not conspicuous as between heads of departments and other teachers in the departments. Placing side by side the eight topics from each group which are mentioned by as many as three teachers, the situation is fairly clear.

TABLE V

Heads of Departments	No. of Teachers Replying	Other Teachers (not including Training School Teachers)	No. of Teachers	Total Per Cent. of Faculty
1. Lack of equipment and room.	14	1. Lack of equipment and room.	13	49%
2. Lack of co-ordination between departments.	10	2. Inadequate time allotment.	6	
3. Lack of recognition of college's function.	4	3. Classes too large.	4	
4. Low initial equipment of students.	4	4. Lack of intra-departmental co-ordination of teachers.	4	
5. Inconsecutiveness of courses of students.	4	5. Lack of recognition of College's functions (see 3 in other group).	3	14%
6. Lack of time for laboratory and research work.	4	6. Lack of time for laboratory and research work.	2	10%
7. Lack of connection with public school teachers.	3	7. Need of more teachers.	2	10%
8. Too heavy teaching schedule.	3	8. Low initial equipment of students. (See 4 in other group.)	2	10%

The matters agreed upon are of unequal significance for an inquiry into organization (or the lack of it). The most generally felt barrier would appear from the foregoing comparison to be the lack of equipment and room, upon which twenty-seven agree; but it is seldom mentioned first by anybody. The most significant agreement, from the point of view of organization, is in regard to the lack of recognition of the peculiar functions of the College, upon which seven write. Next come the lack of time for laboratory and research work and the low initial equipment of students, upon which six agree.

Next we report the barriers listed by the training teachers of the elementary school.

TABLE VI

## Elementary Training School Teachers (9 in All)

Barriers	No. of Teachers
1. Too heavy load.....	6
2. Inadequate rooms and equipment.....	4
3. Too many student teachers.....	3
4. Indefinite and conflicting instructions.....	2
5. Lack of recognition of function.....	1
6. Two years inadequate.....	1
7. Over-emphasis on measurable results.....	1
8. No time for study.....	2
9. Lack of organization. Inconsecutive, non-cumulative work in subjects .....	2
10. No course of study.....	2
11. No co-ordination of College study and training school teaching..	2
12. Inadequate recognition of the peculiar conditions existing.....	1

## CHANGES IN DEPARTMENTS IN TWO YEARS PRECEDING 1917-18

*"List all the changes made in the last two years in either the organization of your department, or in the emphases within the established activities of the department (including new courses framed, old courses abandoned or changed), stating in each case the reasons for the changes and the method of accomplishing the changes (e. g., whether by co-operative effort or otherwise)."*

This topic was expected to throw light on the matter of intra-departmental



unity as well as on inter-departmental connections. Changes would be expected. The reasons for making specific changes would, it was expected, be illuminating; the method of accomplishing changes would be still more so; and the source of even slight changes might have a bearing.

It is convenient to examine the responses of heads of departments first and after that the responses of the other members of the faculty. The returns of teachers in the Elementary Training School are left to the sub-committee on Training School. So also would be the returns of the teachers in the Secondary Training School, had the teachers (other than the principal) not replied from the point of view of departmental teachers of this or that subject rather than as members of a training school. The following tabulations present the essential data of the returns to item 5.

New Courses Created in Two Years Preceding 1917-18  
Heads of Departments (22 in all)

TABLE VII

No. of Courses	Dept.	No. of Teachers in Dept.	Reasons for New Courses	Inception of New Courses	Method of Establishing New Courses
3	Chemistry	1	Needed by another Dept.	Head of other department.	Agreement with head of department; announcement in Year Book.
2	Physics	1	Emphasis of College on Junior College work.	The teacher's own initiative.	Announcement in Year Book.
4	Mathematics	3	Emphasis of college on Senior Graduate College.	The teacher's own initiative.	Announcement in Year Book.
4	History	1	Needed by modern teachers.	(1) Amer. Acad. of Polit. and Soc. Sci. (2) Superintendent's criticisms. (3) Requests of students; and (4) the teacher's evolution of needs.	Conference with President; announcement in the Year Book.
4	Oral Eng.	2	To allow more specialization.	The teacher's own initiative.	Announcement in the Year Book.
9	Biology	2	In general, better training for teachers; two requested by another Dept.	The teacher's own initiative plus one request from another Dept.	Announcement in the Year Book.
4	Sociology	2	To meet European war situation; to meet new developments in field; to meet student needs. To give new members of Dept. opportunity to develop courses.	Partly result of Dept.'s conference over the question of the courses most needed.	Conference of two members with Dept. heads in Biology, Education and History; announcement in the Year Book.
2	Ind. Arts	4	To meet demand for graduate courses.	The teacher's own initiative.	Announcement in the Year Book.
1	Com. Schools	1	Needed by rural teachers.	The teacher's own initiative.	Announcement in the Year Book.
3	Fine Arts	2	To allow more specialization; recognition of public school need.	The teacher's own initiative.	Announcement in the Year Book.
1	H. S. Training	9	Needed by students.	Suggested by President.	Conference with President; announcement in the Year Book.
2	Psych.	2	Needed by teachers.	The teacher's own initiative.	Announcement in the Year Book.
3	Phys. Ed.	2	To encourage men students.	The teacher's own initiative.	Announcement in the Year Book.
1	Library	1	To teach use of.	The teacher's own initiative.	Recommended by course of study committee.

New Courses Created in Two Years Preceding 1917-18  
Other Teachers (33 in all)

TABLE VIII

No.	Dept.	No. of Teachers	Reason for Changing Courses	Source of Idea of Change	Method of Procedure in Change
1	Com. Arts	3	To meet city school requirements of teachers.	Head of Dept.	No response; presumably mere change.
1	Education	3	To meet need of modern teachers better.	Conference of Dept. members.	No response; presumably mere change.
5	Sociology	2	Response to material by students. War conditions requiring recognition.	Mainly independent; occasional conference with Head of Dept.	Redescription of courses for Year Book.
1	Fine Arts	2	To give time for necessary new course; old course shortened.	No response; presumably the teacher's initiative.	No response; presumably mere change.
2	Home Econ.	3	Merging of related material in 2 courses more economical.	No response; presumably the teacher's initiative.	No response; presumably mere change.
1	Hist. (H. S.)	1	In the interest of students.	Departmental initiative apparently.	No response; presumably by announcement in the Year Book.
3	Eng. (H. S.)	3	No reason suggested.	Departmental initiative apparently.	No response; presumably by announcement in the Year Book.
1	For. Lang. (H. S.)	1	No reason suggested.	Departmental initiative apparently.	No response; presumably by announcement in the Year Book.
2	Eng. (H. S.)	3	No reason suggested.	Departmental initiative apparently.	No response; presumably by announcement in the Year Book.
2	Eng. (H. S.)	3	No reason suggested.	Departmental initiative apparently.	No response; presumably by announcement in the Year Book.

Courses Dropped in Two Years Preceding 1917-18  
Heads (22 in all)

TABLE IX

No.	Dept.	No. in Dept.	Reasons	Source of Idea	Method
2	Physics	1	No demand.	Own initiative; failure to fill.	Merely dropped.
1	Modern Lang.	1	"Obvious reason" (war).	Own initiative.	Merely dropped.
3	Geography	1	Overlapped H. S.; no demand.	Own initiative.	Merely dropped.
1	Psychology	2	Better material.	Own initiative.	Merely dropped.
7	Sociology	2	New developments; new courses.	Own initiative.	Conference with other member.
2	Ind. Arts	4	Development of new courses.	Own initiative.	No statement; presumably merely dropped.
1	Fine Arts	2	Not suitable.		No statement; merely dropped.
1	Psych.	2	More important courses possible.	Own initiative.	Merely dropped.
12	Foreign Lang.	1	Distaste for German.	Own initiative.	Merely dropped.

Old Courses Dropped in Two Years Preceding 1917-18  
Other Teachers ((33 in all)

TABLE X

No.	Dept.	No. Teachers	Reasons for Dropping Courses	Source of Idea of Dropping	Methods of Procedure in Dropping
2	Education	3	More useful courses possible.	Departmental conference.	No response; mere elimination presumably.
2	Fine Arts	1	Lack of space and equipment.	No response; teacher's initiative apparently.	No response; mere elimination presumably.
3	Home Econ.	3	Lack of space and equipment.	No response; teacher's initiative apparently.	No response; mere elimination presumably.
2	Home Econ.	3	Lack of equipment.	No response; teacher's initiative apparently.	No response; mere elimination presumably.
1	Hist. (H. S.)	1	More useful course possible.	No response; teacher's initiative apparently.	No response; mere elimination presumably.
2	Eng. (H. S.)	3	More effective separation of aspects of work.	No response; teacher's initiative apparently.	No response; mere elimination presumably.
1	Eng. (H. S.)	3	No response; teacher's judgment apparently.	No response; teacher's initiative apparently.	No response; mere elimination presumably.

Courses Remodeled in Two Years Preceding 1917-18  
Heads of Departments (22 in all)

TABLE XI

No.	Dept.	No. in Dept.	Reasons for	Source of Idea	Method
1	Mathematics	3	Req., Course of Study Committee.	Course of Study Committee.	Merely established
5	Geography	1	Student need.	Own initiative.	Merely established
1	Oral Eng.	3	Allow specializing interest.	Own initiative.	Merely established
1	Psychology	2	Better material.	Own initiative.	Merely established
3	Sociology	2	New development. European War.	Own initiative.	Merely established
3	Fine Arts	2	Time too short to allow specializing.	Own initiative.	Merely established

Old Courses Remodeled in Two Years Preceding 1917-18  
Other Teachers (33 in all)

TABLE XII

No.	Dept.	No. of Teachers	Reasons for New Courses	Inception of New Courses	Methods of Establishing New Course
1	Com. Arts	2	City school requirements.	Head of Dept.	No response; presumably announcement in Year Book.
9	Education	3	Needed by modern teachers; to recognize present interests.	6 by head of department; 3 by other members of department.	4 by head of department without conference; 5 after conference with department teachers; after that presumably by announcement in Year Book.
5	Sociology	2	New member of Dept. permitted to develop courses.	Conference with head of Dept. concerning the needs to be met.	Purposes of course discussed and agreed upon; then formulated and handed to the Dean for announcement in Year Book.
3	Dean of W.	2	Personal needs of students.	No response; presumably in conference, with the course of study committee's approval.	No response; presumably by announcement in the Year Book.
11	Library	3	To meet the needs of students.	The teacher's own study of the situation and the course of study committee's approval.	No response; presumably by announcement in the Year Book.
2	Fine Arts	2	To meet needs of special group on request of students.	Primary teachers in the training school.	Approved by course of study committee and announced in the Year Book.
2	Woodwork	1	Requested by students.	Requested by students.	No response; presumably by announcement in the Year Book.
8	Home Econ.	3	2 fundamental to Dept.'s work; 1 needed by majors; 1 necessary for treatment of disease; the rest desirable.	Departmental initiative, except one case; conference with another Dept. in that case.	No response; presumably by announcement in the Year Book.
10	Home Econ.	3	Needed by majors in Dept., to make previous courses effective; to meet war conditions; at request of students.	Departmental initiative, apparently.	No response; presumably by announcement in the Year Book.

Classification of Other Changes  
Heads of Departments (22 in all)

TABLE XIII

Nature of Changes Made	Departments Affected	Reasons for Changes	Methods of Effecting Change
1. Separation of departments formerly combined.	Chemistry from Physics	None given.	President's decision.
	Home Econ. from Practical Arts.	None given.	President's decision.
	H. S. Dept. of Com. Arts from College Com. Arts.	None given.	No statement.
2. Decreasing credit values of courses.	Mathematics.	None given.	No statement.
	Educ. Psychol.	None given.	No statement.
	Fine Arts.	Time needed for another course.	No statement.
	Kindergarten.	Time needed for another course.	No statement.
3. Changing length of courses.	Commercial Arts.	None given.	No statement.
	High School Course.	Agreement with President.	Announcement in calalog.
4. Changing the nature of requirements.	Mod. For. Lang.	Get rid of mere samples of course; economize energy.	No statement
	H. S. Practice Teaching.	Better training.	Approval of President.
	Kindergarten.	More teaching needed.	No statement.
5. Reorganization of	Biology.	More professional spirit emphasis on College.	No statement.
	Kindergarten.	More teaching.	No statement.
5. Division of responsibilities within departments.	Biology.	No statement.	No statement.
	Phys. Ed.	No statement.	No statement.
	Dean of Women.	Economize energy.	No statement.
	Sociology.	Clearer definition of courses.	No statement.

## Classification of Other Changes

Other Teachers (33 in all)

TABLE XIV

Nature of Changes Made	Departments Affected	Reasons for Change	Method of Effecting Change
Separation of departments formerly combined.	Home Econ. from Practical Arts.	No statement.	No statement.
	H. S. Com. Arts from College Com. Arts.	No statement.	No statement.
Decreasing credit value of courses.	Physical Ed.	No statement.	No Statement.
Change in nature of Course Requirements.	H. S. English.	Clearer definition of courses.	No statement.
	H. S. For. Lang.	No statement.	No statement.
	H. S. Practice.	No statement.	No statement.
Reorganization of Dept.	Music.	Closer supervision of practice teaching.	No statement.
Division of responsibilities in department.	Phy. Ed.	No statement.	No statement.
	Assist. to Dean of Women.	Economy of Energy.	No statement.
Changing grade of practice pupils taught.	Bookbinding.	Never explained to teacher affected.	No statement.

### DISCUSSION

The rough classification of data in the preceding tables yields at once certain "pure crude fact." For example, of 94 new courses mentioned, 82 are distinct,—only 12 duplications being made in the enumerations. Heads of departments enumerate 43 new courses, and the other teachers 51. Of 43 courses dropped, 6 are listed by departmental teachers in the Secondary Training School. No duplications occur. In the two years mentioned, the College (or the Year Book) shows a net gain of 57 courses. Of 24 courses remodelled in the same period, 14 are listed by heads of departments, and 10 by other members of the faculty,—eliminating a few courses listed by Elementary and Secondary Training Schools. Again, there are no duplications.

This general situation is interesting. Departmental heads do not (except in two instances) list the new courses framed by other members of their department; similarly (except in two instances) the other teachers hold strictly to the account of their own activities. A very high degree of individual independence is exhibited. One might say that here, at least, academic freedom is fairly complete. But the topic calls explicitly for "*all changes made in the department in the past two years, including new courses, courses dropped, remodeled, etc.*" The question arises whether perhaps the two groups are so independent that they do not know of each other's activities. Unreasonable as this might appear, it is probably true in too large a measure. Insofar as it is true what is exhibited is not only freedom but such kind and amount of it as might properly be called disorganization. The same independence or detachment of activity is illustrated in the responses to the request for a statement of the method of accomplishing changes. For example, how are new courses established? Of 29 teachers answering, all but 7 either explicitly or implicitly describe the process as simply "announcement in the Year Book." Of the 7 exceptions, two conferred with the President before offering the description of the course for the Year Book; two conferred with other members of the department concerned; two had the approval of the Course of Study Committee first; and one agreed with the department for whose students the course was created. One department head set up four new courses without conference with the other members of the department and they were established



apparently by mere announcement in the *Year Book*. In the majority of cases, when an individual or a department thinks a change desirable, apparently it is made and put into effect in the simplest possible fashion, though opposite ideas of what the purpose of the College is exist. For example, one teacher drops three advanced courses because the College is emphasizing Junior College work, and another adds four advanced courses because the College is emphasizing Senior and Graduate College courses.

In the various statements of reasons for changes made, only a few suggest inter-departmental co-operation, and there is a conspicuous lack of intra-departmental co-operation. In a few cases new courses are created by a department at the request of another department; but for the most part departments are apparently quite detached; and within departments new courses do not seem to be as a rule the result of conferences between members of the departments. Many apparently excellent reasons for changes appear in the statements; but sometimes they contradict each other, and no safeguard against changes that negative each other appears. It was expected that reasons for changes (if the faculty were unified in purpose and effort) might be stated with at least implicit reference to the characteristic or differentiating purposes of teachers' colleges. Only seldom, however, and then only vaguely, do they imply such consciousness; for example, new courses framed at the request of students do respond to the College's recognition of the "elective principle." What is conspicuously lacking, however, is evidence of the operation of activities to correlate departmental effort,—or even consciousness on the part of the faculty of the existence of such activities. The course of study committee, whose purpose was to rationalize and co-ordinate changes in curricula, is mentioned only a few times, and then only vaguely. Doubtless it is much more effective than the responses indicate; but doubtless, also, the faculty as a whole is not highly conscious either of the need of such co-ordination or of the work of the committee except as a somewhat mischievous check upon independent activities.

In short, the examination of the responses to the fifth inquiry gives results that confirm the conclusions drawn from the data yielded in the first and third items, and raises a strong presumption in favor of the conclusion that lack of unity either of purpose or effort is an intra- as well as an inter-departmental characteristic.

To the inquiry as to what the faculty regarded as the changes most needed in the College we now turn.

#### NEEDED CHANGES REPORTED BY 22 HEADS OF DEPARTMENTS

*"List all the changes which in your opinion should be made in the organization of your department and in the emphases within the established activities of your department."*

It was expected that if unity of purpose were considerable, changes would have more or less specific reference to the ends of the College that are subscribed to by the departments.

Thirty-six topics cover the changes suggested by this group of teachers. Taking the responses at their face value one must conclude that the most important changes lie in the direction of departmental expansion. Seven heads of departments ask for sixteen new teachers. To one who knows the enrollment of the school and something of the distribution of students over the departments, however, qualifications would be possible even where reasons are not given that can be evaluated without such knowledge. The reasons given in two cases reflect real need, which even under the pressure of short funds might still claim serious consideration. In another case, the request for additional teachers was contingent upon the achievement of another change,—*viz.*, the increasing of course requirements in the department. The reasons given for this change seemed sound, granting that funds exist for the support of additional teachers. In the other four cases the desire for additional teachers clearly reflects not the pressure of students but the desire for departmental growth,—a laudable enough desire if conditions warrant it rather than other changes.

The next commonest change sought is simply the classification of more of this or that department's courses as *general* requirements of graduates. Six teachers ask for this, with more or less justification. If these changes were acceded to, the present requirements of the College would be increased by twelve courses, and the period for which teachers can be held would still remain two years for the most part, and the elective principle would have to pass.

Three teachers ask for dormitories for women students. Four make no response; two speak of the need of much greater emphasis on the teaching of the common school subjects in College; four speak of the need of more equipment; two of the need of more room; two of the desirability of more laboratory work in their departments; and two of the need of new courses in their department.

The rest of the desired changes represent one teacher each and are as follows:

1. Working out curricula with more attention to the value of continuity of study.
2. Placing more emphasis on method of instruction in College courses.
3. Equalizing the pay of training teachers in the rural demonstration schools with the pay of training teachers in the College Elementary School.
4. Organizing the training school on the 6-4-2 plan.
5. Ceasing to offer instruction in bookbinding to Elementary School pupils.
6. Placing emphasis on the third and fourth year work of the College.
7. Making more opportunity for supervision of the work in the Training School.
8. Freeing students in "special" departments from the general or required "professional" studies.
9. Changing graduation requirements with reference to English so as to protect the public schools against teachers who can not speak and write correctly.
10. Eliminating duplications of instruction in related departments.
11. Requiring syllabi of all College courses to be framed and made open to inspection.
12. Establishing a cafeteria.
13. Employing a medical adviser for the women students.
14. Seeing that when subject matter is required enough is required to realize the purposes for which the course is established.
15. More attention to seminar and research work in the Senior and Graduate College.
16. More attention in extension work to helping the least well-equipped groups of public school teachers.
17. Sex instruction for women students.
18. Printing in the Year Book the descriptions of the courses offered for third and fourth year students.

Half of these "needed changes" are quite significant—or would be if the conditions to which they refer are actually not receiving considerable attention. For example, items 1, 2, 7, 10, 13, 15, and 18 deal with matters of general import to the College. To evaluate all of them, however, would require following half of them up with a complete analysis of the conditions that obtain. Items 10, 13, 14, and 18 alone clearly recommend themselves. Item 8 is a fine illustration of departmental isolation and unconsciousness. It makes no distinction between (say) a biologist, a chemist, a cook, a carpenter, etc., and a teacher of the subject matter in question in the public schools. Unity of purpose and effort does not impress the reader of these recommendations. Their value as clues to unsatisfactory conditions is considerable. The first of these, however, is simply the lack of faculty unity of purpose and effort.

## NEEDED CHANGES REPORTED BY 33 OTHER TEACHERS

Forty-five topics cover the changes suggested by the second group of teachers. Twenty of these were contributed by the training teachers of the Elementary School,—among whom there is apparently more unanimity in regard to *needed changes* than in any other department in the College. They appear in every group of more than two teachers concerned in any topic. They constitute four of the seven who ask for more help; of the three others two are departmental teachers in the high school, and only one is in the group of College teachers. In the next largest group six teachers are represented. They are all training teachers in the Elementary School, uniting upon the desirability of a less strenuous daily program, more time to study, better service to the children. The reasons are apparently excellent, whether regarded from the selfish point of view of individuals or the altruistic point of view of conservators of the interests of young children. Three training teachers make the next largest group. They join in explanation of the desirability of a reorganization of *practice teaching*, and more or less definitely point out what seem to them plans superior to those in operation. Three complain of the amount of time absorbed in making reports. Two complain of the necessity of making sudden changes and plead for previous explanation, preferably in writing,—which would seem to be reasonable. Two complain of the inequality between the amount of work done in the classes for an hour of credit as over against the amount done in the Training School. Two desire more experimental work. Two ask for special supervision from the College. Two ask for a heavier teaching requirement for graduate students.

The following additional changes are suggested by the Elementary Training School teachers. Each represents a single teacher, but all except three of the points are suggested by one teacher (*viz.*, 1, 6, and 8).

1. More children and more room.
2. More teaching by the training teachers.
3. New and modern textbooks.
4. A printed course of study showing the sequence of work from the kindergarten through the eighth grade.
5. More flexible promotion for bright children.
6. The restriction of student observation to observation of training teachers.
7. More individual help for student teachers.
8. A better lunch room for the children.

An appeal to general principles is rather frequently made by the Training School teachers, and apparently with excellent reasons. The essence of the difficulty, however, is hardly touched by anybody: *viz.*, *the large number of graduates and the inadequate number of children in the Elementary School*. The problem of adjusting the equities of the children and the student teachers may not be capable of satisfactory solution under the conditions that exist. The emphases actually given may be deliberately adopted in the attempt to meet the legal requirement of practice teaching, and may be the best that could be planned; or they may not rest upon an analysis of the situation. The first list of needed changes (suggested by three teachers) are mostly pretty significant in any event. It would be impossible to justify an organization of observation which left student teachers to observe each other's teaching, for example; and bright children should, of course, not be paced by slower children. But the deliberate analysis and evaluation of the Training School situation is the function of the sub-committee on the Training School. The function of this section of the report is merely to collect data relevant to the question of what unity of purpose and effort exists throughout the school. On this point it can only be said that there is a very general feeling of things askew, and a very general absence of satisfactory analysis of the complex factors involved. Only one teacher takes a thoroughly open and rather comprehensive view of the situation. Of the rest only one teacher makes any considerable contribution to the searcher after pivotal concerns.

The other teachers (*i. e.*, not Training School teachers or heads of departments) suggest the following changes:

1. Securing correlation between related departments.
2. Making the principals of the High School and the Elementary School *ex-officio* members of the Department of Education and scheduling their courses in the Department of Education, as a means of reducing duplication.
3. Reducing the number of courses in the department, so as to have larger classes.
4. Reducing the amount of history of education to a very minimum and eliminating courses which experience suggests are superfluous.
5. Scheduling advanced courses less frequently,—some of them only every other year.
6. Making provision for research.
7. Increasing the length of the survey courses in literature.
8. Elimination of High School extension work.
9. Restricting practice teaching in the High School to fourth year College students specializing for the work of the department concerned.
10. Reorganizing the High School and the Elementary School on the 6-4-2 plan.
11. Reorganizing second year High School Latin,—eliminating Caesar for simpler material.
12. Reorganizing first and second year High School mathematics,—combining algebra and geometry.
13. Adding two years of French and a second year of Spanish.
14. Making a closer correlation of High School courses in Home Economics with the College courses later to be available to High School graduates.
15. Correlating High School courses with College courses.
16. Lengthening the music period in the Elementary School to 20 or 30 minutes.
17. Bringing Household Arts and Household Science into the same building.
18. Relating Household Arts more closely to Fine Arts.
19. Dormitory for out-of-town High School students.
20. Married woman for High School preceptress.
21. More personal contact with the students of the College.
22. More time for supervision of Training School classes.
23. A secretary of the High School to do the clerical work.
24. More equipment illustrating business practice in the classes in accounting.
25. More courses in Physical Education.
26. Opportunity for all students in Home Economics to use the Model Cottage.
27. Providing of noon lunch for students by the Home Economic department.
28. Fewer changes in the curricula,—a more stable program.

Of this list of needed changes, only three represent more than one teacher. Reasons are seldom given or suggested. The general impression of the reader is that of considerable alertness on the part of individuals to conditions bearing immediately on their own work, but of considerably restricted vision of the relation of the department to the school as a whole. No occasion has yet appeared to change the conclusion that the faculty is not unified or co-ordinated.

We turn next to the faculty's statement of inter-departmental co-operation.

## DIRECT STATEMENTS OF INTER-DEPARTMENTAL CO-OPERATION

"To what extent do the activities of your department co-operate with the activities of other departments? To what extent should they co-operate?"

### Heads of Departments

Four College departments mention co-operative relations with the training schools. Three other College departments mention their willingness to co-operate with the training schools,—in terms, however, that suggest doubt of welcome should they proffer their services. One department describes past co-operation which the "new organization of practice teaching renders impossible," but looks toward giving aid in making courses of study for the Elementary School. One remarks regretfully that there are no relations with the Training School except in way of making suggestions on the course of study.

The members of the Psychology Department describe very complete and useful services rendered to the Training School,—in way of examining children and studying "problem cases." The training teachers do not mention this co-operation, which is probably the most thorough-going relation maintained between College and Elementary School. It may be, therefore, that co-operative relations are actually greater than the accounts suggest. So far as the responses show, however, the Training School is pretty thoroughly isolated from the other departments of the College.

Turning to the relations between the "teaching" departments, it is at once clear that they also are isolated, or have only very meager relations. One department mentions happy relations with five other departments; but the description makes it clear that the co-operation is not so much in curricular as in extra-curricular activities. Only one department speaks of co-operating with the English department in its effort to improve the quality of oral and written English. The same department describes significant correlations worked out with three other departments. Several regret their inability to get recognition of the need of co-operative relations with allied departments. Two speak of co-operating "on request"; and three describe a type of co-operation that might be called *exigentia*. Six make no response; and one says that there is no conscious co-operation except in two cases.

### Other Teachers

The responses from this group are similarly meager. One department mentions co-operative relations with seven other departments. What the relations are is not explained. The commonest co-operation mentioned is simply that certain courses required by a given department are offered by another department: *e. g.*, Bacteriology, a required course in Home Economics, is offered by the Biology department. This is probably what is meant by the occasional statement that a department co-operates "on request." One department reports directing students to useful courses in other departments, and mentions observation of Training School work as a privilege granted by the Training School. The statement of another teacher that inter-departmental co-operation is mainly incidental or accidental probably covers the situation fairly well.

### Training School Teachers

The teachers in the secondary school make on the whole the most meager report. Only one seems to appreciate the possible interrelations of effort and to make use of the opportunity.

The Elementary School teachers have less to report on this topic than on any other. It seems probable that theirs is too full, crowded, and hurried an existence to make it possible for them to seek co-operation.

## THE MOST IMPORTANT PROBLEMS OF THE COLLEGE

It was thought that in the deliberate formulation of the most important problems of the school data would be assembled that would sufficiently supplement the response above reported to make conclusions fairly reliable. Though the first three sets of responses revealed no very general recognition of professional responsibilities among the faculty, and not a very encouraging amount

of conscious organization or correlation of effort, still, it might be that (as was occasionally suggested) the faculty was actually more highly unified than was shown in the statements of departmental function and organization, the statements of the functions and interrelations of courses, and the statements of important changes made. If there were considerable agreement in regard to the major problems of the school, it would indicate unity. Whether the unity so revealed were upon the level of modern thought in regard to the work of preparing teachers might be the next question.

It is convenient again to group the responses under "Heads of Departments" and "Other Teachers." A rough classification of the 175 problems enumerated is made in each case for the sake of seeing how they are distributed. In most cases each item represents *one* teacher.

*"List what seem to you the most important problems of the College." Responses of Twenty-two Heads of Departments.*

1. Establishing undoubted college rank; improving the quality of work; developing senior and graduate college courses.
  - a. The strengthening of the Senior and Graduate Colleges in order that our school may constantly take higher rank among the teachers' colleges of America.
  - b. The raising of our standards, the stiffening of our courses so that the Teachers College may win and hold the confidence of the educators of America.
  - c. Reorganizing the Senior College, and the curriculum in relation to the Senior College.
  - d. Examination of the status and work of the Graduate College.
  - e. Establishing our relationship with other colleges and universities.
  - f. The problem of educational standards,—a problem which the policy of the management is facing, as the appointment of a strong Survey Committee witnesses.
  - g. Removing the cause for the attitude of universities toward normal schools and teachers' colleges.
  - h. Encouraging graduate work.
  - i. Setting our educational standards high enough so that they may equal or lead those of the most progressive teachers' colleges in the country. Every teacher should feel the responsibility of keeping his own standards up and where slackers are found in this respect there should be changes made.
  - j. Removing the cause for the attitude of universities toward normal schools and teachers' colleges.
2. Securing more men students.
  - a. The problem of securing more men students.
  - b. The development of our athletics along sane and constructive lines in order that our institution may be made more attractive to men.
  - c. How to secure more men and train them to be school principals and superintendents.
  - d. The expansion of the Manual Training Department as an opening for more men in the teaching profession.
  - e. The most important educational problem now faced is, in my estimation, the getting of more men; courses that will draw men here must be established. One such course could be mechanical engineering; another, a course in foundry practice for automobile work; a third, a course in pharmacy, which could be added to the chemical department; a fourth, a complete course in architecture.
  - f. Advertising our departments for men more widely. The average high school boy knows nothing of our College.
  - g. Establishing more scholarships for men.
  - h. First, I consider the problem of bringing more men into this in-

stitution and into the teaching profession as the most important problem of the school.

3. Working out a program of educational organization.
  - a. Working out our educational organization.
  - b. Forecast of an educational plan for the College for the near future at least; then making a building plan to house the educational plan.
  - c. Educational reorganization of the College in keeping with the function of a real Teachers' College.
  - d. Working out a better organization of the educational activities of the school, so that they may all push more effectively toward the attainment of a common goal.
  - e. This implies a clear statement of the organization of the College and the division of the school into sufficiently complete units so that they may work as units.
  - f. Orientation along the lines indicated by the chairman of the Survey Committee is, in my judgment, the most pressing need of the institution.
  - g. Definition of the *aim* of this College.
  - h. Formulating a clear statement of the needs and demands of a college of this type.
  - i. Either laying a special emphasis placed upon grade and rural education for the predominating two-year students or else making an effort to induce the students to remain four years for secondary education.
4. Correlating or co-ordinating the various departments.
  - a. Substitution of the principle of co-operation for that of rivalry between departments and individual instructors.
  - b. Get more co-operation between various departments. Now it reminds me of the co-operation between a group of lawyers and doctors in an office building.
  - c. The subordination of individual interests for the good of the whole school.
5. Providing for research upon the problems of the school.
  - a. Provision (time, opportunity, and equipment) for experimentation, research, and writing to be conducted by a *few* members of the faculty who are inclined toward that work and educationally equipped for it.

Full teaching time (16 to 24 hours a week, according to the nature of the subject) for all who have no administrative or research work to do.

Hearty recognition of the fact that one type of work (teaching, administrative, research, writing) is just as honorable and requires just as much talent (even if slightly different in kind) as any other.
  - b. Establishing research in various departments in order that we may know what has been tried successfully, giving an opportunity for further new experimentation.
  - c. It seems to me a teachers' college is an institution for experimentation and research or it is nothing. This implies that our teaching should not be patterned after that of other institutions but should be progressive and do the most advanced types of teacher-training and practice teaching.

The course of study should grow as the result of serious experimentation and research.

The great fault with all schools of our type is that we look to universities for textbooks and for research studies in all lines. Practically all the worth while studies seem to have been done by people outside of teachers' colleges and normal schools. These

problems should rightfully belong to a training school department of a great teachers' training school. Such studies cannot be made unless the work can be so arranged that individuals will have enough free time to seriously study problems.

All such work should be started with the idea of adding something worth while to the sum total of valuable information for the teaching profession.

We are past the day in education when an individual's opinion alone is worth anything.

Evidence presented must be scientifically gathered, analyzed and sifted, and conclusions drawn based on such evidence.

6. Establishing vital relations with the public schools.
  - a. Articulating our work here with the school work in the state. A leader should not be a laggard; but a leader a mile ahead cannot be seen through the fog by his followers.
  - b. Providing more extensive field work to get acquainted with the needs of the state and what is just as important, to get the state to know we exist.
  - c. Bringing the College nearer to life as it is in the field where the products of our College instruction struggle with the problem as it is.
7. Definition of the function of the training school and working out of the problems of "practice teachers."
  - a. Facing the problem of the training of teachers. I mean this judgment in a specific sense; the training-school problem. The Training School is our laboratory; nothing else can be quite so pertinent to our declared function as to make it effectual. The problem of maintaining the degree of flexibility and the experimental viewpoint essential to a school of its type, while at the same time providing ample careful training for our growing body of student teachers, is a serious one. I should deplore an evasion of the problem by a resort to the more or less formal system prevailing in our public schools.
  - b. How to make "practice teaching" of the greatest possible value to the student.
8. Shaping courses with reference to the world situation created by the war.
  - a. The problem of the immediate relation of the college to the present world situation and to the great questions of social and individual reconstruction that must follow the war. I believe that no department which has suffered recently because of new social demands should be permitted to diminish its strength; that such a department should rather modify its activities in the light of changed social conditions, keeping its full quota of instructors and finding new types of service for its equipment.
  - b. The formulation of a program by which to develop the most desirable citizenship for the period that is to follow the war, with a view to meeting the new conditions that will be faced by America. Some of the phases of this broad question in which this institution may function directly are indicated below.
    - (a) Integrity and efficiency in manufacturing. Accuracy and thoroughness in all our work in Practical Arts must accordingly prevail. The demand of the consumer for articles that are well designed and well made must be encouraged.
    - (b) Appreciation by all of the Fine Arts and Athletics as an antidote to harmful amusements.
    - (c) Teach active and not passive loyalty to government. This calls for student control or student government.
  - c. The readjusting of courses to meet the needs of the war situation.



9. Democratizing the student body.
  - a. Encouraging a more democratic spirit in our student body.
  - b. Developing a finer type of school spirit.
10. Making provision for training in service for the faculty,—research being one measure.
  - a. The training of the college's teachers in service by organizing research work.
  - b. The development of a method of genetic and functional teaching that will be as thorough in subject matter and discipline as it is training for initiative and originality.
  - c. The facilities for efficient practice teaching are exceedingly low. A comparison of Judd and Parker's standard with our practice makes necessity for some early and radical changes in this department, in the way of increased facilities, very urgent.
11. Securing continuity in the elective programs of students.
  - a. The value of continuity in courses should be held before the students; not "choppy courses." After taking one course in a department, the student generally feels that he must go on to explore.
  - b. More students should come into contact with the department to get the point of view, most recent, in study and teaching the subjects. This applies to all departments.
12. Provision for the preparation of rural school teachers.
  - a. Laying a greater emphasis upon the preparation of rural teachers. In this connection I think the demonstration school has marked significance. It is a means whereby Teachers College can get hold of many *rural* communities.
  - b. Deliberately planning to supply a corps of properly trained teachers for our existing country schools.
13. The expansion of the Extension Department.
  - a. Expanding the Extension Department.
  - b. The Extension Department is in great need of additional help for purpose of supervision. The details which indicate the necessity for this assistance in the department have been submitted to the President.
14. Keeping in touch with the Alumni.
  - a. Revivifying the Alumni Association.
  - b. The establishment of an Alumni Bureau for the purpose of following up the graduates in their professional work. This would help us to determine the kind of work which it is most necessary for us to accomplish.
15. Correlating training schools with college departments.
  - a. Second in order comes the problem of bringing the training schools into more definite touch with the college.
  - b. Recognition by the training school and high school of the necessity for some preparation in the college for teaching the special subjects.
16. Making functional definition of college responsibility for college instruction.
  - a. Demanding that each course be taught by a specialist and not by some instructor who happens to have a small number of classes.
17. Setting up a program of educational publication.
  - a. Increasing the number of worthwhile publications on educational problems.
18. Finding means of touching the work of pivotal members among the public school teachers.
  - a. Avoiding the loss of the progressiveness of our instruction by inducing students who have the authority to initiate changes to attend our school.

19. Building dormitories for all women students, and one dormitory for men students.
  - a. Provide dormitories for all the women students and one dormitory for men. This will insure better housing, better control of students and cheaper board and room.
20. Unifying the faculty's requirements in class work.
  - a. Unifying standards of study requirements for outside preparation in all classes. Some classes require little or no preparation while others insist upon two or three hours outside preparation for each day's recitation. This, it seems to me, should be limited so that there is some unity of standard.
21. Eliminating duplication of instruction.
  - a. Eliminating duplication of instruction.
22. Laying more emphasis on political economy.
  - a. Undoubtedly, in view of the present interest in government, greater emphasis should be given to political science.
23. Getting recognition for professional preparation from the high schools of the state.
  - a. How to get professionally trained teachers into the high schools of the state.
24. Putting modern knowledge of individual differences into effect throughout the school.
  - a. Recognizing *individual differences* from the *Kindergarten* to the *Graduate College*.
25. Regulating the responsibilities and power of faculty committees.
  - a. Defining the responsibility and power of faculty committees and councils.
26. Professionalizing the college's placing bureau.
  - a. The professionalizing of the teachers' bureau.
27. Establishing psychological clinics through the state.
  - a. The establishing and maintaining of psychological clinic stations at strategic points in the state is a very great need right now. As agricultural colleges test the soils and teach farmers to test the soils in which they plant their seed, so should teachers' colleges test the mentality and teach teachers to test the mentality of children whom they teach. Much time is spent and energy wasted because of the absence of knowledge on the part of parents and teachers concerning the mentality of children they are teaching. A service, the limits of whose value to the state it would be difficult to over-estimate, can be rendered if the institution proceeds at once to establish these clinics and place them at the service of the educational forces of the state.
28. Providing systematic recruiting.
  - a. The enlargement of our field activities. We are falling behind other educational institutions of the state in this respect. We need strong men in all parts of Colorado, in order that the work of Teachers College may be better known and its privileges better understood. The growth of the college is dependent upon this vital contact with the state.
29. Expanding the high school as a feeder for the college.
  - a. The vitalization and development of the undergraduate school as a feeder for the senior and graduate colleges.

#### DISCUSSION

Heads of departments enumerate 77 problems,—an average of 3.5 to the teacher. The contributions vary in number from 0 to 9; four teachers make no response. One explains: "This is entirely outside my jurisdiction.

I have not had occasion to study requirements (needs?) outside my own department, and for that reason do not feel that I can offer anything in way of suggestion that would concern other departments of the school as a whole." The others made no explanation.

The grouping of the responses by teachers, or even by departments, would be the most illuminating first step. It would be too illuminating, in fact; so a rough grouping of problems is given, which leaves the contributors anonymous.

Attention may properly be called, however, to the fact that twenty-nine topics are required even for so rough a classification as the one made. The first topic might be subdivided into three; but even as it stands, it represents only ten teachers. The second topic also might well be subdivided according to the reasons suggested; but even as it stands it represents only eight teachers; one of these contributed to the first topic. The third topic represents nine teachers, of whom one contributed to the second topic. The fourth topic represents three teachers, two of whom appear for the first time, and the other of whom appeared in both items two and three. The fifth item represents three teachers, two of whom make here their first appearance; the other appeared before in two, three and four. The sixth item represents two teachers, both of whom have appeared before,—one being the repeater above described several times; the other appeared in item two.

The importance of the unity discovered in these responses depends upon the importance of the matters agreed upon. But it is significant that no selection that may be made of the most important problems enumerated will involve more than ten teachers. Individualism and detachment are the outstanding characteristics of the responses of the heads of departments. Perhaps the most important problems of the college yet enumerated; but at all events awareness of them is conspicuously localized. Differences in value are conspicuous within the larger groups. For example, to want to reach more men because they are likely to hold the key positions in the public schools is a more promising attitude than the mere feeling that men are *per se* desirable; and the desire for men at any cost (even at the cost of developing trade courses) is naive for its innocence both of the characteristic functions of the college and of the operative socio-economic factors that select women rather than men for the public schools. Similarly, the important need suggested in items 3 varies considerably through the stated problems.

### RESPONSES OF THIRTY-THREE OTHER TEACHERS

1. Giving immediate and thoroughgoing attention to the training school problem.
  - a. Providing adequate opportunity for training the student teachers.
  - b. Developing a training school which will better serve both children and student teachers.
  - c. The rapidly increasing number of practice teachers with the relatively small number of pupils in the training school.
  - d. I think one of the most important problems facing the college today is the training of the practice teacher.
  - e. The problem of practice teaching seems to me to be the greatest one now. There should be more schools, more rooms, more teachers, more equipment and more teaching for each student.
  - f. The college has but one problem,—the production of better teachers.
  - g. How to train teachers so they are actually fitted to fill positions wherever they may go, but also so they will succeed in raising the standards of any school into which they may go; for it seems to me this is the best way in the world to improve the schools of Colorado.
  - h. The direction of the training school according to the best *training school* methods.
  - i. Correlating observation and methods to precede teaching.
  - j. Reorganization of training school in regard to student teaching.

- k. It seems to me that the college is existing through the fact and need of the training school. Necessarily one of the big problems then is the working out of a satisfyingly broad yet definite plan for its growth.
  - l. Are there any problems more vital to a teachers' college than those of the training school?
  - m. Are we working for the best interests of this school and its students in making the training school a typical up-to-date public school?
  - n. Are we giving the kind of training that our students need to make them efficient teachers?
  - o. The training of teachers. How much observation should they have? How much actual teaching?
2. Working out a thoroughly conscious educational organization for the college.
- a. Formulating clearly the aim of the training school.
  - b. Working out in detail a program for the realization of this aim.
  - c. To work out an *educational organization* of the college's activities that will entitle it to be regarded as a thoroughly *conscious* institution.
  - d. To focus the educational activities of the college upon its most pressing educational problems. This must be done if we are to deserve the position of educational leadership of the state. We do not possess it; but we can. The way is perfectly clear. It will involve:
    - 1. Professionalizing the academic studies of the college and getting *teachers' courses* in every school subject.
    - 2. Securing from every department of the college the much-needed research work upon (1) the *extent*, (2) the *nature*, and (3) the *causes* of public school failures in the teaching of the school subjects.
    - 3. Establishing, as a part of our educational organization, dynamic educational relations with the State Superintendent's office,—so as to improve the character of the educational data gathered and the usefulness of the annual report; and also establishing relations for the same purpose with the city and county superintendents of the state.
  - e. To work over our *organization for government* so as to make it less arbitrary. College students ought not to be governed as children.
3. Raising scholarship standards and establishing unquestionable bases of relationship with other schools.
- a. Raising scholarship.
  - b. The question of advanced standing and credit for outside work.
  - c. Standardizing of work so that no objections can be raised by other institutions to accepting our work at face value.
  - d. There should be a uniform system of credits worked out in our school and one recognized by all other schools.
  - e. Establishing the credit of the institution with other states and institutions.
  - f. General recognition of State Teachers College as a full, "A Grade College" with a four-year course. (What can be done toward winning such recognition?)
  - g. In my opinion the greatest educational problem which confronts the State Teachers College is the *bringing up* of the *standards* of the *curriculum* to the excellence of the educational opportunities, and of the work demanded of faculty and students, so that we may take and maintain our place among institutions of higher education in America.
  - h. Establishing a standard system of credits exchangeable with accredited schools and a standard basis for obtaining the same.

4. Correlating college departments and training schools.
  - a. Getting closer co-operation between college and the training school.
  - b. A closer relation of the elementary training school and the high school to the other department of the college.
  - c. Establishing close relations between the college and the training school.
  - d. The relation of the courses of study in the training school and high school to the other department.
  - e. I think that there should be a closer relationship between the training school and college.
5. Securing inter-departmental coordination.
  - a. Securing stronger co-operation among the several departments.
  - b. Correlation of all subject-matter in the college.
  - c. Making out a closer correlation of the various departments of the school; greater interest in the school as a whole on the part of faculty members.
  - d. Greater harmony and closer co-operation between the various departments, schools and activities of the college.
  - e. The proper selection of required courses and their correlation with courses in special departments.
  - f. College subjects should be more correlated.
6. Recruiting more men.
  - a. To induce more men to attend the college and more boys the high school.
  - b. Studying methods of securing men for the institution who are capable of filling small principalships and superintendencies in Colorado. More time, attention and money need to be devoted to securing these men from the high schools of the state. It would pay the institution and the state to have one man as a high school visitor for the college. So long as the various faculty members have it to do, this work is poorly done.
  - c. We should devise ways of attracting and getting more men.
  - d. If it were not for the fact that most thinkers and writers say that men are not interested in the teaching profession I would say: "Courses of study that would be attractive to men." Men *are* taking up school work in its various phases. Columbia University secures this and is furnishing the men for the responsible positions in Educational Supervision and Administration. And if "Colorado State Teachers College is to the West what Teachers College, Columbia University, is to the East," then the University of Colorado must not continue to place more men from her school in most city high schools of our state than Colorado Teachers College. In my line of work, and it is so in most others, they say "Send us a man." How long will they come to us with this concerted appeal if we do not satisfy them? Courses of study that will attract men.
  - e. I do not feel qualified to answer this question. However, I venture the assertion that at least one large problem facing the institution is the *obtaining of men students*. I believe, too, that this problem is part of a mighty question of industrial training, of vitalizing education, which this and all other schools are facing even now, and which will be practically a life and death matter with them in the mighty industrial upheaval, or readjustment, following close upon the heels of the great war.
  - f. From my point of view the most important educational problem now facing the college is that of getting into the college sufficient men to supply the demand for men in the teaching profession. During my four years' service in the college, I have known of a great many young men who would have attended Teachers College had the college been able to give them the training they desired and at the

same time a great many positions could have been filled had we been prepared to give the training desired by these same young men who did not attend this college.

7. Establishing more vital relations to the public schools.
  - a. Running the college according to demands, needs and customs of Colorado and its people,—always living up to these.
  - b. To solve the above problem it will be necessary to do a number of things: To make effective the skill and experience of every teacher in the institution toward solving the training and high school problems. Every teacher in the institution should be required at the expense of the school to spend from one to two weeks every year visiting the representative schools of the state in order to see at first hand what is being done in his field and what problems are confronting his department. The director of the training school should visit other schools much more frequently. There should be frequent conferences between the training school head and the other teachers in the college.
  - c. To use members of the faculty to go out in the state and assist school boards, superintendents, teachers or supervisors if they ask for that service. To let them know that such service is available.
  - d. Laying plans to supply the teaching positions of Colorado with teachers from this institution. The confidence of the superintendents of the state in the institution must be secured. More attention to our recommendations and greater effort on the part of the Employment Bureau are necessary.
  - e. Establishing as a part of our educational organization dynamic educational relations with the State Superintendent's office—so as to improve the character of the educational data gathered and the usefulness of the annual report; and also establishing relations for the same purpose with the city and county superintendents of the state.
  - f. To perfect our extension service,—as the very best handle whereby to take hold of the important problem of securing the indispensable co-operation of public school men in our attempt to improve the service of the public schools to the children of the state. We have been aloof from them and have had little or no part in their problems—which is stupid, considering the part they play in the business of the college and the extent to which they may and can be brought to co-operate with us in changing antiquated aims and practices. We must involve them in our stream of effort. (This is closely connected with (3) above). The extension department needs the alert co-operation of every academic department of the college in *using the results* of its school surveys.
8. Making the training schools serve the purposes of educational leadership in the public schools.
  - a. To make our training schools (elementary and high) dynamic in the state. So far as I can discover, neither of them has as yet sensibly affected public school procedure, aims or *values* in the state. But they *should*. To do this involves at least:
    1. Publishing from each school a very *complete* and *modern* "Teachers Handbook of Practice" which should be possessed by every graduate of the college henceforward, and which should be so *concrete* that it would pass into general use in the state.
    2. Publishing from each school a *minutely* detailed *curriculum* carrying with each subject full references to the best literature,—analytical references to topics. This too should be possessed by each graduate henceforward.
    3. Adding to the high school faculty some men. They should be men of public-school experience *plus* graduation from the *best university departments of secondary education* in the United States. At present (not because our high school teachers are mainly women, perhaps) our high school is without influence upon the

public high schools of the state. We take no part in the councils of secondary education here or elsewhere. Yet we should. And we *can*. It is only a problem of facing conditions squarely and making the necessary provisions to meet them successfully.

4. Enlarging the size of the training school—to at least double its present capacity. A *training school* exists for meeting practical needs of student teachers.
  5. If we can not enlarge the training school, then our problem of meeting the needs of student teachers for practice can not be met here, and we should frankly face that situation by going on the *model school* basis and give over attempting to give practice.
  6. If we can enlarge the training school we should do that generously and create also a *model school* for observation and demonstration.
9. Securing faculty unity in regard to problems of method.
- a. Is the argument true that all educational principles being the same, the teacher who teaches two or three subjects satisfactorily during the course of the year will be able to apply those principles to other subjects; or is the argument that all educational principles being the same, the teacher will have them fixed in her mind by teaching four or five subjects each term, to be accepted? This is being worked on experimentally now.
  - b. What part shall we give to appreciation in the teaching of literature? Shall we insist that nothing be given to the child which he cannot dig out for himself? Are we to measure all school work by pupil activity? What do we mean by pupil activity? What do we mean by initiative on the part of the child?
  - c. Educational methods for special fields.
10. Making the needed recognition of research work.
- a. More time given to training teachers for study and research. Should the training teachers be driven every minute of the day by red tape and details?
  - b. How can these young people be prepared for such work in the training school without dwarfing their general cultural and professional development?
  - c. Securing from every department of the college the much-needed research work upon (1) the *extent*, (2) the *nature*, and (3) the *causes* of public school failures in the teaching of the school subjects.
11. Focussing the faculty upon their most pressing educational responsibilities.
- a. To focus the educational activities of the college upon its most pressing educational problems. This must be done if we are to deserve the position of educational leadership of the state. We do not possess it; but we can. The way is perfectly clear. It will involve:
    1. Professionalizing the academic studies of the college and getting *teachers' courses* in every school subject.
    2. Securing from every department of the college the much-needed research work upon (1) the *extent*, (2) the *nature*, and (3) the *causes* of public school failures in the teaching of the school subjects.
    3. Establishing as a part of our educational organization dynamic educational relations with the State Superintendent's office—so as to improve the character of the educational data gathered and the usefulness of the annual report; and also establishing relations for the same purpose with the city and county superintendents of the state.
12. Working out a more purposeful publication program.
- a. To publish bulletins on courses of study, methods of teaching, information on equipment, and any other information that the school can furnish which will improve public school teaching.
  - b. Publishing from each school a *very complete* and *modern* "Teachers

Handbook of Practice" which should be possessed by every graduate of the college henceforward, and which should be so *concrete* that it would pass into general use in the state.

- c. Publishing from each school a *minutely* detailed *curriculum* carrying with each subject full references to the best literature—analytical references to *topics*. This too should be possessed by each graduate henceforward.
13. Reorganization of the high school.
  - a. Consideration of the Junior High School question.
  - b. The rapid growth of the high school without enough room.
14. Reconstructing college curricula.
  - a. Making changes in the curriculum.
  - b. Definite and full outlining of the course of study.
15. Establishing educational leadership in the state.
  - a. Securing leadership of educational theory and practice in state.
  - b. Getting close co-operation between college and the training school.
  - c. Regulating organizations.
16. Regulating student organizations.
  - a. Regulating organizations.
  - b. Making out a closer correlation of the various departments of the school; greater interest in the school as a whole on the part of faculty members.
17. Preparing rural school teachers.
  - a. Stimulating and increasing the facilities of the rural school department.
  - b. Recognizing the largest group in the student body to be that of the junior college, training for work in the elementary and rural schools to be the one affecting the largest group of students.
18. Emphasizing senior and graduate college work.
  - a. The tendency to a four-year course.
  - b. We should emphasize more the senior and graduate college.
19. Effective deploying of the faculty.
  - a. Making out a closer correlation of the various departments of the school; greater interest in the school as a whole on the part of faculty members.
  - b. To utilize fully the entire talent of the faculty in all important decisions affecting the college.
20. Working out a more rational (less arbitrary) government.
  - a. To work over our *organization for government* so as to make it less arbitrary. College students ought not to be governed as children.
21. Unifying the faculty for the purposes of a teachers college.
  - a. To unify the faculty with the educational life of the school in regard to the *function* of the college and of each of its activities, the faculty ought to be of *one mind*. This can not be accomplished incidentally. It can be accomplished by organization of activities directed to that end.
22. Changing the present grading system.
  - a. A system of grading that will be recognized by other colleges and universities.
23. Applying our Psychology Department to the organization of our training schools.
  - a. To apply our Department of Psychology to our own school problems more fully.
24. Defining the function of the training schools.
  - a. Formulating clearly the aim of the training school.
25. Recognition (in course) or war-produced conditions.
  - a. Adjusting courses to meet war conditions.



26. Reconstructing the two-year curricula.
  - a. The problem of the two-year course.
27. Keeping in touch with the Alumni.
  - a. Organizing the Alumni of Colorado State Teachers College. The institution must keep in touch with its graduates if it is to accomplish what is its function to accomplish.
28. Enlarging the offerings of the science department with reference to public school work.
  - a. To provide a *botany* and a *physiology* section for our science department; and in the building plan for the college house them all in a building of (say) the size of the Guggenheim building.
29. Making museum material available for training school use.
  - a. To make the museum material more available for the training school.
30. Providing a room for each department head.
  - a. To provide a room for each department head.
31. Studying the social problems of the student.
  - a. Meeting social problems of the students.
32. Providing ample recreation for students.
  - a. Amusements—kind—amount.
33. Offering courses to prepare men for trades.
  - a. Adding types of training such as foundry work, forge work, machine-shop work, and concrete work so as to fill up the ranks of skilled mechanics and workmen in many lines left open by the world war.

Including the four nominal heads of departments above mentioned thirty-three teachers are represented in this group of problems. Ninety-two problems are stated. Seven teachers made no response. A few frankly referred the question to the heads of their departments, to whom, it is considered, such matters properly belong. Most of the seven, however, merely make no response. Thirty-three topics are needed to cover the problems stated. There is, as before, considerable overlapping; for example, two teachers contribute the nine problems mentioned in group two. In group three one of the teachers contributing to item two reappears. In the fourth group one of the teachers contributing to the third group reappears, but the others are all new. In the fifth group three teachers repeat and three are new, and so on.

TABLE XV

## Summary of Faculty Agreement on Problems

The Problems Contributed by	Heads of Depts.	Per Cent. of Heads	Other Teachers	Per Cent. of Others	Total Teachers	Per Cent. of Faculty
1. The Training School Problems.....	2	9%	15	45%	17	31%
2. Raising standards of college work.....	9	40%	8	24%	17	31%
3. Improving educational organization.....	9	40%	6	18%	15	27%
4. Securing more men.....	8	36%	6	18%	14	25%
5. Co-ordinating college departments.....	3	13%	6	18%	9	15%
6. Improving connections with the public schools.....	3	13%	6	18%	9	16%
7. Training in service for college teachers.....	4	18%	3	9%	7	12%
8. Correlation of training school with college departments.....	2	9%	4	12%	6	10%
9. Recognition of war conditions by courses.....	3	13%	1	3%	4	7%
10. Establishing program of educational publications.....	1	4%	3	9%	4	7%
11. Establishing touch with alumni.....	2	9%	1	3%	3	5%
12. Preparation of rural teachers.....	2	9%	1	3%	3	5%

## DISCUSSION —

The table suggests greater unity than exists. For example, in the first group of problems seventeen teachers are represented; but eleven of them are training teachers in the two training schools,—two in the secondary school. Of the rest, two are heads of college departments, and the other two are teachers in two other college departments. In short, four college “teaching” departments are represented. In the second group of problems, six heads of college departments, four training school teachers (three in the secondary school), and three other teachers appear. In the third group of problems four heads of departments, one elementary training school teacher, and two other teachers appear.

Thirty-nine teachers contribute to the twelve groups of problems shown in Table . . . . . One teacher is represented in six of the groups (in one group six times, and more than once in several). Three other teachers appear in five of the groups, two others appear in four, two others in three and twelve others in two. Nineteen contribute to only one group of problems. The chief contributions come from eight teachers,—and most of them from six.

If, to the twelve groups of problems shown in Table XV, nine other groups be added, all the problems involving as many as two teachers will have been covered. Four are contributed by heads of departments and five by other teachers, as follows. The number of teachers is indicated after each description.

### Heads of Departments

13. Laying emphasis on the teaching of the public school subjects (2).
14. Securing continuity in students' programs (2).
15. Extending extension service (2).
16. Establishing touch with the Alumni (2).

### Other Teachers

17. Focussing the faculty on the school's problems (3).
18. Reorganizing the high school (3).
19. Reconstructing the college curriculum (2).
20. Seeking educational leadership (2).
21. Regulating students' organizations (2).

The rest of the problems represent unduplicated contributions. They follow.

### Heads of Departments

22. The socialization of instruction.
23. Increasing the amount of professional work in the college.
24. Avoiding the substituting of non-specialist teachers in courses in which efficiency would require a specially prepared teacher.
25. Touching the public school teachers who have power to make needed changes.
26. Securing dormitories.
27. Unifying the requirements for outside study.
28. Eliminating duplication.
29. Laying more emphasis on political economy.
30. Placing professionally trained high school teachers.
31. Making recognition of individual differences throughout the school.
32. Regulating the power and responsibilities of faculty committees.
33. Professionalizing the Placing Bureau.
34. Establishing psychological clinics throughout the state.
35. Systematizing the work of recruiting students.
36. Expanding the secondary school as a college feeder.

### —Other Teachers

37. Laying emphasis in senior and graduate college work.
38. Studying the problem of effective use of the faculty.
39. Working out a less arbitrary student government.
40. Unifying the faculty for the characteristic purposes of the Teachers College.
41. Changing the present grading system for one more widely recognized.
42. Employing the psychology department to the organizing of the training schools.
43. Defining the function of the training schools.
44. Reconstructing the two-year curricula.
45. Adding more science courses.
46. Making museum material available for class use.
47. Providing a room for each department head.
48. Studying the social problems of the students.
49. Giving attention to the need of recreation.
50. Creating trade courses.

### THE FACULTY COMMITTEES

An inquiry into the matter of educational organization could not well overlook the groups of faculty members appointed by the President to carry on various activities connected with the operation of the college. The importance of an examination of the distribution of faculty committees over the field of the characteristic problems of a teachers' college may not be at once apparent. It is clear that the significance of committee work depends heavily upon what other extra classroom activities are carried on by the faculty. Committee work is only one phase of educational organization. The absence or bareness or routine formality of committee work in any case might only mean that there is greater activity elsewhere. Standards of instruction, for example, may be set up or built up and maintained through supervision and discussion. The president of the school may himself perform this work; or if the usual departmental organization obtain, more or less of this work may be delegated to department heads. The more general problems involved may be weighed in faculty meetings or in departmental conferences, and unity of purpose and effort may be thus established.

If, however, there are problems of course-making and the shaping of curricula; of the economic scheduling of work; of conserving the health of students; of discovering and capitalizing exceptional students; of establishing fruitful relations with the public school system; of correlating departments; of changing traditional educational structures; of getting better school statistics; of discovering and meeting public school deficiencies; of training in service for the college teachers, and so on; and if there is any usable talent in the faculty,—then, it is likely that in a fairly democratic administration at least, faculty committees will be set up to share the work.

The examination of the work of such committees affords an immediate glimpse of the probable purposefulness of organization and of the administrative grasp of the situation as a whole. If for example, faculty unity of purpose is important and the absence of a sufficient degree of it is recognized, one might expect to find in the list of faculty committees some evidence, at least, of concern about particular conditions in the economy of the school, if not of attempts to secure unity. If knowledge of the actual conditions in the public schools, and of the typical results of public school work is essential to a proper adjustment of courses, etc., one might hope to learn from the list of faculty committees something of how the need is met. Finding no committees of the faculty bearing on such needs one might then turn to the extension department in a further search.

At all events, such committees as exist must be for *some* purpose; and the list of faculty committees would show something of the range and

nature of the *recognized* extra-classroom activities of the faculty, and perhaps something of the fields and levels of operation of the school.

The setting up of committees of the faculty to deal with howsoever important activities would not, of course, ensure any relevant attainment. A very bare and incomplete list of faculty committees covering only the occasional concerns of social and disciplinary tasks and the most formal routine of administration, *might* go hand in hand with the most purposeful organization for the most difficult and important of the characteristic problems of schools for teachers,—especially if the school were quite small. In view, however, both of the shifting or impermanent personnel of schools for teachers and of the comparatively small proportion of professionally prepared teachers available for the “academic subjects,” it would suggest *the absence of an active sense of the supplementary relation of schools for teachers to the public schools and of the characteristic or differentiating purposes which set the peculiar problems of schools for teachers*. The suspicion would be raised that the work of the school might be formal, and that organization though tight might be visionless because purposes were not obviously clear.

It is equally clear that a beautifully complete list of committee activities might be made and amount to nothing; or that it might be made and so operated as to divert the energies of its most valuable teachers from the essential work of the classrooms. Nevertheless, the recognition of conditions calling for extra-classroom study by the faculty, and of the values to be had from co-operative effort in such work, is more promising than the absence of such recognition. Attainment through committees, however, depends upon several factors. For example, it depends first of all upon the clearness and persistence of the purposes underlying the setting up of committees for particular ends. It depends upon selecting the proper personnel for the committees,—especially for the chairmanships. And finally, it depends upon setting up provisions which will furnish effective motives for activity by the committees. Committee work must be made possible, for instance, and compatible with other responsibilities. If possible, it should be made desirable; but at all events it must be made important enough to be *done*. This is the work of the President. There are various ways of doing it.

The first inquiry is simply, what committees exist? The Year Book for 1917-18 gives the following list:

1. Committee on Entrance.
2. Committee on Advanced Standing.
3. Teachers' Bureau.
4. Committee on Women's Welfare.
5. Committee on Men's Welfare.
6. Press Bureau Committee.
7. Committee on Official Publications.
8. Committee on Physical Education.
9. Committee on Faculty Club.
10. Committee on Public Exercises.
11. Committee on Chapel Specials.
12. Committee on Student Programs.
13. Alumni Committee.
14. Committee on Student Receptions.
15. Arts-Crafts Committee.
16. Committee on Educational Progress.
17. Research Committee.
18. Vocational Committee.
19. Committee on Woman's Building.
20. Museum Committee.
21. Committee on Scholarships.
22. Committee on Lyceum.

23. Committee on Courses of Study.
24. Committee on Y. M. C. A.
25. Committee on Y. W. C. A.
26. Committee on Class Officers.
27. The Survey Committee.

Of this list of faculty committees, ten are new,—*i. e.*, they do not appear in the Year-Book of 1916-17. They are the following:

1. The Committee on Students' Programs.
2. The Committee on Scholarships.
3. The Committee on the Faculty Club.
4. The Committee on Chapel Specials.
5. The Committee on Lyceum.
6. The Committee on Y. W. C. A.
7. The Committee on Y. M. C. A.
8. The Committee on Class Officers.
9. The Committee on Courses of Study.
10. The Survey Committee.

On the whole the new list of faculty committees is more compact than that of 1916-17 and preceding years. The chief change of policy that appears to casual inspection is the centralizing of functions and the decentralizing of authority,—or rather *the wider use of the faculty*. For example, in the former list are five committees apparently sharing the function of making courses. The Junior College Committee dealt with the two-year curricula; the Senior College Committee dealt with the two additional years of work leading to the A. B. degree; the Graduate College Committee dealt with the courses of graduate students; the Extension and Summer School Committee dealt with non-resident and summer school courses; and above all these, apparently, was the executive committee, presumably receiving and making such changes as it saw fit in the work of the other committees. These were all consolidated in one *Committee on the Courses of Study*. Of the new committees added, some might be significant either for progress or perhaps the opposite.

The first point of interest in the list of established committee activities is simply its possible relations to the conditions existing in the school—and of course to the characteristic purposes and typical problems of schools for teachers. The list suggests obvious gaps in the provisions made to focus the faculty. But the titles indicate that some seventeen of the committees might deal with matters quite important in the economy of the school. The complaint about the inconsecutiveness of students' work might be met by the *Students' Program Committee* and the *Committee of Students' Advisers*. The recognized lack of unity of purpose and effort in the faculty, the lack of correlation between departments, the great individual freedom to originate and abandon courses, etc., might be somewhat met by the *Committee on Courses of Study*. It could hardly work without making clear definitions of the differentiating responsibilities of schools for teachers; and it could hardly evaluate the situation at all without discovering the duplication of instruction which exists in the school. Its conscientious operation might lead to provisions bearing more directly on the departmental isolation discovered. The *Research Committee* would, if its function were defined with reference to the differentiating responsibilities of schools for teachers, and if provisions were made to secure continuous activity, be almost certain to sharpen the definitions of function and the conceptions of pressing tasks,—and so it would be somewhat a unifying activity. Beyond this, however, it could hardly help bearing upon the need of dynamic relations with the public schools; and along with it the committee on *Official Publications* could perhaps be part of a program to bear upon the needs of teachers; while the *Committee on the Faculty Club* and the *Committee on Educational Progress* might to some extent be unifying agencies. The committees on *Student Welfare* and the committee on *Physical Education* might perhaps bear purposefully on the important problem of conserving the

health of students, which ordinarily receives little sincere attention, and might look toward establishing the long needed medical supervision of the students; and so on. The Survey Committee would necessarily be a unifying activity.

On the other hand the existence of a faculty committee on *Class Officers* suggests that the student body might be faculty-ridden,—unduly dominated in what should be their own affairs. Along with the list of rules governing the students' disposition of their time, it raises the question of the modernity of government in the school. And the *Committee on Lyceum* raises also an interesting question,—whether perhaps lyceum courses, like chautauquas, do not belong to the earlier period of community isolation and of undeveloped educational resources of higher schools. At all events such questions merit some effort toward explanation.

Since the functions of the committees are not defined, it is necessary to explore them further. The second inquiry is obviously, *What do the committees do?*

If the list of faculty committees *is actually part of an educational organization*, it will always be possible to get some definite and pertinent information in regard to the work done by the committees. For example, the functions of the committees will have been defined by somebody, and from these definitions some idea of the importance of the responsibilities can be had. Functions would have reference to problems, of course. Something of probable relationship between functions would be suggested. In view of the shifting personnel of schools for teachers it would be thought necessary to keep records of committee work which among other things would facilitate the adjustment of new committee members. Method of procedure would get formulated, and guiding principles would gradually become clear, and so on.

As a clue to what the committees of the faculty do in this school, the following questionnaire was framed and sent to the chairman of each of the faculty committees with a definite date set for closing the returns.

#### Questionnaire of Faculty Committees

Kindly provide the Survey Committee with

1. A precise formulation of the function of your committee.
2. A full statement of its established relation, if any, to other committees of the faculty and to other activities of the college.
3. A list of the relations not established but which in your opinion should be established between your committee and other committees or other activities of the college.
4. A clear statement and illustration of the nature of your committee's problems.
5. A careful description of the organization whereby it is enabled to bear successfully upon these problems.
6. A concise formulation of the guiding principles of your committee.
7. A clear statement of the reasons which in your opinion justify the college in continuing or abandoning your committee.

The Survey Committee was especially concerned to have responses from the nine or ten committees whose work might be of considerable importance in the economy of the school; for example—

1. The Students' Program Committee.
2. The Committee on the Courses of Study.
3. The Research Committee.
4. The Committee of Students' Advisers.
5. The Committee on Women's Welfare.
6. The Physical Education Committee.
7. The Entrance Committee.
8. The Advanced Standing Committee.
9. The Committee on Official Publications.
10. The Alumni Committee.

In addition to these the committee desired the statements that might be made by the *Lyceum Committee*, the *Committee on Class Officers*, and the *Committee on Chapel Specials*. The latter might suggest the conception held of the function of the General Assembly.

Twenty-two responses were received from the twenty-seven chairmen. Unfortunately the committees on *Class Officers*, *Chapel Specials*, *Physical Education*, and *Women's Welfare* did not respond.

Since the bulk of the returns is small the more significant ones are printed in full, each under the title of the committee concerned.

## I. RESEARCH COMMITTEE

### 1. "*Formulation of Function.*"

The function of the research committee has never been very specifically defined. The committee was established in the year 1910-11 with the following assigned function: "Organization of research work in the institution, its promotion, etc." Since the inception of the committee there has been no restatement of function. This year, however, the committee discussed the matter of function and agreed tentatively on the following:

- a. To encourage the members of the faculty to undertake the investigation of problems in which teacher-training schools are vitally interested. The problems are essentially three-fold in character as follows:
  1. Histori-educational.
  2. Socio-educational.
  3. Psycho-educational.
- b. To undertake the solution of any educational problem which is either new, disputed, or inadequately known.
- c. To co-operate in doing research work with the public school authorities of the state, especially with the Department of Public Instruction, for the purpose of securing data on questions under investigation and the opportunity for original studies to authorized investigators.
- d. To recommend for publication as research bulletins reports of original investigations.

### 2. "*Full Statement of Established Relations to other Committees and Activities of the College.*"

No such relations have ever been officially established, but the committee in its work has assumed them to exist. For example, on account of dissatisfaction in the training school with its number work, the committee made a brief survey of the work in addition and followed this up with an original study of the subject. Between this and other committees, however, I am not aware that any reciprocal services have been rendered.

### 3. "*List of Relations Which in Your Opinion Should Be Established.*"

The research committee should serve other committees and other activities of the school by,

- a. Inviting other committees and those interested in other activities of the college to refer the problems which hamper their work to the research committee for solution provided they fall within the function of the committee.
- b. Conferring with those interested in other activities in regard to problems whose solution might prove helpful.
- c. Encouraging those interested in other activities to undertake (with the assistance of the research committee if desired) the solution of their problems.

Other committees and departments of the school should render aid to the research committee by,

- a. Giving opportunity for working out problems in their respective fields of activity.



- b. Responding to requests for surveys or statements of conditions in their fields of endeavor.
  - c. Making note of and presenting to the research committee any significant educational problem which has come under their observation.
4. *"Statement and Illustration of Nature of Committee's Problems."*
- a. Securing administrative recognition for research work. Thus far practically no provision has been made for the time required to put the committee's program of work into effect.
  - b. Its problems embrace all of those unsolved educational problems in which teacher-training schools were vitally interested. (For illustrations see point 7: also point 5, b, 10.)
  - c. Encouraging a faculty to do research work, which is too largely composed of members who have had little or no training in making original investigations.
  - d. Elimination of the attitude that the research committee should not undertake the solution of problems which arise in the other educational activities of the college; or, effecting a willing cooperation between the research committee and those engaged in other activities.
5. *"Description of Organization for Solution of Problems."*

I shall treat this point under two main headings: 1. The plan which the committee followed prior to 1917-18 for the purpose of performing its function. 2. The committee's present plan for solution of the problems enumerated under point 4.

- a. Plan prior to 1917-18.

As the committee has not kept any permanent records, I am unable to describe its organization before I was made chairman of the committee in 1914-15. At this time the committee assumed the function of undertaking the solution of those educational problems upon which the college or other institutions of the state sought information which was not at hand.

The committee endeavored to perform this function in the following way:

- 1. By having meetings at the call of the chairman for the purpose of,
  - a. The presentation and discussion of research problems.
  - b. The selection of problems by the members of the committee.
  - c. The discussion of reports on progress made by the members of the committee.
- 2. The approval of proposed investigations by the president of the college.

No more ambitious program was undertaken by the committee, because no extra time was allowed for the work.

- b. Present proposed plan of coping with the problems enumerated under point 4.

- 1. To secure more adequate administrative provision for the committee's work by presenting to the president of the college for his consideration a report covering the following main points:
  - a. Necessity of making research work one of the most important functions of the college.
  - b. Functions of the research committee.
  - c. Organization of the committee.
  - d. Principal obstacles to research work.
- 2. A revision of the committee's organization. The following organization has been proposed and adopted by the committee:
  - 1. The membership of the committee shall be limited to five.
  - 2. No person shall be eligible to membership in the committee who has not made and published the results of at least one original investigation.

3. No person shall be made chairman of the committee who has not made and published the results of at least two original investigations.
4. No person shall be a member of the committee who has been absent from any of its meetings without sufficient cause as determined by the other members of the committee.
5. No person shall be a member of the committee who is not actively engaged in some research work or who fails to make, at least once a year, a report of progress which is satisfactory to the committee.
6. The president of the college shall appoint or authorize the chairman of the committee to appoint one of the members of the committee to confer with the State Department of Public Instruction in regard to ways and means for cooperation in making needed investigations.
7. Each member of the committee shall interview two or more members of the faculty in regard to possible research problems in their respective departments. As the professional departments are well represented on the committee, preference shall be given to the academic departments.
8. Members of the faculty may have the assistance of the research committee in working out important educational problems. To attain this end, they are invited to report (orally or in writing as the nature of the problem may require) to the committee on the progress of their work.
9. With the approval of the principals of the training schools (elementary and high) or the teachers of classes which may be involved, and the president of the college, pupils and students may be used as subjects for carrying on investigations.
10. Problems arising in any of the departments of the college or in any of its committees may be presented to the research committee for solution, provided they fall within the functions of the committee.

For example, many problems arise in the *Course of Study Committee* which should be presented to the *Research Committee* for solution. Among them may be mentioned, the needs of the school communities which most of our graduates serve; the worst shortcomings of our graduates; the relative difficulty of the several professional and academic subjects for most of the students.

The commercial arts department may be unable to accommodate all of the students who apply for admission, without having any means of selecting the most promising students for the work. Under such conditions it should call upon the research committee to devise tests or standards for making a wise selection.

The training school department may be unable to tell whether the synthetic or whole word method of teaching writing is best for beginners; or whether one method is best for some and the other for others. It might wish to know the order of difficulty of the combinations in addition or multiplication. In the solution of all of these problems, the research committee should be of assistance.

11. Provision shall be made for a prompt response to recommendations for publication.
12. At the discretion of the president of the college and upon the recommendation of the committee, the teaching hours shall be reduced to twelve as a minimum for those doing research work of sufficient importance to teacher-training schools.
13. If the pursuit of research work requires it, the college shall make provision for defraying the expenses of the same.

14. The secretary of the committee shall keep a type-written record of the minutes of every meeting of the committee.

15. The committee shall meet while the school is in session on Tuesday at 3:30 P. M. at the call of the chairman.

6. "*Formulation of Guiding Principles.*"

Only those principles are given here which have not already appeared under the headings of function and organization.

- a. Other things being equal, those problems shall be given the preference which are believed to be most significant for the college.
- b. No investigation shall be published in which the methods of modern science have not been strictly adhered to.
- c. Reports on investigations shall be received by the committee in strict confidence.
- d. No member of the committee shall be obliged to undertake the investigation of a problem which is foreign to his interest.
- e. No more than two of the members of the faculty shall work jointly on a single problem.

7. "*Reasons for Continuing or Abandoning the Committee.*"

In order to promote educational progress, educational institutions must undertake the solution of the many unsolved problems in the field of education. These problems occur primarily in the historical, sociological, and psychological aspects of education. The historical problems arise from a poor and inadequate account of the origin and of the progressive steps in the development of the teaching of the school subjects and of school organization and administration. The best progress in the teaching of the several school subjects and in school organization and administration cannot be made without knowledge of their origin and past progress.

The sociological problems arise primarily from a vague and uncertain statement of the aims and values of education and instruction. Other things being equal, the more clearly the goal of education and instruction can be seen the better it can be realized. Education must remain inefficient so long as professed educators authorize the teaching of materials found in text-books which were written by men who in selecting their subject-matter were guided mainly by the standards of personal interest, formal discipline, and the needs of the past. Original studies in present sociological conditions and needs are indispensable to a clarification of the aims and purposes of education.

The psychological problems arise chiefly from an inadequate knowledge of the nature of children, their capacities, their differences, the nature of their development, and the method of treatment essential to realizing the aims of education in the best possible way.

- b. The wholesome effect of research work upon the faculty:—Nothing in the whole circle of school activities has a more quickening effect upon the members of the faculty of an educational institution than the solution of educational problems. Successful research work gives the investigator enthusiasm for work, a feeling of power, and a keen interest in and knowledge of the problems peculiar to his field of endeavor. It also gives him standards for the correct evaluation of the investigations and writings of others. *Well organized and directed research work is probably the best means at the disposal of a college president for training his faculty in service.*
- c. The effect of research work upon the rank of the college:—The institution which does not produce original work can never hope to attain a standing among other institutions and educated men. An institution which does no more than present the thoughts of others and follow the educational trails blazed by others may become large but never great. Apart from general educational problems, there

are those which are peculiar to each institution. As these will never be solved by other institutions they must, without research work, remain permanent barriers to progress.

## II. COMMITTEE ON COURSE OF STUDY

### 1. *Need of This Committee on Course of Study.*

The program of studies, the number and arrangement of curricula, and the various courses offered, are unmistakably indices of the standing of any institution. If the courses of study are not progressive, then the institution shows lack of progress. Not only are curricula needed which prepare teachers for the various teaching positions, but it is just as highly important that courses be formulated with the idea of "*definitely and sharply meeting actual ascertained conditions.*" Since these conditions are continually changing, the courses and curricula of the institution must also be changed. Even if all the necessary data were at hand to formulate a perfect course of study today, there would still be need of a new course tomorrow.

It is of course useless to say that all the desired data are available; neither are all conditions favorable for making a perfect course of study. As data are secured and conditions become more favorable, the *Committee on Courses of Study* changes requirements. The fact that all Normal Schools and Teachers' Colleges are making their most rapid changes now, and that teachers need more than ever to get the social point of view in order that they may meet the requirements of the new social order, it is imperative that the *Committee on Courses of Study* work overtime, if it expects to keep Colorado State Teacher's College on the map with a progressive program of studies, with up-to-date curricula which will meet the needs of all teachers preparing for a vital teaching profession.

There is, then, a very real demand for a *Committee on Courses of Study*, provided it realizes the true function of such a committee in such an institution as Colorado State Teacher's College, and proceeds to modern principles of curriculum making.

### 2. *The Function of the Committee on Courses of Study.*

The function of this committee is to formulate changes in the constituted curricula of this institution, to institute new curricula when there is demand, and to advise the discontinuance of any curricula which have become obsolete as a preparation for teachers of this state or section; to suggest new courses, and syllabi of either new or old courses if in the opinion of the committee, changed conditions justify. The Extension Department, with the offering of some two hundred and twenty-five courses, affords the committee one of its largest fields of usefulness along this line. It is highly important that the courses offered by correspondence not only be worth while but that they be the best that can be offered in that field by this institution. But without pressure being continually applied by some individual or committee, the courses offered in the Extension Department may be at least not wholly worthy of this Teachers College.

### 3. *Obstacles to the Work of Committee on Course of Study.*

There are many obstacles in the way of the committee's wisely carrying out its functions, among which might be named:

- a. Lack of well-defined guiding principles in the minds of the entire personnel of the committee.
- b. Lack of data with regard to needs of the state for the various types of position, number of graduates from the various curricula of this institution, together with the type of positions they secure, so as to intelligently plan required courses and curricula.
- c. Lack of much needed intelligent cooperation with other faculty committees. If this correlation of the work of the various committees were observed, there would not be such a dearth of data.

For instance, the research committee might furnish data concerning the greatest needs of the state so far as teaching positions

are concerned. It may be that if the *Committee on Courses of Study* were made to feel the serious shortage in well-trained rural teachers, it would recommend to the President of the college that the *County Schools* curriculum and department be materially improved and extended. There is a serious need of close cooperation with Director of Extension as proper courses are developed and offered in that Department.

There is need of cooperation with the *War Council* so that each course may be made to reflect, to some extent at least, the social conditions as they exist because of the war.

There is needed by this *Committee on Courses of Study*, the information which the committee on the placing of teachers might give. Such data as the number of graduates from the various courses, the sort of positions secured, etc., are very much worth while to the *Committee on Courses of Study*.

The duties of the *Committee on Duplications* and those of the *Committee on Courses of Study* are interrelated.

The *Survey Committee* will have some facts which will be valuable in assisting the committee on *Courses of Study* in arriving at a sane basis for reorganizing certain curricula and courses, perhaps.

The *Committees on Text Books and Library Material* should be advised that the most efficient presentation of many courses offered in the institution is getting interfered with because the most valuable and most recent literature on that subject may be at the bindery, or more probably in the library store room packed for binding. The school should have access to any material within ten days after it is desired by any faculty member for class work. Particularly is this delay in securing material detrimental to Extension courses. When a student is required to wait two or three weeks for material the interest in the course is dead.

- d. Lack of means of placing the work of the committee before the teachers and school men of the country. Since the annual catalogue is not read, some other agency such as bulletins which give concretely the information needed concerning our courses, should be published.
- e. Lack of a thoroughly unified faculty. *It is impossible to get an adequate response from faculty members on any question regardless of its importance.* To a very important question in regard to needed changes in the curricula of the institution, less than fifteen members of the faculty responded. So long as this condition exists, the *Committee on Courses of Study* cannot hope for a realization of its functions, even though it plans a progressive program of studies. Their work is of little avail without the cooperation of a progressive faculty.

In order that the above difficulties may be overcome to as great a degree as possible the guiding principles shall be reviewed and changed if such change seems advisable, at the beginning of each year, and the type of organization essential for carrying forward progressive curricula effected.

#### 4. *Guiding Principles in Curricula Making.*

"The general principles that are to guide course makers in Teachers' Colleges must be found in (1) the aims of education, (2) the definition of the function of teachers colleges in the field of education, and (3) the limiting factors of the historical situations in which they operate.

The aim of education "is to *CAPITALIZE INDIVIDUAL CAPACITY FOR SOCIAL PURPOSES.*"

"The function of a Teachers College is *TO PUT TEACHERS IN THE WAY OF CAPITALIZING INDIVIDUAL CAPACITY FOR SOCIAL PURPOSES.* More specifically a Teachers' College is to enable teachers

both to discharge acceptably their usual duties in the public schools and at the same time to cooperate intelligently with the spirit and in the technique of modern education."

In regard to the limiting factors of the historical situations, one might remark that "a course for teachers which was so modern as to ignore custom, tradition, and the like, would also be so detached from conditions in the field as to be ignored by practical school men. The way of progress is evolution rather than revolution. It is by progressive forward-facing adjustment to existing conditions, aims, materials, organizations, practices."

Only with definite principles before a committee on course of study can a Teachers' College hope "to insure to society, teachers who will be able to provide a citizenry competent to meet its impending problems efficiently." In short, the *Committee on Courses of Study* must have definitely in mind "what social needs are most pressing, what opportunities exist in public schools for making knowledge of these conditions dynamic." (These quotations are from *Guiding Principles for the Committee on Course of Study*, by E. D. Randolph.) And it must then frame the program of studies with curricula and courses which will imbue every prospective teacher, so far as possible, with this same respect—even reverence—for social conditions.

The following three general principles formulated by Mr. Randolph were adopted:

1. That, since schools for teachers have certain general and characteristic responsibilities that differentiate their work from that of liberal arts colleges they must require of all graduates a core of *common studies*, the "*professional studies of schools for teachers*," which represent the *professional responsibilities* common to all *public school teachers*.
  2. That since each well-marked teaching position represents in addition to these *common* (or *professional*) *responsibilities a group of specific responsibilities peculiar to the grade of the work and the age of the pupils, additional requirements covering these specific responsibilities should be added*,—giving a number of differentiated curricula corresponding to the typical school positions.
  3. That beyond these two sets of requirements the elective principle should be applied.
5. *Organization of the Committee on Courses of Study.*

In order that the best results may be attained, the following organization of the committee seems essential:

The committee shall be composed of at least seven members with representatives from the departments of Extension, Education, Psychology, and Training Schools. Furthermore, it is advisable to have the following faculty committees represented on the Committee on Course of Study: Research, Advanced Standing, Duplications, Official Publications, Teachers' Bureau.

There should always be a majority of the committee who have been members of the committee at least one year, if it is possible to secure such majority from the faculty.

It is advisable that the chairman of the committee should have had at least two years' experience on the committee.

There shall be a secretary who shall keep a careful record of the work of the committee.

In order that the work of the committee may be carried forward more expeditiously, the following sub-committees are appointed for the year 1918-19:

Text books and syllabi for courses, Heilman, Smith, Randolph; Extension, Randolph, Smith, Wright; Research, Heilman, Hotchkiss; War Council, needed changes due to changed social conditions, such as the war, Smith, Barker; Teachers' Bureau, Cross, Bell; Duplications, Hotchkiss,

Bell; Survey, Randolph, Cross, Heilman, Smith, Hotchkiss, Wright; Library, use of current magazines, Barker, Randolph, Smith; Bulletins on Course of Study and Revision of Courses as printed in present catalogue, Cross, Randolph, Wright.

### III. COMMITTEE ON STUDENTS' ADVISERS

#### *Functions.*

1. To offset the students' inability to understand the Year Book by giving assistance in making out programs acceptable to the College.
2. To distribute the students as evenly as possible each quarter over the required courses of the College.
3. To protect the students' interests by so far as possible *starting* them with a program that will be stimulating.
4. To collect and classify data for the use of the College,—concerning the operation of its machinery.

#### *Relation to Other Committees.*

The Committee has been only three months in operation, and as it had to start without a chance for a preliminary canvass of its problems it has as yet had none but chance opportunities to direct its own work.

A few generalizations from this blind experience may be made however.

1. This committee must be organically related to the *Committee on Students' Programs*,—by which some of the most important problems of the *Student Advisers' Committee* are discovered.
2. It must also have relations with the *Committee on Advanced Standing*,—because advice to students who are part way through the college without ever having been in it before must not be given blindly.
3. It should have relations with the committee that composes the Year Book.

#### *Nature of the Committee's Problems.*

1. To get the Student Advisers to study the Year Book.
2. To dispose of the idea that college requirements are inflexible and must be enforced regardless of the students' interests.
3. To indicate the need of an organization for distributing students for their own better advantage and the more economical administration of the curricula.

#### *Organization of the Committee.*

A committee can not have an *organization* until it has something to organize for,—i. e., until it knows *what its problems* are. The Committee was formed at the beginning of this year and had to begin its work without a meeting. Some of its problems are clear: e. g.

a. Obviously those who advise students should understand the Year Book.

1. For such situations as this, we apparently need a *Study Organization*,—or a quiz class.

We can obviously improve somewhat the distribution of students over the courses offered each term.

2. For such problems as this we need to adopt a provisional routine, checking the distribution of students and notifying advisers of full hours, etc.

#### *Guiding Principles of the Committee.*

A committee can not have much in way of formulated principles until it has listed all its important problems and has perfected its organization. It can only set up a general aim provisionally.

1. To distribute students each quarter as evenly as possible over the required courses.
2. To prevent over-crowding of required courses in the fall and winter

quarters. It would be better to have classes of thirty throughout the year than heavy classes for two quarters and very light ones a third quarter.

#### *Reasons for Continuing the Committee.*

1. Students apparently do not find the Year Book usable. Until more psychology is applied to the composing of the Year Book it will be necessary to have help provided for the student who is just entering the school. The *Year Book* is like a text book. It is organized for convenient reference for those who presumably have a grasp of the whole field. It does not, however, represent the organization that is best for the learner, who knows nothing of the field. If the Year Book is for prospective students, its problem is quite different from the problem of making a ready reference book for the college officials.
2. There needs to be some group of people connected with the work of operating enrollment in classes who can collect concrete instances of the kind of difficulties that are met, and classify them for the use of the college in perfecting its machinery.
3. A part of the duty of every educational institution is to give training to its teachers. This committee represents one of the phases of training that teachers need as well as a fair opportunity to give it.

#### IV. STUDENTS' PROGRAM COMMITTEE

##### *Function.*

This committee as it has thus far operated is really a committee on Students' Standing,—which because of its knowledge of the work of students is in a position to discharge certain other necessary functions of the college.

1. To protect the college standards against the credit seeker by checking up the work of the student in his classes here, or his past record as a student. Extra hours of work are not granted to students who can present no evidence of the right to have more. Ability to do high grade work is the basic test of right.
2. To protect the exceptional student against the arbitrary operation of a generally useful rule limiting the amount of work that can be taken per quarter. No college has a right to hobble its exceptional students by barring all short cuts to graduation.
3. To assist the students who enter the college in mid-career (through advanced standing) to adjust to the college's requirements most economically.
4. To collect and classify data for the use of the college in perfecting its machinery.

##### *Relation to Other Committees.*

The present chairman has been in position only three months. He found no evidence of committee organization or formulation of problems or statement of relations or expression of principles. Heavy class work and still heavier committee work have prevented him from working out completely the proper organization of this particular committee.

1. This committee must first of all have an organic relation to the *Student Advisers' Committee*,—because the problems of the latter are in fact best discovered by the *Committee on Students' Programs*. The failures of the student advisers become apparent to the *Committee on Students' Programs*.
2. It should have the same relation as the *Committee of Student Advisers* to the *Committee on Advanced Standing* and the *Committee on Entrance* for the same reasons, q. v.
3. Both this committee and the committee of *Students' Advisers* should



at stated intervals present a report to the *Faculty in Council*,—but only upon matters which *joint response* of the faculty is desirable.

4. Both of these committees should on occasion meet with the *Committees on Advanced Standing and Entrance* to discuss the effective interrelations of their work.

#### *The Nature of the Committee's Problems.*

The problems of the committee arise from several sources.

1. The student adviser's imperfect acquaintance with the Year Book.
  - a. Miss \_\_\_\_\_, with advanced standing shortening her course, reached the second quarter without knowing that she had any required work to do.
  - b. Miss \_\_\_\_\_ was given a term in Spanish "to fill up her program," and was not told that she must have a year's Spanish to get credit for *any* Spanish. Since there is no statement to that effect in the Year Book this may be counted a fault of the college as a whole rather than of the adviser.
2. The student adviser's loose conscience in regard to the interests of the student.
  - a. It is the adviser's first duty to protect the interests of the student. To assign a term of Spanish to a student who doesn't intend to take more Spanish is to be remiss; to regard the college requirements as inflexible,—to be enforced regardless of the student's interests,—in also to be remiss.
3. Lack of relationship between this and the committees on *Advanced Standing and Entrance*.
  - a. Miss \_\_\_\_\_ reports having repeated here a course in Psychology which she took as a senior in the Decatur, Illinois, High School. This is wrong and unnecessary.
  - b. Miss \_\_\_\_\_ reports having repeated a course here in Household Arts which she took in the Colorado Springs High School. This is wrong and unnecessary.
  - c. Another student reports having repeated here a course in geography which she took in the high school at Colorado Springs. This is wrong and unnecessary.
  - d. Miss \_\_\_\_\_ reported finding it necessary to *repeat* a course taken here, in order to complete her physical education requirements. This is wrong and unnecessary.

#### *The Committee's Organization.*

1. The chairman receives in advance of registration, the written applications of the students who wish to take more than the regular number of hours of work.
2. In committee meeting these are discussed and the obvious cases are passed on by agreement, the request being O. K.'d and retained by the chairman. The doubtful cases are parcelled out and investigated, and if found satisfactory are O. K.'d by the committee member, who then returns this to the chairman. If not found satisfactory the data are placed on the paper and it is returned to the chairman, who refuses the request.
3. A list of all who are granted extra work is kept and at mid-quarter is investigated by the committee members.
4. The organization of the committee for cooperation with the *Student Advisers'*, *Advanced Standing*, and *Entrance Committees* has not been discussed, but is probably the most important phase of the committee's organization. But a committee can not have an organization until it has a rather complete classification of *its problems*. It could not have this until it has been in operation awhile.
5. Students' applications for excess hours should be made *at least a week* before registration.

### *The Committee's Guiding Principles.*

A committee can not have much in way of formulated principles until it has listed or classified all its significant problems and has established its relationships with other committees. It can only set up rough and provisional rules.

1. To make the students' record in class work done here the test of his ability to do more than the usual number of hours of work.
2. To accept in lieu of this high marks from standard institutions from which advanced standing has been granted.
3. Sometimes to accept in lieu of either of these evidence of ability shown in responsible positions held in school work.
4. To check up before mid-quarter all students who are carrying over sixteen hours of work and to reduce this amount for all who are found to be earning less than marks of B.

### *Why the Committee Should Be Continued.*

1. Exceptional or superior students need protection against *general* rules.
2. The Dean usually has enough detail work to do without the burden of investigating the standing of students. If he has not, he might do the work of this committee.
3. The collecting of concrete data concerning the operation of the college's machinery is a business we pursue altogether too little.

## V. COMMITTEE ON ENTRANCE

### *Function.*

1. The determination of all questions relative to college entrance.
2. Since the Principal of the High School, the Dean of the College, and an additional member of the faculty constitute the committee, it is essential that there should be the closest cooperation between the *College Entrance Committee* and the *Advanced Standing Committee*. In fact both the function of admitting to college and of determining advanced standing were formerly performed by a single committee.
3. It is not necessary, in the judgment of the chairman of the College Entrance Committee, that said committee should be in close touch with any other committee of the faculty or activities of the college other than the administrative head, and the *Advanced Standing Committee*.

It is important, however, that the *College Entrance Committee* should be thoroughly informed about educational conditions in Colorado and other states, in order that it may evaluate justly the work that has been done by those students who have broken educational careers.

4. The committee is constantly dealing with individuals who for one cause or another have failed to complete their high school course, but who desire nevertheless to enter college.

The first step in the solution of these individual problems is for the Principal of the High School to confer with the Dean of the College, or for the Dean of the College to bring to the Principal of the High School persons who cannot show a diploma or a certificate of graduation from an acceptable high school. If the case presents any difficulties, a committee meeting is called and the judgment of the committee as a whole decides the case.

5. Little formal organization is necessary in carrying forward the work of the *College Entrance Committee*. The important thing is that the committee should be subject to call when difficult cases are to be decided.
- 6-7. These questions are best answered by an extract from a report to the President on the general problem of college entrance.

The report in question was made before the *Committee on College Entrance* came into existence. It is inserted here because it throws light upon the plan of cooperation which has been worked out by the

committee, and states clearly the principles upon which the committee's activities are based.

A report of the Advanced Standing Committee to the President is also presented in this connection inasmuch as the two first paragraphs deal with the problem of college entrance and state the conclusions of the *Advanced Standing Committee* on that subject.

#### EXTRACT FROM REPORT MADE TO DR. CRABBE ON COLLEGE ENTRANCE

I believe that there should be "special" students in Teachers' College, but I am sure that Teachers' College and not the desires of those who apply for admission should determine the status of each individual who enters. If this is not done the standards of the college can not be maintained, and the function of the Ungraded School for adults can not be conserved.

I believe also (and there is no personal feeling in this matter), that the man who is responsible for the classification of all high school students and has acted during the past two years as chairman of the *Advanced Standing Committee* in the college should have a voice in determining who shall be admitted to college.

The judgment of the Principal of the High School should not be final. It should be approved by the Dean of the College and the President of the College if need be, and when at fault it should be set aside, but I do feel deeply that there should be a simple, business-like, and just method provided whereby special and trial promotions to college are made and students should never be allowed to slip into college merely because they want to do so.

The plan of admitting persons who are not high school graduates to college, which is outlined below, will in the judgment of the writer, protect the standards of Teachers' College, prevent any abuse of power by the Principal of the High School, give flexibility and unity to the promotion machinery of the institution and make secure the interests of experienced teachers who may desire to enroll in Teachers' College. Furthermore, the plan can be made clear in the catalogue by use of a sentence or two. The plan is as follows:

1. That the preliminary recommendation be made by the Principal of the High School Department.
2. That this tentative recommendation be approved by the Dean of the College.
3. That the Principal of the High School present to the Dean of the College not later than the end of the first week of each school term a list of all experienced teachers who have been assigned to the Ungraded School for Adults together with a brief statement of their previous training, teaching experience, and personality.
4. That the Dean of the College may transfer, with the approval of the President, any person who in his judgment should be enrolled as a special student in the college, from this list to the regular college roll, provided that the Principal of the High School be given written notice.
5. That the President of the College at the beginning of each term shall make clear the method of admitting special students to the college.
6. That a definite and concise statement giving the method of admitting special students to the college be printed in the Summer Quarter bulletin and the Year Book.
7. That all persons who try to slip into the college without fulfilling the entrance requirements, except those who are admitted as special students in the regular way, be transferred at once to the High School Department.

#### ADMISSION AND ADVANCED STANDING

1. That admission to Colorado Teachers' College be granted to those who present a certificate of graduation showing the completion of fifteen units in an acceptable high school.
2. Mature students not high school graduates applying for admission may

- be assigned to the Ungraded School for Adults. As soon as they have completed the equivalent of fifteen high school units or show the learning power which such completion gives, they may be given a certificate of graduation and admitted to the college.
3. Credits for admission and advanced standing are granted only for actual work done in normal schools, colleges, and universities which maintain standards on a level with our own, except in such cases as are noted below.
  4. Students who receive advanced standing are held for all required subjects (Junior or Senior College) which have not already been passed. They must also satisfy the requirements set by the head of the department in which they are majoring.
  5. Credits may be granted for private lessons in music, art, language, business courses, penmanship, etc., or for courses in such subjects in private or special schools not of collegiate rank only upon a recommendation after careful examination by the heads of departments giving such work in the college. Whenever thus recommended the work must be certified as similar to and as a substitute for certain specified courses which such departments offer or recognize as a part of the training of a teacher in that particular field.
  6. Recognition of what is usually termed "life experience," such as travel, housekeeping, experience in a profession or trade, private reading club work, etc., etc., is given only in connection with the usual credit granted for teaching.
  7. The total credit for teaching granted in Junior, Senior, or Graduate College, shall not exceed fifteen hours. Additional credit for extended and successful supervision of teaching up to a maximum of ten hours may be granted.

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Chairman Sub-Committee on College Entrance.

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Chairman Advanced Standing Committee.

## VI. COMMITTEE ON ADVANCED STANDING

1. This committee evaluates the credits offered by students transferring from other colleges and schools.
2. It works independently of other committees except that it asks the *Committee on Entrance* to handle credits which seem to fall below the requirements of this college for unconditional admission.
3. No suggestions to offer as to interrelations with other committees.
4. The committee's problem stated in 1 as Function.
5. The committee has four members. An application for advanced standing is examined by one member of the committee. He summarizes his findings and then recommends to the whole committee the amount of credit to be given. The committee then by majority vote accepts, modifies, or rejects his recommendation. The student is then notified by letter from the President's office.
6. The committee accepts credits hour for hour from schools and colleges of equal academic rank with ours. It grants credit for private lessons or courses in private schools at the valuation placed upon them by the heads of departments involved. It grants credit for teaching (not over 12 hours) and for extended successful supervision (not over 8 hours.)
7. To meet its obligations to students coming to us from other colleges the committee must be continued.

## VII. COMMITTEE ON OFFICIAL PUBLICATIONS

1. Function: To collect the material, organize it and see it thru the press for all the bulletins and official publications of the college.
2. No established relation to other committees.
3. I see no need for any such established relations.
4. See function above for a hint as to our method of procedure.
5. The committee consists of three members. The chairman assigns pieces of work to individual members and asks them to see each piece through.
6. No guiding principles except that we want the publications to be attractive in form and statement and nearly uniform in make-up.
7. So long as the college publishes a series of printed bulletins such a committee or some individual must do this work.

## VIII. COMMITTEE ON EDUCATIONAL PROGRESS

1. a. To gather data pertaining to the Educational Progress of the U. S. and the world.  
b. To report such information to the faculty when requested to do so.
2. No relation to other committees of the faculty.
3. It seems to the committee that a coordinating relationship should exist between its committee and
  - a. Committee on Courses of Study.
  - b. Research Committee.
4. a. To determine the meaning of "Educational Progress" as distinguished from mere change and experimental activities.  
b. To find accurate sources of information and to know the means by which this information was secured.
5. a. Individual members of the committee have been assigned a definite number of educational papers to review, covering all magazine publications received by the college.  
b. Reports of findings are made in meetings of the committee, discussions follow, and final disposition is made of material gathered.
6. To keep members of the faculty exposed to what is going on in the educational world, either by committee reports or by reference to sources of information.
7. a. The committee should be continued:
  1. Because individual members of the faculty are absorbed in their special lines of work and as a result may lose the broader and more general perspective of educational problems.
  2. Because the committee's function is to make a special study of its problems.

## IX. COMMITTEE ON PUBLIC EXERCISES

1. Function: To assure the suitability, obvious purpose and dignity of general public exercises offered in the college.
2. Relations: This committee, which formerly worked jointly with the *Music Committee*, has this year absorbed the latter committee. It must work with the *Calendar Committee* more or less, in the making of a calendar of events for the year. It is at present cooperating with the *War Council*, to the end of planning a suitable occasion for the installation of a service flag.
3. Devised Relations: Cooperation with the *Lyceum Committee* might be profitable.
4. Problems: The main problem is the difficulty of financial support (by the student body) of the grade of entertainment we should find profitable to bring to the students. The management of the college is very

generous in support of such enterprises; but it is the desire of both management and committee to establish a fund which will serve as guarantee for proposed entertainment of an educational nature.

5. Organization to solve such problems: Responsibility of developing different phases of entertainment has been distributed among sub-committees. I believe that when more is required of these sub-committees, through the pressure of more frequent general meetings, better results will be realized.
6. Guiding Principles: To foster public exercises that serve some purpose of inspiration, instruction or wholesome recreation for the students of the college; to unify the elements of college life and activity through such exercises.
7. Justification: Such activities as fall within the scope of the committee's functions are doubtless more unified and purposeful because directed by one committee. There is economy of effort, and greater probability of a fairly high uniformity of standard.

## X. COMMITTEE ON LYCEUM

1. The *Committee on Lyceum*, composed of eight members,—four from the college and four from the city of Greeley,—has for its function the selection, contracting for, financing, and general management of a local Lyceum.
2. There is no established relation between this committee and any other committee or activity of the college.
3. To aid in the selection of talent, we recommend the establishing of an advisory relationship between this committee and the following departments of the college.
  - a. The Department of Music.
  - b. The Department of Oral English.To stimulate student interest, to aid in the sale of tickets, and to assist in promoting general enthusiasm for this form of high class entertainment, we solicit the cooperation of the following committees:
  - a. The Young Men's Christian Association.
  - b. The Young Women's Christian Association.
  - c. The Newman Club.
4. Chief among the Committee's Problems are the following: The financing of the course, owing to the great expense involved in hiring a suitable building in which to present the course. The selection of a course broad enough in its characteristics to appeal alike to faculty, students, and the public. The dating of the various numbers to prevent conflict with other college functions.
5. The committee has adopted the plan of securing a very few of the best numbers available rather than a large number of entertainments of inferior quality. By this means, it is hoped the public desire for an *Artists' Course* might be cultivated and a more universal support secured. Though the cost of a lyceum course involves both payment for the talent and the expense of the theatre, the season tickets have been sold at the lowest possible figure and a special rate has been allowed to students.
6. The committee has no thought of using the lyceum as a means of making money, so the guiding principles will be the presentation of the very highest class talent which the community will support.
7. The *Lyceum Committee* should be continued, for it is furnishing the means of bringing to the college and to Greeley a class of entertainment which is recognized by critics as being worthy of patronage and essential to the best development of the community mind. Too much is being offered from other sources which will not warrant the sanction of the enlightened public. We believe it is a good thing for the college to enlarge its sphere to include the making of some recommendations concerning the recreation of the community of which it is a part.

## XI. COMMITTEE ON MEN'S WELFARE

1. The function of the *Committee on Men's Welfare* is to provide in every way possible for the increased pleasure, comfort, and profit of the men in the college.
2. The committee has no "established" relations to other committees.
3. This committee bears a very close relationship to the following committees: *Committee on Women's Welfare*, *Committee on Physical Education*, *Committee on Y. M. C. A.*
4. Some of the problems this committee is undertaking to solve are: to maintain an employment bureau for the men, to help men to find suitable rooming and boarding places, to provide social affairs that will bring all of the men together.
5. The committee is small and does not need any special organization to meet these problems. They are discussed in committee meeting and individual members are named to look after various matters as they arise.
6. The guiding principle of this committee is: It is the duty of the committee to do everything in its power to make the college a more attractive place for men.
7. Such a committee is needed because there is plenty of work for it to do.

Having discovered what committees there are, and what they are expected to do, the next inquiry is in regard to *What provisions are made to secure their operation?*

Where the work to be done is of an *occasional* sort and largely routine in character the pressure of the occasion is usually sufficient to ensure their activity. But a different situation is faced where the work to be done involves exploration, evaluation, original explanation, and the recommendation of changes affecting the economy of a school. Such activity requires time as well as definite purpose. If it is to be *an organic part of the school* it must first be made possible, and then *provision for cumulative efforts must be made*. After this, if the work is an organic part of the school, provisions must be made to *use the relevant results* of the committee's work. This, of course, is finally a responsibility of the President.

If there is actually a thorough-going provision to secure activity from such committees it will be revealed in teaching schedules or in pay. Extra pay for such work is a less forward-facing provision than recognition in *time or teaching-load*. Teachers should always do full work. Again, if there is actually an organization to secure committee work it will be reflected at least in committee reports. And if really important work is done, probably it will also be reflected in publications setting forth the results of the committee's work. Schools operating in a given field owe some obligation to each other, and can best discharge it by some form of publicity.

If there are regular committee reports, they will be revelatory. Either they will show activity or conformity; i. e., either they will get somewhere or they will be more or less formally alike. In the latter case (which is common) the committee is only formal; it is not organized as a part of the school, and has no real status because there is no directive nusus in way of administrative provision to operate the committee machinery; or, to carry out the figure, only parts of the machinery are at hand, and no attempt is made to assemble the tool. Whether committee reports are frequent or occur at stated intervals may depend upon the nature of the committee's work. If for some committees both are required, the omen is perhaps best of all. Stages of work should be known by all concerned; and summaries at definite intervals are almost necessary as a convenient check or assurance.

Finally, if the committees are really an organic structure of the school there will be provision made for capitalizing committee experience and achievement. The shifting of personnel makes it desirable to facilitate the adjustment of new members to the tasks of the committees as a part of the economy of the school; and the purpose of the school in establishing the committees is the practical one of using its results.

There are, in short, three questions to be raised: (1) What provisions are

there to secure committee activity? (2) What provisions are there to secure continuity of effort and cumulative results? and (3) What provisions are there to make use of the relevant results of committee work?

To some extent the reports of committee organization which the chairman submitted furnish answers to the questions. For the rest the answers may be supplied from experience. The committees dealing with occasional situations or with routine work are operated by the mere *pressure of the occasions* to meet which they were established. The committees that are assumed to carry on difficult and exacting work are, unfortunately, left also mainly to the mere pressure of occasions. The committee on *Courses of Study* and the *Research Committee* offer the best examples of important committees with none but casual provision for operation. No provision either of time or pay is made for the operation of either. Under the pressure of the administrative purpose of reshaping the curricula of the college, however, the committee on *Courses of Study* has operated almost continuously since it was established (October, 1917). Its personnel has not changed appreciably; the nature of its problems has been pretty thoroughly defined; it has worked out guiding principles, and has had considerable experience in the necessary work of unifying faculty thought about courses of study; and (though with many compromises) the results of its work have been incorporated into the curricula of the college. In short, the committee on *Courses of Study* is at present an organic part of the school; but it is quite conceivable that it may not remain so.

The *Research Committee*, however, which throughout its history (up to 1917) lacked the pressure of administrative purpose, illustrates the fact that a pretty well conceived plan of very desirable activity may be ineffective as a part of the organization of the school for promoting its characteristic purposes. Throughout most of the period of its existence it merely reflected the special interests of a succession of chairmen, all of them able but none of them conceiving the work of *research* as an organic part of the school's responsibility, and consequently none of them attempting to focus the committee (and through it the faculty) upon the immediate and persistent problems of the school. In effect the activity of the *Research Committee* was merged with the activity of the rather casual committee on *Educational Progress*, whose function was, occasionally, upon request, to report to the faculty such matters of current educational effort as seemed significant. The people affected by this activity were not very numerous. There was never any serious purpose behind the committee on *Educational Progress*, but it was as nearly an organic part of the school as the *Research Committee* was. Neither was conceived as an organic structure of the school. No records of the work of either were kept,—though both had a shifting personnel. The *Research Committee* worked or not according as its members had or lacked the time and the inclination. What they worked upon had only chance relevance to the persistent problems of the preparation of teachers; and there was of course no cumulative advantage to the school from their work. Up to the reconstituting of the committee in 1917 under the leadership of the chairman who had done most to keep it alive, a single publication issued from the committee,—*A Study in Addition*, by Dr. J. D. Heilman and Professor Frank Shultis. This was a study of comparative achievement in the teaching of addition in the Training School and the public schools. Its very clear findings, fully based on carefully gathered data, were received with such marked disfavor as effectually deterred the committee from further effort of the same practical sort. So far as can be discovered up to date (1917) only one other piece of work was ever completed by the committee. It was not printed.

In conception the *Research Committee* as reconstituted in 1917-18 is an organic structure of the school. It is theoretically, at least, restored to the possibility of great usefulness, being free to pursue any quest it may elect. But lacking administrative provision for its operation, it is still in fact somewhat outside the school organization. Among its several purposes (see pp. 94-97) is the very important one of stimulating research throughout the school upon such problems as discovering what the characteristic failures of public school instruction are in each of the school studies; what the extent of the failures is; and what the causes of the failures are. This important purpose has hardly been embarked upon yet. One tentative study of typical errors



in English in the Training School was initiated in the English department; and one quite significant search for principles underlying the courses of study in English in the Normal Schools of the United States was begun,—but never finished. For awhile it seemed that serious studies of the results of public school work in several of the school studies would be undertaken; but all were merely flashes in the pan. The college knows no more than before of the typical unsuccesses of the public schools in teaching the school studies. And of the external factors which, because they condition its success, should affect its internal activities, it knows no more than before.

The failure is not due to neglect by the committee or lack of interest by the President, but simply to the difficulty of initiating such activities in a faculty unaccustomed to make critical inquiries, and to the fact that the teaching load of the faculty is quite heavy. The President reduced teaching hours for all by about 11 per cent,—without apparently freeing much energy for original work. To some extent the expansion of extension service absorbed the leisure thus created; but the reorganization of extension service and its expansion seemed a necessary part of the program for discovering needs. The real explanation of the failure lies deeper,—in the fact that the school does not possess a corporate consciousness of the characteristic or differentiating purposes of Teachers' Colleges. This, however, is in prospect. The same explanation covers the absence of important activities bearing upon the interests of the students and the supplementary relation of the college to the public schools. Some of the more important of these will be outlined in the following paragraphs.

Two groups of *student interests* need in every school a special and dynamic organization. The functions of both are protective. The first and most important, as well as the least attended to, here and elsewhere, is the *health interest*. The second, also quite vital, has to do with the classification and supervision of students,—especially the discovering and capitalizing, promoting or advancing, of superior students. Both of these might be expected to be recognized in the extra-classroom activities of the faculty,—in committees if not elsewhere.

It was desirable therefore to examine with care the work of the faculty committees on *Physical Education* and the two committees on the *Welfare of Students* (men and women). The potentialities of such committees under a forward-facing administration are quite obvious,—partly because they have hitherto so generally received so little but *formal* recognition.

In view of the public health situation disclosed in the last few years, the importance of college organization to bear upon its own relations to the situation is now far beyond the possibility of reasonable question. The responsibility of the college covers not only the matter of new and more relevant courses of instruction, but also a few complex and highly important extra-curricular activities, part of which might be discharged by faculty committees on *Physical Education* and *Students' Welfare*. Every higher school must sooner or later both *acknowledge and honestly endeavor to meet its responsibilities not only for conserving but also for promoting or advancing the health of students. This however, is doubly an obligation on colleges for teachers, because upon their graduates rests the responsibility for conserving and advancing the health of the rising generation and of building up in it the necessary support for future improvement.* The state of health of public school teachers is no less important than the level of their knowledge of the prevalent conditions and common menaces of health. *No college for teachers can reasonably be considered fit for educational leadership if it does not recognize both the actual deficits in the health equipment brought by its students to the college, and its own moral and professional obligation to improve that equipment.*

Such responsibility would obviously cover provision for scientific investigation or diagnosis of every student in the college, for the sake both of the student and of society,—in the rising generation especially. To discharge this function would require the employing of a physician thoroughly equipped for the complete and scientific physical examination of the students. And when this is done the next requirement is simply the practical one of *utilizing the*

results of such investigation in the interests of the students,—and, through them, of society. The known tendency of higher schools (which, as a matter of traditional academicism, too frequently still have a pre-scientific attitude toward health) to adopt forms rather than *dynamic purposes*, requires that the work of health-conservation and advancement, be definitely organized to *get practical consequences from knowledge of health conditions*. Some of these are very obvious, and yet neglected. For example, the known facts of *malnutrition* of pupils in the public schools and of students in colleges point conclusively to the obligation of schools to deal with the practical problem of *removing malnutrition* in their students. Concretely, this is the obligation to provide intelligent oversight of boarding-house dietaries, and to follow up individual cases of malnutrition. Beyond this, it may be necessary in the end for colleges to provide their own tables for students. At all events, such dietetic standards as have been established should be fully recognized by higher schools. There are of course numerous possible difficulties. Funds may be lacking, for example; but a leadership school should be engaged in shaping public opinion to support efforts to *live on the present level of scientific knowledge*. Funds are not likely to be provided for those who make no effort to educate the public to present needs. Again, the failure may lie for the time being with public food vendors; but this—again is not valid excuse,—as the Westfield, Massachusetts, Normal School has abundantly shown. In the end the failure must be charged either to ignorance or the lack of good will. It is of course only the former that operates; but the results are not substantially different from what they would be if it were the latter.

Again, the known prevalence of tuberculosis, the known and easy routes of its transmission, and especially the known importance of *early diagnosis* and of a *saving regimen* would point of course to further practical needs, especially in higher schools in Colorado, and still more especially in schools for teachers. The general requirement of “physical education” (exercise!) must in all schools be qualified by the results of scientific physical examinations of the most thorough-going sort; and regardless of religious attitudes that may be pleaded by those seeking exemption, it is the *plain moral obligation of the school to protect both the student and society through the unvarying application of this program*.

In view of these clear obligations it is significant that the committee on *Physical Education* had no report to make of its functions or activities. It was, in fact, only formally in existence in 1917-18. Emphasis was placed upon athletics, which, though both men and women were concerned, proceeded frankly on the unwarranted assumption that health conditions, in Colorado and elsewhere, were so good that the provision of regular exercise was the only conservational or protective activity needed. The educational aspect of the problem was confined to the development of outdoor games, and the like. There was no health supervision. If students were sufficiently sick they consulted a physician.

In short, so far as the health interests or needs of its students are concerned the Colorado Teachers College is at present (1917-18) without plan or program. It makes none but purely formal recognition of the health needs of its own students, and not very great recognition (through courses of instruction) of the relations of its graduates to the public health situation known everywhere to exist in Colorado. The critic who, whether from malice of the reformer's zeal, might examine the school could not discover another so vulnerable point of attack as this condition of long standing. Fortunately, however, a conference has already been held over the situation and it seems likely that funds may be found, along with a genuine disposition to go cheerfully the whole length of duty in the matter. It is, however, as yet (1917-18) a vision rather than a program.

In the absence of real Physical Education activity in the college, the two committees on the *Welfare of Students*, might be expected to show concern about the health situation. The committee dealing with the *Welfare of Women* (about nine-tenths of the student body) did not report, however. The report of the committee on the *Welfare of Men* shows recognition of a number of important kinds of activity, and is well known to have been beneficent in its

influence and help. But it does not touch the health interest. Probably the companion committee is not more active or in better ways.

The other phase of welfare activity is apparently not so much the concern of the committees on welfare as of other committees; and various important student-welfare concerns are apparently not touched. To a limited extent the committees of *Student Advisers* and the committee on *Student Programs* show a protective intention,—as well as the lack of college organization. At least two other opportunities for student protection exist, without adequate recognition or organization. One of these is the *administering of the grading system*. It is devised to offer the small group of superior students a fair opportunity to capitalize their superiority, but is so loosely administered as not to reveal superior students much better than any other system. The most important reason is that it is not understood by more than a small fraction of the faculty. Another opportunity occurs in the field of student government, which is yet only formally recognized as a legitimate activity.

In closing the report on committee work it is hardly necessary to call attention to the frequent indirect evidence pointing to both the lack of college organization and the frequent illustrations of *isolated initiative* struggling toward recognition.

We turn now to a few other aspects of organization.

### THE FACULTY MEETING

The faculty meeting, like the general assembly, may serve both as an educational activity and as an administrative convenience. Probably it always serves the latter end, and seldom more than incidentally the former. Whether it should serve the educational and consciously or not perhaps depends upon how permanent the personnel of the faculty is, how much professional preparation they have had, how much supervision of instruction there is, and the like. It would be a rare school that possessed a faculty so perfectly at one in purpose as to obviate the need of an organization to increase unity.

Later sections of this report will show that the personnel of this school shifts pretty heavily; and that the amount of professional preparation is not great on the whole. The preceding analyses have probably suggested also that the amount of faculty unity of purpose and effort is not great. So, here if anywhere, we should expect to find the educational purposes of the faculty meeting somewhat in evidence. Something in way of effort to unify the faculty, a sort of training in service, is apparently needed. In schools that are not too large it would seem that the faculty meeting should be deliberative in function; that it should be devoted primarily to the discussing of important matters of policy and procedure; that, in other words, the faculty should be involved in the shaping of the educational organization of the school. To do this it would be necessary to announce the topics beforehand, so that there would be opportunity for everyone to think. Extempore discussion is usually wasteful. Mass action without individual preparation is not democratic. And the meetings would have to be held when the teachers were fresh, rather than after school as an additional two hours.

Whether the faculty is used in this fashion or not, it would seem that only the absence of need of supervision (or the most level excellence of work from both faculty and students) could enable the president to dispense with some systematic discussion of the problems of instruction.

The faculty meeting in the Colorado Teachers' College has characteristically been mainly an administrative convenience. It offered an opportunity to make announcements. Usually they could have been equally well made by a typed sheet of items. Sometimes still as in the past it is used for disciplinary purposes, the whole group enduring the veiled rebukes intended for a few sinners. It serves now also as in the past to give an opportunity for certain committee reports. The committee on *Educational Progress* usually in the past reported two or three times a year at faculty meetings. A few times the *Research Committee* has been asked for a report at faculty meeting upon some matter of general import. These, however, are about the only examples of an educational function that have occurred. New activities, now as

in the past, are usually initiated at the faculty meeting,—or rather announced. It would be fair to say that hitherto the faculty meeting has been mainly perfunctory and that so far as its functions have been illustrated in its procedure it has been only an administrative convenience. It is not yet democratic, though perhaps tending in that direction as rapidly as would be wise, all things considered.

### SUPERVISION

With teachers selected mainly on the basis of University graduation or experience, i. e., without professional preparation for the most part,—a professional school for teachers faces or should face the problem of *training in service*. For this some supervision is necessary. Even though the general point of view of the teachers be educationally sound, there are usually matters of technique that can be improved if they are thought about. The teaching process usually needs attention where the teacher has had no professional preparation. There is of course the danger that “methods hobbies” may be ridden in a professional school for teachers. But with free faculty discussion the danger is probably not great.

If supervision is dispensed with, inspection may still serve a purpose. It may even be as remote as the requiring of syllabi of prescribed courses and still be a useful check upon duplication.

Supervision in Colorado Teachers' College is limited to occasional inspection and the requirement of syllabi in correspondence work.

### STUDENT GOVERNMENT

The problems of government and discipline probably do not call for definition. Perhaps their sources are also clear enough, *except where the source is in arbitrary government*. They are met by organization of some kind. The general nature of the proper organization should be suggested by the general characteristics of the student body and the nature of their prospective responsibilities,—in short by the capacity of the students and the ends of the school. As an intellectual organization a college should seek order and appropriate activity mainly through the character and organization of its typical activities. The organization of instruction (including supervision) should be so complete that order will for the most part be secured through the constant pressure for relevant achievement,—through appropriate assignment of work and a vigorously unremitting expectancy of standard work. Accordingly, the number and character of the arbitrary rules a school enforces afford a clue to the character and efficiency of its intellectual organization. The number and character of the typical infractions of rules may indicate nothing but the ineptness of the established government. Schools usually earn their problems of government.

It is clear, however, that the setting up of an arbitrary government is likely to be an adjustment to various existing conditions. The overcrowding of classes, for instance, is an effective barrier to high standards of instruction, and can easily lead to arbitrary government. It would be better, of course, if large classes are to be permitted, to organize so as to continue to be able to form the kinds of judgments of the work of students which teachers must have. The much more frequent and greater quantity of written work which must be required for the teacher of a large class to know his students and discover their needs might be handled by the employment of proctors to assist in large classes, and the order-giving pressure for daily achievement might still be possible.

Government, however, is also an adjustment to the immaturity and social inexperience (or bad experience) of students who are for the first time removed from the oversight of their families; and in this fact probably originates most of the arbitrary government in schools of this kind. It is protective in intention, and probably in many cases also in fact. Nothing is more certain, however, than that the administering of rules governing hours, recreation, and study conditions is tremendously complicated and measurably rendered ineffective by lack of sufficient attention to the administering of the courses of study. Students upon whom through systematic supervision and vigorous class-

room instruction constant pressures for achievement are brought to bear will not long desire mid-week recreation or visiting. Weekly reports to the President or the Dean or to department heads concerning students who do not "measure up" will make it easy to chart their record, for faculty discussion; or the matter of exploration of causes may be delegated to a faculty committee. Probably, however, either the President or the Dean should handle the problem,—both of interviewing such students immediately and of effectively assisting them to make acceptable adjustments.

An organization which throws upon the Dean of Women the responsibility for administering rules regarding hours, midweek recreation, and visiting ought to be expected to be quite unsatisfactory,—because it is fundamentally a shifting of responsibility and a confusion of functions.—The tendency of the operation of such an organization is to encumber the Dean of Women with special police duties, and thus to hamper her in meeting her proper responsibilities. Inherently, the work of the Dean of Women is that of building up personal and social standards, and aiding students to attain acceptable standards. There are few schools in which young women do not need the sympathetic ministrations of a refined and cultured woman, their guide and counselor in personal problems too numerous and delicate to mention. Police duty, however tactfully performed and with however good reason, inevitably creates barriers to sympathy rather than removes them. Thus it defeats the purpose of a Dean of Women. In the meantime the purposes of the school are also measurably defeated by lack of an organization to bring the appropriate pressures constantly to bear.

The place of student government in a higher school is much more obvious than in a public school. The more mature and highly selected the student body the greater their proper part in the preservation of the organization of the school. The term, student government, is not a good one, however; its place would be more readily recognized if its actual function were described, perhaps in such a phrase as *student cooperation in school organization*. In the end it is clear enough that those must organize and govern who are responsible for the characteristic purposes of the organization. Functions the exercise of which are both educative and capable of delegation may properly be referred to students as cooperators. There is no reasonable doubt that an organization of the students could be set up which, taken in connection with a more planful organization of instruction, would maintain, without friction and a sense of injustice, such standards as are desired and sought under the present organization. Classes would have to be restricted in size and, of course, provision would have to be made for effectively checking up the work of students. For the rest, the students would probably do it better than the faculty is able to do it.

One does not have to go far to discover that government is complicated by every other phase of school work. The next aspect of organization to be treated in this report is vital to it, for example.

### THE GENERAL ASSEMBLY OR "CHAPEL"

Is the general assembly or "chapel" a part of the *educational organization* of a higher school, or is it merely a *customary break* in the day's business, which can be conveniently used for various purposes relevant or irrelevant? Is it a *planned structure* to serve important and characteristic ends of the school? Is it for the sake of the faculty, the students, or the public?

Inquiry of the faculty brings out again the characteristic diversity of attitude and lack of unanimity among those who express themselves. Apparently a larger proportion than usual are without convictions or feeling on this matter. The only source of information is the general faculty meeting discussion of "Chapel" and individual inquiries carried on by the author.

1. Some, perhaps not over five per cent, regard a college assembly with any religious feature in its exercises as a useless and objectionable relic of the days when teachers were monks. It is to them one with such reminders of medievalism as cap and gown. This, however, appears on exploration, to be merely a convenient point of attack upon an undesired institution. A general assembly without any religious aspect is not really needed, they think. It is

tiresome alike to faculty and students,—a waste of time. They would abolish it,—or at least attendance should be purely voluntary.

2. A large proportion of the faculty attack the general assembly vigorously because it frequently overlaps the following class-hour,—which as a result is in some quarters reduced by about one-fourth of its total time. It has always been so. This, of course, is a fault of administration rather than *per se* of the institution in question. Exploration of the opposition in this case reveals the fact that here too the attack is to some extent merely a convenient one. The chapel, as they view it, really serves only doubtful purposes. It wastes time even when it does not invade the following class hour. It is perfunctory and pointless. Despairing of abolishing it, they would restrict it to once or at most twice a week.

3. Others, again a considerable number, take a firm stand for “chapel” as it has always been administered. Exploration here reveals nothing except preference for the familiar way of doing. Apparently they *like* it because *they* or friends of theirs like it; perhaps because change involves readjustment. They would have it daily and of course compulsory.

4. Others, a smaller number, think a general assembly necessary in a school drawing an immature and not very closely selected student-body from a wide variety of social and cultural backgrounds. It serves important purposes of the school. Part of these prefer the assembly to have a religious feature because it helps set “tone.” Others care only for the direct educational effort which may be made in the period. Generally these agree that though nominally voluntary it should in effect be compulsory.

A better way to discover, in a typical situation, what the general assembly is, in practice, *for*, is merely to follow curiously what is done at or with the period. Such a procedure reveals considerable justification for the opposition that exists to the period. It is a period without apparent purpose or consistency. It opens usually with a Bible reading, and sometimes there is an extempore prayer. After that, too large a proportion of the time frequently goes to announcements. Some of these are important, but many are not; some concern the whole student body and many are of interest only to small groups. A single announcement may consume five minutes.

There is nearly always singing. In this there is a great deal of variety, and much that is good, except in a few important matters. Owing to the shortness of the time oftener than not only fragments of the songs are sung,—say, “The first and last stanzas.” Only the piano or the organ completes these, the audience beginning on the fourth or fifth beat as a rule, and remaining a little behind throughout. Very frequently the singing is interrupted in mid-course that the singers may be exhorted to do better. The improvement in the assembly singing is not great throughout the year, however. There is but little opportunity to improve it in chapel. A great deal of verve and freedom is exhibited, however, which in itself is often quite pleasing.

Traveling musicians and local artists often appear in chapel. In the course of a year a great deal of excellent music comes to the chapel audience.

Usually there is speaking. The plan is to have fifteen-minute talks once a week from members of the faculty who have signified their willingness to give such help. Frequently a visitor comes to chapel, however, from the town or elsewhere. He may chance to come on the day appointed for some teacher to speak to the student body. In that case he is asked to speak and the faculty member is released. If announcements have absorbed a good deal of time, the speaker, whether faculty member or visitor, “runs over” into the following period,—to the regret of the teachers whose time is being consumed “for less important matters.” The talks are upon topics chosen by the voluntary speakers. Though the talks are mainly good, they reflect for the most part only the special interests of the teachers, or the special purposes of the visitors. Inevitably in war-time the visitors frequently represent “movements” seeking support. Sometimes they represent student organizations seeking membership. Very few talks in the course of the year bear upon more or less common needs and problems of students. It is fair to say that there is no level attempt to set standards or correct misbeliefs, and the like. Sometimes one topic suggests another, and so a brief sequence is effected. But, except for the

unity given by the war, this is unusual. The students see a considerable number of the faculty "in action," which is no doubt good in its way.

Provision is also made for contributions to "chapel" from students. They "read" sometimes. Sometimes they put on short plays.

All in all, the introductory comment to the effect that the assembly period is without apparent purpose or consistency must hold. In the most favorable terms one might say that the purpose of the general assembly as reflected in its practice is perhaps to make important announcements, to give opportunity for visitors to speak to the students, and casually to give the students a fuller acquaintance with various members of the faculty. Beyond this it offers some practice in public appearance for students from classes in English, Science, Music, and the like.

It is clear that announcements are sometimes of pressing importance; that to every college will come visitors whom it would be prodigal waste of opportunity not to urge to speak; and that in a school with specialized curricula the students will not all know all the faculty unless opportunities other than class work affords are given. It is no doubt good for students to appear in public, and the student body is a convenient audience. The question is not so much whether the general assembly may properly be used for these purposes as whether these purposes are the best ones *to be guided by in organizing a general assembly*. Two of the purposes mentioned reflect conditions that are occasional in character rather than constant or abiding and the others though they reflect conditions that are constant in character are not in practice regarded as very important; both are purely voluntary, and both make way for the others. The purpose of making announcements could probably be well served by a weekly assembly, or perhaps by a week of assembly at the beginning of each quarter while programs are being adjusted; and the occasional visitor could be served by an equally occasional assembly set at an hour when there are no classes.

Are there, however, constant conditions inherent in the student body of schools like this, which justify setting aside a period to be devoted to activities planned for the better adjustment of the students to their present opportunities and approaching responsibilities?

If one keeps in mind the social purposes of schools for teachers and considers the general characteristics of the typical student body of such a school, it seems clear that there are obvious "student needs" not provided for in the courses of study, but presenting enough to be regarded as responsibilities of the school.

For example, it would not be possible to bring together six or seven hundred young people from a hundred communities in a large new state like Colorado without representing the considerable diversity of social background, cultural experience, and intellectual outlook which the complex social composition, varied topography, and specialized interests of the state provide. It would be expected that there would in the student body be considerable variations in respect to standards in a wide range of important human relationships. The tendency of many graduates to seek new communities reflects pretty definite aspirations, which though promising are not always without a certain hazard to the school. Its graduates to be effective must in addition to giving excellent instruction be able to maintain a wholesome prestige with their patrons. The Bureau of Recommendations is only one of numerous teacher-placing agencies in the state, and by no means controls the situation. These obscure factors, (youth, inexperience, social immaturity, and diversity of social background) set a problem not consciously covered by the courses of study, and perhaps too large to be met by the Dean of Women without purposeful cooperation from the rest of the college. The short period of study for which (at present wage levels) the students can be held lessens the chances that incidental orientation will in all cases be adequate. Some planned and cumulative effort to meet characteristic needs and offset typical deficiencies is called for by the conditions; and it seems that the general assembly or chapel may properly be organized to play a part in this.

From the angle of class-work no less than personal habit or social standards the bearing of backgrounds upon present work and approaching

responsibilities is obvious. At the beginning of each school year half the students are just taking the first step beyond the high school. They face the perplexities of young students in a new situation. Too large a proportion of them are accustomed to page assignments in a text book rather than to the use of a library in following up assignments. Too large a proportion of them are used to class-work dominated by the purpose of testing the previous night's work over a text book. Under pressure to get stock information very many of them have adopted memorization as a method of study. The attitude of willing drudgery is on the whole a much more conspicuous student trait than is a liking for inquiry and the disposition to use the class to clarify conceptions. In one way or another (the usual ways, of course) their minds have been stocked with the usual amount of misbelief, misinformation, etc., and the saving attitude of impersonal quest is ordinarily not well established; and so on. These factors also set a typical problem which is not so very consciously met by the college as a whole. A great deal of waste and no doubt considerable suffering accompany the process of adjustment; and beyond this a considerable number of students do a considerable amount of drifting before they "size up" the situation; a considerable number of them form erroneous judgments of the standards of the school, etc. For this situation also, it seems that a planned activity to facilitate adjustment is needed, and the general assembly seems to afford the strategic opportunity.

There are two angles from which to view the general assembly as an organic part of the school: (1) As an educational activity; and (2) As an administrative device or convenience. Each of them will be briefly discussed or defined.

1. As an educational activity *the general assembly is supplementary to the organized and sequential work of class-room instruction.* It is, all things considered, an almost indispensable part of the organization of instruction. It shares with class-room work the responsibility for unifying and orienting the student body. Using a paradox by way of definition one might say that the general assembly *is organized for incidental education.* Like class-room work its endeavor should (other things being satisfactory) be determined by characteristic needs, deficiencies and responsibilities of modern teachers. What its major efforts will actually be directed at, however, will be determined by

- a. The initial equipment of its students; and
- b. The gaps left in their adjustments by all the other activities planned to meet their needs as modern teachers.

In short, from an educational point of view, the uses of a general assembly are potentially *as varied and as numerous as the insufficiently met needs or the typical deficiencies of the students.* It is a "stop-gap" or emergency institution. Its function is to deal fruitfully with exigencies,—some of which at least are so inherent in the situation as to admit of their being forecast and deliberately prepared for, others of which are so unpredictable that they can not be planned for.

The general situation here indicated suggests the need of definite topics for at least the opening month or so of the school year, a more or less level attempt throughout the year to set standards, and perhaps for the sake of the graduating class a more or less definite set of topics near the close of the year. It is clear, however, that the beginning students need considerable help in adjustment to new conditions and standards; that exigencies should have precedence; and that a constant effort should be made to set tone and standards.

For the sake of concreteness a few illustrations may be attempted.

1. College versus high school,—certain significant contrasts:
  - a. In students,—more highly selected, older, destined for leadership.
  - b. In methods,—greater freedom; more responsibility on the student, premium on intelligence rather than on willing drudgery, less compulsion, etc.
  - c. Dangers to the immature student: the drifter may temporarily get along, but eventually misses all ports.
  - d. Text book versus library; the dangers of the text-books; its rela-



tion to knowledge,—a tool; how it may use both student and teacher rather than be used by them.

- e. How the college is organized to promote superior students, to stimulate initiative, to encourage initiative, self-reliance, etc. The ideal of class work, etc.
2. The virtues of the student: the duty to think.
    - a. Memorization versus study. The essence of study,—asking oneself relevant questions and then exhausting resources to get valid answers.
    - b. The scientific attitude: Paul's "*Seek ye the truth*," Christ's "*Become as little children*," Plato's "*Follow the quest whithersoever it leadeth*"; etc.
    - c. Belief versus knowledge. Higher schools and the work of unteaching. The nature of evidence. Morley's "The educated know when a thing is proved, the uneducated do not," Montaigne's "To know how much and what kind of evidence ought to precede belief in anything," etc.
    - d. New knowledge and progress. The necessity of readjustment on new levels, etc.
  3. New Knowledge and Progress.
    - a. The necessity of readjustment; acting on new levels.
    - b. Various problems of unsettlement.
    - c. The significance of higher education; who gets it; what selects the students of higher schools; their responsibilities to their generation.
    - d. The idea of profession,—a favored group dealing with large responsibilities: "The mastery of crises."

Such a rough and ready list of relevant topics is certain to be faulty. Emergencies should always take precedence, of course. Perhaps the first task of the general assembly would be to establish standards of attention, routine, etc., in the assembly. The "atmosphere" should of course be generally serious,—but not strained or stiff. If entertainment is provided it should be excellent of its kind. If singing is a part of the routine acceptable standards of performance should be gradually reached; and so on.

2. As an administrative device the general assembly is a strategic position for administering the student body. It serves the ends of the president (or the school) with reference to the students as the faculty meeting serves his ends with reference to the faculty. The first of these ends is the unification of the student body with reference to the intellectual organization of the school and the responsibilities of public school teachers. From the faculty meeting, from departmental conferences, from the various activities in the supervision of instruction, from the observation or experience of alert teachers, etc., comes information bearing on the general needs of the students. With a finger thus on the pulse of the school the administrator may plan to set the tone of the school's activity, to shape a fruitful public (*i. e.*, school) opinion, etc.

These matters overlap the educational ends, but only because wise administration is in the interest of educational ends. Administration is only an aspect of organization. From an administrative point of view unity of purpose is a guarantee or a condition of co-operation or efficiency. To unify the student body with the effort of the teachers is to increase the prospects of zealous work and of individual concessions in the interest of common ends in view. If students perceive the wisdom of setting up required courses, of giving courteous attention in assembly; the value of the impersonal attitude to questions in debate and of common standards of achievement in routine, etc.,—then friction is reduced everywhere.

The general assembly offers an opportunity to supplement the reconstruction work of the class-room. Wrong attitudes of students toward their work can be impersonally dealt with from the platform, and fruitful attitudes and standards substituted, thus shaping a useful student opinion. Prevalent mis-

conceptions about important matters can be corrected, etc. Conduct in regard to the common use of school equipment can be unified, and so on.

Unless there are other activities whereby the school is able to deal effectively with such general conditions as have been described, perhaps a general assembly should be regarded as a necessary part of the school's organization. And if this be agreed to, it must be admitted that the general assembly in the Colorado Teachers College is only partly effective.

### THE POSSIBILITIES OF UNCONSCIOUS FOCUSING OF EFFORT

When from such examinations as have been reported in the foregoing sections it has become somewhat apparent that there is too little conscious unity of purpose and effort in a faculty the inquiry turns to a quest for evidence that might suggest that the school is nevertheless realizing some of the benefits which are ordinarily expected from a purposeful organization to focus upon its characteristic problems. A college might conceivably, without plan or effort, still be somewhat focussed upon important concerns. Independent activity carried on by individual teachers for their own guidance or satisfaction might in this or that aspect of the college's work yield something of the benefits of corporate consciousness. The presence of a few such dynamic teachers might, without administrative recognition, leaven a whole faculty. But, of course, also it might not. Time is required to get such results casually or incidentally. So rather a long period of service for most of the teachers would be necessary to give good results. Of course progress achieved in this fashion would be largely accidental. Even the desire to employ teachers active at such work may in many cases be mere customs-imitation,—a means of "staying in the business" rather than part of a sure program for *getting ahead*. Dynamic teachers gravitate to schools where favorable conditions exist; and favorable conditions are usually the result of either conscious planning or of traditions and customs on a higher level. Of course they gravitate to the places of higher pay; but to a large extent the higher level of pay is merely an external indication of consciousness of both the values and the conditions of service.

In any event, however, such teachers of this sort as are in a school will somewhat manifest themselves. If they have freedom, they will be actively developing courses to make instructions more relevant. If not quite overloaded they will have established dynamic relations with the public school leaders in their own field of interest. They will be influencing public school work directly. Their work will probably be represented in the state course of study and possibly in city courses of study. They will, of course, be prominent in educational associations. Beyond this, or in the absence of such activities, they may be exerting influence through publications, either by the school or by educational journals. In short, there will be some focussing of the school, even though it be unconscious, on its characteristic problems. To this possibility we now turn.

The various departments of this college, though in various degrees conscious of the possible relations of their work to public school instruction, are not focussed upon the public school situation with reference to the subjects of instruction. This has already been emphasized in the discussion of the faculty statements of departmental functions and interrelations of courses. Beyond this, however, for example, the members of the faculty have only to a very limited extent contributed to the treatment of the school subjects in the State Course of Study. Those who have been invited to do so have responded, but mainly without useful explanations of variations from the usual treatment of the subject. There has not been a general expectancy of leadership established in the state which would guarantee such invitations; and, of course, non-educational factors have played a part in the situation. The initiating of an extension service was a step consciously taken toward establishing such expectancy; but the lack of funds effectively prevented its proper educational organization. It had to be self-supporting in the beginning, and consequently could not at the outset have a very definite relation to the problem of educational leadership; nor could it plan very hopefully to stimulate an alert faculty consciousness in regard to the proper relations of college

courses to the typical work of the public schools. On the other hand, there is evidence of considerable faculty consciousness of defective public school treatment of various subjects. It appears in several excellent courses which have long been worked out for public school teachers. But it is significant that the best of these have not in the past received, and do not now receive, much public school approval. The conditions of educational leadership in this respect have not been met. The reasons for variation from the usual public school treatment of a subject have not been carefully or tactfully or systematically put before the teachers of the state through the public school leaders, who alone have the power to make or promote significant changes. And desirable changes have not been duly supported by relevant data and justified in open discussion. Probably this has not been done because there has not been any significant attempt made by any one in the college to determine inductively the characteristic unsuccesses of public school instruction in any school subject as a basis for shaping its own instruction or for justifying changes and promoting improvements in public school instruction. The public schools are right enough in resisting wide innovation until the need of them is clearly established. Mere opinion should always be discounted. The burden of proof properly rests upon the advocate of change. It would be easy in various subjects to discover the typical results of public school instruction: and there is no doubt that there are important unsuccesses.

Various excellent explanations of the failure to work on such problems may be found. For example, undoubtedly it lies partly in the recency of the scientific movement in education. Partly it lies in the impermanent or shifting personnel of the faculty and in the unprofessional character of their typical preparation. Partly it lies in the operation of the same factors in the case of the school superintendents of the state. Partly it lies in the youth and inexperience of the mass of public school teachers and their short and shifting service. It lies also, however, in the loose organization of the state system of education and in the failure of the college to focus upon the characteristic or differentiating problems of schools for teachers. The shifting personnel of the faculty and the lack of professional preparation for a considerable proportion of them provide a constant condition which should be met by definite provisions to unify and focus them upon a progress for public school service.

The part taken by the several departments of the college in the programs of the State Educational Association is somewhat more encouraging with respect to the amount of participation, though not especially with respect to the kind or the distribution. There are many departments that have almost never been represented upon the programs or in the councils. Few departments have been represented in the N. E. A. The college has not especially cared to have them do more than enroll.

Similarly, the several school journals of the state do not reflect educational leadership from the college. Contributions are welcome, and are even sought,—though probably without great expectancy, and at all events without significant results. Since the college publishes no magazine on its own account (other than the usual student "souvenir" things) it might be expected that it would take an active interest in the State Educational Journals. But a chart of the contributions from members of the faculty of the Teachers College to the Colorado School Journal (the organ of the Colorado Teachers' Association) would show conspicuous gaps, a few periods of considerable activity, but no sustained interest or co-operation. From the present faculty only three reported any contributions to this magazine. The total of their contributions was eight articles, of which five were written by one teacher. Five teachers reported a total of nineteen articles to *Public Schools*, another Colorado magazine. Fifteen of these, however, were contributed by one teacher in an editorial capacity, the same one who contributed most of the articles to the other journal.

From this it is clear that, whatever the reasons, the college is not bearing upon the educational situation from this angle.

Activity has been greater and somewhat more general in lectures or public addresses. Seventy-eight lectures are reported for the year 1917-18. They were given by twenty-five teachers. Two gave eight lectures each; one

gave seven, two gave five; three gave four; two gave three, etc. Twenty-four different localities were touched. Denver received twenty-three of the addresses, Greeley fifteen, Pueblo three, and Colorado Springs two.

The question of what characteristic ends of a college for teachers may have been served by the bulletins or pamphlets it has printed may properly receive somewhat more detailed treatment. It might be that some of the purposes of educational leadership have been promoted by the college bulletins. But apparently they have not been directed to that purpose very steadily. Over the whole period of its existence up to 1918 (some twenty-five years) the college has put out a total of 185 publications, excluding folders and leaflets. Exclusive of catalogues, magazines and advertising bulletins, there are only 30 pamphlets, roughly 800 pages of educational material. Classified, the list is as follows:

## CLASSIFICATION OF PAMPHLETS, 1895 TO 1917

### I. SCHOOL SUBJECTS.

#### 1. Outlines of material.

Five bulletins on English.

1901—English in State Normal School. Outline; references—50 pages.

1905—Background of English work. Analytical outline—29 pages.

1907—First Term Senior English Brief topical outline—16 pages.

1907—First Term Senior English Brief topical outline—8 pages.

1907—First Term Senior English Brief topical outline—8 pages.

Two bulletins on History.

1905—Industrial History in Secondary Schools. Evaluation; discussion—45 pages.

1911—Course in History for Elementary Schools. Aim; organization—107 pages.

One bulletin on Manual Training.

1902—Manual Training in the Normal Schools; Outline of material—17 pages.

One bulletin on Physiography.

1898—Course in Physiography. Bare outline of material—8 pages.

One bulletin on Agriculture.

1904—Bibliography of School Gardens—20 pages.

#### 2. Research.

One bulletin on Arithmetic.

1916—A Study in Addition. Experimental research—16 pages.

One bulletin on English.

1917—Errors in English. List and discussion—16 pages.

### II. SCHOOL ORGANIZATION.

Two bulletins on Rural School Consolidation.

1909—Rural Schools and Their Consolidation. History; purposes; forecast—38 pages.

1911—Consolidation of Rural Schools. Present status; outlook—29 pages.

### III. PROFESSIONAL STUDIES.

Point of view for Teaching.

One bulletin on Child Study.

1898—Child Study. Bare outline; references—6 pages.

One bulletin on the Training School.

1901—The Training School. Essays on purpose, organization, material—101 pages.

One bulletin in Educational Philosophy.

1907—Education Is Motorization. Topical Outline Theses—10 pages.

Two bulletins on the Training School.

1908—Suggestions for Practice Teachers. Standards; Aims—18 pages.

1917—Handbook of Practice. Aims; routine; standards—15 pages.

One bulletin on the Kindergarten.

1908—The Kindergarten. Aims; valuation—31 pages.

One bulletin on incidental education.

1903—Methods of Teaching Truth-Telling and Lying; illustrations—24 pages.

One bulletin on exceptional children.

1913—Exceptional Children. Removable defects—10 pages.

One bulletin on a school survey.

1917—Survey of the Sterling Schools—69 pages.

#### IV. MISCELLANEOUS.

One bulletin on biological aspects of education.

1909—Bibliography of Biological Aspects of Education—69 pages.

One bulletin on school museums.

1908—The Museum. Descriptions; purpose—75 pages.

One bulletin on elementary school libraries.

1910—Bulletin of Books for Grade Libraries—70 pages.

Three bulletins on religious education.

1912—Religious and Moral Education—18 pages.

1915—The Greeley Plan of Bible Study—17 pages.

1917—Bible Study for College Credit—15 pages.

One bulletin on community co-operation.

1917—The Community Co-operation Plan, etc.—15 pages.

One bulletin on community entertainments.

1917—Two Community Entertainments; description; forecast—28 pages.

The impression left by careful inspection of this phase of the college's activities is simply that there has been no program of educational publication. Of the thirty bulletins listed, few seem likely to have been useful to the public school teachers. It is clear enough that the outlines of material offered in various subjects sometimes show considerable variations from the usual text book material; and also that they are usually improvements upon the material current at the time. But innovations in treatment would hardly be received upon authority then more readily than now. There is almost no effort at exposition or justification. Perhaps in a generous view six or seven of the thirty bulletins, about 250 pages in all, would cover all that was ever dynamic in the whole. Mostly they lack the freshness or originality which characterized many sections of the old Year Book,—which were composed by President Snyder.

Clearly, so far as the college's publications are concerned, the advertising or recruiting functions have been more effectively developed than its educational functions. Or perhaps it would be better to say that the advertising or recruiting value of *educational pamphlets bearing upon the characteristic problems of the public schools* was apparently not highly esteemed. And it may be that what appears to have been a failure to recognize this value was in reality the result of sagacious appraisal and rejection of it in favor of a more productive method. But the present eagerness of teachers for help, the instant response they make to the advertising of material bearing upon their problems, incline one to believe in the solid value of a program of educational publication. From the point of view alone of the needs of *faculties in schools for teachers* such a program would seem to deserve the most serious consideration from administrators. It should be a part of the planned effort to unify and focus the faculty. To organize it for this double purpose would be com-

paratively easy. The setting up, for example, of an *emergency* service in the Extension Department would speedily reveal the felt needs of the public school teachers. These are the fruitful points of attack. And the organization of the Extension Department so as to place the resources of the school at the service of the superintendents would not only give purpose and definite direction to the development of extension service, but would ultimately connect the work of the college dynamically with the supervisory work of the public schools, where deficiencies are discovered. Even in advance of such projects, however, it would be easy to make a list of several dozen pamphlet topics bearing directly upon the most pressing needs of public school teachers; and though it would be less easy, still it ought not to be difficult in a modern school to discover the proper authors to energize or make opportunity for. And the means of securing cumulative effort of this sort are clear enough.

The reports of the faculty make it possible to see how much of the effort that is not spent locally goes into writing for magazines of national circulation and into book-making. It appears that contributions have been made by ten of the faculty to eighteen periodicals of wide circulation. These cover a total of twenty-nine articles, of which, however, seventeen were written by one teacher for eleven magazines, all of them technical. The next highest number is four articles, contributed to three technical magazines; the next, two articles to two magazines, etc.

The present faculty has not been prolific in books. A total of thirteen monographs is reported. Only four, or possibly five, however, exceed the length of magazine articles. Probably only two should be called books. One teacher, however, reports three plays, which perhaps should be listed as books.

At least one other phase of the organization of a school for teachers should be explored. The supplementary relation of schools for teachers to the public schools and their responsibility for promoting school improvement should give them a dynamic interest in the conditions of work in the field. The occasions for extension service from schools for teachers are clear enough. A heavy proportion of the public school teachers enter the occupation without any special preparation for their characteristic responsibilities; and local provisions for training in service are usually quite meager except in the larger centers. But even if the teachers began their work without completing a two-year course of professional preparation there would still be need of extension activities in their interest from schools for teachers. No vocational school can anticipate in its residence work all the problems that will arise in the work of its graduates under the varied conditions of their work in the field. Schools of medicine, nursing, social work, commerce, business, agriculture, and the like can not do it, and still less can schools for teachers. The initial equipment of the students is too meager and uneven; the established level of wages is too low to enable normal schools and teachers colleges to hold the students for an adequate period of study; and the social and economic conditions of the communities to which the graduates go are too unequal to admit of more than partial success even in the modest attempt to equip students to meet the characteristic responsibilities of this occupation.

Consequently, for the teacher as for the doctor, the nurse, the social worker, the business man, and the farmer, the progressive higher school must maintain an extra-mural service directed at the exigencies that arise in practice under the typical conditions that obtain.

Beyond this, an organization of extension service is essential to the development of the most relevant residence work.

We turn accordingly to an account of the extension service of the State Teachers College.

## EXTENSION SERVICE

E. D. RANDOLPH

### Historical Sketch

From the successive pamphlets issued by the school to describe and advertise its extension service a general notion may be had of the nature and growth of this phase of the school's activities. An account largely built up

in this way, however, will certainly be incomplete and probably not always accurate, because the pamphlets are meager in exposition and at least in some cases neither complete nor accurate in their accounts of what is done. Activities were actually carried on, for example, that are not described in the pamphlets, and administrative provisions are mentioned in the pamphlets that were ignored in practice. Such an historical sketch may in any instance give either too favorable or too unfavorable an evaluation of the extension service. It is necessary to remember that new activities are experimental. Operative factors can not all be fully pre-arranged, conditions may be discovered that invalidate plans, and resources may prove inadequate for the best plans. Organization could not be very complete until the major constant problems were discovered. For these and other reasons equally good this section of the survey should have been written by Mr. W. B. Mooney, the man who from its origin in 1908 until his resignation for army service in 1917, had more to do than anyone else with the development of the extension service of this school. His resignation, however, made it necessary to appoint a new director, upon whom the task devolved of making the analytical report asked for by the Survey Committee.

A summary of the growth of the Extension Department will make a convenient starting point.

TABLE XVI  
Summary of Growth

Date	No. of Courses	Enrollment in Corres. Courses	Enrollment in Extra-mural Classes	Enrollment in Community Coop.	Institute Enrollment for College Credit
1908-9	67	72	...	...	...
1910-11	90	109	...	...	...
1911-12	128	159	...	...	...
1912-13	128	57	...	...	...
1913-14	128	267	...	...	...
1914-15	128	336	571	...	...
1915-16	220	351	740	...	...
1916-17	220	366	750	...	...
1917-18	220	293	378	434	52

#### THE SEVERAL PAMPHLETS ON EXTENSION WORK

The first description of extension work offered by this school was contained in the bulletin issued in 1908-9. It is on the whole not a very enlightening pamphlet,—or rather, most of its information is implicit rather than explicit. It gives no account either of the considerations underlying the new venture or of its purposes, except that “non-resident work, together with work in the summer terms will enable teachers to take the normal courses, graduate, and receive the normal diploma” without interrupting their teaching. It gives only the vaguest suggestions of the organization and administration of the work. It is clear that the only work attempted in the beginning was correspondence instruction. A few matters of organization are also clear: The work was under the direction of a committee of three, of whom the school visitor (later made director) was one. With few exceptions (*e. g.*, in mathematics) each “course” was a group of related books, roughly *one book for each credit hour*. The student ordered the books from the publisher and proceeded to study them under the general direction to “Make careful notes or outlines as the reading proceeds. As each volume is completed these notes or outlines should be submitted to the committee for approval. As soon as convenient after the completion of the course the student should report at the school for an oral examination in the subject matter read. . . . Occasionally it will be possible for the school visitor or other member of the

faculty to conduct the examination at the home of the student." The cost to the student was three dollars a course. There is nothing to indicate what, if anything, the teachers conducting the courses were paid. The Year Book reports 72 students taking non-resident courses this year.

Inspection of the descriptions of the advertised work shows that in about half the courses offered, some *direction* of the students' work was either given or promised. The courses in Art consisted of "reading" and "construction," within some cases the requirement of an essay and an examination upon the reading. The courses in Literature set forth the reading to be done, and announced the approaching publication of detailed "syllabi" for the guidance of the student. One course of twelve plays carried six questions the satisfactory working out of which would be a considerable task for a pretty mature and philosophical student with a liberal education to begin with. The courses in Biology asked generally for an essay of 2,500 words upon such topics as "the birds of your county," "the mammals of your county," and the like, with an examination upon the reading. The courses in mathematics asked for constructions, solutions of problems, and the like. The courses in foreign languages exact both a written and an oral examination.

On the other hand courses in Industrial Arts, Psychology, Philosophy of Education, Pedagogy, Sociology, History, Latin, History of Education, Nature Study, and others, merely gave a list of books to be read and outlined.

A second pamphlet was issued in 1910-11. It obviously brings together some results of experience. It opens with "*Special Directions and Information*," some fourteen items covering the preparation of manuscripts, etc. *Item ten* partially suspends the requirement of examination at the close of the courses: "Unless otherwise stated in the description of the courses in this bulletin, credit is granted to the student without further examination if the manuscripts . . . are satisfactory." Of the twenty teachers offering courses three state that examinations are required. One requires both oral and written examinations. Others specify certain work "in lieu of examination." Seven of the twenty teachers adopt some plan or other of directed study. Some promise "outlines on application;" some state that the course is "conducted by syllabus;" some warn the student "not to begin the course without correspondence with the teacher;" some explain that "directed studies, not reviews" are wanted, and so on. About one-third of the total number of courses fall within this group. The rest merely give a book list and grant credit for "satisfactory outlines."

A third pamphlet came out in 1913. It contains further evidence of experience. The chief item of interest is the increase in the proportion of courses that are *directed*. Nearly two-thirds of the courses offered require something beyond mere "outlines or summaries of the main thought." Four teachers still require an examination at the close of the course. The oral examination in the foreign languages is dropped, or at least no longer mentioned. The variety of the requirements is considerably increased. Some courses require three essays upon topics covered in the reading. Some require difficult comparative studies of elementary school practice. Original studies in biology are asked for, which, if well done, would make acceptable monographs for technical journals. The course in composition exacts ten themes requiring considerable study, and in addition calls for an examination either at the school or under the supervision of some school man in the student's community.

In this pamphlet occurs the first notice of *class work in absentia*: "Group study" to be carried on "wherever possible by members of the faculty;" but "where this is inconvenient other persons nominated by the group and approved by the college . . . may direct the course . . . as members of the college faculty." "The fees for group study shall be determined by the non-resident instructor for each group together with the non-resident committee. . . . One dollar for each person per credit hour is charged to cover the expense of the work of the institution."

In the interval between this and the following extension bulletin the Director, Mr. W. B. Mooney, wisely recommended the adoption, by all the teachers, of the "syllabus plan," and the abandonment of the original plan of giving credit for outlines, digests, summaries, and the like. This was officially done



in 1916-17. The "syllabus" as conceived by Mr. Mooney was really a detailed set of study directions to be worked out by the students in a series of recitation papers. A somewhat definite effort was made to place correspondence study on an equality with residence study.

In the fourth pamphlet, printed in 1917, apparently the diversity of practice disappears. All the study is, theoretically, *directed by syllabi*. So the courses are merely described. The student can no longer see in advance which are difficult and which are easy courses. In reality, the diversity of practice remains almost what it was before, and gradually non-resident students become aware of what courses exact too much.

Since this is the bulletin now (1918) in force it will be more carefully analyzed. The introduction will be quoted almost *in toto* because it gives an outline of the activities carried on, and something of their organization.

#### "INTRODUCTION

"The Extension Department of the Colorado Teachers College is organized and exists for the following purposes:

"(1) To assist, thru co-operative effort, State, County, and District school officials in their efforts to improve the efficiency of their schools.

"(2) To give instruction to teachers in service and to extend the service of the institution to all persons who wish to work under its guidance.

"The Department is ready to render service to State, County, and District school officials. A request for assistance in any work connected with education in Colorado will receive prompt attention.

"Systematically organized instruction is given to teachers under the following plans:

#### "THE GROUP PLAN

"A. A person who possesses at least the degree of A.B., or its substantial equivalent, and has had professional training and experience that would justify his appointment as a regular instructor in the College, may be appointed an Extension Instructor. He gives the Course under the general direction of the College, but his relations to his students are about the same as they would be were he giving instruction to them within the institution. He receives a percentage of the fee paid by his students for his services. Members of the College faculty give instruction to outside groups under this plan.

"B. A person who does not possess the above qualifications may be appointed a Class Leader. The Class Leader keeps the required records of the members of his group, leads in the work of the Class and otherwise acts as the director of the work his group is studying under the direction of the College. The Class Leader is allowed the same credit as other members of his group. He does not pay a fee for his course.

#### "HOW THE GROUP IS CONDUCTED

"Under the general supervision of the Extension Department of the College extension instructors are allowed to conduct their classes as they think best. If Courses are selected that are printed in this bulletin the syllabi of these Courses will be furnished extension instructors if they wish them. The same rules and regulations that govern regular instruction in the College will govern these instructors and the reports they make to the College will be the same, as far as possible, as those made by regular members of the faculty.

"Class leaders will use the syllabi of the Courses selected and will make such reports as may be required.

#### "EXTENSION COURSES OF THE REGULAR FACULTY

"Regular members of the faculty of the College may give non-resident courses where arrangements can be made such as will not interfere with their regular work in the College. Courses given by regular members of the faculty under the group plan are counted as resident courses, provided that not more than 20 hours of credit may be so earned in the Junior College and 20 hours in the Senior College by any student.

#### "THE INDIVIDUAL PLAN

"Under this plan any person who desires to study alone or who cannot join a study group may do work under the direction of the College. All of this work is done by Syllabus. Fifteen syllabi or study units constitute a five-hour course, twelve study units a four-hour course, nine study units a three-hour course, six study units a two-hour course, and three study units a one-hour course. Thus one of these study units equals four recitation lessons in residence.

"By the Group and Individual Plans of Study a student may take practically any course offered in residence by the College.

## "HOW THE INDIVIDUAL WORK IS CONDUCTED

"On receipt of the required fee and postage we shall send you the first three study units of your course and the required books for these units. You should do the work in the first study unit and return it to the Extension Department. It will be given to the instructor offering the course. He makes his notations and grade on the paper and returns it to the Extension Department. We shall then send it to you. When we return the first study unit to you, we shall enclose the fourth study unit and when we return to you the second study unit, which your teacher has corrected, we shall enclose the fifty study unit, and so on until the course is completed. In this manner you will always have two study units, upon which you may be working, while the one you have mailed us is being corrected and returned to you. At the close of the Course you will have in your possession a series of valuable papers on the Course you have taken.

## "WHO MAY TAKE EXTENSION COURSES

"Any teacher in active service may take Courses offered in this bulletin. Any other person desiring to study under supervision may enroll as a regular or special student. If a student wishes to become a candidate for graduation, however, he must fulfill the entrance requirements. To aid students who lack entrance requirements we offer High School Courses on the Extension plan. Any person interested in such courses should write for our High School Extension Bulletin.

## "HOW TO BEGIN WORK

"We have regularly organized study groups in most of the larger centers of the State and in many of the towns and villages. Your County or City Superintendent of Schools can give information about these. Join one of these groups if possible. If there are no organized groups you can join, write the College indicating the course you wish to take. State briefly what your previous training and experience have been and indicate the work you are now doing. If you have decided upon the course you wish to take, enclose in your letter the required fee and postage and address to Colorado State Teachers College, Extension Department, Greeley, Colorado. You may begin individual study at any time.

## "FEES

"With the exception of the courses in Modern Languages, when taken by the dictaphone method as indicated on page 43 and the fee required for the registration of institute credits, the fee for Extension work is one dollar per credit hour, whether the Course is taken on the Group or Individual plan. Therefore, a five-hour course will cost five dollars, a four-hour course four dollars, a three-hour course three dollars, a two-hour course two dollars, and a one-hour course one dollar. The full amount of the fee for any course must be sent at one time together with the required postage for books. The postage for a five-hour course is fifty cents, for a four-hour course forty cents, for a three-hour course thirty cents, for a two-hour course twenty cents, and for a one-hour course ten cents. If the student wishes to furnish his own books, the postage need not be sent. Hence if the student wants us to furnish the books a five-hour course will cost five dollars and fifty cents, a four-hour course four dollars and forty cents, a three-hour course three dollars and thirty cents, a two-hour course two dollars and twenty cents, and a one-hour course one dollar and ten cents. *All fees, including postage, are payable in advance.*

## "GENERAL REGULATIONS GOVERNING EXTENSION STUDY

- "1. Students in residence are not allowed to study under the Extension Plan of Study.
- "2. A student may earn not more than 15 hours of credit in any one school year. This applies to both group and individual students.
- "3. Courses outlined in this bulletin must be approved in advance by the Dean of the Graduate College before they can be applied toward A.M. credit.

## "INSTITUTE WORK

"A person employed in a Colorado teachers' institute, who can qualify as an extension instructor, may have courses of a professional character, which he plans to give in the institute, approved by the Extension Department of the College. Such courses will be recognized for credit in the College, and a limited number of these courses may be taken for credit in the College by a student in the institute. A charge of one dollar is made for the registration of these credits regardless of the number of credit hours the student takes or is allowed to take. At present not more than four hours credit may be so earned in any given institute.

## "STATE READING CIRCLE COURSE

"Groups may be organized for the purpose of studying the books selected by the State Reading Circle Board. These groups may work under the direction of an Extension Instructor or a Class Leader in the same way and under the same conditions as regular Group work described on page 4.

"This Reading Circle Work may be taken also on the Individual Plan described on page 4.

"At present three hours credit is given for this work to persons in the Junior College only. The fee is one dollar per credit hour or three dollars for the course whether taken under the Group or Individual Plan.

#### "THE TERM OR CREDIT-HOUR

"The unit of work in residence in the College is one recitation a week for a term of twelve weeks. This is called a term-hour, or credit-hour. Three of the study units in this bulletin are equal to one term-hour or one credit-hour.

"To complete a five-hour course in group work, classes must meet 12 times for 2½ hours each meeting, 15 times for 2 hours each meeting, or 18 times for 1½ hours each meeting. Each student in the group must read and give adequate reaction to approximately 1,200 pages of reading matter pertaining to the course. To earn less than five hours a proportionate number of meetings and reading work on the above bases must be arranged.

"Courses requiring no preparation outside the recitation hour are credited on the basis of laboratory work—two periods of recitation or laboratory work being credited as one term-hour."

To this general description we may add a table, showing the amount and variety of the work offered to non-resident students.

### TABLE XVII

#### THE FOURTH EXTENSION BULLETIN (1917-18)

Departments	Courses Offered	Departments	Courses Offered
Psychology and Child Study.....	1	Literature and Composition.....	10
Education .....	27	Reading .....	2
Methods .....	12	Foreign Languages.....	36
Biology .....	2	Music .....	5
Physics .....	7	Physical Ed.....	4
Chemistry .....	3	Ind. Arts.....	9
Geography .....	6	Fine Arts.....	4
Mathematics .....	10	H. H. Arts.....	3
Sociology .....	39	H. H. Science.....	2
History and Political Science.....	14	Com. Arts.....	18
Latin .....	3		
Mythology .....	2	Total Courses.....	230

In the month following the issuance of the Extension Handbook of 1917 a pamphlet was printed describing the *Community Co-operation* work of the Extension Department. The following excerpts (almost all of the pamphlet) show the scope of this phase of the department's activity. It is formally under separate leadership, but the "students" are counted in the Extension Department. The matter of especial interest, how the work is organized and supervised, is not described in the bulletin. There would obviously be considerable difficulties involved; but since credit is given for the work it would be expected that definite plans would be made for meeting the difficulties.

#### "THE COMMUNITY CO-OPERATION PLAN OF COLORADO STATE TEACHERS COLLEGE

"Society needs leaders. This has been recognized for many centuries. 'Who's Who in America' indicates that the majority of leaders in American life are college-bred men and women. Among these we find a fair proportion of members of the teaching profession. Colorado State Teachers College believes that even a larger proportion of leaders would be found among professional teachers and others if institutions of higher learning gave specific attention to training for service to society.

"No doubt many educational institutions already give courses that enable those trained in them to be leaders in their special fields of study and research: e. g., the specialist in business administration, in medicine or in art. The teacher, altho a specialist to as great a degree and in the same sense as a physician or other other individual with intensified training, is very frequently discounted as a leader in the business and civic life of the community. Those engaged in teaching are considered more clannish than workers in other occupations and are said to be less practical and less interested in citizenship duties than those in other walks of life. It is no doubt true that the teacher is on the average as intelligent in the performance of his duty to society as is the average person engaged in any other vocation.

"In order, however, to encourage those who go into the profession of teaching to take greater interest in the life of the community and to give them experience in dealing in a leadership way with groups of children or adults in various situations in life, Colorado State Teachers College has inaugurated a

plan whereby students are allowed to do leadership work for organizations in the community for regular college credit.

"In March, 1915, Dean Thomas C. McCracken submitted to the Council of Deans a plan in which provision was made for allowing students to go out to organizations to assist them in their undertakings. It was proposed to allow students credit for acting as leaders, teachers, or directors of such groups as Boy Scouts, Girls' Camp Fire, Boys' Clubs, Girls' Clubs, Sunday School Classes, Junior Christian Endeavor Societies, Junior Epworth Leagues, Sodalities, Children's Choirs or Orchestras, and similar organizations. Two credit hours a term were to be given for this work provided it required preparation and at least one meeting a week. No credit was to be granted for less than two consecutive terms. This work, when approved by the Dean of the Training School, was to be substituted for a part of the required practice teaching.

"The above plan was adopted by the Council of Deans and later very heartily approved by President Snyder. Dean McCracken was appointed Director of Community Co-operation and for the year 1915-16 Miss Helen Ringle was made Fellow in Education with her main work that of helping to supervise the work carried on under the Community Co-operation Plan.

"The College was willing to inaugurate the Plan because of its promise of usefulness both to the community and to the prospective teacher. The Plan should benefit the community by bringing to organizations the assistance of well-trained College students who are willing to work along lines in which the organization is interested. The Plan should be of vital aid to the student who is preparing to be a teacher. It will give him an opportunity to study children at close range outside of the school room. He will have a richer understanding of school problems and be better able to take a place of leadership in his community. All this will make a greater success possible for him and will extend his influence for good wherever he enters upon the work of teaching.

"The College believes that the Plan is well worth while and hopes for its extension until all students may have had such training before going into actual work in the teaching profession.

#### "STUDENT INTEREST AND ACTIVITIES

"The plan seemed to meet a felt need of the students of the College, for when it was outlined to them many at once expressed their desire for training in a community work. Various organizations in the community also expressed their desire for help. During the year 1915-16 seventy-one students worked under the Community Co-operation Plan. They were engaged as follows:

- "43 Sunday school teachers
- "1 Sunday school superintendent
- "1 leader of a boys' club
- "8 story tellers in the Greeley Public Schools
- "2 directors of a gymnasium class for the Business Women's League
- "2 Junior Christian Endeavor Leaders
- "4 Camp Fire guardians
- "2 B. Y. P. U. Leaders
- "1 engaged in general Parish service
- "1 director of a children's choir
- "2 directors of children's gymnasium classes
- "2 Junior Epworth League leaders
- "1 director of a brass band
- "1 assistant director of a Sunday School Home Department

#### "GROWTH OF THE PLAN

"The success of the Plan is also shown by its growth both in scope and number of workers during this first half of the present school year, 1916-17. It is again under the direction of Dean McCracken with Miss Celia M. Lawler as his assistant. The plan is the same as that of last year with the exception that all who teach Sunday school classes are required to have at least one year under the Greeley Plan of Bible Study or its equivalent and that all are required to take Education 44, a one-hour course designed to give methods of handling groups of children, instruction in the pedagogy of Sunday School teaching, and the principles of community service. Ninety-nine students are now (March, 1917) engaged in Community Co-operation work. The activities and number of those engaged are as follows:

- "68 Sunday school teachers
- "1 choir leader
- "8 story tellers in the Public schools
- "1 teacher of a Mothers' Bible class
- "1 teacher of a class in Spanish for the Business Women's League
- "1 director of a Sunday School orchestra
- "1 teacher of a High School Bible class
- "1 Boy Scout master
- "2 teachers of Sunday School construction work
- "4 Camp Fire guardians
- "1 teacher of a class in German for the Business Women's League
- "3 teachers of classes in Folk Dancing in the Public schools
- "1 secretary of Sunday school

- "2 teachers of classes in Commercial German and Spanish given for business and professional men
- "1 story teller for sick children
- "2 story tellers for church work
- "1 teacher who visits children's homes and makes suggestions to the co-operation group for further extension of the work.

#### "VARIOUS DEPARTMENTS OF THE COLLEGE INTERESTED

"There has been a definite drawing upon various departments in the College for skilled workers to meet requests from the community for help. With growth in this direction and the co-operation of departments of the College in furnishing specialists for various kinds of leadership the expansion of the Plan is unlimited.

#### "EXTENSION KINDERGARTEN ESTABLISHED

"Through the efforts of the Community Co-operation supervisors and Miss Mildred Julian of the Kindergarten Department of the College, a kindergarten for children of the East Side, Greeley, has been established. The people of the German Congregational Church have given the use of a room in their church for the kindergarten. The College is providing the teacher and necessary equipment. There is a keen interest among the people in this opportunity for their children, and the kindergarten promises to be a great success. The opportunity for extension of this sort is thus beginning to develop.

#### "OUTLOOK

"The Community Co-operation Plan has so enlarged itself that it is becoming very evident that a Community Center is needed where not only students can conduct classes and clubs but where members of the Faculty of the College can give courses at hours convenient for people other than college students. Already the Women's Civic Federation is having Miss Redifer and Miss Kessick of the Home Economics Department give a course of lectures for the women of the city. The need of a Community Center is thus making itself felt. It is hoped that with the establishment of such a center, presumably at the College, will come the offering of College opportunities to adult and youth alike until there shall be a co-operation of community and College which will make for the best interests of both and for the upbuilding of the best type of citizenship."

We now have before us the information that the publications of the school afford, and may proceed to discuss it in the light of the implications apparently involved in the published statements, and with the help of such additional information as may be had from other records, from interviews with faculty members, and from personal knowledge of practice.

### DISCUSSION

The activities carried on by the Extension Department are diverse in character and in the working conditions that surround them. The emphasis of the account falls upon two types of extra-mural instruction: viz., class work and correspondence study.

The first concern is to see as completely as possible what the extra-mural class work is like.

#### 1. Extra-Mural Class Work

So far as class work is concerned the emphasis of the Handbook clearly falls upon the instruction that is carried on by the *local representatives* of the college,—the teachers who are appointed by the college as non-resident instructors. The two brief references to the extra-mural class work done by the faculty both give the impression that it is secondary in importance. The longer of these describes the extra-mural classes of the faculty as contingent upon the possibility of "making arrangements such as will not interfere with their regular work in the college." It is implied that the "regularly organized study groups in most of the larger centers of the state and in many towns and villages" are taught by the local representatives. The method of support would make this unavoidable for the most part. The local representatives and the faculty alike are (1917-18) paid wholly from the fees of their students, which must also cover the expenses of traveling, board, etc. To be specific, those who conduct extra-mural class work receive 80% of the fees of their students. Their income depends upon the size of their classes. The size of the classes may depend upon a variety of factors. Some of these will appear later.

The matters of special significance in this plan of extra-mural work are

the qualifications of the local representatives, what courses they give, and what guidance and supervision they receive.

We may first call attention specifically to the information given in the excerpts from the Handbook. A quite specific statement is given concerning the qualifications the local representative must possess. The scattered information concerning the courses they give indicates that: (a) the local representatives give only credit courses; (b) that they are perfectly free to give courses not described in the Handbook,—and therefore presumably not worked out by members of the faculty (since “practically any course given in residence may be taken *in absentia*”); and (c) that in case they choose courses that are described in the Handbook they may please themselves about asking for and using the study directions worked out by the college instructors who developed courses.

Concerning the guidance and the supervision of the extra-mural classes the information given is least specific. The local representative “gives the course under the *general direction* of the college.” Since he is not required to ask for or use the *study directions* worked out by members of the faculty for the course described in the Handbook, and since he is free to give courses not included in the Handbook it seems implied that the “general direction” given must be in the nature of direct supervision and advice upon general procedure. Possibly, however, the “general direction” intended may be covered in the requirement that “each student in the group must read and give adequate reaction to approximately 1,200 pages of reading matter pertaining to the course.” The “rules and regulations” governing regular instruction in the college are applied, apparently; but what they are is not stated. There is no planned supervision of residence instruction. The only rules and regulations that are in force are those tacit ones touching absences, tardiness, and the expectation of work upon assignments, etc. The reports mentioned concern in the main such matters as these. From the Handbook it is clear that the local representatives decide whether to meet 12 times for 2½ hours, 15 times for 2 hours, or 18 times for 1½ hours. This might properly be a matter for the “general” direction of the college. The meetings occur as a rule at 4:30 on Friday afternoons or at 10:00 on Saturday mornings. The longer periods would be more appropriate for the Saturday meetings than for the Friday ones.

With a word or two on the classes or groups working under the leadership and direction of one of their own number, we may pass to a closer analysis of the school's extra-mural class work. The *class leaders* are obliged to select courses that are described in the Handbook, and must use the study directions worked out by the college teachers. It should be explained that this plan is an attempt to combine with correspondence study some of the advantages of group study. The class leader pays no fee to the college. There is no record of anyone's ever having done work under this plan.

The Director's last summaries (1917-18) of class work in the field afford some information in regard to the amount and distribution of the extra-mural classwork; and in about half the cases it is possible from other sources to add the subject taught.

TABLE XVIII  
Class Work of Local Representatives

Town	Size of Class	Subject
Denver.....	30	Art
Denver.....	23	Art
Denver.....	10	Penmanship
Denver.....	11	Penmanship
Pueblo.....	9	.....
Pueblo.....	11	.....
Pueblo.....	19	.....
Colorado Springs.....	8	Spanish
Colorado Springs.....	9	History
Colorado Springs.....	10	Short Story
Trinidad.....	20	Spanish
Trinidad.....	9	Spanish
Trinidad.....	16	.....
Trinidad.....	7	.....
Trinidad.....	3	.....
Trinidad.....	25	Spanish
Loveland.....	7	Art
Loveland.....	5	Art
Loveland.....	5	.....
Canon City.....	18	.....
Pierce.....	4	.....
Sterling.....	13	Religious Education
Aguilar.....	2	.....
Akron.....	10	.....
Montrose.....	10	.....

TABLE XIX  
Class Work of Six College Teachers

Town	Size of Class	Subject	Teacher
Denver .....	55	Sociology	G. R. Miller
Denver .....	56	Sociology	G. R. Miller
Denver .....	43	Sociology	G. R. Miller
Loveland .....	13	Sociology	E. D. Randolph
Denver .....	20	Geography	G. A. Barker
Ft. Morgan .....	12	Geography	G. A. Barker
Brush .....	7	Geography	G. A. Barker
Denver .....	12	Physics	F. L. Abbott
Denver .....	5	Physics	F. L. Abbott
Denver .....	39	Psychology	Clara H. Town
Denver .....	41	Education	F. L. Wright
4 Towns .....	456 Students	5 Subjects	6 Teachers

We may first interest ourselves in the work that is delegated to local representatives of the college—the class work that is conducted by others than the faculty of the college. The summary in *Table XVIII* shows 20 local representatives giving instruction in 25 classes in from 8 to 17 subjects in 11 towns widely scattered over the state. The distribution of the towns, the variety of the subjects taught, and the fact that classes meet only once a week (usually on Friday afternoons at 4:30 or on Saturday mornings at 10:00) suggest difficulties of supervision and direction that would make the selection of local representatives a very important matter. How are they chosen?



The files of the extension department contain some information. An application for appointment must be filled out by the prospective teacher and approved by certain college officials. The form is as follows:

Colorado State Teachers College  
Greeley

APPLICATION BLANK AS GROUP EXTENSION INSTRUCTOR

.....  
(Name)

.....  
(Address)

I. Qualifications:

- (a) I am a graduate of.....covering a course of.....years, and received the degree of.....
- (b) During my college course I made a special study along the line of.....
- (c) My present position is.....
- (d) My postoffice address is.....
- (e) My education experience is as follows: .....

II. I feel competent to give group instruction to teachers in the following subject or subjects: .....

- (b) If approved for group instructor as above, I shall send in a list of names in the class and keep the State Teachers College of Colorado fully advised as to the progress of the work, and submit a complete record of the attendance of each teacher.

(Signature).....  
(Applicant)

Note: Each five hour course in any subject may be met by 12 meetings of 2½ hours each, 15 of 2 hours, or 18 of 1½ hours each, not oftener than once per week, with readings and reactions to the instructor upon at least..... textbooks, to be approved by the Non-resident Department of the State Teachers College.

(Do not fill in this blank)

..... is hereby appointed an instructor of the class or classes designated above under the direction of the State Teachers College of Colorado.

..... Approved .....  
Dean of College Director of Extension Dept.

.....  
Dean of College President

In the files of the extension department there are twenty-nine of these applications. Comparison of the names of local representatives in the applications with the list revealed in the Director's summary in *Table XVIII* adds fourteen local representatives to the number. For these fourteen we have no data in regard to degrees, professional training, and experience. They were apparently appointed by the Director independently of the rest of the faculty. This may be the best way to select them. Also, of the twenty-nine applications in the files only sixteen are completely approved; i. e., thirteen lack one or more signatures of the college officials designated on the application. Of the sixteen local representatives whose applications for appointment are signed by all the designated college officials, six do not hold either the A. B. or the B. S. degree. Two hold, instead, the degree Pd. M.,—a degree conferred by the State Teachers College for three years of satisfactory work beyond the high school. Four hold no degree. Three have the A. M. degree and one has the M. D. So it seems clear that the phrase "substantial equivalent" is in force. What the standard is is not ascertainable. It is significant that of the thirteen incompletely approved applicants, three hold the A. B. or the B. S. degree, and one holds the Pd. M. A few of the thirteen are clearly marked *Not Approved*. The implication is that the rest of the thirteen may be considered approved. Exploration reveals only one of the thirteen conducting a class for the college.

So far as can be discovered without correspondence it appears that there may be about forty local representatives who may give courses for college credit. Probably there are not so many; but none of the applications is dated, and there is no indication of what appointments, if any, have lapsed. Nor is it possible to discover how steadily or regularly the local representatives have been teaching or how many students have completed courses of instruction with them. Some of them name three subjects that they wish to teach and many name two; but there is no way of discovering which subjects were taught or whether all the subjects named were taught.

Eighteen towns widely scattered over the state are named in the applications in the Director's summary of extra-mural classwork. And over thirty subjects of instruction are designated. If all the local representatives named are regularly teaching the subjects they were appointed to teach, the problem of supervision and direction of extra-mural class work might be stated as that of keeping in effective touch with forty teachers handling thirty subjects in eighteen towns so located that constant traveling would hardly enable one to visit each town once a month. This probably somewhat exaggerates the problem. It is hardly likely that more than half the local representatives teach in any given semester. The Director's summary for 1917-18 (*Table XVIII*) shows, for example, only twenty local representatives. But they were conducting twenty-five classes in from eleven to seventeen subjects in eleven towns not very conveniently distributed for supervision; and the fact that the classes meet but once a week and all at week ends reduces the possibilities of keeping effective touch with them.

It may as well be said that direct supervision is practically impossible without a considerable extension faculty. That the Director has pointed out this difficulty is clear in the file of correspondence on the subject. Clearly the most feasible guidance would be that of syllabi and study directions provided by the college teachers of the subjects taught. This, however, is not attempted.

Other facts about the work of the local representatives may be pointed out. Usually the classes are quite small. The exceptions are Art in Denver and Spanish in Trinidad. In twelve cases no record is available to show what the teachers taught, and in most of the other cases there is no clear information that indicates whether the courses given were courses described in the Handbook,—and therefore worked out by members of the college faculty. In some cases it appears clear that the courses were not courses described in the Handbook, but were courses that the local representatives wished to give and that some students were willing to take. All these matters the Director had in hand and could no doubt have given a perfectly satisfactory account of them.

A word may be added concerning the extra-mural classes of members of the college faculty (*Table XIX*). The Director's summary shows that of the total

of 744 students enrolled in extra-mural classes, 456 were in the classes of the six college teachers who that year conducted courses in the field, as over against 288 in the classes of the twenty-one local representatives. The classes of the college teachers varied exceedingly in size,—viz., from five to fifty-six students. The five college departments that were represented share very unequally. Sociology, for example, claims 290 of the 456 and geography only 39. Various factors enter into the explanation, some patent, others obscure. For example, teachers vary in popularity, in methods of teaching, in the rigor of requirements, in the relevance of their work to the daily pressure of public school work or to graduation from the college, etc.

From this summary it is clear that the bulk of the extra-mural class work is really done by a small group of faculty members representing five college departments and working in four towns close to the college. It may be said that so far as the work of the faculty members is concerned the service of the school is mainly for Denver. At least four of the classes could not have paid even the expenses of the teachers if the regulation concerning the minimum number of meetings had been enforced. And judging from both the size of the classes and the nature of the work given the idea of training in service was subordinate to the idea of facilitating graduation from the college. The work of the local representatives suggests the idea of training in service more fully, but in 1917-18 it is not wide in range. There is no record to show what it has been before.

Let us now inquire more closely into the conditions of extra-mural class work. What is "group study" like? The general or characteristic conditions surrounding this work are not altogether favorable. Some of them are, other things being satisfactory. For example, the students are active teachers and as a rule somewhat more mature than the resident students in the school. Presumably they may be a selected group with reference to energy, ambition, and the like. Beyond this there is a possibility that they may have somewhat better refined motives than the resident students.

On the other hand, in some cases their enrollment in extension classes is the result of the superintendent's prescription of a definite amount of "professional or college study" each year as a condition of advancement or approval. In a few cases teachers who are definitely failing may enroll in a desperate effort to save their position. In other cases no doubt enrollment is due mainly to the desire to work off a degree. In such cases it may happen that the courses yielding most credit for a given amount of work will be chosen.

In all cases, however, extension class work faces certain constant difficulties that require definite consideration.

1. In the absence of highly conscious and purposeful organization it is always *extra* work and has the quality of *burden* rather than of *help*. Frequently, if not usually, the teachers come to the meeting "spent," so that the value of a given amount of class work is somewhat below par.
2. The meetings are infrequent and lack the cumulative effect of daily residence work.
3. In some cases the classes are too large to teach,—so that the kinds of judgments that need to be formed of students' work are not possible.
4. Most of the teachers report that under the general conditions of extension class work the teachers do not as a rule feel bound to make very extensive or careful preparation for the class. Though there are sharp differences of opinion, the majority believe that such study as they do is probably generally done swiftly in a short period before the meeting. The amount of preparation made will depend partly upon the organization of instruction and partly upon the subject taught. In mathematics, for example, it is comparatively easy to enforce preparation. In general where no special pains are taken to offset the constant unprospective conditions that surround extension work as at present organized the presumption is that credits earned *in absentia* cost less than the same credits earned in residence.

The difficulties that beset extension instruction when the college faculty themselves conduct the classes are in some cases increased and in some cases lessened when the classes are taught by local representatives. For example, if the local representative chances to be the school superintendent, to have a strong personality, and to be promoting a useful program for training in service, then the problem of motivation is perhaps likely to be more effectively met than when the class is conducted by a member of the college faculty. The college, in that case, adds to the pressures of the superintendent's supervision such motives for effort as the reward of credit recognition for creditable work of college rank. If, however, the local representative lacks prestige of position, or of personality, his work may only accommodate the credit seeker and he may even obstruct specific improvements by occupying the time that should be given to school work.

Without constructive planning extension classes for credit may easily amount to nothing much beyond the accommodation of credit seekers.

What sort of organization would promise to offset somewhat these unfavorable conditions?

Organization begins with the definition of purposes. It should be clear that school superintendents and schools for the preparation of teachers have a common problem which is created by certain constant factors in the educational situation. A few of these may be enumerated. For example, the short service of the bulk of the public school teachers, their annual shifting from one school to another, their incomplete initial preparation, their typical lack of satisfactory adjustment to their characteristic responsibilities,—these and allied characteristics call for the development in public school systems of a plan of training in service. It may be urged that Normal Schools, Teachers' Colleges, and University Departments of Education should give a better preparation than they do. But this criticism has much less point than those who make it have thought. Normal Schools and Teachers' Colleges are caught in the same net of circumstances as the public schools. At the present wage levels of public school teachers, Normal Schools and Teachers' Colleges cannot hold many students for more than two years of continuous study. Can satisfactory preparation be given in two years? Of course not. Then, the most pressing concerns must be attended to in this period. The courses of study in schools for teachers must be framed on the basis of relative values and in the light of the best modern thought upon the problem of teaching.

Normal Schools are even less free than this indicates, because of the rising tendency of their graduates to do their advanced work in great eastern universities. This requires the meeting of certain course requirements. In the Teachers Colleges, also, the maintaining of credit relations with eastern universities necessitates certain definite course requirements. It is clear enough that the failures of public school teaching trace in part to the teachers' lack of sufficient margins of knowledge in the common branches and the secondary school subjects. But failures from this source prevailed when it was generally believed that sufficient knowledge of the subject matter is the only necessary equipment of the school teacher,—and when no other effort than that directed at scholarship was made. Failures from this cause, however, are the characteristic failures of the beginning teacher. The pressure of daily class work, of the course of study, and of organized supervision, all of which in a good school system bear daily upon the teacher, tend quickly and inevitably to remove this cause of failure. They provide both the most effective motives and the best conditions for individual effort to remove the deficiencies of information.

It is also clear that in part the failures of public school teaching trace to lack of rational points of view for teaching the school subjects, to lack of knowledge of the laws of learning, to lack of craftsmanlike technique, and the like. And these seem on the whole to be the characteristic and persistent sources of failure among experienced teachers. Teachers of long experience and perfect knowledge of their subjects fail in these respects quite as frequently and as seriously as beginners fail from lack of sufficient margins of knowledge; and the prospects of acquiring the necessary equipment by individual effort

are much less than the prospects of removing specific ignorance of subject matter. In the two year period available for preparation therefore, schools for teachers ordinarily feel that the basic sciences of education must be taught even at the cost of omitting review courses in the school subjects. If a longer period of preparation were available it would certainly be desirable to spend a great deal more time upon specific preparation to meet the detailed problems of teaching *each of the school subjects* than is at present ordinarily planned for.

In the face of these conditions progressive school superintendents usually work out some plan of training in service. It may not go beyond the employment of a few supervisors of a few subjects or activities in a few grades. It may not go beyond the mere clerical device of requiring a certain amount of study in the teachers' field of subject matter. It may add to this a certain requirement of annual "professional study." But it sometimes extends to specific instruction bearing upon specific ascertained deficits of knowledge, technique, and point of view.

Accordingly when a Teachers College establishes extension service the first need is a substantial recognition of the common problem of school superintendents and the schools that prepare teachers, and following this a thorough-going plan for correlating the extension class work with the superintendents' program of training in service; or in the absence of a definite educational program on the part of superintendents, a definite effort of the Teachers College to cooperate with the superintendent in working out a satisfactory program. If the courses of instruction that are offered to active teachers in a school system were directly relevant to the matters upon which the organized pressures of supervision and the force of precept are daily bearing, then extension work would to a considerable degree lose the handicapping quality of *extra work or burden*. Extension instruction so planned should even appreciably *lighten the necessary efforts of the teachers who are striving under constant pressure to improve their work*. At all events such an organization would secure a favorable kind and amount of motivation that can not be otherwise had. From the practical point of view of economical operation every consideration argues for such an organization.

It might be objected by ambitious schools that such an organizing idea implies yielding leadership in extension work with teachers to the city superintendents of schools. It ought to be clear, however, both that it *belongs* to them, and that in fact it could hardly be elsewhere. Leadership can be exercised only from within a situation. It is hardly a question of yielding, therefore. Rather, it is simply acknowledging that *strategic location of superintendents* and their superior opportunities for discovering the specific needs of teachers. As a result of constant supervision of the work of teachers the progressive city and county superintendents gather a fund of valuable information about the deficiencies of teachers and their needs of specific instruction and training. On the basis of such classified information about recurring needs such superintendents frame programs for the cumulative improvement of school work,—or under the worst conditions, merely for *holding* the gains that have been made. Higher schools that without such information attempt to give extension *service* to public school teachers are not in the position to be of the greatest use to the progressive superintendent. They may even obstruct him. It is certain at all events that they do not necessarily or indefectibly assist him by facilitating the efforts of teachers to get degrees. Under these circumstances except by chance they probably mainly serve the personal ends of the more ambitious individuals of the school system rather than work directly for school improvement. The initiative in training in service properly belongs to the school superintendent, and the function of the Teacher-training school is properly that of collaborator and cooperator. The adoption of this point of view would apparently meet the most serious obstacles to effective extension instruction.

The problem of initiating such a plan of organization would be one of varying difficulty. In many cases it would probably offer no difficulty at all. For example, in all cases where the superintendent has a definite *educational program and some provision for training in service for his shifting and in-*

*completely adjusted personnel*, and is willing to cooperate, it should be comparatively easy. So far as Colorado is concerned this is the situation in the more important city school systems. In such cases the only additional factors needed are (1) that the school providing extension class work for teachers should be willing to subordinate growth to service, (2) that it should be willing to take the superintendent's diagnosis of the needs of the teachers in his school system and cooperate with him in meeting the situation, and (3) that it actually have a teaching personnel able to promote the superintendent's forward-looking plans.

To carry out such a purpose, however, it must be possible to provide (either for the resident faculty or through a special extension faculty) the courses of instruction that are actually found to be needed for improving the teachers' mastery of their daily work. Under the ordinary conditions of school work in the West this is seen to be a matter of financial support. It may be laid down as a maxim that without the very completest cooperation of the school superintendents no school for teachers can possibly operate extension work, for the purpose of giving training in service, *upon the fees paid by the students for instruction*. To *initiate* a plan of extension work to give *training in service* it is necessary to have support other than the students' fees. The college teachers must be paid by the college or the school board of the city receiving the service.

The experience of this school with the self-support plan seems quite conclusive. The result has been a sharp competition among faculty members to get students enough to pay expenses and something over for extra labor. Unless a class in Denver, for example, could draw thirty students, a teacher from the college could not afford to undertake the work. Suppose he got thirty students. The railroad fare is \$55, roughly; the college collected \$20 from the fees paid by the students. Thus \$75 of the total receipts would be absorbed, leaving the teacher \$25 for sixteen trips and 1,600 minutes of work. Usually he would have other expenses,—perhaps a meal a day, and perhaps secretarial expense (for usually he gave one of the class something to keep records of attendance). With a class of twenty, the teacher would thus get about \$12.50 for his half-year's work, and could have no further interest in extension work. Some after starting small classes abandoned them.

So, under the circumstances all a teacher could do, if he wished to carry on extension classes, was to compete shrewdly with his fellows for students, and then lessen the number of meetings as far as possible to reduce expenses. In some cases instead of sixteen meetings of 100 minutes each, there were eight meetings of two and one-half hours each,—as if these were the equivalent for class purposes of the more frequent shorter period. This evades the real difficulty of the situation entirely. Further, if a teacher offered a course and found few or no students he paid his own expenses to Denver and return. This too was bad. The college was willing to profit from the extension work, if it were profitable, but was unwilling to pay for its gain, if there were gain. Assuming that it was good for the college for a number of its teachers to succeed in enrolling enough students to pay expenses and something over, no one could blame the teachers for fighting shrewdly for students in the near-by cities. Whatever undesirable forms such competition may take are simply by-products of the plan of self-support.

Aside from this it should be noted that under such a plan of support the initiative in the growth of extension work is left mainly with the students. It is a *wholly elective system* and only by chance has any relevance to any existing or possible plan of training in service. It might (as has been earlier suggested) even be obstructive to the program of training in service,—if, for example, it attracted to advanced "cultural" and technical courses teachers whose immediate need as revealed by supervision is to improve their margins of knowledge in the elementary subjects of their daily class work, or their technique of teaching the "tool" subjects. A certain amount of this diversion of effort is indeed inevitable, because teachers will be seeking graduation and higher degrees. Their courses will certainly be chosen to some extent with the view of meeting graduation requirements. Under such circumstances it can easily happen that the extension work only accommodates ambitious teachers.

While this is a worthy thing to do it is less worthy than training in service, and under the conditions described does not necessarily have any relation to training in service, because clearly only the few college teachers who draw large classes will really be available for extension work; and though the changing personnel of the public school system may assure them classes every year they can at best only meet a segment of the existing needs in a school system. The teachers' needs will certainly be as wide as the curriculum and as numerous as the changing personnel and the reconstructions and expansions of school work carried on by the superintendent. There will certainly be need for some small classes, even though principals, supervisors, and departmental teachers are fairly permanent; and it will undoubtedly be true that conferences and brief courses of special lectures and demonstrations rather than long systematic courses will often be the best sort of service.

Since only the very exceptional superintendent will demand of the college the courses that are directly relevant to the ascertained needs and weaknesses of the teachers in the school system it ordinarily comes to pass that self-supporting extension work is mainly an accommodation to the teachers who are seeking graduation. And since only the exceptional college teacher will, when his returns depend wholly upon the size of his classes, be able to maintain adequate standards of work, it comes about that extension work is often somewhat at cross purposes with residence work. Extension work from any sort of higher school ought to promote the same ends as the residence work of the school. If this is true, it seems fair to conclude that the self-support plan promotes the essential purpose neither of the school superintendent nor of the college.

These considerations give special point to Mr. Mooney's decision in 1917-18 that the self-support should be abolished in favor of a plan whereby the college should collect fees of extension students and pay its teachers for their extension work. The college would thus be able to bring just any of its teachers to bear upon just any phase of the superintendent's program, regardless of the size of the class.

It will be obvious, of course, that such a plan of extension work as this could, if there were fairly good response from the superintendents, easily expand beyond the available funds of any Teachers College. The College may properly *in the beginning* carry a considerable deficit from extra-mural class work for the sake of enabling progressive superintendents to establish their forward-facing plans for training in service. But the function of training in service is a responsibility that ultimately belongs to the public school system and should ultimately be supported mainly by the Board of Education and the public school teachers. This adjustment, of course, is at present complicated by numerous factors already indicated, one important one being the low wage levels of teachers. They ought not to be taxed for training in service until better paid.

A further consideration should be mentioned in justification of the College's assuming in the beginning a considerable financial responsibility in cooperating with the progressive superintendent to establish a real training in service. The benefits of a purposeful extension service are mutual. It is true the Teachers Colleges are established primarily to give the best possible initial preparation for public school teachers. It is equally true, however, that they can not possibly do this without maintaining dynamic relations with the public schools. In short, the maintaining of Extension service of the sort mentioned is an indispensable part of the College's plan for developing the best residence work. The duty of *training in service* for college teachers is just as pressing upon the president of a school for teachers as the duty of training in service for public school teachers is upon the superintendent of public schools. His problems are just as real. He too has a shifting personnel; and his teachers are drawn from sources that make it inevitable that they should be somewhat detached and aloof. They must be put into the educational situation in a stimulating way, and extension service is the readiest and best means of doing it.

With this we may turn to an account of the second phase of the college's extension work: viz., its correspondence instruction.

## 2. Correspondence Instruction

The range of the opportunities for study is shown in Table XVII. All these courses are "credit courses." The general plan of study is made clear in the excerpts from the Introduction to the Handbook. It is closely followed in practice. The outstanding features of the plan are (1) The provision for *study directions* ("syllabi"), intended to standardize study requirements and to make correspondence study equal in value to residence work, (2) The absence of examinations at the close of the courses, (3) The range of the opportunities for study, (4) The low cost to the student, and (5) The fact that the work is largely self-supporting. Theoretically, the Director teaches half-time in the colleges, so that half his salary and all the salary of his secretary (the clerk who handles the routine of the office) represent roughly the cost to the college of the Correspondence Division of the Extension Department. Perhaps the advertising and recruiting values of the Handbook considerably more than balance its cost.

What are the study directions like? It would be useful to illustrate rather than describe them; but the variety is so great that space can not be taken to print samples of their range from meager to full. This phase of the work is in the beginning of a second period of experiment. The Director had wisely abandoned the old plan of giving credit for the mere outlining or reporting of books, thus closing one experiment. He initiated the change in the interval between the close of one summer quarter and the beginning of the following fall quarter. His plan had been placed before the faculty as fully as possible in a single faculty meeting. Sundry conferences following this had done something to amplify the faculty's conception of the requirements of the plan. But he had not found it easy to get the faculty to spend a great deal of time in working up a new plan, for the returns were very inconsiderable for the work involved. Eighty per cent of a student's fees for a course meant less than 25 cents an hour for the teacher's work, according to the faculty. The Director had to be content with making a start. In the effort to get the most satisfactory work possible he asked at first only for the *first three study units of each course*, thus lightening the immediate burden of reconstruction very greatly, and in a measure providing for such careful beginnings of each course as might to some extent set standards for the rest of the course.

Notwithstanding such plans, the study directions present a very great deal of variety that is independent of variations in the nature of the courses. They vary with the differing conceptions held by the teachers in regard to the typical difficulties surrounding correspondence study; with the varying notions of the distinctive character of college work; with the extent to which the textbook may be relied on to do the teaching; and perhaps somewhat with their varying sense of responsibility. The study directions vary from one or two pages of "directions" for fifteen lessons, to fifteen or twenty pages of "directions" for one lesson. They vary in character just as decidedly. The study-directions formulated by the teachers giving correspondence courses consist of

1. Assignments such as might be given in residence class work.

There are courses in which the assignments are the barest possible specifications of tasks or of pages of book work. There are courses in which the typical assignments are of the general character of "Outline chapter I"; "Compare Book I with Book II"; "Discuss the following topics (selections of topics treated in the book)." There are, however, courses in which the assignments are of a sort requiring the student to become for the time being a quester,—as, for example, the direction to "Read chapters 1-4 and work out in detail the practical implications for the teacher of (say) civics"; or, "On the basis of the material covered in chapters 8-12 work out a program for changing the curricula in (say) the Physiology-hygiene-sanitation group so as to meet the present public health situation in Colorado."

2. *Questions* such as might be asked in class work if the student were studying the book in residence.

Comparatively few teachers, however, feel it necessary or desirable



to do much questioning. The questions asked vary from few, casual, and perfunctory, to detailed, searching, and cumulative questions directing attention insistently to every matter thought to need close study.

3. *Explanations* such as might be made in class work.

These vary in length from a sentence or two to a short essay intended to orient the student with regard to this or that aspect of the course, to focus attention upon important problems, to give clues to wholesome attitudes, etc. Few teachers do much explaining, however, no matter that the distinctive value of the course may call for substantial changes from the usual attitude upon the matters involved.

4. *Suggestions* in regard to the most fruitful methods of working on particular problems of the field or assignments in the course; in regard to the best sources for further material,—as for example, the various national societies and foundations that distribute material. These are rarest of all.

5. *Requests* for the student's reaction on the specific books are included in a few courses, with the view to discovering what books are least useful for the purposes intended; and in a few instances the student is asked at the close of the course for suggestions for making the course more useful.

As a result of these queries a small number of letters reach the office. Sometimes they are critical. More often they are quite commendatory. In a few cases it would appear that the correspondence courses meet the demands of instruction in a manner more to the satisfaction of students than the residence course. But these are exceptional cases,—of exceptional students. Usually the letters suggest that residence work is more satisfactory.

There are courses that contain neither explanations nor suggestions where both would apparently make the work more fruitful. There are courses that have no assignments or questions that reflect either much ingenuity in teaching or effort to stimulate thought, or much pains to be helpful to the student. And it seems clear that in cases all too numerous the characteristic difficulties of correspondence study have not been much considered.

In a general way it is planned that a course of twelve study units shall require about the same amount of effort as a four hour course in residence; and it is assumed that a teacher doing full school work can by working regularly complete one four hour correspondence course in three months.

Relatively very few students drop courses that they have begun,—not 5%, apparently. Some spend a very long time in completing a course,—often a year, and sometimes longer. This might indicate either dawdling or lack of time. Since most of the students are teachers doing full school work, probably lack of time is the reasonable explanation. In some cases undoubtedly the slow progress is due to the difficulty of the work. Occasionally letters are received complaining of excessive requirements. These are very rare. Sometimes they are from students who have clearly undertaken courses too difficult for them. On the other hand, courses are sometimes completed in a few weeks. Sometimes they are from students who have clearly undertaken courses too difficult for them. On the other hand, courses are sometimes completed in a few weeks. Sometimes this is explicable on the ground that the student has given his whole time to the work until it was completed. But sometimes it is done by a teacher in addition to his regular school work. Facts of this sort may indicate nothing more than the normal variations of conditions and individuals, but they, no doubt, to some extent indicate variations in the requirements of the courses.

The Director was well aware of the need of revising many of the *study* directions. But the new plan was experimental. To get thoroughly satisfactory study directions at the outset was impossible; and to get revisions was quite difficult because the pressure of regular class work was heavy and the correspondence work was not very well paid for.

Why are examinations not required at the close of courses? Probably the main reason is simply the difficulty of administration; but in most cases the

teachers profess to feel it unnecessary. In cases where the study directions are very full and contain searching questions and assignments the whole course "examines." The possibilities of dishonest methods of gaining credits of course exist. Perhaps the college teachers are quite warranted in their pretty common faith in the integrity of the teachers who do corresponding study. The isolation of correspondence students, moreover, is usually considerable; where group work is possible they always choose it instead of correspondence work. It may reasonably be doubted whether collusion is as frequent as in residence work. Once or twice a year, however, some college teacher will find some indication of what seems to be "bare-faced copying." There is no provision for dealing with such cases. The College teacher takes the matter up with the students in question.

Is the range of correspondence instruction too wide? Probably it is much too wide, considering the fact that all the work offered is *credit work*. There are numerous courses that apparently ought not to be attempted for credit except in residence. For example, beginning courses in such fields as the practical arts, woodwork, millinery, interior decoration, and stenography, the languages, etc., would apparently be next to impossible to give satisfactorily to beginners *in absentia*. Emergency help in all these might properly be offered without credit. Perhaps the most serious defect in the plan or conception of correspondence work is simply the absence of the *emergency* feature. This is due to the fact that training in service has not been central in the organization of the department as a phase of the college.

A number of other criticisms of the correspondence division of the Extension Department may be made, likewise with full recognition of the fact that it is still in the experimental stage and that the Director left before he had had due opportunity to deal with the defects in question.

1. Teachers who are conducting correspondence courses are paid for their work when they have examined and returned the first three papers of the student. This plan, it should be explained, was adopted largely for the sake of convenience. It does not work well. Teachers get paid for a course and leave the school before the student completes his work. One teacher, for example, left the college with fourteen courses unfinished, for most of which he had been paid. At long range he completed most of them; but it was a slow process and very unsatisfactory to the student. In other cases the successor of the teacher completed the work without pay.

The simplest solution of this situation would seem to be to pay the teacher only when the course is finished. Thus the college would always have the funds with which to pay for the completion of unfinished work.

2. It is in some cases very difficult to get prompt attention to the recitation papers of the students. The withholding of pay until the course is finished might help to mend this; but it would not completely control it. The best that could be done would probably be simply the systematic checking up of those who are notably shiftless in handling their correspondence work, though it should be possible to devise a checking system that would locate all work that is out more than a week.
3. There is no established plan for handling the correspondence work during the summer vacation. Theoretically there is no vacation from correspondence work. Many students do their heaviest correspondence work in that period. Papers are mailed to all parts of the United States during the summer. Delays are quite vexatiously the rule. Part of the summer papers accumulate in the Extension office. It should be possible to adopt a plan and announce it through the Handbook.
4. There is quite inadequate correlation between the Extension office and the Dean's office,—since the change of the basis from twenty to sixteen hours of work a quarter. In the Extension office the assumption was made that all courses that under the twenty hour plan received five hours' credit should under the sixteen hour plan receive four hours' credit. But as a matter of fact the Colleges continued in numerous

cases to give both five and four hour courses as before. A good deal of erroneous recording was the result of the misapprehension.

5. The grading system used by the College in residence work should be applied in its non-residence work. The practice, at present common, of writing O. K. upon students' recitation papers suggests perfunctory attention.

A few other phases of the work of the Extension Department should be mentioned.

### 3. The Institute Credit Work

The account that the Handbook gives of this phase of the work is less satisfactory than the Director's practice in dealing with the credit problem involved. In the present year (1917-18), for example, outlines of institute courses are required to be submitted by the institute instructors to the Extension Department, by which in turn they are referred to the College department concerned, for approval or rejection. Credit was not given for review courses in the common subjects, but only for courses "of a professional character."

So far as can be discovered, however, the qualifications of "local representatives" were not required of institute instructors whose courses received college credit.

There are obvious and serious objections to giving credit for institute work. On the other hand there are also defenses that may reasonably be urged where the institute students are high school graduates and the work is of a suitable sort. For example, leadership institutions ought to seek to make other necessary institutions as effective as possible. Teachers' institutes are at present both quite necessary in the West and very susceptible of improvement. The danger to college standards from giving credit for institute work is not so great that it may not be practically eliminated by provisions ensuring the quality of the work done, limiting the amount of credit given, supervising the actual teaching, etc. A fair start at all these has been made. It should be mentioned in passing that one of the arguments for giving credit for some institute work is simply that the accumulating of a few hours of college credit acts after the fashion of a savings account. The student plans to accumulate more,—through summer school and correspondence work,—and eventually graduates from the college.

The community cooperation work (see p. 129) appears upon examination to be more ambitious in conception than effective in operation. It is mainly an extension of practice teaching. It seems doubtful whether any of it except the language work (German and Spanish) should receive credit, though perhaps the story-telling in the city might properly be substituted for a part of the Training School work. The difficulty met even with these two phases of the work is that of supervision. With the rest of the work there are additional serious difficulties. The Sunday School work, e. g., very seldom could meet any very rigorous standard.

Finally, the very promising school-survey work that has been started by the Director of the Department should be described.

As conceived by the Director the purposes of this work are:

1. To give the public schools possession of the modern method of taking stock of their work.
2. To enable the schools to discover the nature and extent of public school deficits; and
3. To assist the schools to work out a cumulative program for their own improvement.

In short, the point of view adopted by the Director for the survey work is not that of the critical appraiser of public school effort but that of the friendly collaborator. The organization of the work thoroughly exemplifies its purposes. The Extension Department works through and with the public school. The initiative lies with the superintendent of schools. He directs the work of his

teachers. The college cooperates with him at every step. The work is organized as follows:

1. Preparation of the teachers for the work of self-analysis.

Having chosen the books to be used on the subject of educational tests and measurements, etc., as the basis for the teachers' preparation, very concrete and detailed study directions are worked out and sent to the superintendent. The teachers are organized into a study group. At regular intervals the representative of the college meets with the group in order (a) that they may quiz him about specific difficulties and get his help; and (b) that he may discover the matters upon which special help is needed, etc.

Such preliminary study may occupy a year. The length of the period of preparation will depend upon the initial equipment of the teachers and the amount of time they can give regularly to the study. In the period of preparation the superintendent and the Director discover the teachers who can best carry on the various phases of the work.

2. Taking the inventory.

After such preparation has been satisfactorily completed the actual work of examining the school is undertaken. The tests are given; the results are studied and interpreted; the work of the school is compared with that of other schools; the weak points are discovered.

3. Interpretation of results in terms of procedure.

The superintendent then has at hand the data he needs in order to formulate plans for the improvement of the work of the school system. They decide what should be the foci of effort for the coming year; what lines of individual study should be undertaken; what extension classes will most promote the plans for improvement, etc.

4. Publication of results for the benefit of other schools.

If the superintendent and his Board of Education desire the publication of the results of the survey, the college issues a bulletin giving a full account of procedure and results. This was done in the case of the Sterling Public Schools, and the bulletin is a valuable illustration of the constructive application of the survey idea to the work of school construction as over against merely school appraisal.

By way of comment it may be noted that this phase of the activities of the Extension Department have in the completest degree the point of view of training in service, and deserve the fullest support of the college, as probably its most immediately helpful activity. It is obvious, however, that the college has not yet made adequate provision for this phase of the work. The Director lists nearly a dozen towns that desire assistance of the Extension Department in this work next year. Obviously in case they undertake the work the whole time of the Director would not be adequate to the demands of this one phase of his work. The whole time of another man would be needed for the supervision of the group study and the reconstruction of the correspondence work. And if the community cooperation work is to be carried on probably it also needs the bulk of another teacher's time.

This general account of the varied activities of the Extension Department may properly conclude with the quotation of the Directors' recommendations to the President on February 4, 1918, and a statement of his estimates of the financial support to make the work effective.

"February 4, 1918.

"President J. G. Crabbe,  
State Teachers College.

"Dear President Crabbe:

"In accord with your verbal request I am herewith submitting plans for the Extension Department for the coming school year.

"1. I recommend that we continue to organize the counties of the State into study group centers for the purpose of getting rural teachers together at least once each month; (a) to study the work of the coming school month as each county superintendent, the State superintendent and the College wish it to be given to the children; and (b) to study some line of work, such as the State Reading Circle Course, that will give teachers an insight into their problems as practitioners in a growing profession.

"2. I recommend that we continue our group study work in the cities and towns of the State practically as we have it now. Some readjustment as to the method of paying regular members of the faculty, who go out to do this work, might well be considered.

"3. I recommend that we establish psychological clinics at strategic centers in the State where the mental ability of children may be analyzed and a course of instruction recommended which will make it possible for these children to get the greatest value out of their school experiences. This work should have in mind the adjustment of the superior child as well as the inferior. I think you agree with me that this is a highly important phase of our work as a Teachers' College. As Agricultural Colleges have helped the farmer to understand the soils in which he is planting, so must we help the teacher and parent to better comprehend the children whom they are teaching.

"4. With some slight modifications I recommend that we continue our correspondence study on the basis upon which it is now organized.

"5. I recommend that the community co-operation work continue and that it be expanded into the field of evening schools for men and women. There is no good reason why our shop and other facilities should not be utilized for such work. Citizenship classes should be pushed more vigorously. Some adjustments must be made regarding credit for teaching Sunday School classes. I am working on this problem now and shall make a special report upon it later.

"6. I recommend that the Extension Department become more active in the placing of teachers from the institution. Its means of collecting information about vacancies, etc., is large now and will increase as the department expands. These should be used more systematically than at present.

"7. I recommend that a correct Alumni directory be made by the Extension Department and kept up to date. This work should be done with the co-operation of the Faculty Alumni committee, but the Extension Department should be held responsible for its accuracy and completeness.

"8. The possibilities of the co-operative plan of educational surveys are unlimited. I recommend that this work continue and that it be vigorously pushed from the College. Great good to the school children of Colorado has come and will come from a careful, sensible, and efficient prosecution of this work.

"You can readily see that if this program is approved and legitimately carried through, additional help is needed in the department. I recommend the following arrangement of the work for this department for the school year, 1918-1919.

"First: We need a person who can assist in the organization and supervision of classes and co-operative studies among city and larger town teachers, who will devote all his time to such work.

"Second: We need a person who can organize and supervise classes and co-operative studies in the rural and smaller town communities, who will devote all his time to such work.

"Third: Direct supervision of the community co-operation work, the general supervision of extension service, the co-ordination of this service with the residence work of the institution should be given to the director of Extension Department. In addition he should teach a class or classes in the department of education in order that he may keep in close touch with the inside work of the school, and also that he may give students the benefit of his first-hand information concerning the outside educational activities. These classes should not, however, prevent his being free for a reasonable portion of each week for outside work.

"Trusting that the above program will meet your approval, I am,

"Sincerely yours,

"W. B. MOONEY,  
Director Extension Department."

It will be observed that some activities mentioned in the letter as being carried on are not touched in the analysis given by the author of this section. The reason is that there is no record of them in the department or the college.

On March 25, 1918, the Director's estimates of the cost of the proposed psychological clinics was presented to the President. It contemplated the possible establishing of seven centers and reckoned the cost at \$25,500 if the entire state were covered, but counted that one of these centers (that on the western slope) would no doubt be taken care of by the State Normal School at Gunnison, which would reduce the cost by about \$4,000.

It will be observed that the Director's recommendations allude to various items that have been criticized in the analytical sections of this report. Of all these he could have given a better account than the present author, for he alone was thoroughly conversant with the details of the field work.

### CONCLUDING REMARKS

Throughout this study the value of unity of purpose and effort has been constantly stressed. Has it been overstressed?—to the depreciation of other equally important values?

For example, in spite of the illustrations, it may appear to some that individuality or initiative has been constantly undervalued. If so, it is not likely that a brief final paragraph or two can correct the impression.

It is (and has constantly been) clear, however, that unity in the sense of *agreement* is not necessarily good except as the result of the free play of discussion over evidence. It may be mere traditionalism or preference for the familiar. Of this we have in education quite too much. Intellectual activity, rather than complacent acquiescence or traditionalism is the need, and where definitely unsatisfactory situations are to be met, such activity must be somewhat focussed. Not agreement so much as purposeful organization for declared and carefully defined ends should be sought,—a socialization of effort for common important purposes. Unity in the sense of co-operative, active interaction and cumulative, mutual influence in the attempt to solve the common and characteristic problems of the preparation of teachers in schools of this kind is necessary to any fruitful endeavor.

While it is clear that here such faculty unity of purpose as exists is not very completely focussed, that is not all there is to say. So far as conscious and flexible organization for the characteristic responsibilities of a school for teachers is concerned, it is (as President Crabbe suggested in the Foreword) far more than probable that the deficiencies of co-ordination disclosed here are at least no worse than what is typical of schools for teachers. It would be easy to find much tighter organization but probably rather hard to find more evidence of awareness of the differentiating purposes of schools for teachers. And probably few dynamic teachers would prefer a tight organization with less vision to even the very loose organization that we have been considering,—with its quite unusual freedom for individuals and its very considerable awareness of things askew. The wastes of so loose an organization need to be set over against the values that go with the wholesome freedom from educational dogma and cant that has *always* characterized this school.

Finally, though everything else were loose, it is to be remembered that there have *always* been *course requirements* of a forward-looking sort in this school. In few schools, anywhere, at any time, has modern evolutionary science had so heavy and consistent an emphasis as in the Colorado Teachers College. It was, if not the first, at least among the very first schools of *any kind* to require Bionomics for graduation; and it was one of the earliest schools for teachers to require Educational Sociology; to drop General Psychology in favor of Educational Psychology; to consider Educational Values more important in a short course than the History of Education; to escape the domination of text-books, and so on. The report of the sub-committee on the *Courses of Study* will attempt to give a full and impartial evaluation both of the long established courses and of the work done by the committee on *Courses of Study*.







# Colorado State Teachers College BULLETIN

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## Hand Book OF THE Extension Service



GREELEY, COLORADO

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Published *Quarterly* by State Teachers College, Greeley, Colorado. Entered  
as Second-Class Matter at the Postoffice at Greeley, Colorado,  
under the Act of August, 24, 1912

### **Important Notice**

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All correspondence should be addressed to

**EXTENSION DEPARTMENT  
COLORADO TEACHERS COLLEGE  
GREELEY, COLORADO**

The Director of the Extension Service is frequently out of the city and mail addressed to him must wait for his return.

APPLICATION FOR CORRESPONDENCE STUDY

To the Director of Extension Service  
Greeley, Colorado

Date.....

Name .....

Post Office Address.....

Present Occupation.....

High School Attendance:

School ..... City ..... State .....

School ..... City ..... State .....

I attended..... Years ..... Months.....

I earned.....units.

I graduated in the month of..... Year.....

I can furnish certified credentials, answer, yes or no.....

College Attendance:

School Attended..... Years ..... Months.....

School Attended..... Years ..... Months.....

School Attended..... Years ..... Months.....

Graduated from..... Year ..... Month.....

Can furnish certified credentials.....

Subject desired by correspondence.....

Be sure to give both name and catalog number.

**Note One:** Read carefully what this Hand Book has to say about limitations on extension study (see page 14). Students are held responsible for all statements of fact contained in said limitations. Note that no enrollment can be made without payment of fees.

**Note Two:** All persons who desire to take extension courses with Teachers College are required to matriculate with the College (this involves no additional fee), and to establish by means of certified credentials their educational status.

**Note Three:** Colorado Teachers College has provided for individuals with broken educational careers, and teachers who have not completed their High School work, high school extension courses. If interested write to the Extension Department of Colorado Teachers College for High School Extension Bulletin.

Cut on this Line and Send in Application Sheet



# EXTENSION DEPARTMENT

JOHN GRANT CRABBE, A.B., A.M., Pd.M., Pd.D., LL.D.  
President of the College

JOHN RANDOLPH BELL, Ph.B., A.M., Litt.D.  
Director of Extension Department

## MEMBERS OF THE COLLEGE FACULTY GIVING COURSES IN THE EXTENSION DEPARTMENT

Francis Lorenzo Abbott, A.M.	Professor of Physics
Leverett Allen Adams, Ph.D.	Professor of Biology
Mrs. Lela Aultman, Pd.M.	Training Teacher, First Grade
Grace Baker	Professor of Fine and Applied Arts
George A. Barker, M.S.	Professor of Geology, Geography, and Climatology
W. G. Bowers, A.M.	Professor of Chemistry
Ambrose Colvin, B.C.S.	Professor of Commercial Arts Education
E. A. Cross, A.M., Dean of the College.	Professor of English Literature
Hulda A. Dilling, B.E.	Training School, Fourth Grade
Edwin Stanton DuPoncet, Ph.D.	Professor of Modern Foreign Languages
Flora Elder, A.B.	Assistant in Commercial Arts
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Charles M. Foulk, Pd.M.	Assistant in Manual Training
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Jacob Daniel Heilman, Ph.D.	Professor of Educational Psychology
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Genevieve Lyford, A.B.	Director of the Kindergarten
Elizabeth Hays Kendel, A.B.,	Departmental Teacher of Mathematics, Junior High School
John Clark Kendel, A.B.	Director of the Conservatory of Music
Margaret Joy Keyes, A.B.,	Assistant in Physical Education and Dramatic Interpretation
Thomas C. McCracken, Ph.D., Dean of the Graduate College,	Professor of Education
Gurdon Ransom Miller, Ph.D., Dean of the Senior College,	Professor of Sociology and Economics
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Margaret Roudebush, A.B.	Director of Home Economics
Frieda B. Rohr, A.B.	Training Teacher, Fifth Grade
Mark Burrows, A.B.	Professor of Rural Education
Mrs. Bella Bruce Sibley, A.M.	Training Teacher, Second Grade
Edwin B. Smith, A.M.	Professor of Political Science and Government
Frances Tobey, A.B., Dean of the Junior College,	Professor of Oral English and Dramatic Interpretation
Jennie L. Tressel, A.B.	High School Training Courses*
Grace Wilson, A.B.	Assistant to the Dean of Women
Frank L. Wright, A.M.	Professor of Education

\* On leave of absence.

## Summary of The Extension Department and Its Work

"The chief item of cost in a college education is the expense of living away from home. The Extension Department takes the College to your home."

### ARE YOU A TEACHER?

1. Do you have to teach a subject that **worries** you? If so, increase your margin of knowledge and get an "easy" mind. Seek help from some one who likes the subject. Try one of our mail courses in it.
2. Do you have to teach a **new** subject this year? Why not **enjoy** it? Should you like to take a course in it and have a college teacher to put your questions to? Try one of our mail courses in it.
3. Are you **ready** for promotion? That means more than **being willing to be promoted**. Perhaps we can help you to be **ready**. Study our lists of department offerings and see if what you need is not there.
4. Are you "in deep water"? Let us help you. It is good for us to study your problems, and we shall try to make our effort good for you.

### ARE YOU A SCHOOL SUPERINTENDENT?

1. When you classify the results of your supervision of teaching do you find that a score of your teachers need instruction in a score of subjects? Do they know that they can remove their limitations by studying a college course in the subject in which they are weak?
2. Should you like to take a complete educational inventory of your school so as to be sure that your educational program is focusing upon the most pressing matters? The Extension Department offers help in this.

### ARE YOU A CLUB WOMAN, A CITIZEN

Interested in modern problems, a MOTHER interested in the growth and development of her children? See whether the College cannot advance your personal interests through its Extension service. We give courses for clubs—by lecture or by mail. We have many courses upon modern problems—see pages 28-35. We give courses for mothers—see pages 16, 31. We know the best material available upon modern problems. Let us help you to master the literature bearing upon your particular problem.

ARE YOU DISAPPOINTED IN WHAT WE OFFER? ASK US FOR WHAT YOU WANT. ADDRESS:

*Extension Department*  
**STATE TEACHERS COLLEGE**  
*Greeley, Colorado*

# INTRODUCTION

## PURPOSES OF EXTENSION WORK

The purpose of an Extension Department in a Teachers College may be expressed from several points of view.

### CO-OPERATION WITH SUPERINTENDENTS

Primarily, it is a standing offer of the College's resources to public school leaders for the purpose of promoting their plants for public school improvement.

### TRAINING DURING SERVICE

As a result of constant supervision of the work of teachers, city and county superintendents of schools gather a valuable fund of information concerning the deficiencies of teachers and their need of special study and training. On the basis of such classified information about recurring needs superintendents frame their general programs for the cumulative improvement of the work of their teachers. At this point the College through the Extension Department offers its services to superintendents. In consultation with the superintendent the College offers courses of instruction designed to meet the ascertained needs of the teachers, and provides an instructor to meet the teachers regularly in their own town. From this point of view the Extension Department exists to co-operate with superintendents in the work of giving training during service.

### DISCOVERING THE NEEDS OF SCHOOLS

As a result of the tendency to adopt scientific methods of working on the problems of Education, public school leaders are applying to their schools a familiar practice of the business world—the inventory. In Education this practice is called the survey. It consists in taking stock of the entire educational situation as a means of discovering the phases of the work which especially need attention. Through the Extension Department the College offers its services to superintendents who wish, as the starting point of their campaign of improvement, the complete perspective which an educational survey provides. From this point of view also, the Extension Department exists for the purpose of co-operating with school superintendents in the task of giving training in service—because the survey discloses, among other things, the specific needs of training for teachers.

### THE PERSONAL GROWTH OF TEACHERS

Secondarily, the Extension Department is a standing offer of the resources of the College to ambitious teachers who cannot at the time attend College.

### MEETING THE NEEDS OF TEACHERS

The thoughtful teacher discovers his needs by the difficulties he meets in his daily work, by the suggestions of his superintendent, by comparison of his work with that of other teachers, and the like. The teacher with scholarly tendencies craves opportunity to follow up some interesting subject for the study of which he needs the direction of a specialist. The teacher with a penchant for research work in his field finds he needs help in blocking out

his problem and devising fruitful lines of attack, and so on. Or the teacher in line for promotion feels that he needs to be ready to teach a new subject next year.

To all such teachers the College offers through the Extension Department a wide variety of courses in many fields of culture, and as much counsel upon specific problems as may be desired.

### THE WARRANT FOR EXTENSION SERVICE

In short, the Extension Department of the Teachers College is organized to co-operate with public school leaders in their effort to give training during service; and to provide timely help to individual teachers in improving their mastery of their craft. It is the College's practical recognition of the fact that no vocational school can anticipate in its resident curricula all the problems that will arise in the work of its graduates under their varied conditions of life in the world of affairs. Schools of medicine and nursing, schools of philanthropy, schools of commerce and agriculture cannot do it. Neither can schools for teachers. The period of school life is too short; the initial equipment of students is too uneven; and the social and economic conditions of the communities to which graduates go are too unequal to admit of more than partial success, even, in the attempt to equip students to meet the characteristic responsibilities of their occupation. Consequently, for the teacher as for the doctor, the nurse, the social worker, the business man, and the farmer, the progressive higher school must provide an extra school service directed at the exigencies that arise in practice. Beyond this the Extension Department is the College's recognition of the fact that teaching is an occupation which may in many communities be entered with very slender initial preparation, and which oftentimes must be pursued with but little timely help.

### THE DUTY OF TRAINING DURING SERVICE

Consequently, as a result of both sets of conditions, training during service properly and inevitably constitutes a very important part of the program of both superintendents and teacher-training schools. The courses described in this bulletin, and the special courses asked for by superintendents and given in various towns under the group plan of instruction (see below) are a part of this College's contribution to the solution of the superintendents' problem of giving training during service.

### THE ORGANIZATION OF EXTENSION SERVICE

Since Extension service is in the interest of teachers in the field its organization must be co-operative with reference to all agencies that are directed at the same ends.

Extension service from any college is properly directed in the interest of the same occupational groups as its residence work. In so far as this is the controlling motive the higher schools engaged in it will be impelled to adopt co-operative rather than competitive methods. Accordingly the State Teachers College, the State Normal School, and the State University have pooled their efforts to aid teachers on the Western Slope under a common representative with the title of District Superintendent of Extension Service, whose headquarters are at Grand Junction. The work is under the direction of a Joint Extension Board representing the three schools, and successfully eliminates all duplication of service. Similar co-operative plans are being formulated for the Eastern Slope, with every promise of better service for teachers in the field.

### HOW EXTENSION WORK IS CONDUCTED

There are two general schemes of Extension instruction. In the following paragraphs each is described:



## THE GROUP PLAN OF INSTRUCTION

1. **Instruction by Members of the College Faculty**—In centers close enough to the College to make such procedure possible, members of the College faculty will conduct courses for teachers. Realizing that the superintendent of schools is in a position to know better than anybody else the characteristic needs of his teachers, the College prefers for the superintendent to take the initiative in determining what courses ought to be offered at any given time in his town. Ordinarily, such classes meet once a week in town within one hundred miles of Greeley. In towns farther away than this fortnightly meetings are usually necessary unless the class be exceptionally large. Under the best of circumstances, however, each such class involves a substantial deficit to the College, which must be provided for in the budget. So, instruction under this plan is restricted to groups of fifteen or over.

A fee of five dollars is charged each individual who enrolls in any particular group. Service is the motive. It is not intended that there shall be any profit, but hotel bills and railroad rates mount up so rapidly that any lesser charge than that specified would mean serious financial loss to the College.

Courses under the **group plan** are conducted as nearly as possible in the way in which they would be conducted in residence at the College. The periods are, of course, longer, and the meetings are necessarily less frequent—important variations which require definite adjustment from the instructor, both for the sake of the students and in the interest of the College's standards of work.

2. **Instruction by Local Representatives of the College**—In centers too remote from the College to admit of sending members of the faculty for regular class-work, it is frequently feasible to appoint a resident of the community to represent the College for a particular line of instruction. A person, usually a school-man, who possesses at least the degree of A.B., or its substantial equivalent, and who has had professional training and experience that would justify his appointment as a member of the College faculty may, with the full approval of the President, the Dean, and the College department involved, be appointed an Extension Instructor. Under the general direction of the head of the Department involved and under the supervision of the Director of Extension instruction he gives the course agreed upon with the Extension Department, observing the same regulations as govern the group instruction conducted by members of the College faculty. He assumes full responsibility for the organization of the class, applying the necessary tests, keeping the necessary records, transmitting initial and final reports to the Extension Department, and the like. In all cases he is provided with a syllabus of the course by the College department concerned. He transmits to the Extension Department the total fees collected from his class, and receives from the College for his services a percentage of these fees. Courses given under this plan are announced at the beginning of each semester in the town where they are offered, and enrollment is accomplished as in the classes conducted by members of the faculty.

## ENROLLMENT FOR GROUP INSTRUCTION

Group-work is advertised in the towns in which such instruction is to be given; and upon the date set for the first meeting those who wish to take the work meet at the appointed place, enroll, receive full instructions for their initial study, and are acquainted with the regulations governing credit work, etc. A secretary is appointed who receives the fees, transmits them to the instructor, keeps the necessary record of the class, and makes the required reports to the College.

## REGULATIONS GOVERNING GROUP-INSTRUCTION

With perfect co-operation between Extension Instructors and Superintendents the effect of Extension study should be to **lighten** the teachers' daily work—because under such conditions the courses chosen would deal with the

matters upon which the superintendents or supervisors were bringing daily pressure to bear. Such a situation, however, is Utopian and can only be approximated. Extension service is complicated by numerous conditions such as the teachers' desire for credit, and even here and there and now and then by a superintendent's lack of an educational program—so that extension service for credit must be somewhat guarded by general regulations as well as by supervision. The following have been agreed upon:

- a. Sixteen 100 minute meetings constitute a three-hour course. All credit courses are to be reckoned on this time basis.
- b. A syllabus of the course to be given shall be provided by the Department having educational supervision of the course for (1) the files of the Extension Department, (2) for use by local instructors who are authorized to give group instruction.
- c. All classes must be systematically checked up by some plan which will enable the instructor to distinguish early between superior, mediocre, and inferior students well enough to apply the grading system used in residence work in the College. The plan adopted in any class must have the full approval of the Department having educational supervision of the course; and a general statement of the essential features of the plan adopted must be provided for the Extension Department at the beginning of the course.
- d. All courses are to be concluded by an examination planned to reveal the extent to which the courses have attained their objectives. The nature of such examinations shall be determined by the Department having educational supervision of the course.

#### THE INDIVIDUAL OR CORRESPONDENCE PLAN OF INSTRUCTION

The long and successful experience of Chicago University in conducting College courses for credit by correspondence is quite sufficient warrant and recommendation for this phase of Extension service. It is feasible for teachers to carry on their study for College credit no matter how remote the region in which they work may be from the College. It requires only **ambition and energy**—but it requires both these, because the correspondence student will lack the stimulus of face to face relations with the instructor and the challenge of class-mates. These losses are serious in **proportion as the student lacks initiative and independence**. They can to a considerable degree be offset by an instructor of insight, through painstaking study directions, suggestive questions, illustrations, explanations, and the like. **EVERY CORRESPONDENCE STUDENT IS INVITED TO WRITE TO THE EXTENSION DEPARTMENT IN REGARD TO ANY DIFFICULTIES MET IN CORRESPONDENCE STUDY.** The experience of this College with many hundreds of correspondence students has made it certain that there are many teachers who possess the fiber necessary to do College work independently, and that sympathetic college teachers trained in psychology can do a great deal of effective teaching through mail courses. Those who enroll for correspondence courses and faithfully carry their work through are thereby marked as people of superior quality. To offset the possible danger of dawdling the student is required to **COMPLETE THE COURSE WITHIN SIX MONTHS** from the date of enrollment. For sufficient reason an **EXTENSION of THREE MONTHS** may be granted, however, upon application to the Director of the Extension Department.

#### HOW TO ENROLL

The process of enrollment for correspondence study is simple. The student chooses from this Handbook the course which he wishes to study. If it is a credit course, he notes how many hours of credit it carries. He reads the sections on **Fees and Books from the College Library**. He then writes to the **Extension Department, State Teachers College, Greeley, Colorado**, enclosing

a check, draft, or money order for the fees, stating clearly what course he wishes to take, explaining what his previous training and experience have been, and mentioning the work he is now doing. Correspondence study may be begun at any time, but under a regulation of the business office of the College, **NO ENROLLMENT CAN BE MADE UNTIL THE NECESSARY FEES HAVE BEEN PAID.**

Upon receipt of the fees the secretary of the Extension Department enrolls the student for the course chosen and sends him the material he needs. The following sections explain more in detail.

### THE NATURE OF CORRESPONDENCE COURSES

Each Correspondence Course consists of (1) a set of "study units" containing questions such as might be asked in class, assignments such as might be made in residence study, and explanatory sections corresponding to the explanations which instructors often make in class. (2) a "materials sheet" which informs the student fully in regard to all the books and other materials needed for the course, with what study units each book will be needed, what material the College Library will provide, and so on; and (3) a sheet of "general directions" for preparing recitation papers. (See section on General Directions in this Introduction.)

### HOW CORRESPONDENCE COURSES ARE CONDUCTED

The Extension Department sends the student the first three study units of the course he has chosen and the book needed with them. He studies the book as directed and works out his first **recitation paper**—covering the work outlined in the first study unit. He mails this to the Extension Department as soon as it is finished—and waits for its return before sending in his second recitation paper, so that he may have the advantage of the teacher's suggestions. The date on which the paper is received in the Extension Department is recorded on the student's enrollment card and the paper is passed to the instructor in charge at once. When the instructor has read, commented on, and graded the paper he returns it to the Extension Department, where the date of its return and the grade given it are recorded on the enrollment card. The first recitation paper is then returned to the student with the **fourth study unit**, after which the student may mail to the Extension Department his second recitation paper together with **any additions required by the instructor** to his first recitation paper. The second paper passes through the same process and is mailed back to the student with the fifth study unit, and so on till the course is completed.

### DISCONTINUED COURSES

Money will not be refunded for courses after the first three recitation papers have been read and graded by the instructor; or in any event after the expiration of nine months from the date of enrollment.

### WHO MAY TAKE EXTENSION COURSES

The courses described in this bulletin and the courses offered through group instruction in Colorado are open

1. **To all teachers in active service.**

But within reasonable limits the advantages of such study under direction and supervision are open also

2. **To clubs and societies, and to isolated individuals who desire to carry on systematic study for the sake of personal growth.**

### EXTENSION COURSES FOR CREDIT

All WHO ARE ENTITLED TO COLLEGE ENTRANCE may enroll in and study for credit the CREDIT courses described in this bulletin and such other CREDIT courses as are offered under the group plan. This covers roughly "all who can present to the College a certificate of graduation showing the completion of fifteen or more units of work in an acceptable high school." Through its **ADVANCED STANDING** and **ENTRANCE COMMITTEES** the College makes full provision for adjusting equitably the claims for entrance of the occasional teacher who by virtue of actual achievement may in spite of a broken high school career be entitled to entrance—either full or conditional.

### NON-CREDIT EXTENSION STUDY

All courses described in this Handbook, and the additional courses offered each year under the group plan of instruction in various towns of Colorado may be taken without credit, if desired—and students following this plan are freed from study-regulations which are otherwise applied. But courses designated as **NON-CREDIT COURSES** may **NOT BE TAKEN FOR CREDIT**.

Non-credit study is provided as a special aid for teachers who are dealing with subjects or phases of a subject that **cannot on the whole be satisfactorily taught by mail**; and also for teachers dealing with subject-matter that cannot be credited toward a degree. Only a few such courses are described in this Handbook. Others will be added as fast as there is a call for them. Write to the **Director of College Extension, State Teachers College, Greeley**, stating the course you want. You will be promptly informed in regard to it.

### EMERGENCY HELP FOR TEACHERS

As a part of its service to teachers, the College has always provided special help for teachers who found themselves in unexpected need. This has always been done gratis. Rural school teachers have had aid in the teaching of difficult topics in most of the elementary school subjects; and in answering perplexing questions arising in the course of their work. Outlines have been provided, references and sources of free pamphlet material have been suggested; plans and suggestions for the teaching of difficult topics have been furnished; topics for discussion have been supplied for regular teachers' meetings; sample examination questions have been framed for many subjects, and so on. The College will continue this service.

### OTHER PHASES OF EXTENSION SERVICE

In addition to co-operating with superintendents and individual teachers, the College seeks to assist the State Superintendent of Education in developing those special agencies for training during service which were first created in response to the general lack of professional training on the part of "beginning" teachers. A description of these follows.

### INSTITUTE WORK

After consultation with the State Superintendent of Public Instruction a plan was put into operation last year whereby the College paid the expenses of the Institute Teachers of History and Civics to a conference at Greeley with the Head of the Department of Political Science and History. The benefits of this conference were so apparent that the State Superintendent of Education and the College decided to continue the practice.

### LECTURE SERVICE FOR ASSOCIATIONS AND CLUBS

So far as possible the College responds to calls for speakers to contribute to the programs of teachers' meetings, inter-county and sectional.

### BOOKS FROM THE COLLEGE LIBRARY

The College prefers for students to provide their own books for all these courses, either by purchase or through the local city library. Certainly in many cases this should be done. Teachers must have professional libraries. But in view of the frequently inadequate salaries of young teachers and the not uncommon isolation from a useful public library, and also in view of its own interest in assisting ambitious teachers to get ahead, the College has made provision for supplying most of the books necessary for the courses described in this bulletin. The following are necessary conditions of the library service, however:

1. A postage fee of ten cents per credit hour must be paid at the time of enrollment whether for one or ten books. In all cases return postage must be paid by the student; where for any reason books are sent to a student a second time, the student must pay extra postage.
2. In all cases where one book is used throughout the course the student will be permitted to retain the book for **three months**. After this period a rental fee of five cents a week must be paid to the College library. It is obviously usually wise for the student to purchase the book. Second-hand books may be purchased from the College Book-room at substantial reductions in price.
3. In courses making use of several books in sequence the College library will furnish the books as needed, each in turn rent free for one month. After this period in each case a rental fee of five cents a week will be charged by the library. **ALL BOOKS MUST BE RETURNED AND ALL RENTAL FEES PAID BEFORE CREDIT FOR A COURSE IS RECORDED.**
4. State Reading Circle books will not be furnished by the College library. It was the intention of the State Superintendent that these books should be in the teacher's professional library.
5. The Librarian endeavors to keep in stock a sufficient supply of books to accommodate all students. An unexpectedly large enrollment in a given course, however, occasionally exhausts the supply of a given book—especially where rare or foreign books are used, and where valuable books no longer published chance to be on the list. In such cases the student is notified of an inevitable delay.
6. **NO PAMPHLET MATERIAL IS PROVIDED BY THE LIBRARY.** Depreciation is too great.
7. **SUPPLEMENTARY** or **ILLUSTRATIVE** reading material is not provided by the College—e. g., the **SHORT STORIES** and **NOVELS** used in certain English courses.

### FEES

The extension Service of the Colorado State Teachers College, aspiring to make its courses in every way equivalent to residence work, and realizing the necessity of thorough standardization, has been compelled to increase its rates. The compensation to Faculty members for the preparation of study units and the careful grading of same was so meager that it did not remunerate them for high class work and painstaking effort. The department could not under these circumstances justly insist upon a number of highly desirable reforms in the service.

In order therefore that progress may not be impeded and that compensation may be just, the old rates were changed September 1, 1920, and the price now charged for extension courses is \$2 per quarter hour plus 10 cents per quarter hour for postage. This means that a 3-hour course would cost \$6.30 and a 4-hour course \$8.40.

These rates are effective for all registrations subsequent to September 1, 1920.

**GENERAL DIRECTIONS FOR PREPARING RECITATION PAPERS**

1. Each recitation paper must show clearly on the first page the following information:
  - a. The Student's Name and Address.
  - b. The Name and Number of the Course.
  - c. The Number of the Study Unit.
  - d. The grade of school work the student is teaching.
2. Leave a general margin on your paper for use by the instructor.
3. Always copy the number of the item or question or assignment with your answer; i. e., let your answer bear the same number as the question you are answering.
4. The student is expected to answer every question asked, or else when it is not possible to work out a fairly satisfactory answer independently, to ask questions of the instructor. The instructor expects to do as much teaching as the course requires.
5. Similarly the student is expected to work out all assignments (such as "list the factors—," or "Illustrate—," etc.) with deliberate care, or else to ask questions of the instructor.

**Limitations on Extension Study****ALL EXTENSION STUDENTS ARE HELD RESPONSIBLE FOR ALL FACTS STATED IN THE FOLLOWING RESTRICTIVE PARAGRAPHS**

1. No diploma or degree can be earned wholly by extension study. Three full quarters of residence work must be done by all who graduate from the Junior College; graduation from the Senior College requires at least two additional quarters of residence work; and graduation from the Graduate School requires three additional quarters of residence study. Group study done with members of the College Faculty may be counted to the extent of one quarters' residence work in the Junior College, and one in the Senior College.
2. Students in residence are not permitted to do correspondence work except as a means of completing a course which has been begun at least three months before the residence enrollment was made. In such cases the residence work must be correspondingly restricted and written permission of the Dean of the College must be presented to the Director of the Extension Department.
3. Not more than one-third as much work can be taken in any given school year by extension as in residence. The standard amount of residence work in any year at Colorado Teachers College is 48 quarter hours. Sixteen quarter hours is therefore the maximum amount of extension work allowed in any given school year. An additional 4 quarter hours may be taken in the summer quarter, provided the individual is not a residence student. Any group work must be included in the 16-hour limitation.
4. All extension courses must be completed within six months from the date of enrollment. For sufficient reasons an extension of three months may be granted by the Director of the Extension Department, upon the request of the student.
5. No enrollment can be made until the necessary fees have been paid. Note that the fees were increased September 1, 1920, to \$2 per quarter hour plus 10 cents per quarter hour for postage.
6. No enrollment can be made in any given course until the Instructor shall have prepared and presented to the Extension Department the study units required for the given course.
7. Only persons eligible to College entrance may enroll and study for College credit the credit courses described in this Bulletin and such other credit courses as are offered under the group plan.

8. All students enrolling in the Extension Department subsequent to September 1, 1920, must fill out a matriculation blank which will be furnished by the department, giving evidence that by training and experience they are prepared to do work of College grade.

9. In all cases the detailed instructions relative to **method of study** and preparation of manuscripts as outlined in the Hand Book of the Extension Department must be **strictly adhered to**.

10. Conference and seminary courses in residence are not given under direction of the Extension Department.

11. Courses begun in residence cannot be completed in non-residence and courses begun in non-residence cannot be completed in residence. The two types of work are entirely distinct.

12. After September 1, 1920, no credits will be given by Colorado State Teachers College for work done in the County Institutes of the State or for State or City Reading Circle Courses.

13. It is the prerogative of any Instructor to ask any student to drop a course for which the student is clearly not prepared.

14. The College provides in connection with the State High School of Industrial Arts, the High School department of State Teachers College, extension courses for individuals, especially teachers, who have not been able to complete their High School work and as a consequence are not eligible to regular College extension courses. A Bulletin will be forwarded upon request.

15. Students finishing graduation requirements by extension work must give one month's notice to the Dean of the College of their expectation of graduation.

16. Money will not be refunded for courses after the first three recitation papers have been read and graded by the instructor; or in any event after the expiration of nine months from the date of enrollment.

## THE DEPARTMENTS

### OUTLINE OF COURSES OF STUDY

#### Psychology and Child Study

JACOB DANIEL HELLMAN, Ph.D.  
MARVIN F. BEESON, Ph.D.

The general purpose of the courses in psychology is to improve the student's ability to care for, train, and educate the child by means of studying the child's nature, normal development, and modes of learning.

##### 1. Child Hygiene—First year. Five hours.

The main purposes of this course are: (a) to point out how the child's school progress and mental and physical development are arrested and how his health and behavior are impaired by the physical defects which are very prevalent among school children; and (b) to discuss the causes of defects, the methods of preventing them and of detecting them, and the measures required for effective amelioration or cure.

The following topics will be treated: Educational and economic values of health; the need for health conservation; deformities and faulty postures; air requirements; malnutrition and school feeding; hygiene of the mouth; enlarged adenoids and diseased tonsils; defective hearing; defective vision.

##### 108. Educational Tests and Measurements—Required in the fourth year. Four hours.

*Chief Purpose of the Course*—(a) to give the student a working knowledge of the best instruments for measuring the child's school progress and his performance level in the school subjects; (b) to discuss the methods of using the educational tests and tabulating the results, and (c) to point out their educational significance in all of its phases.

*Topics Treated*—Tests and standards of reading, writing, spelling, arithmetic, geography and of all the other elementary school subjects.

##### 110. General Psychology—Four hours.

*Purposes of the Course*—(a) to make the student acquainted with psychological theories and concepts; (b) to discuss the nature of mental processes; (c) to show what relations they bear to each other, to the nervous system, to the stimuli of the external world and to the various forms of physical behavior.

*Topics*—Those which are listed in the text books on general psychology such as the nervous system and its functions, sensations and images, attention, perception, memory, reasoning, instinct, feeling, emotion and volition.

#### Education

THOMAS C. McCracken, Ph.D.  
FRANK L. WRIGHT, A.M.  
SAMUEL MILO HADDEN, A.M.  
W. D. ARMENTROUT, A.M.  
MARK BURROWS, A.B.  
GRACE H. WILSON, A.B.

The work of this department, although having to do primarily with fundamental theory underlying the educative process, shows also how such theory is of practical value to the teacher. The teacher needs a theoretical background for her work and a broad acquaintance with all fields of educational activity. The purpose of the courses offered is to meet these needs.

#### COURSES PRIMARILY JUNIOR COLLEGE

##### 8. Educational Values—Three hours. Mr. Wright.

The purpose of this course is to give the student a critical attitude in regard to the educational value of the various subjects of the curriculum.



The first part of the course will be an enumeration of the aims of education, and the subjects in the curriculum by the study of which these aims or ends are realized. In the next few lessons the student will be expected to study the theory of educational value as set forth by Bagley in his "Educational Values."

The last part of the course will be given to a practical consideration of educational values. The student will make a detailed study of text-books in at least two fields, one of which may be a high school subject. If the student prefers to make both studies of high schools texts, he should communicate with the instructor in charge. These texts are to be studied from the standpoint of the relative value of (a) method of presentation of material, (b) order and sequence of the various topics, and (c) topics or parts of the text which should be eliminated entirely because of lack of evidence of their being of educational value.

A thesis on the relative value of the method of presentation of some subject as it was presented to the student, and as it is being presented in up-to-date schools at present, will also be expected.

This is a practical course for any teacher, as he will be made to criticize the material he presents and will perhaps be led to eliminate certain topics he now teaches.

**10. The Elementary School Curriculum—Three hours.** Required of all students, second year. Dr. McCracken.

This course will deal with the forces by which the various elementary school subjects became a part of the curriculum. Typical courses of study will be studied with a view to determining what material is usually presented in the schools and with the purpose of evaluating this material. Modern text books will be compared with older texts in the same subject so as to understand the place of the text book in present-day curricula. The student will then have the background for considering the problems of the modern teaching of the subject.

**12. Current Movements in Social Education—Three hours.** Dr. McCracken.

The purpose of this course and of 13 is to acquaint the student with some of the more recent movements in the field of education. This course will include a discussion of such subjects as the following: The school as a social center; open-air schools; school credit for industrial work in the home; and other subjects of current interest.

**13. Current Movements in Social Education—Three hours.** Dr. McCracken.

This course is in no way dependent upon Education 12. Either course may be taken without the other. It will include a discussion of vocational education, the school survey, the Junior High School, supervised study, the project method, and other subjects of current interest.

**15. Vocational Guidance—Three hours.** Dr. McCracken.

This course will deal with the place of vocational guidance in public school systems. Among other subjects it will treat of the need and value of the study of occupations, vocational analysis, opportunities for vocational education, opportunities for employment, the work of placement and vocational bureaus and various guidance agencies in this and other countries.

**24. School Administration—Three hours.** Mr. Wright.

This course deals more particularly with school and class management as it relates to the teacher and the school principal. A part of the course is given to the study of co-operation between teacher and principal in instruction, discipline, etc. There will be some time given also to a study of the recent school legislation in Colorado.

Other topics arising in the course are:

- (a) Some errors the new teacher often makes and some things she ought to know.
- (b) Nature, kinds, and development of conduct.
- (c) Teaching children to think.
- (d) Teaching children to execute.
- (e) School room government; fair play in the school room.

This is a good course for any teacher in the field who has not had courses in education. It is particularly good for the teacher of little or no experience.

**25. Administration of Rural and Village Schools—Three hours.** Mr. Burrows.

This course is a study of the history of rural school organization and administration in our country from primitive local needs to the present time. It aims to meet the needs of county superintendents, rural supervisors, and others interested in special problems of country life. It will include studies and special

researches in the various phases of reconstruction and enrichment of rural education, and a discussion of forward movements in legislation as they affect the education of rural children.

**26. County School Methods—Three hours. Mr. Burrows.**

Most of the methods found in books on teaching have been worked out for graded schools, but it is also true that most teachers are destined to begin their professional careers in country schools where conditions are different. The application of methods to a rural school, the organization of material, class-room management, and effective presentation will receive special emphasis. This course will aim to discover points of difference between the graded and ungraded school in respect to the utility of pertinent methods used in teaching the various branches of study in a rural and village school.

**32. The History of Education in Ancient, Mediaeval and Renaissance Times—Three hours. Mr. Wright.**

A general survey of the history of education up to and including the Renaissance will be made in this course, with special emphasis upon the Greek, the Roman, and the Renaissance periods. An effort will be made to show the influence of the various movements in these periods upon the education of our own times.

The course is especially beneficial to one majoring or especially interested in history.

**33. History of Modern Elementary Education—Three hours. Mr. Wright.**

Students who have not had Education 10 or its equivalent will be expected, in the first few lessons, to review the features of the Renaissance which influence materially the men and movements of modern education. While the entire field of modern education will be covered to a certain extent, the main part of the course will be devoted to the study of modern elementary education. Such subjects as the development of the vernacular schools, the early religious basis of elementary schools, and the transition to a secular basis, together with the work of such men as Comenius, Locke, Rousseau, Pestalozzi, Herbart and Froebel, will be emphasized.

**38. Vocations for Women—Two hours. Miss Wilson.**

A course designed for the study of vocations open to women, with the idea of preparing the teacher to guide her students in the choice of their life work. The course consists of a study of women in industry, agriculture, commercial work, the professions, such as nursing, library work, and medicine.

### COURSES PRIMARILY SENIOR COLLEGE

**111. Principles of Education—Required fourth year. Four hours. Dr. McCracken or Mr. Wright.**

This course is designed to set forth the theory of aims, values, and meaning of education; the place of a scientific basis in education; the relation of schools to other educational institutions; the social limitations upon the work of the schools; the types of schools necessary to meet the needs of society; and the processes of learning and teaching.

**113. Organization and Administration of the Junior High School—Three hours. Required of Grammar Grade Majors and in the Supervisor's Course. Mr. Wright or Mr. Armentrout.**

In this course the following points will be considered: Organization; standards for judging junior high schools; historical development; the program of studies; the daily schedule of classes; courses of study for the various subjects; the qualification of teachers, etc. After many representative junior high schools of the United States have been considered from the above mentioned stand-points, each student will arrange a program of studies, and a course in one subject for a junior high school in some designated community.

**116. The High School Curriculum—Four hours. Dr. McCracken.**

In this course an opportunity will be given to study the curricula of various high schools of this and other states. The student will be expected to study the schools the study of which will be most beneficial as a preparation for his own work. After a careful consideration of education values and the needs of typical communities, a program of studies and curricula will be outlined for some community, rural, village or city, utilizing the principles determined upon earlier in the course. This program of studies will include the work for both the junior and the senior high school.

**120. High School Administration—Four hours. Mr. Wright.**

This course will deal with the organization, management, and administration of the high school, a critical examination of one or more typical high schools, emphasizing courses, programs of study, daily schedule of classes, records and reports, equipment, training, qualification, and work of the teachers and other similar matters of high school administration. The student will be allowed to select topics in which he is especially interested, for study and research, under the direction of the instructor.

**123. Elementary School Supervision—Four hours. Mr. Armentrout.**

This is a course for principals, supervisors and superintendents. It is based upon the following factors: (1) Measuring the worth of teachers. (2) The values and relations of elementary school subjects. (3) The use and misuse of devices, interests, etc., by teachers. (4) Some results to be expected of teachers in the elementary schools. (5) Standards for judging class-room instruction. (6) The problems of training teachers during service.

**130. Rural Education—Three hours. Mr. Burrows.**

A course intended, primarily, to give a comprehensive grasp of American rural history, and a brief study of the rural educational systems of this and other countries. After the problem is considered in its historical and sociological aspects resulting from a long national evolution, the present as well as the best type of rural school will be studied as a factor in preparing for an efficient citizenship. The fundamental needs in rural education, the recent rural life movement, the redirection of the schools, its legitimate functions and revitalizing agencies will be correlated with existing conditions in Colorado and the West and with the social and historical development of the country.

**134. American Education—Four hours. Mr. Wright.**

A brief survey of conditions existing in Europe at the time of the settlement of the American Colonies will be considered with a view to explaining the various types of education found in Colonial times. A study will also be made of the growth of the public school idea, the spread of education from the East to the West, and the development of state control of education.

Other topics of American education emphasized in the course are:

- (1) National land and money grants to education.
- (2) Higher and professional education.
- (3) Higher education of women.
- (4) Normal schools and the training of teachers.
- (5) Education of defectives.
- (6) The growth of the kindergarten idea.
- (7) Modern movements in American Education.

These topics will be considered briefly historically, but more emphasis will be placed upon present-day tendencies in each of these lines.

The student will also select a topic from a list of some twenty subjects, on which he will write a thesis of from two to five thousand words. Among the topics are the following: (1) "Indian Education," (2) "Negro Education," (3) "Education of the Foreigner," (4) "The General Education Board," (5) "The Smithsonian Institution," (6) "The Carnegie Foundation for the Advancement of Teachers," (7) "Work of the Bureau of Education," and (8) "Modern Movements in Education."

This course is appropriate for principals and superintendents who are anxious to learn of progressive features in American Education.

**135. Educational Classics—Four hours. Mr. Wright.**

The purpose of this course is to study the various educational classics (a) as interpretations and criticisms of the educational practices of the various periods of history represented by them; (b) as to their influence upon the period and writers directly following; and (c) as presentations of theories and practices of present-day education.

Some of the classics to be studied are:

- Plato's "Republic."
- Quintillian's "Institute of Oratory."
- Comenius' "The Great Didactic."
- Rousseau's "Emile."
- Locke's "Thoughts Concerning Education."
- Pestalozzi's "Leonard and Gertrude."
- Spencer's "Education."

The latter part of the course will be given to a careful study of (a) what constitutes an educational classic, and (b) what twentieth century treatises on education are probably destined to become classics.

The course would probably appeal most to mature students in the Senior College or to mature second year people. It is recommended to English majors.

**142. Educational Administration—Three hours. Mr. Wright.**

In the first part of this course, the student will be given a general idea of the field of school administration by the study of Cubberley's "Public School Administration." Then he may, if he desires, select certain lines of school administration in which he is interested, for study and research. He may make a critical examination of his own city or village system; make a survey of conditions as they exist in his own state or county in organization, powers and duties of the Board of Education; also the qualifications, powers, duties, and opportunities of the superintendent and the principal.

Superintendents and principals will find this course helpful in the administration and critical examination of their own schools.

**143. The Federal Government in Education—Four hours. Dr. McCracken.**

This course treats of the efforts of the Federal Government to aid the states in education.

**147. Educational Surveys, a Preliminary Study—Four hours. Not ready until winter quarter. Mr. Wright.**

Open to students of Junior College upon permission of the instructor. There are conditions, both good and bad, in every school system which can and should be revealed by a survey, conducted by the administrative authorities in charge of each school system, aided by expert advice from outside the system. The Teachers College is under obligation to furnish this expert assistance. To this end a Survey Committee has been appointed and is ready to render service to any school community in Colorado. The Survey Committee is of the opinion that wherever the administrative authorities in any school community wish to undertake a co-operative survey of their schools a preliminary study of the underlying principles of educational and mental measurements together with a study of social problems, especially as these are related to educational problems, should be made by the teachers and those responsible for the work of the Public Schools in that community. This course is intended to give opportunity for such study. It may be given on the individual plan or by a member of the faculty of the College, or by the superintendent of schools in co-operation with the College. The results of the course should be that all who take it will have a fair grasp of the underlying principles of the subjects treated and some should become fairly proficient in giving the tests and making the observations and calculations involved in educational surveys.

**COURSES PRIMARILY GRADUATE COLLEGE****217. Vocational Education—Three hours. Mr. Hadden.**

This course has for its purpose the interpretation of the subject from the artistic, industrial, and commercial standpoints.

**223. Research in Education—Dr. McCracken.**

This course is intended for advanced students capable of doing research in educational problems. Each student may choose the problem of greatest interest to him, provided sufficient opportunity is at hand for original investigation. The results of such research are to be embodied in a thesis. Credit hours will be given in accordance to the amount of work done. A suggestive list of subjects follows: Federal aid to education; state aid to special types of education; vocational guidance; the continuation of the education of the adult; methods of school support; student government; vocational education for women; distribution of school funds; social needs of the child and the adolescent in education; differentiated programs of study for older children in elementary schools; certification of teachers; the Junior High School; the after-training of teachers; measurements of results in education.

**228. Comparative School Systems—Four hours. Mr. Wright.**

In this course one makes a rather comprehensive study of the school systems of England, France, and Germany, comparing each with the other and finally emphasizing the points to be found in each system which seem especially applicable to our own American system. Other countries which excel in any particular line are studied from that particular standpoint. For instance, Denmark is studied because of its recognized standing in rural education.

Early in the course, a number of thesis topics like the following will be presented, from which the student may select for the purpose of making comparisons of the various countries.

1. Compare the curricula for the secondary schools of the various countries.
2. Compare the countries as to teachers' preparation, term of office, salary, interest in their work, etc.
3. Compare the countries as to emphasis placed upon physical education.

In the last part of the course, a study of modern movements in Education in the various countries will be made.

This course is more easily taken by students who have access to some library facilities.

**229. Current Educational Thought—Four hours. Dr. McCracken.**

This course will consist of reviews and discussions of recent books in the various fields of education.

Note—Students wishing suggestions in regard to research study upon any educational problem are invited to consult with the College.

## Elementary Education and Teaching

W. D. ARMENTROUT, A.M., Director of the Training School

GENEVIEVE L. LYFORD, A.B.

MRS. LELA AULTMAN, Pd.M.

MRS. BELLA B. SIBLEY, A.B.

FRIEDA B. ROHR, A.B.

ELIZABETH HAYS KENDEL, A.B.

MISS BERNICE ORNDORFF, B.S.

MISS HULDA DILLING, B.E.

This department aims to give practical courses to teachers in the field, in order to increase their efficiency in teaching. We connect theory with practice. Too often the theory does not seem to be practical because the teacher does not understand how to put her theory into practice. In the following non-resident courses we aim to bring the teacher in contact with our elementary training and demonstration school as well as with the best elementary school practice in the United States and Europe.

**3a. Primary Methods—Four hours. Mrs. Aultman.**

This course will be valuable to both beginning and experienced teachers of primary grades. It will include a resume of methods and material for all subjects, giving the viewpoint of some of the best authorities. The value of the Montessori system in primary grades will be discussed. The play life of the child, story telling, the study of poems and nature study will receive special consideration. If the student is teaching we shall expect her to try some of these methods and report the result. A daily program and a brief course of study for any one of the primary grades, with reasons for the selection of subjects and arrangement of material, will be required. This should be based on information acquired in this course.

**3b. Primary Methods—Four hours. Mrs. Sibley.**

This course is based on the needs of the child between the ages of 7 and 8 years. This course leads up to the selection of subject-matter which functions in the child's life. To this end a brief comparison of courses of study in some of our larger city schools is made. The latest and most scientific articles on primary methods are read and discussed. Many devices for teaching beginning reading, phonics, rhythm, spelling, songs, as well as methods for dramatization of stories, multiplication table, and practice in blackboard illustrating are given.

**7. Third and Fourth Grade Methods. Junior College Elective. Four hours. Will not be ready until January, 1921. Miss Dilling.**

The course is based on the needs of the child between the ages of 10 and 12. It will consist of (1) a review of the most significant things in child study common to children of this period; (2) a comparison of courses of study for these grades; (3) the building of a course of study; (4) methods of presenting the material of the curriculum of the third and fourth grades.

**4b. Fifth and Sixth Grade Methods—Four hours. Miss Rohr.**

This course will consider the fundamental needs and characteristics of children in the pre-adolescent period with the purpose of applying such psychological principles as govern method and selection of subject-matter in these grades. Chief emphasis will be placed upon the practical side of the work with a view of arriving at the best means of securing initiative, accuracy (good habits of study) and retention. Teachers will be expected to show by reports of actual class work in their own schools how they have been able to apply these principles in order that their conclusions in theory may be tested in practice.

9. **Grammar Grade Methods**—Four hours. Will not be ready until January, 1921. Miss Kendall.

The pre-adolescent stage is the most critical of all stages of development. Most difficulties of high school pupils have their beginnings in the grammar grades. Grammar grade teachers should know how to avert them. The greater per cent of boys and girls leaving the eighth grade assume the responsibilities of citizenship without further formal instruction. Grammar grade teachers should therefore know how to make what they teach worth while to their pupils for these essential reasons: 1st, that those who must leave school will be better fitted for living. 2nd, that a greater number will feel that it is good for them to remain longer in school.

This course consists of practical problems which confront every teacher of grammar grade pupils and aims to aid the teacher in overcoming to some extent the difficulties suggested above in the grades in which she may teach.

Some of its specific aims are as follows:

1. To give a knowledge of grammar grade pupils, physically and in terms of their interests; and its application to certain problems of discipline and method.

2. To give understanding of the aims of the various school subjects in upper grades and methods of teaching.

3. To give a working knowledge of what constitutes a good curriculum for grammar grades in certain fundamental subjects, through study of model curricula.

4. To give the ability to adapt specific subject-matter to pupils of these grades.

51. **Story Telling in the Grades**—Three hours. Mrs. Aultman.

The following subjects will be considered in this course: 1. Why we tell stories. 2. The technique of story telling. 3. Adaptation of stories. 4. Fairy tales and folk tales. 5. Animal stories. 6. Nature stories. 7. Mother stories. 8. Stories of legendary heroes. 9. Stories of historical heroes. 10. Stories adopted from standard literature. 11. Holiday stories. 12. Humorous stories. 13. Ethical stories. 14. Biblical stories.

53. **Plays and Games for Kindergarten and Primary Children**—Three hours. Miss Lyford.

A study of the different theories of play, and the psychology of children's play, the development of games, different types of games, the value of play, characteristics of games for children of different ages, original games based upon rhymes and activities, simple rhythms and methods of presentation.

122. **Play Life of Children as a Basis for Education in the Kindergarten**—Three hours. Miss Lyford.

The meaning of educational play and its significance in the mental and moral development of the children of the kindergarten and primary grades, the growth of the new conception of play and in its influence upon the work in the kindergarten and primary grades. The difference between illustrative and purposive work for children. Means of establishing a closer relation between kindergarten and primary.

## Biological Sciences

LEVERETT ALLEN ADAMS, A.B., A.M., Ph.D.

**Biology 2a**—Four hours. Dr. Adams.

Biology 2a will remain on the five-hour basis until June 1, 1921.

This course may be substituted for Biology 2, which is required in the Junior College. It is a study of some of the fundamental facts and laws of Biology that may be valuable in teaching. It forms a basis for the intelligent study of other educational subjects. It considers the Evolution doctrine, cell life, problems of fertilization, maturation, and embryology, Mendel's Law, formation and organization of tissues.

## COURSES PRIMARILY SENIOR AND GRADUATE COLLEGE

**Biotics 102. Heredity (and its application to man)**—Four hours. Dr. Adams.

In these times when science is doing so much for the improvement of the world, man has come to the point where he is beginning to make a study of himself. Former studies in heredity were for the most part on animals and

plants. Recent years have shown great progress in man's study of himself and we now are able to show some results from the pioneer work of Galton, Pearson, Castle, Jennings, T. H. Morgan and Davenport. There are several centers in Europe and the United States that deal with this problem entirely in its relation to man. This course takes up (1) the pioneers in heredity and eugenics, (2) the fundamental laws of heredity as they are known at present, (3) inheritance of characters, traits, defective strains, feeble mindedness and other unfortunate conditions, (4) how these laws may be applied to man for his improvement, (5) some practical problems to be worked out in the student's community.

## Physical Sciences

FRANCIS LORENZO ABBOTT, B.S., A.M.

### COURSES PRIMARILY JUNIOR COLLEGE

#### 4. General Science—(Junior or Senior College.) Four hours. Mr. Abbott.

One of the main functions of any branch of science is to rationalize life—to free the mind from superstitions of whatever sort, thereby reducing human error and sufferings, much of which traces to false beliefs about things and phenomena. Science seeks to accomplish this end by various means—chiefly, however, by teaching a fruitful method of working on problems, or seeking to answer questions. The final result of science for those upon whom it produces the proper effect is a just sense of the KIND and AMOUNT of evidence that should precede the belief in anything.

This is an elementary study planned with the view of giving, as far as possible in such a brief course, an orderly, scientific understanding of the phenomena of every day environment, thereby increasing mastery of it.

Beyond this, the course should be of immediate use to teachers who must take the county examinations for a certificate to teach.

#### 6. Applied Physics. The Automobile—(Open also to Senior College.) Four hours. Mr. Abbott.

In this course the various types of cars, kinds of engines, springs, axles, clutches, differentials, feed systems, ignition systems, and car lubrication are discussed.

The purpose of the course is at least two-fold: (1) That persons who ride in, drive, or own a car may derive the greatest amount of satisfaction and pleasure from it by possessing an understanding of the mechanical principles underlying its operation; (2) That teachers taking the course may be well enough informed in the subject to disseminate a knowledge of the automobile physics correctly, thereby increasing scientific education.

#### 10. Household Physics—(Junior or Senior College.) Four hours. Mr. Abbott.

This is a first, or elementary, course in physics planned wholly from the point of view of the practical BEARINGS of physics. It is not restricted to the household, but uses freely the materials of the immediate surroundings of the home and school. It has been planned to meet the needs of several groups of people: (1) Students and teachers of domestic science and household economy; (2) Teachers of physics in small high schools; (3) Rural school and grade teachers.

The course deals with matters so fundamental that it should be of large use to the elementary school teacher in explaining many aspects of geography, agriculture, physiology and hygiene.

Beyond this it should be valuable to the house builder through those sections that explain the physics of ventilation, heating (water, hot air, steam), vacuum cleaning, etc. It is possible that teachers of physics in the larger high schools might find in this elementary course much practical material useful in stimulating pupils' interest in the subject.

#### 9. The Physical Aspects of Nature Study—(Junior College.) Three hours. Mr. Abbott.

Bacon said: "We must become as little children in order to enter the kingdom of Science." That means, I take it, that our minds must be free from preconceived notions, and superstitions; we must have an attitude of looking out, alert and ever ready to know why. For a long time I have asked the question, and am asking it with more emphasis than ever, why should we wait until we are old to enter into the "Kingdom of Science"? I believe little children should be allowed to enter this kingdom and be allowed to remain *always*, especially the so-called physical sciences, from which they have been almost wholly shut out. There is nothing more important than our physical surroundings, so far as health, comfort and life are concerned.

The first purpose of such a course as this should be to make nature and her ways seem *natural*. It matters nothing what we may call the course, the purpose should be to *lay* the foundation for an understanding of the Sciences by furnishing a basis of experiences. Nature Study as now taught emphasizes mostly botany or zoology, or at best the animated life part of nature. But the so-called inanimate nature is so closely linked up with the animate, that when we leave it out of account we only have a very imperfect or fragmentary understanding of the working of nature which we are trying to show the children.

"The Physical Sciences, and especially that designated as physics, is the most fundamental in its conceptions and the most practical in its applications of all the sciences." We must emphasize that the mere *book* teaching of science is of no value; it is injurious.

11. Household Physics—(Junior or Senior College.) Four hours. Mr. Abbott.

For a general statement giving the purpose of this course read the general statement of Course 10.

The subjects treated in this course are electricity, light and sound.

13. Theory of the Electron—(Junior or Senior College.) Three hours. Mr. Abbott.

It is impossible to read or study modern physics without understanding the Election Theory. The course is a very lucid explanation, in non-technical terms, of the Electron Theory of Matter.

### COURSES PRIMARILY SENIOR AND GRADUATE COLLEGE

105. Historical Physics—(Junior or Senior College.) Four hours. Mr. Abbott.

Probably the historical aspects of the school subjects offer the easiest insight into their relations to human life and problems. Physics, from the modern point of view and practice, is more than a set of laboratory experiences to be memorized. It is a history of *men facing baffling problems* and step by step finding a way to solve them. It is possible that this may be the best point of view from which to teach physics to any group of students, but its peculiar value for teachers of physics hardly needs to be emphasized.

This course is planned, primarily, for those teachers of physics who have a scholarly interest in the evolution of various aspects of their subject. Probably its chief service lies in its bringing together many classical experiments and indicating their influence on the development of physics, which is a matter of considerable difficulty, since there is no book written from this standpoint.

Beyond this, for the sake of humanizing physics, the course exhibits the circumstances and conditions under which various men first performed the classic experiments.

It is our belief that the teaching of college and high school physics may profit considerably from such a background study.

113. Alternating Currents Simplified—(Junior or Senior College.) Four hours. Mr. Abbott.

Practically all of the commercial electrical current is an alternating current and our high school text books give practically nothing of the subject of alternating currents. The aim of this course is to give a student or a teacher of physics such a clear understanding of the action of an ALTERNATING CURRENT as to form a safe and sure foundation for his work. The course is not a mere description of alternating machinery, but an explanation of PRINCIPLES in language so simple and clear that anyone with a very elementary knowledge of physics will have no difficulty in comprehending the course.



## Chemistry

W. G. BOWERS, A.B., A.M.

The following courses in Chemistry are intended to give the teacher and prospective teacher a better appreciation of this subject. The great world war has demonstrated in a very forceful manner the woeful lack of development of industrial chemistry in our own country. The realization of our utter dependence on European countries for many of the chemical necessities has given a great impetus not only to the manufacturing end of chemistry, but also to individual research and study. With our wonderful natural resources as a basis, and the lessons of the world war as a strong stimulus, we are looking into the future of a great chemical awakening in this country.

12. **New Theories of Chemistry**—(Junior or Senior College.) Three hours. Mr. Bowers.

The development of chemistry has taken place by leaps and bounds. There is a marked difference between the chemistry of a quarter of a century ago and that of today. The earlier chemistry was at first purely empirical, then it became more and more systematic and out of this condition has come a most fascinating modern science. The condition which has brought about this change has been the introduction of physical and mathematical methods into this science, and particularly is this true in the application of physical methods in the solution of the real fundamental problems of chemistry.

It is the purpose of this course in chemistry to review the chief new theories of this subject and to show how, through the collecting and co-ordinating of materials which form the foundation of a science, new substances have been discovered and a knowledge of their composition and properties has been derived. Special attention will be given to the works of Van't Hoff, Arrhenius, and Ostwald, who were the prime leaders in bringing about the transition from a mere system into a real science and who by discovering generalizations and making fertile suggestions and testing their accuracy have directed the trend of chemical work and chemical thought in its development up to the present day.

At least one year's work in general chemistry is a prerequisite for this course.

108. **Organic Chemistry**—(Junior or Senior College.) Four hours. Mr. Bowers.

A study of the methods of preparation and of the properties of the aliphatic series. At least one year of General Chemistry is a prerequisite for this course.

112. **Food Chemistry and Food Values**—(Junior or Senior College.) Four hours. Mr. Bowers.

This course takes up a thorough study of the four essentials of food, metabolism, digestibility, and assimilation of foods. Food lists and rations for various individuals under various conditions are calculated according to the most modern theories. A knowledge of organic chemistry is desired but not essential. General chemistry is a prerequisite.

### COURSES PRIMARILY SENIOR AND GRADUATE COLLEGE

213. **Chemistry as Applied to Problems of Civilization**—(Junior or Senior.) Three hours. Mr. Bowers.

Chemistry is not a subject to be appreciated only by those who have access to some sequestered laboratory, the doors of which are closed to the uninitiated, but is a great modern science which, in countless wonderful ways, is supplying the ordinary needs of contributing to the conveniences of modern life. There are many unexpected and marvelous ways in which chemical forces have been applied to solve the problems of civilization. Today there is more activity in chemical research than at any previous time, and out of what has seemed to be a hopeless confusion of chemical phenomena has come a veritable storehouse of simple and useful discoveries designed for the ultimate service of man.

It is the purpose of this course to see how the chemical forces which are at work all around us have been revealed for the use of man and how, through trustworthy and painstaking observation even of trifling occurrences, the scientist has contributed to the great romance of modern chemistry.

This course is a popular treatment of the subject, and requires no special knowledge of chemistry.

Note—Teachers of Chemistry are invited to make suggestions in regard to courses which should be offered in Extension; and information in regard

to the peculiar difficulties met in the teaching of Chemistry will be gratefully received.

## Geology and Geography

GEORGE A. BARKER, M.S.

The courses offered in non-resident work are in phases of the subject where laboratory and field work are not stressed. It is very difficult to do satisfactory work in a subject like mineralogy by non-resident work.

### Physical Geography—Four hours.

A course taking up the land form and climatic sides of the subject. Suggestions as to field and map work are included in this course. A course for students that have not had it in high school.

### 3. Climatology—Four hours.

A course taking up the principal factors controlling the atmosphere, as well as the effect of these in marking out on the earth's surface definite climatic provinces. An elementary course for those who have had little climatic work.

### 4. Geography of North America—Four hours.

A study of the physical geography of North America and the effect of these physiographic conditions upon the commercial and social geography. A course for teachers in service. Presupposes some knowledge of physical geography.

### Geography of Europe—Four hours.

The interaction of environment and race upon the development of the present European Nations. A course for teachers in service. Presupposes a knowledge of North American geography.

### 7. Commercial Geography—Four hours.

A study of products and commercial routes with the relationship to the underlying physiographic controls stressed. An elementary course in commercial geography.

### 22. Life Geography—Four hours.

The distribution of plants and animals emphasizing the main climatic and geologic controls of such distribution. An advanced course based on some knowledge of climatology.

### 113. Mathematical Geography—Four hours.

Covers subjects like earth as a sphere, tides, calendar.

### 175. Geology of Colorado—Four hours.

A map study of the outcrop of the various formations and their relation to the economic and cultural life of the state.

Note—Teachers in need of help in securing material or in organizing it for presentation are invited to write to the College for such help.

## Mathematics

GEORGE WILLIAM FINLEY, B.S.

Courses in mathematics are especially well suited to non-resident work by reason of their definiteness. The texts used in this work have been selected with special reference to their clearness of statement and logical arrangement of material. Anyone who has had the preparatory work may take up the courses outlined here with ease and profit.

All five-hour courses in mathematics change to four-hour basis June 1, 1921.

### COURSES PRIMARILY JUNIOR COLLEGE

#### 1a Solid Geometry—Four hours. Mr. Finley.

This course is designed to meet the needs of that large group of students who completed their plane geometry in high school, but did not take up solid geometry. A careful study of the main propositions and the solution of many of the originals is required.

2 and 3. Trigonometry—Six hours. Mr. Finley.

Anyone who has had at least one year of elementary algebra and a course in plane geometry is prepared to take up trigonometry. The course covers the solution of the right triangle, the development of general formulas, and the solution of the oblique triangle. Many problems of a practical nature are included in the work.

5. College Algebra—Five hours. Mr. Finley.

Anyone who has had at least one year of elementary algebra should be able to carry this work with ease. It takes up first a rapid review, with special attention given to the principles involved and continues with a study of functions and their graphs, quadratic equations, inequalities, and complex numbers.

6. College Algebra—Five hours. Mr. Finley.

A continuation of course 1. Deals with theory of equations, permutations, combinations, probabilities, determinants, partial fractions, logarithms, and infinite series.

7. Analytic Geometry—Five hours. Mr. Finley.

Practically all of the ordinary notions of analytic geometry are covered in this course. The student gains a good working knowledge of the elements of this powerful science, and is, at the same time, prepared to go into calculus.

9. The Teaching of Arithmetic—Five hours. Mr. Finley.

This course takes up the practical, everyday problems of the teaching of arithmetic rather than a more generalized study. It deals with the methods of presenting the various parts of the subject from primary arithmetic to eighth grade work. It is especially helpful to those actually engaged in teaching in the grades, as they are able to test in their classes the suggested methods.

### COURSES PRIMARILY SENIOR COLLEGE

100a. The Teaching of Secondary Mathematics—Five hours. Mr. Finley.

This work is planned for active or prospective teachers of high school mathematics. It takes up a careful study of the purpose and value of secondary mathematics and of the most recent movements in that field. It also includes a study of the fundamental principles of elementary algebra with a view to giving the teacher a clear understanding of the reasons involved in the various processes.

101. Differential Calculus—Five hours. Mr. Finley.

This course and the one that follows are designed for those who feel the need of a broader outlook upon the mathematical field. Needless to say every teacher of high school mathematics needs this work to enable him to understand to some extent the possibilities of the subject he is teaching. In this course the fundamental notion of the differential calculus is carefully developed and many practical applications are introduced.

102. Integral Calculus—Five hours. Mr. Finley.

The work in this course follows that of the preceding in logical order. It deals with the ordinary notions and applications of the subject.

104. Descriptive Geometry—Three hours. Mr. Finley.

This course takes up the ordinary problems in points, lines, planes, and solids. It is designed especially for those interested in manual training.

### Social Science

GURDON RANSOM MILLER, Ph.D.  
EDGAR DUNNINGTON RANDOLPH, A.M.

This department offers a series of courses which it desires shall appeal to both the needs and ambitions of many students. The courses are liberal and varied in scope. Many of them will meet the immediate practical needs of teachers. Some of them are technical, and are intended for teachers and students of special subjects. Still others are advanced courses in social theory, or are practical studies in applied sociology. Superintendents and principals will find many courses in this list well adapted for group study and teachers' clubs.

The Department of Social Science invites correspondence regarding these courses. We will formulate new courses, or change present courses when such action seems desirable. Let us know what you want.

### COURSES PRIMARILY JUNIOR COLLEGE

1. **The Beginnings of Human Society**—(Junior or Senior College.) Four hours. Dr. Miller.

An interesting study of early human society. Valuable for teachers in descriptions of physical, mental, and social changes in primitive men and women. A story of development through race experience; the evolution of language, industry, art, the family, law, and other social institutes; correlates well with courses in genetic psychology, human biology, human geography; and is also commended to students of history as a basal study.

2. **Social Evolution**—(Junior or Senior College.) Four hours. Dr. Miller.

A more advanced course in human evolution. The first volume is Elliot's intensely interesting account of the origins of human beings, and the original peopling of the continent of Europe. The second volume is Lord Avebury's standard work on "Primitive Times;" and the final volume, by Dr. Boaz of Columbia, takes as its thesis the idea that all races are approximately equal in potentiality.

This course correlates well with studies in the psychology of primitive people, race studies, and with many phases of the physical geography of Europe.

3. **Modern Social Problems in Relation to Education**—(Junior College.) Four hours. Mr. Randolph.

This is a first course in sociology. It is planned to meet practical needs of a somewhat varied group of people. It should be distinctly useful to the teacher who wishes to vivify her teaching of history by a clearer point of view and a more incisive method of work. It should be valuable to the supervisor of elementary school subjects who wishes a livelier sense of the relationship of school to life—as shown in a social interpretation of the course of study. To the student of affairs it offers help in forming judicious attitudes toward various problematic situations, such as the dynamic modern citizen is required to pass judgment on. To some extent the course will be varied to meet these different needs—where they cannot better be met by other courses described in this bulletin. Primarily, however, this is a course for elementary school teachers in the relations of school work to the varied problems of the world outside school. It is largely concrete. Of the five books studied, only one deals with social theory. This, the first one, is accomplished by very full directions for study—which will be extended as far as the needs of the student require and the ability of the instructor admits.

12a. **Social Readjustment**—(Junior College.) Four hours. Mr. Randolph.

This course offers an elementary study of how the processes of reconstruction may be applied to a considerable number of practical social problems. It is a much simpler course than Sociology 4, as well as a much less extensive study. It isolates certain situations from the larger field and by a brief analysis of the factors in these attempts to stimulate the habit of thinking in terms of social cause and effect. Its main concern is with the possible lines of improvement to be realized through supplementing and redirecting the development of such fundamental institutions and relationships as a family, church, school, property and the like. This course should be useful to the elementary school teacher of history and civics.

16a. **Society and The Church**—(Junior and Senior Colleges.) Four hours. Dr. Miller.

A live, stimulating course of large interest to students of church, Sunday school, and religious social improvement; of special value to classes in religious education. The authors in this course are Rauschenbusch, King, Wormer, and Cutting, all well known writers in this department of social thought.

17. **Society and Religion**—(Junior and Senior College.) Four hours. Dr. Miller.

Similar to Course 16, but dealing more directly with growth and changes within the Church. It comprises discussions of the social basis of religion, the relation of the Church to democracy, religion in social action, God in evolution, and the religion of the future.

18a. **Rural Sociology**—(Junior and Senior College.) Four hours. Dr. Miller.

A constructive study of country life, economic activities, social organizations, schools, clubs, churches, social centers, and modern efforts and successes in rural progress; intended primarily for rural teachers, but is of value to all students of rural social conditions and needs.

19. **Property and Society**—(Junior and Senior College.) Four hours. Dr. Miller.

An attractive study of property rights, wealth holding, standards of living, social problems resulting from poverty, and theories of the leisure classes.

### COURSES PRIMARILY SENIOR COLLEGE

104a. **Elementary Sociology**—(Primarily Senior College, but open to qualified Juniors.) Four hours. Dr. Miller.

This is a course planned to give a clear working notion of the *field of thought* more or less vaguely called *sociology*. It presents the accepted results of study in the field and offers a perspective of the whole field with the various subdivisions displayed in proper relations. In other words, the relationships of the somewhat tangled mass of "modern social problems" is made clear and the most judicial opinions in regard to them are exhibited. This course should be of considerable value to teachers of history and civics. And the general reader who is interested in the complex inter-relations of modern life may find this course offering somewhat nearly the orientation he wants.

105a. **Elementary Sociology**—(Primarily Senior College.) Four hours. Mr. Randolph.

This course is less concrete than the preceding one. It does not attempt to give an outline of the whole field of sociology but is concerned rather with the study of social theory in an elementary way. The foundations that have been most influential in America will be considered carefully. This course should follow Sociology 4.

106a. **Social Theory**—(Senior and Graduate College.) Four hours. Dr. Miller.

An advanced course in the principles of sociology, based on the works of Ward and Giddings, both of whom are recognized great creative leaders in sociologic thought. This course is virtually a study in social philosophy, and is commended to mature advanced students only.

107. **Social Theory**—(Senior and Graduate Colleges.) Four hours. Dr. Miller.

More varied in material than Course 6. All books in this course are scholarly and scientific products of two of the greatest living American sociologists, and one English author of world fame. This will form a productive study of large value for advanced students.

108. **Social Direction**—(Senior College and Graduate.) Four hours. Dr. Miller.

A course in applied sociology, social control, and the scientific direction of comprehensive social reform efforts. This study presupposes knowledge on the student's part of social theory, social institutions, and modern political attempts to direct social change without revolution.

A vigorous, vital course for experienced students.

109. **Comparative Sociology**—(Senior College and Graduate.) Four hours. Mr. Randolph.

For students who have had Sociology 4 or Sociology 6, this course offers an opportunity to consider somewhat deliberately the factors in the rise of sociology, the nature of the theoretic and practical problems confronted by the sociologist, the various points of divergence of theory among the more significant contributors to the science, and the like. It offers in the end the best attempts at a synthesis of the whole field of social thought.

110. **Social Psychology**—(Senior College.) Four hours. Mr. Randolph.

This course might better be called a course in *psychological sociology*, if the older name had not become fixed. It deals with those parts of psychology upon which *social theory* immediately rests. It uses psychology for the purposes of social theory. It considers, for example, the part played by instinct, feeling, intellect, imitation, sympathy, and the like in the characterization of society. The course should be useful to students of education and to administrators who are not satisfied with their merely empirical control of social groups.

111. **The Evolution of Morals**—(Senior College and Graduate.) Four hours. Dr. Miller.

A scientific study of the development of morals through anthropologic and historic times. Of interest, not only to teachers, but to all students of ethical and religious development. This course might wisely be preceded by courses 1 or 2; and will be permitted to Junior College students who have taken either of these courses, or similar ones, or who have taken two courses in elementary sociology or social theory, or who have earned not less than seven hours in such courses.

113. **Scientific Management and Labor**—(Senior College and Graduate.) Four hours. Dr. Miller.

A somewhat technical course, dealing with detailed study of mechanical operations, and the efficiency of labor. It includes consideration of the relation of psychology and industry; factory management; fatigue surveys; the bonus system, and its effects on production, and also on workmen. The authorities studied are Taylor, Hoxie, Gantt, Munsterburg, and others.

Intended for teachers of industrial classes, commercial and business classes; but is also of large interest to all students of efficiency in industry. It is a superior practical course.

114. **Privilege and Society**—(Junior and Senior College.) Four hours. Dr. Miller.

This study is closely allied with Course 12, and may profitably either precede or follow it. It deals with the social problems arising from special privileges; social abuses and their political aspects; and with tendencies toward reform in the social order. An interesting course.

115. **Social Insurance**—(Junior and Senior College.) Four hours. Dr. Miller.

Studies the operation of social insurance in European countries, Australia, and New Zealand, and the growth of the idea in America since 1912. It comprises a study of social compensation for accidents, sickness, invalidity, unemployment, and old age. A comprehensive and instructive course.

120a. **Distribution of Wealth**—(Senior College.) Four hours. Dr. Miller.

A companion study of Course 19, but more extensive, and more scientifically worked out. It contains Hobson's well known contrast between production of wealth and its consumption, in which he treats consumption as the neglected element in economics and urges its just scientific treatment. It also contains Dr. Ely's latest discussion of property and contract.

121. **Problems and Methods of Modern Philanthropy**—(Senior College and Graduate College.) Four hours. Mr. Randolph.

This is a course planned to reveal to students of affairs, teachers of history and civics, and those who, from the cultural point of view, are interested in the dramatic under-currents of human life and progress, the least known aspects of our civilization—those aspects which perhaps are to have most credit in the end if we succeed in passing from civilization to humanization. The course will deal with (1) the nature and extent of social failure; (2) the slow and bungling evolution of ways of relieving distress or of putting down the symptoms of misery; (3) the gradual achieving of a conscious technic and curative methods of relief; (4) and the general principles which experience has slowly contributed to present methods of working in social amelioration. Happily, there is a considerable number of books available for such a course, which possess merits of form and graces of expression entitling them to be called *literary* at the same time that they exemplify all the conditions and courageous virtues of a thorough-going scientific method.

122. **Women and Social Evolution**—(Junior and Senior College.) Four hours. Dr. Miller.

A reliable, attractive, sociological study of the modern feminist movement. The contributions are from German, Swedish, and American writers, and include the biologic and psychologic aspects of the problem, as well as its historical and sociological features.

Worthy the attention of any student. It is closely related to Courses 31 and 32.

123. **Immigration and American Problems**—(Primarily Senior College and Graduate, but open to qualified Juniors.) Four hours. Mr. Randolph.

This course is intended to be of practical benefit to two groups of people; (1) To teachers—especially teachers of history and civics—it offers the sociologists' and the economists' interpretative principles in the treatment of a social

phenomenon which, though it has been the life of America, is hardly considered in the usual school history. (2) To those interested in forming judicious views upon current problems of our life it offers as far as possible in the limits of such a course an impartial account of the great *change in the character of population* in the 19th century, whereby from a people comparatively homogeneous we have come to exhibit in our composition the greatest mechanical mixture of racial stocks the world has ever known, and have suffered consequent weakness in our institutions. It is felt that the course is timely now in view of the recent recognition by the government of the peril implicit in our unassimilated aliens.

**124. Problems and Methods of Child Welfare**—(Senior College and Graduate, but open to qualified Juniors.) Four hours. Mr. Randolph.

This is a course in the growth and tendencies of the modern movement for the conservation of children. It begins by giving a view of the status of children in the past; passes to a consideration of the evolution of the child protection agencies in the United States; and deals finally with the present problems and tendencies in child welfare programs. This is a course which should be especially useful to parents who are desirous of raising the type of family relations in their community either through organizations intended to affect the community by public effort or through less direct agencies. Beyond this, parents who are especially zealous to give the most humane nurture to their children will find in this course much to recommend it to them. It should be useful to teachers of household arts as an extension of the dynamics of home making. It is, however, hoped that this course will appeal largely to the elementary school teacher, who next to the parents, best loves the child and most needs to know of the significance of changing attitudes to the child.

**225-226. Socialism**—(Senior and Graduate College.) Four hours each. Mr. Randolph.

The first of these courses is an introductory study of the scope and meanings of this modern reaction to modern conditions of life. It will probably meet the needs of most students. It gives a complete but elementary survey of the whole field, and through some of the simpler treatises presents the pros and cons concretely enough to make the course enjoyable to the novice. In the second course more is done to show the variations of socialism under varied national conditions.

**128. Boys and Modern Social Problems**—(Junior and Senior College.) Four hours. Mr. Randolph.

This course is in sequence with Sociology 124 and offers those who have been especially interested in the field of child conservation an opportunity to give special attention to the problems of rearing, managing, and directing the more restless sex.

**129. Crime and Society**—(Junior and Senior College.) Four hours. Mr. Randolph.

This course is a study of the relationship of the criminal to society—to social institutions and social organizations. Incidentally it will show the changing attitude of society toward the criminal, and the more important factors behind the change. The course is, however, mainly concerned with the present relations of the criminal in society and his treatment at the hands of society. The course intends to present the best modern thought in the various aspects of the field.

**130. The Single Tax**—(Junior and Senior College.) Four hours. Dr. Miller.

A discreet, careful discussion of the Single Tax, in pleasing form, and all material up to date. No old books in the course. Taxation reform is one of our most comprehensive social changes, and is probably the gateway to accomplishment of most of the general program for social improvement, through a more equitable distribution of wealth. This course discusses the Single Tax as a possible solution of the general problem.

**131. The Modern City**—(Junior and Senior College.) Three hours. Mr. Randolph.

A live topic, discussed by the most virile and attractive writer on this subject in America. The three volumes in this course are all by the same writer, an American scholar, of wide and varied experience, occupying high government position. The series is in sequential order, and uses the comparative method in discussing British, German, and American cities. It is a rich fund of information.

**132. The Family**—(Junior and Senior College.) Four hours. Dr. Miller.

A very profitable study of the family from the standpoint of education, industry, ethics, and as a social unit. Desirable for teachers, but of great value

to all students of either theoretical or practical sociology. Closely related to Courses 22 and 24.

133. **Social Hygiene**—(Junior and Senior College.) Four hours. Mr. Randolph.

A special study of marriage and sex, not highly technical, by writers of national and international reputation; a thoroughly reliable, scientific study.

134. **Heredity and Progress**—(Junior and Senior College.) Four hours. Dr. Miller.

Presenting two books each, on the biologic and sociologic aspects of the problem of social progress. Can be profitably used in connection with courses 8, 11, 36, or 39.

135. **The Evolution of Culture**—(Senior College and Graduate.) Four hours. Dr. Miller.

A standard scientific study of the development of human knowledge, and the bases of civilizations. The material is largely anthropological, and forms an excellent sequence for Courses 1, 2, or 11. Commended to historical students.

136. **Social Progress**—(Senior College and Graduate.) Four hours. Dr. Miller.

Deals with modern social evolution and theories of progress; historical and philosophical in method of treatment; covers a wide range of thought, and might properly be termed a philosophy of history.

137. **Labor and Society**—(Junior and Senior College.) Four hours. Dr. Miller.

A study of the laboring classes, development, place, privileges, and rights in society; and relation of workers to systems of industrial administration. Specially commended to teachers of industrial education, and students of economics. It correlates well with Courses 12, 13, 14, 15, 19, and 27.

138. **German Social Organization**—(Junior and Senior College.) Four hours. Dr. Miller.

Four recent books of superior quality on the modern German method and system of organization in industry, business, commerce, education, and governmental activities. A rich fund of information, well told.

139. **Social Philosophy**—(Senior College and Graduate.) Four hours. Dr. Miller.

An advanced course in fundamental social theory, closely related to Courses 6, 7, 8, 9, 10, and 36. Commended to mature, experienced undergraduates, and to graduate students.

140. **The American Family**—(Junior and Senior College.) Four hours. Dr. Miller.

A Social History of the American family from the period of American independence to the close of the Civil War.

141. **Women and Business**—(Junior and Senior College.) Four hours. Dr. Miller.

A study of the entry of American women into the business world, with a recital of general social results, gains and losses in individual opportunities, and a discussion of the future of business for women.

Note—This department has always been interested in promoting the study of modern social conditions and problems. Students interested in finding material on any phase of modern life are invited to apply to the College for help.

## History and Political Science

EDWIN B. SMITH, A.M.

The work offered in this department includes some of the resident courses and some special courses that may be taken to advantage. The effort is made to arrange these courses on a practical basis so that they will aid the teacher who is working in the lines indicated. In nearly every phase of school work the teacher utilizes the subject matter of history, either directly in teaching



the subject or as supplementary material. The new interest that attaches to political relationships calls especially for new effort in the schools in teaching history and civics.

The department is anxious to meet the needs of teachers. If the desired work is not listed, correspond with the department concerning it.

### COURSES PRIMARILY JUNIOR COLLEGE

#### 1. American History—Four hours.

This course includes: The European conditions that furnished the background for the work of the discoverers and explorers; the life of the Indian, especially of the western section; the settlements made by the Europeans; the life of the colonist; the growth of the European colonists in America; and the struggle for the rights of independent people.

#### 2. American History—Four hours.

In this the work of Course 1 is continued as follows: The formation of a government suited to the needs of the people; the experiences of the people under the new government in becoming a strong nation; the western movement; and the testing of the strength of the national government. Throughout, the interest includes the social and industrial conditions.

#### 3. American History—Four hours.

The work begins with the reconstruction following the Civil War. The large movements are traced; such as, the growth of industry, the financial measures, American diplomacy, imperialism, business combinations, labor organizations, conservation, and the international relations of the United States.

#### 4. Medieval Europe—Four hours.

The conditions of the people of Europe, politically, socially, and industrially, during the period called the Middle Ages form the interest of the course. The conditions of modern Europe and of the United States are so largely affected by the life of Medieval Europe that they cannot be properly understood without consideration of this period.

#### 5. Early European History—Four hours.

The countries of Europe at the beginning of the sixteenth century; the commercial revolution; the Protestant Revolt and the Catholic Reformation; the culture of the sixteenth century; absolutism in France; parliamentary government in England; the world conflict of France and Great Britain; the revolution within the British Empire; eighteenth century Germany; the rise of Russia; "Liberty, Equality, Fraternity;" European society in the eighteenth century; the era of Napoleon.

#### 6. Recent European History—Four hours.

A continuation of Course 5. The era of Metternich; the industrial revolution; reform and revolution; the growth of nationalism; the problem of the Irish; the German Empire; the new Russia; dismemberment of Turkish Empire; the spread of European civilization in Asia and Africa; international relations and the outbreak of war, 1914.

#### 9. National Government—Four hours.

The relations between the government of the United States and the people; the new conception of the presidency; the growing powers of Congress; the federal judiciary; constitutional protection of business; the police powers of the national government; civil service; direct legislation; corrupt practices act; legislation of the last administrations.

#### 11a. Commercial History of the United States—Four hours.

A survey of commerce from early times; colonial commerce and its consequences to European nations; commerce in the several periods of American development, domestic and foreign; the coastwise trade; government aid; the consular service; improvement of rivers, harbors, and waterways; tariff provisions affecting shipping; commercial treaties; commercial changes of the twentieth century; international complications.

#### 13a. The Teaching of History in the Elementary School—Four hours.

The aims in teaching history; the values of history; history of one teaching of the subject; the course of study, past, present, and future; psychology of the subject; methods and materials; testing results of history teaching; and the consideration of the school problems relating to history—the place of history in the school curriculum, and the relation of history to other subjects.

**22. Municipal Government—Three hours.**

The growth of cities; their relation to trade and industry; state control over cities; the development of the American city; services to the people; city planning; the commission form of government; the city manager; other recent movements.

**24. Modern European Government—Four hours.**

A course presenting conditions of European governments; the foundations of their governments; the positions of the heads of governments; democracy under the present governments; most recent movements.

**25. Comparative Government—Four hours.**

The government in other countries compared with that in our own; England the cabinet type, France the constitutional cabinet type; Germany the cabinet type in transition, and Switzerland the most perfect type of democracy; the smaller European states and the South American republics; the growth of internationalism and democracy.

**26a. The Teaching of Civics in the Elementary School—Four hours.**

The development of civics teaching from the mere study of the constitution to the present community civics; the value of civics in education for citizenship; the purposes of instruction in government; courses of study for the elementary school; methods and materials for various grades of instruction.

**28. Ancient Social History—Four hours.**

This is a survey of the development of society among the early peoples, with the emphasis on the social and economic phases. The main purpose is to give teachers a new point of view with respect to the teaching of ancient history.

**31. History of the Great War—Four hours.**

This course deals with the diplomatic background, the economic, commercial, and other causes, the conditions surrounding the outbreak in 1914, the United States in the war, and the reconstructive activities following the cessation of hostilities. This work is based upon the best writing produced by the war.

**COURSES PRIMARILY SENIOR AND GRADUATE COLLEGE****104a. Western American History—Four hours.**

The westward movement as an historical process; the migration from the Atlantic into the Mississippi Valley; the Trans-Mississippi West; the history of Colorado as a part of this movement; the Pacific Coast and the dependencies.

**107. English History—Four hours.**

The foundations of England; consolidation of England under Norman supremacy; parliamentary development; medieval institutions; civil wars and the decline of feudalism; the Tudor period; divine rights; monarchy and puritanism; contest for constitutional government; whig supremacy; the age of Walpole; development of Greater Britain; transition to modern England; democracy and reform; the eastern question; present movements.

**116a. Spanish-American History—Four hours.**

A course designed to furnish a background for understanding the growing relations between the United States and the republics to the south. In tracing the experiences of the Spanish-American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to the Panama and the purchase of the Danish West Indies, and to the new Pan-Americanism.

**117. The Teaching of History and Civics in the High School—Four hours.**

The aims and values in teaching the subjects; the development of instruction in these subjects; the socialized course of study problems of teaching; and the relation between history and civics teaching.

**118. Financial History of the United States—Four hours.**

The origin and growth of the currency, banking, and revenue systems of the United States, with especial emphasis upon the relation of the tariff system and the currency system; the recent achievements in the financial system as expressed in the federal reserve banking system, the farm loan plan, and war finance.

**119. Constitutional History of the United States—Three hours.**

Origin of the constitution; relation to the state constitutions; the Articles of Confederation as a precedent; the constitution in the process of making; the interpretation placed on the principles by the makers; the period of misunder-

standing; the Civil War; the new interpretation of the principles of government; the service of the law courts. Throughout the course the great cases that have grown out of the interpretations of the document will receive consideration.

**120. Elementary Political Science—Four hours.**

This is an introduction to the principles of the various political organizations which control people. The theories and forms of government, constitutions, and ideals of citizenship are included. The course should be of special interest and value as explanatory of the current political thought relative to democracy and to the radicalism that is expressed in bolshevism.

**123a. Internal Relations—Four hours.**

In this course there is a study of the principles governing the relations of civilized nations, which includes the problems of citizenship, the position of aliens and of alien enemies, the rights of nations with respect to war, neutrality, and intervention, and the regard for treaties. American ideals, the Monroe Doctrine, Pan-Americanism, and the league of nations.

**124a. History of the Far East—Four hours.**

This is a study of the modern history of China, Japan, and India with reference to their relations to Europe and the United States.

Note—The department invites correspondence from those who find themselves perplexed in regard to any phase of the teaching of history and civics.

## Literature and English

ETHAN ALLEN CROSS, A.B., A.M.

FRANCES TOBEY, A.B.

RAE E. BLANCHARD, A.M.

The department of literature and English selects from all the courses which it offers in residence, a group that may profitably be conducted by individual correspondence.

Text Books: Wherever a text book is prescribed it is supplied by the College under the usual conditions; but the College does not agree to supply the illustrative pieces of literature studied in these courses. These must be obtained from a local library, or bought by the student. In most cases the books are such as may be found in any good town library, and in all cases they will be worth possessing.

**1. Reading in the Grades—Four hours. Miss Tobey.**

Aims of the course: To stimulate insight and encourage system in the organization of material; to direct the study of method; to develop initiative and resource in the conduct of the reading class; to quicken the teacher's perception of the values of literature of varied type, for pupils of various grades.

**8. English Literature (670-1660)—Open to students of either Junior or Senior College. Four hours. Miss Blanchard.**

The course will consist of a study of the following pieces and authors:

1. Beowulf and Anglo-Saxon literature. 2. Chaucer. 3. Everyman. 4. Book 1 of *The Faerie Queene*. 5. *The English Sonnet*. 6. *Sidney's Arcadia* (extract) and other attempts at fiction. 7. Marlowe's *Dr. Faustus*. 8. *Macbeth*. 9. *Every Man in His Humor* or *Epicene* (choice). 10. Bacon (12 essays). 11. Early Translations of the Bible (extracts). 12-14. Burton, Walton, and Sir Thomas Browne. 15. *Pilgrim's Progress*, Book 1 *Paradise Lost*, and *Lycidas*.

**9. English Literature from 1660-1900—Open to students of either Junior or Senior College. Four hours. Miss Blanchard.**

This course includes studies in (a) the poetry of Dryden, Pope, Thomson, Gray, Goldsmith, Cowper, Burns, Wordsworth, Coleridge, Scott, Byron, and Tennyson; and (b) the prose of Dryden, Pepys, Addison, Steele, Johnson, De Foe, Swift, Goldsmith, Lamb, De Quincey, Macaulay, and Ruskin; and (c) plays by Goldsmith and Sheridan.

Note—The material for English 8 and 9 has been divided into three four-hour courses (English 8, 9, 10).

**6. American Literature (1700-1900)—Open to students of either Junior or Senior College. Four hours. Miss Blanchard.**

This course embraces (a) a survey of the history of colonial literature, and (b) a careful study of the following authors: Emerson, Whittier, Longfellow, Holmes, Lowell, Hawthorne, Poe, and Whiteman, with a few others of lesser note.

**31. The Short Story—Four hours. Mr. Cross.**

The study of the forms and themes used by modern short story writers. Today the short story is a literary form quite distinct from any other, and capable of carrying a significant theme within its limited space. This course attempts first to study the forms and then to show how the story is being used to entertain and to teach truth to the millions who read magazine fiction. The student is expected to study the structure and meaning of fifty typical stories.

**100. Advanced Composition—Four hours. Miss Blanchard.**

This is a practice course in writing designed for those who are already familiar with the elements of correct expression in writing. It consists of fifteen themes of 6 to 10 pages each, on paper approximately 8 by 11 inches. Detailed directions for each of the fifteen papers are given in the syllabus, which will be sent, one section for each theme, after the student has enrolled for the course. The papers are read, criticised, and returned by the instructor.

**116. The Festival—Four hours. Miss Tobey.**

Aims and scope of the course: A study of the values, the varied forms, and the practical development and direction of school pageants and festivals; the preparation of full outlines of school or community festivals which are detailed and practicable for actual use in schools.

**127. Selected Plays of Shakespeare—Four hours. Mr. Cross.**

A careful study of the ten plays of Shakespeare, chronicle, comedy, and tragedy, which seem best suited to high school courses in English literature.

**132. The English Novel—Four hours. Mr. Cross.**

In the main this is a reading course following the development of the English novel from 1740 to 1900. The two text books which will be indicated are assigned for reading to guide the student through the course in an ordered way. Ten novels are read entire, and parts of two others. The details of the work are furnished in a syllabus of fifteen parts.

**133. The Recent Novel—Four hours. Mr. Cross.**

Many students who do not care to follow the development of the novel as a literary form wish to study the novel of the present. An opportunity for such study is given in this course. It may be taken following Course 16 or independently. In the main, it consists of a careful study of ten or twelve novels of the present, with written work to accompany each study. Some of the most significant pieces of writing on social and educational problems of the day are being published in the form of novels. This course gives literary students an opportunity to study these problems.

**134. Modern Dramatists—Four hours. Mr. Cross.**

In addition to making a careful study of standard treatises on modern drama, the student will be expected to read and analyze for form and meaning twenty representative plays, Continental, English, and American, since Ibsen. Details furnished in a syllabus.

## Romance Languages, German and Latin

EDWIN STANTON DU PONCET, Ph.D.

By a recent arrangement, the Department of Modern Foreign Languages is able to offer correspondence courses by the phonograph method. Four different methods may be had, as follows:

First: A year's course using the ordinary course of instruction with the aid of a standard phonograph, grammar, and letter writer included in the course. The price for the course complete, including 30 phonograph records and complete text books, is \$50.00. Second: Without the phonograph, the same course with all complete, for \$35.00. Third: A similar course with the vanophone and 30 records, for \$30.00. Fourth: The same course with the dictaphone, the machine and records to be returned at the end of the year, for \$32.00. All express charges on the above material will be paid by the College.

The following are the non-resident courses offered without any reference to the above aids in pronunciation.

### FRENCH

#### First Year Courses

##### 1a. Elementary French—Four hours.

The definite and indefinite articles; use of the articles; the partitive article; remarks on the articles. The two auxiliaries; uses of same. Number and gender. The adjectives; irregularities of the same; comparison of adjectives. The present tense; the imperfect tense; the future and future perfect, the pronouns *qui*, *que* and *quoi*. Relative and interrogative pronouns. The reading of fifty pages of selected easy texts. The review of all work up to this point.

Note—Unless special reasons are given, no credit will be given for less than 15 hours in the first year of any language studied in this manner.

##### 2a. Elementary French—Four hours.

Possessive adjectives and pronouns. The demonstrative and conjunctive pronouns. Use of the pronoun *ce*. Disjunctive personal pronouns. Conjunctive pronouns; position of same; use of disjunctive instead of conjunctive. Negation. Indefinite adjective and pronouns. Use of *tout* and *même*. Positions of adverbs. Peculiarities of spelling. Idiomatic use of *avoir* and certain nouns. The reading of one hundred pages of graded French text.

##### 3a. Elementary French—Four hours.

The use of the imperfect tense; past definite and past indefinite tenses; the pluperfect and past anterior; use of the future and conditional tenses. Rules of the past participles. Use of the auxiliary *avoir*. The rule for *être*. Use of reflexive pronouns. Use of the imperative. Use of the present participle. The impersonal verbs. The verbs *must*, *should*, and *ought*. The verbs *pouvoir*. The use of the subjunctive after verbal expressions; use of the subjunctive after certain conjunctions; remarks on *que* and the subjunctive; distinction between the subjunctive and other moods; uses of the tenses in the subjunctive. General rules of negation; use of *ne*. Inversions. Gender of nouns and rules for same. Uses of prepositions before certain infinitives. A comprehensive study of irregular verbs. The reading of 150 pages of easy French plays. A colloquial study of every day idioms.

#### Second Year Courses

##### 4a. Intermediate French—Four hours.

Reading and study of *George Sand's Mare au Diable* and *Dumas' Monte Cristo*. French composition.

##### 5a. Intermediate French—Four hours.

Intermediate Course. Reading and study of *Verne's Michael Strogoff* and *Le Tour du Monde en 80 Jours*. Review of grammar and composition.

##### 6a. Intermediate French—Four hours.

Intermediate Course. The study of selected works by *Erckmann-Chatrian; Le Juif Polonais, Waterloo, and Madame Therese*. Advanced press composition.

15a, 16a, 17a. **Advanced French**—Four hours for each course.

Advanced Courses. See the general catalog for these courses. Offered only to students who have previously done work in residence.

## GERMAN

### First Year Courses

1a. **Elementary German**—Four hours.

Introduction and pronunciation. Cases, nominative and accusative. The indefinite article. Present indicative. Definite article. The imperative mood. Genitive case. The present tenses. The dative. Word order. Personal pronouns. Reflexive pronouns. Future indicative. Personal pronouns reviewed. Non-personal use of personal pronouns. Strong nouns, first class. The present tense of the modal auxiliaries. Strong nouns of the second class. Strong nouns of the third class. The present tense of *wissen*. Weak nouns. Past tense of weak verbs. Past tenses of the modals and of strong verbs. The reading of 50 pages of easy German stories.

2a. **Elementary German**—Four hours.

Possessive pronouns and the past tenses of strong verbs. Prepositions with the dative and accusative. Weak declension of adjectives. Adjectives used as substantives. The past tense of semi-irregular verbs. Relative pronouns. Perfect tense of weak verb. Declension of adjectives after *ein* words and after *der* words. Pluperfect and future of weak verbs. Strong declension of adjectives and a review of the mixed and the weak declension of adjectives. Reading of fifty pages of graded texts.

3a. **Elementary German**—Four hours.

Perfect and pluperfect of modal auxiliaries. Demonstratives. Cardinal numbers. Ordinal numbers. Interrogatives. Comparison of adjectives and adverbs. Inseparable and separable prefixes. Separable and inseparable verbs. *Sein*, *haben*, and *werden* used as auxiliaries. Passive voice. Subjunctive. Indirect statement. Conditional mood. Conjunctions. Study of strong verbs. The indirect discourse. Rule of gender for nouns. Reading of 100 pages of intermediate German.

### Second Year Courses

4a. **Intermediate German**—Four hours.

Reading of *Gerstacker's irrfahrten*; *Heyse's Anfang und Ende*; *Wildenbruch's Das Edle Blut*; *Wichert's Die Verlorene Tochter*.

5a. **Intermediate German**—Four hours.

Study of *Storm's Immensee*. *Karsten Kurator* and *Polepoppenspaler: Harris' Prose Composition*.

6a. **Intermediate German**—Four hours.

*Schiller's Wilhelm Tell*, *Maria Stuart*, and *Jungfrau von Orleans*. The life and works of Schiller.

4b, 5b, and 6b. **Commercial German**—Four hours for each course.

A course of one year's work in the writing and reading of commercial German. This course presupposes at least one year of German. The writing of advertisements; the study of phrases used in business houses; the language of the court room; technical terms.

## ADVANCED GERMAN

(For students who have done resident work at this institution.)

12a. **Advanced German**—Four hours.

*Schiller's Trilogy*, *Wallenstein's Tod*, *Die Lager*, and *Die Piccolomini*. Advanced composition.

13a. **Advanced German**—Four hours.

*Lessing's Minna von Barnhelm*, *Emelia Galotti* and *Nathan der Weise*. Study of Lessing's life and works. Some attention paid to the *Hamburg Dramaturgy*.

15a. **Advanced German**—Four hours.

Devoted to Goethe, *Hermann und Dorothea*, *Der Vicar von Sesenheim*, and one other selected work.

18a, 19a, and 20a. **Advanced German**—Four hours for each course.

The following courses are open to all who may be able to take the work. *The Present German Drama*. Reading the selected plays of *Fulda*, *Sudermann*, and *Hauptmann*. Three plays of each will be read.

## SPANISH

### First Year Courses

1a. **Elementary Spanish**—Four hours.

The articles. Gender of nouns; possession; plural of nouns. Regular verbs, present of the indicative. Interrogative sentences. Personal *a*. *Usted; ustedes*. Forms of address. Qualifying adjectives. Apocopation. Comparison of adjectives; of adverbs. Participles. Uses of *haber* and *tener*. Present and perfect tenses. Uses of *ser* and *estar*. Reading of 75 pages of easy texts.

2a. **Elementary Spanish**—Four hours.

Radical change of verbs of the first class. Cardinal numbers. Ordinal numbers. Time of day. Augmentative and diminutives. The past participle and the past absolute. Personal object with *a*. Possessive adjectives. Future and conditional. Demonstrative, pronouns and adjectives. Object personal pronouns. Reflexive and reciprocal verbs. Passive voice. Two object personal pronouns. Compound tenses of the indicative and their uses. Relative pronouns. The erasing of 100 pages of easy stories and plays.

3a. **Elementary Spanish**—Four hours.

Interrogative adjectives and pronouns. The imperative mood; the subjunctive mood. Past, future, and compound tenses of the subjunctive. Sequence of tenses. Conditions contrary to fact. Orthographic changes. Verbs with inceptive endings. Radical changes of verbs of the second and third class. The infinitive. Prepositions before an infinitive. Irregular verbs. Letter writing. Business letters. Introduction to commercial forms. Spanish life. Reading of 150 pages of easy texts.

### Second Year Courses

4a. **Intermediate Spanish**—Four hours.

The reading of *Valera's El Pajaro Verde*; *Larra's Patir a Tiempo*; *Alarcon's Short Stories*.

5a. **Intermediate Spanish**—Four hours.

*Alarcon's El Sombrero de tres Picos* and *El Final de Norma*; *Waxman's A Trip to South America*.

6a. **Intermediate Spanish**—Four hours.

The reading of *Gutierrez's El Trovador*; *Valer's Pepita Jiménez*; *Valde's Jose*.

## ADVANCED SPANISH

10a. **Advanced Spanish**—Four hours.

Three plays of *Echegaray* and *Alarcon's Las Paredes Oyen*. Original themes in Spanish.

11a. **Advanced Spanish**—Four hours.

The reading of *Ayala's Consuelo*; *Caballero's La Familia de Alameda*; *Ibanez's La Baraca*, *Lope de Vega*, and *La Moza de Cantaro*.

12a. **Advanced Spanish**—Four hours.

A study of *Cervantes' Don Quijote* and *Valde's La Hermana San Sulpicio*. Original themes on Spanish life.

4b, 5b, 6b. **Commercial Spanish**—Four hours for each course.

Presupposes one year of Spanish. A complete course dealing with all possible forms used in every day commerce and much original composition. The writing of reports on subjects dealing with Latin-America.

## PORTUGUESE

For the present, the first year's work only will be offered, and will be mostly commercial Portuguese.

1. *A study of the grammar and the reading elementary texts.* Four hours.
2. *Continuation of grammar and reader. Introduction to commercial Portuguese.* Four hours.
3. *A thorough course in commercial forms and the writing of business correspondence.* Four hours.

### ITALIAN

1. *Young's Italian Grammar, first half of book to be completed.* Four hours.
2. *Young's Grammar completed. One hundred pages in Marioni's Italian Reader.* Four hours.
3. *Selections from Carducci; Italian reader and grammar completed.* Four hours.
4. *Reading of Alberto by de Amicis; una Notte Bizarra by Barrili.* Four hours.
5. *Careful study of Amicis' Un Incontro and Camilla.* Four hours.
6. *Reading of Fra le Corde di un Contrabasso by Farina and Fortezza and Un Gran Giorno by Amicis.* Four hours.

### LATIN

1. **Beginning Latin**—(Junior and Senior College.) Four hours.  
Text: D'Ooge's Latin for Beginners.
2. **Intermediate Latin**—(Junior and Senior College.) Four hours.  
This course can be taken by those having had from one to two years' work of the subject. Texts: Sallust's Catiline and any good grammar.
3. **Pedagogy of Latin**—(Junior and Senior College.) Four hours.
  - a. How to Read Latin.  
Text: The Art of Reading Latin—William Gardner Hale.
  - b. Teaching Latin Prose.
  - c. Exercises in Translation and Prose Composition, assigned to each student.

### Music

JOHN CLARK KENDEL, A.B., Director

The Music Courses offered are for both the experienced and inexperienced musician. Music 2 is a plan of presenting the work of the first eight grades in such a manner that it is hoped it will be helpful to teachers of all degrees of experience. Music 7 is designed to meet the needs of those desiring to develop their cultural appreciation of the art, requiring no special musical ability. Music 8 and 9 are designed for the individual wishing to specialize in music and presuppose some general technical knowledge.

The department will welcome suggestions from students for specially desired courses and will strive to present any courses that can be successfully taught by mail.

#### 2. **Methods for the First Eight Grades**—Four hours. Mr. Kendel.

A very practical course covering all the problems of the grade teacher. The course is based on the assumption that the teacher has little or no knowledge of the work at hand, and every effort is made to give the most inexperienced teacher just the knowledge she needs to carry on her work. All problems are discussed and all technical points are explained as they should be explained to children. The emphasis is placed entirely upon making the course practical and helpful. No previous musical knowledge is required.

#### 7. **History of Music**—Three Hours. Mr. Kendel.

The study of the history of music from primitive to modern times. The musical theories and instruments of ancient peoples. The music of the Greeks and Romans. The early Christian era. The evolution of notation. A complete study of the development and growth of music into a great art.

This is a literary course which does not require technical skill. Open to all students who wish to study Music from a cultural standpoint.



**8a. Harmony—Four hours. Mr. Kendel.**

Beginning harmony. The work consists of building scales and chords in all keys and the harmonization of melodies and bases. Emphasis is laid upon original melody writing followed by the harmonization of the original melody. All through the course the harmonization of melodies made predominant rather than of bases. Work completed to the harmonization of dominant discords and their inversions.

**8b. Harmony—Four hours. Mr. Kendel.**

A continuation of 8a. Open to students that have had 8a or its equivalent. The harmonization of the dominant discords, sevenths, ninths, and their inversions. Work done through the diminished seventh chords, up to the second class discords. Emphasis laid upon harmonizing melodies and original melody writing.

**8c. Harmony—Four hours. Mr. Kendel.**

A continuation of 8b. Open to students having taken courses 8a and 8b, or their equivalent. The harmonization of second, third, and fourth class discords and their diversions. Modulation to next related keys, altered and mixed chords, extraneous modulation.

**9a. Harmony—Four hours. Mr. Kendel.**

A continuation of Courses 8a, 8b, 8c. Open to students having taken these courses or their equivalent. Modulation completed, enharmonic exchange, the organ point, suspension, anticipation, the neighboring-note, the passing-note, appoggiatura.

## Practical Arts

SAMUEL MILO HADDEN, A.M., Dean

The Practical Arts Group comprises Woodwork, Metal Work, Bookbinding, Printing, Drafting, Fine Art, Accounting, and Commercial Arts. This group occupies the entire three floors of the Guggenheim building, the first floor of the Training School, the Library basement, and the greater part of the basement floor of the Administration building.

Courses are varied in nature in every special department. These are arranged along both the lines of theory and practice, neither of which is sacrificed for the good of the other. Methods in teaching the subjects in the public schools are emphasized, and when a person has done his major work in his chosen division, he is fitted to do the work, with an added advantage that he is also trained to teach these subjects in the schools.

## Industrial Arts

S. M. HADDEN, A.M.

RALPH T. BISHOP

CHARLES M. FOULK, Pd.M.

OTTO W. SCHAEFER

### COURSES PRIMARILY JUNIOR COLLEGE

**2. Intermediate Woodwork—Four hours. Mr. Foulk.**

This course is designed for those who wish to become proficient in the use of woodworking tools, where the student has at his disposal sufficient tools to carry on the work. The course includes the making of drawings from which cabinet work can be executed. The building of furniture and useful household articles such as tabourettes, library tables, writing desks, piano benches, music cabinets, medicine cabinets, etc. The student must have had sufficient practice with woodworking tools to be able to select and put to use the ordinary tools used in cabinet making.

The student will be allowed to select the projects on which he is to work from a list that will be submitted by the instructor or he may choose some other, but must submit drawings or cut of same for approval. The list of articles that can be submitted by the instructor includes something like one hundred different designs.

No set text is used in this course. The student executes the work as definitely outlined by the instructor. A very thorough bibliography is furnished from which the student can select books that will fit his particular wants.

**5. Methods in Practical Art Subjects—Four hours. Mr. Hadden.**

The work of this course is divided into the following groups. First: Historical development of industrial education and its progress in the public schools of the United States. Second: The influence of scientific development upon industrial conditions; its place in the public schools of the country together with its interpretation and relation to other subjects in the curriculum; the selection of materials fundamental in the organization of industrial courses in public schools and the method of attack and relation of the teacher and student in the class room.

**10. Elementary Mechanical Drawing—Four hours. Mr. Hadden.**

This course is designed to give a knowledge of the use of drawing instruments and the material customarily used in a draftsman's office. The technical phases of the work include lettering, geometrical drawing, orthographic projections, oblique projections, isometric drawings, working drawings, developments and applications.

**12. Elementary Architectural Drawing—Four hours. Mr. Hadden.**

This course includes designs, plans, elevations, and longitudinal sections of framing, doors, windows, sills, rafters, etc., in building construction in its application to work for barns, outbuildings, and residences. It also includes the making of tracings, blueprints, and specifications.

**17. Elementary Machine Design—Four hours. Mr. Hadden.**

Here is treated the development of the helix and its application to V and square threads; conventions of material, screw threads, bolts and nuts, rivets, keys, etc. Sketches, drawings, and tracings are made from simple machine parts, such as collars, face plate, screw center, clamps, brackets, couplings, simple bearings and pulleys. Standardized proportions are used in all drawings.

**COURSES PRIMARILY SENIOR COLLEGE**

**111. Advanced Mechanical Drawing—Four hours. Mr. Hadden.**

This course presupposes some training in drawing and also some fundamental notions in mathematics. The material of the course is as follows: The theory of orthographic projections, or the art of representing a definite body in a space upon two co-ordinate planes at right angles with each other. The work consists of projections of lines, surfaces and solids, also the shadows of lines, surfaces, and solids upon planes of projection, shading and application. Prerequisite: Course 10 or its equivalent.

**113. Advanced Architectural Drawing—Four hours. Mr. Hadden.**

This course is a continuation of Course 12, and deals with the drawing of plans for cement, brick, and stone structures, culminating in a complete set of plans and specifications for a residence or a public building of moderate cost.

**118. Advanced Machine Design—Four hours. Mr. Hadden.**

A study is made of the transmission of motion by belt and pulley, and gears and calms. Such curves as the involute, cycloid, and epicycloid are applied in the designing of gears. Sketches, detail, and assembly drawings are made of intricate pieces of machinery, such as the glove valve, vise, head stock lathe, and such shop machinery as lathes, band saws, motors, and gas and steam engines.

**104. Pre-Vocational Education—Four hours. Mr. Hadden.**

This course is divided into two definite sections. First: Material of pre-vocational education or attempts that have been made to solve the problem in rural schools, city school system, state schools and special government and private schools. Second: The basis for the collection of data fundamental in the selection of material that will give a basis for the interpretation and application of pre-vocational to the needs of the child in the public school.

This course is especially organized so that the work can be done in non-residence.

## Fine and Applied Arts

GRACE M. BAKER  
EDWARD KAMINSKI

### 4. Applied Design—Four hours. Miss Baker.

The construction and decoration of notebook covers, desk pads, and similar articles, theory of design in its relation to useful objects; the application of original designs by block printing on curtains, table runners, or pillow covers.

### 9. History of Painting—Two hours. Miss Baker.

The evolution of painting from the beginning of history; the growth of the great schools and their influences; the study of the important masters, discussing their personalities as related to their painting, and their work as an index to the time in which they lived; illustrated by a large collection of photographs and lantern slides. Lectures with related reading.

## NON-CREDIT COURSES

### 18. Drawing and Applied Art for the First Four Grades—\$4.00. Miss Baker.

Drawing of simple symbols of figure, animals, birds, houses, etc., for use in story illustration and in correlation with other subjects of the curriculum. Paper cutting, lettering, poster. Nature drawing showing the development of design applied to construction problems.

### 19. Drawing and Applied Art for Intermediate and Grammar Grades—\$4.00. Miss Baker.

Object drawing, elements of perspective, development of design from nature and from geometric motifs with application to construction problems. Correlation of drawing with other subjects of the curriculum.

## Home Economics

MARGARET M. ROUDEBUSH, A.B.  
MARIE LUNDBERG, B.S.  
EDITH GALE WIEBKING

## HOUSEHOLD ARTS

### COURSES PRIMARILY JUNIOR COLLEGE

#### 5. Millinery—Four hours. Miss Roudebush.

The purpose of the course is to train the student in discriminating power from the consumer's point of view; to give a working basis of design applied to hats and to the general lines of the figure; to develop technique in handling millinery fabrics. To this end the lessons consist in very simple problems in hat design requiring no ability to sketch, draw, or any previous training in design; book reviews contributing to an intelligent understanding of the problems in hat construction; and directions in shop methods of remodelling and building hats with actual practice in the processes.

### COURSES PRIMARILY SENIOR COLLEGE

#### 6. Textiles—Four hours. Miss Roudebush.

This course deals with the physical, microscopical and chemical analysis of fibers and fabrics. There is laboratory work with hand microscopes, compound microscopes and chemicals.

Supplementary experimental study are papers in review of chapters from textile books and on general topics dealing with the factors related to the textile field. The course cannot be taken unless the student has access to a limited amount of biological and chemical laboratory equipment.

#### 21. Interior Decoration—Four hours. Miss Roudebush.

The work in this course is designed to help the student to a clear appreciation of the fundamental principles underlying designs in their relation and application to the interior of a house. To this end an intelligent and analytical study is made of the factors which make these basic principles. Attention is given to a

washable color theory; to the study of line and form as problems in composition generally; to an analysis of the structural elements comprising the room as a whole—walls, floor, openings; to the materials into which the room is completed in unity with the structural elements—draperies, floor coverings, foreground materials (for example, pictures, brass, furniture, lighting, et cetera). The course will be accomplished by chapter and book reviews, magazine references when the magazines are available—exercises in illustrative material requiring no training in drawing or interior decoration.

## HOUSEHOLD SCIENCE

### COURSES PRIMARILY JUNIOR COLLEGE

#### 5. Housewifery and Sanitation—Four hours. Miss Roudebush.

1. Treats of the site, surroundings and construction of the house; heating, lighting, ventilation, water supply, drainage, and disposal of garbage.

2. Treats of service in all parts of house, the importance of daily routine and systematic housekeeping; of house furnishings and all cleaning processes; of division of income and organization and management of the household.

### COURSES PRIMARILY SENIOR COLLEGE

#### 9. Food Production—Four hours. Miss Roudebush.

A study of food materials, their growth, production and manufacture, conditions of marketing, transportation and storage; adulterations and pure food laws.

## Commercial Arts

AMBROSE OWEN COLVIN, B.C.S.

FLORA E. ELDER, A.B.

It is our aim in the following outline to offer only such courses as seem to be practical by correspondence. We do not encourage the study of shorthand or advanced typewriting by correspondence courses.

We offer Courses 1 and 2 in shorthand, and Courses 11 and 12 in typewriting. We believe that Courses 1 and 2 in shorthand can be successfully taken by mail, but not with the same degree of success that would result from residence courses; therefore, we recommend that students elect other courses from this outline than the ones in shorthand. All of the material necessary for each of these courses is outlined in the first lesson that is sent to the student, and we have omitted further references to the required materials. All of the material and supplies should be bought from the publishers or the local book store of the town.

#### 1. Shorthand—Four hours. Miss Elder.

This course includes ten lessons on the principles of Gregg Shorthand; 1 to 10 inclusive.

#### 2. Shorthand—Four hours. Miss Elder.

Prerequisite: Stenography 1. This course covers ten lessons in Gregg Shorthand; 10 to 20 inclusive.

#### 11. Typewriting—Four hours. Mr. Colvin.

Beginning work in touch typewriting, covering position at the machine, memorizing of keyboard, proper touch, and correct fingering, with instruction in the care of machines.

This course covers the first twenty lessons of the Expert Typewriting Manual by Fritz-Elderidge.

#### 12. Typewriting—Four hours. Mr. Colvin.

Prerequisite: Typewriting 11 or its equivalent. This course covers Lessons 21 to 38 inclusive of the Expert Typewriting Manual by Fritz-Elderidge.

#### 21. Elementary Accounting—Four hours. Mr. Colvin.

Fundamental principles of double entry, the use of the journal and ledger. Making the trial balance and statements. Cash book, purchase book, and sales book introduced.

**22. Intermediate Accounting—Four hours. Mr. Colvin.**

Commercial paper, bill book, invoice book, bills of lading, special column books. A set of books on wholesale accounts. Prerequisite: Course 21.

**23. Advanced Accounting. Corporation Accounting—Four hours. Mr. Colvin.**

This deals with the organization of corporations under the laws of Colorado. Books are kept illustrating the commission business. Prerequisite: Course 21.

**25. Commercial Arithmetic—Four hours. Mr. Colvin.**

This course is intended primarily for commercial students, but as well adapted to those who want a good, stiff arithmetic review. There will be a rapid review of the four fundamental operations and fractions. A thorough treatment of percentage and its applications will be given. Only the most modern methods and short cuts will be used.

**26. Penmanship—Four hours. Mr. Colvin.**

Drills in free-arm movement writing. Mastery of position and movement expected. Study of the forms of the letters and figures.

**26b. Penmanship—Four hours. Mr. Colvin.**

Drill work to develop better form. Much attention is given to the spacing and height of letters.

**24. Bank Accounting—Four hours. Mr. Colvin.**

This includes a study of the state and national banking laws; loans and discounts; commercial paper; methods and principles of banking; savings accounts. A set of books illustrating several days of business will be given. Prerequisite: Course 21.

**32. Cost Accounting—Four hours. Mr. Colvin.**

Importance of cost accounting in a business. Material cost; labor cost; overhead expense; distribution of expense. A set of books will be prepared on manufacturing costs. Prerequisite: Course 21.

**64. Commercial Law—Four hours. Mr. Colvin.**

A treatment of the general principles of common law as applied to business together with the study of the Colorado Statute and decisions bearing on commercial interest.

## Agriculture

W. H. HARGROVE, Pd.B., B.S. in Agr., B.S. in Ag. Ed.

Agriculture in all its phases is a severely practical and scientific subject and cannot be studied successfully except by the laboratory method. Students who have gone far enough in the laboratory study of the problems of agriculture to be able to profit from academic study of any phase of it will be accommodated by this department of the State Teachers College upon application for specific courses that can be successfully given by mail.

Teachers of agriculture in high schools are invited to apply for aid in way of suggestions; and elementary school teachers in town, country, and city are invited to apply to the department for aid in any phase of their work.

## Western Slope

Mr. M. F. BEESON, A.M., District Supt., Grand Junction

The State Teachers College, the State University, and the State Normal School jointly maintain a District Superintendent of Extension Service on the Western Slope—Mr. M. F. Beeson, with headquarters at Grand Junction. This co-operative plan was initiated in 1918 and though greatly hampered by the influenza nevertheless made a very creditable beginning. Representatives of the three schools met last fall in Grand Junction with county and city superintendents of schools and other local leaders of the public schools. A symposium was held upon the needs of the teachers. As a result of the discussion the extension courses were focused upon the two fields of public school work

which the superintendents felt were least satisfactorily taught—namely, the History-Civics group and the Physiology-Hygiene group. In the four most accessible counties twenty groups of teachers were organized, and the District Superintendent prepared courses of instruction, distributed detailed outlines, secured reference material, and so on, and the courses were given.

Students desiring credit for their work pay a fee of five dollars for instruction and designate the school with which they desire to establish standing. Students not desiring credit pay no fee. The co-operation between the public school leaders and teachers and the co-operative higher schools has been highly encouraging and a considerable expansion of the work is expected next year. Students interested in entering this division of the organized opportunities for Extension study should address

M. F. BEESON,  
Grand Junction, Colorado.

### The Grading System

A grade of "B" indicates "average" work and receives full credit. Students who do work of high quality are marked "A," and receive credit for 10 per cent above the number of hours scheduled for the course. Those who do work of unusually high quality are marked "AA," and receive credit for 20 per cent more than the normal hours allowed for the course. Work of only fair quality is marked "C," and 10 per cent is deducted from the normal allowance. Work of poor quality is marked "D," and 20 per cent is deducted from the normal allowance.

- AA indicates 4.8 hours' credit in a 4-hour course.
- A indicates 4.4 hours' credit in a 4-hour course.
- B indicates 4 hours' credit in a 4-hour course.
- C indicates 3.6 hours' credit in a 4-hour course.
- D indicates 3.2 hours' credit in a 4-hour course.

These marks go on the permanent records and stand as an indication of the quality of the work done by the student, and are useful for instructors when they recommend graduates for positions.







Colorado  
State Teachers College  
BULLETIN

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SERIES XX NOVEMBER 1920 NUMBER 8

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ANNOUNCEMENT OF EXTENSION  
COURSES IN DENVER  
1920-21



GREELEY, COLORADO

Published in January  
1921

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## THE SPIRIT OF PROGRESS

Out of the chaotic conditions which followed the exalted patriotism of the Great War the elements of a new idealism are being born. The slump in the higher emotions of men is not a thing that is to endure. The heart of the Nation is sound. Much that is of permanent value has been wrought out in the titanic struggle. The foundations of that more splendid civilization which is to be can be clearly perceived by those who are endowed with vision.

Nowhere is the new order more apparent than in the realm of education. The spirit of progress is abroad and new conceptions of vast importance are written large across the educational horizon.

One-third of our boys were physically unfit. It is certain that our girls in case they had been compelled to face the same tests would not have fared much better. This fact will cause a new significance to attach to the term "physical education" for the next hundred years.

The incomparable superiority of Intelligence Tests over the time honored scholarship examinations as a means of determining mental and social efficiency has been proved beyond the peradventure of a doubt.

Vocational Training is to have a larger place in the new education and it is to be freed from the stigma that have been placed upon it by devotees of the classics.

Our training for citizenship is to have an international orientation whether we will or not. National isolation is no longer tenable. America can not in this age of triumphant democracy be regarded as an oasis in the desert to which those who would seek liberty and justice may come, but must be conceived as an integral member of a world social organism, of which it can be truly said that the well-being of the whole depends upon the health and happiness of each part.

To these greater obligations of tomorrow Teachers College dedicates its highest gifts and asks only that it may serve in so noble a cause.

## COOPERATION THE KEYNOTE

The task of public education in the troubled times of reconstruction is too vast and too significant for any man or group of men to attack single handed. There is urgent need of all the strength of all of those who share the responsibility. This is only possible as a result of the deep-seated and intimate cooperation of such factors as the grade teachers who are nearest the child, the administrators whose primary function is to coordinate all the educational forces and to point out the better way, and the centers of higher learning whose basic obligation is that of research and dissemination. The colleges have

the time and the talent to weigh and to determine with some measure of assurance true educational values.

In harmony with this ideal, Teachers College desires to do its full share of the work. Its faculty, through the instrumentality of the Extension Department, has prepared in the form of a bulletin, obtainable upon request, a series of courses which are in accord, we believe, with the best thought and most pressing needs of educators everywhere.

Two methods of study are provided.

One is the individual method, available to all teachers without regard to their location. The instructor who is so far removed from her professional colleagues that she can not study with them is able to choose a subject in her own particular field and be guided by the suggestions of an expert in this special line.

The other is the group plan which adapts itself to the needs of groups of individuals who are so situated that they can organize a class and gain the advantages of an interchange of ideas.

When the group is near enough to the College, so that the expense is not prohibitive, members of the faculty offer courses which are similar to the resident courses at the college. If a given group is too far away to make the sending out of faculty members feasible, educators who would be qualified to act as instructors in the College are selected in the local community if such are available.

A number of superintendents are acting in this capacity. This is in many respects an ideal arrangement. The superintendent knows the strength and weakness of his teaching corps, he is as a rule widely read, is in touch with the more recent movements in education and can use his class as a means of securing educational progress directed toward a particular kind of efficiency.

## INTERCHANGEABLE CREDIT

In all group or individual study the interests of the teacher are paramount. The teacher ought to get the kind of work she wants and to be able to matriculate with the institution she desires. To this end Teachers College has established all of its group courses on the interchangeable credit basis. There is not the slightest desire to force any teacher to enroll with us who prefers another school.

The following conditions for granting credit have been agreed upon by the University of Colorado and the State Teachers College:

“1. **Standards.** The standard of the work done shall be of such a type as to be acceptable for regular undergraduate credit at either institution.

2. **Instructors.** No work shall be accepted for credit except that given by instructors duly approved by the institution in which credit is desired.

3. **Class period.** The period of each class shall be ninety (90) minutes, requiring seventeen (17) sessions for three (3) quarter hours' credit. The minimum time requirement for a whole course shall be 1500 minutes spent in class recitation.

4. **Fees.** The fee shall be \$5.00 per student per class yielding 3 quarter hours credit.”

## NECESSITY OF HIGH STANDARDS

Occasionally a teacher expresses the sentiment that efforts at standardization are harsh and unsympathetic, and indicate a lack of interest in the teacher's welfare and an unwillingness to render service to worthy members of the teaching profession; but this feeling is not a correct interpretation of the essential facts in the case.

If any given school lowers its standards to aid a teacher in distress, the great law of compensation would inexorably hold and the diploma once it was obtained would be weakened in dignity, significance, and universal acceptability, just in proportion as it was made easy to acquire.

The State Teachers College of Colorado will, therefore, do all it can to assist teachers in realizing their aspirations, but its action must be consistent with an earnest and persistent effort to attain superiority in quality which must ever be the goal of all its true friends.

## EVALUATING CREDIT

Numerous requests for the evaluation of credit come to the Extension Department of Teachers College. This is a function of the Advanced Standing Committee at the head of which is the Dean of the College. The Extension Department is glad, however, to cooperate in this important matter and to render such assistance as is within its power.

Courses given at different times and in widely separated parts of the state can not be judged quickly. In the very nature of the case their universal acceptability, the intrinsic value of the given course, and the qualifications of the instructor, are the determining factors. These, however, are aspects, as thoughtful persons will readily see, that can not be ascertained in haste or determined without due deliberation.

If you feel assured that your case has merit, do not be discouraged, keep the facts before the attention of the Advanced Standing Committee and in the end the College will earnestly attempt to do full justice.

# Special Courses Offered

IN

Winter and Spring Quarters

1920-21

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## EDUCATION I

### REQUIRED COURSE

#### Principles of Teaching—Required of All Junior College Students—Three Hours Credit

This course deals with the various types of classroom procedure; deductive and inductive lessons; object, drill, and assignment lessons; socialized recitation and exercises; development of appreciation; the project method and problems; the development and use of lesson plans; standards for judging both the curriculum and class-room instruction. The ideas of enrichment, development and control of experiences, and the methods appropriate to the realization of these ideas in the various grades of the elementary school.

3 hours. Professor Armentrout.

Date—Saturday, February 5th, 9:00 a. m.

Room 210, East Denver High School.

## EDUCATION 246

### EDUCATION PROBLEMS

Open to Teachers, Principals, Superintendents.

This course will deal with the various problems of educational administration and supervision. An endeavor will be made to discover principles underlying the supervision of instruction, to determine what the supervisor should look for in the inspections which he makes and what he should do in later conferences with the teacher; to find out what the functions of a real supervisor are. All this would involve considerable discussion of methods and underlying principles controlling the activities of the teacher.

Various other problems will be studied and discussed. Each member of the class will be expected to choose an educational problem in which he is interested and give the most or all of his time in this course to its solution.

3 hours. Dr. McCracken.

Date—Saturday, February 5th, 10:35 a. m.

Room—210, East Denver High School.

## EDUCATIONAL PSYCHOLOGY 107

### INTELLIGENCE TESTS

It is now quite generally recognized by leading students of human behavior that the first essential to progress in learning is the adaptation of the task to the capacity of the learner. Without such adaptation there is bound to be much waste, failure and dis-

couragement. One of the important means for determining whether school work is well adapted to the capacity of the child is the intelligence test. It is the purpose of this course to make the class familiar with the various kinds of these tests and with the light which their results throw upon some of the most perplexing problems of the schoolroom.

Briefly the following topics will be treated: types of mental tests; historical sketch of the development of intelligence tests; preparation required for their successful use in the schoolroom; their value to the teacher, supervisor and principal; their reliability and limitations; the principles of mental testing; changes in the nature of tests, methods of expressing results and scoring.

One of the chief features of the course is to train the members of the class in giving the tests and in making legitimate use of the results obtained.

3 hours. Dr. Heilman.

Date—Friday, February 4th, 4:15 P. M.

Room 210, East Denver High School.

## HYGIENE AND PHYSICAL EDUCATION 4 PLAY IN PHYSICAL EDUCATION

This course will deal with the theories and applications of play in modern physical education; causes underlying the rise of the physical education and recreation movement; play as physical education and its place in the daily school program; play and athletic games as training for citizenship; practical conduct of play, and the educational values of play.

3 hours. Mr. Long.

Date—Thursday, February 3rd, 7:30 P. M.

Place—Aaron Gove School.

## JUNIOR HIGH SCHOOL PROBLEMS

Miss Jessie Hamilton, Principal of the Aaron Gove Junior High School, will continue her course during the winter and spring quarters under the auspices of State Teachers College. Miss Hamilton has made a conspicuous success in this particular field and her course will prove helpful to those who expect to prepare for positions in the Junior High Schools of the state.

3 hours. Miss Hamilton.

Date—Tuesday, February 1st, 4:15 P. M.

Place—East Denver High School.

## INSTRUCTIONS

All secretaries of group classes are earnestly requested to make out the class roll in duplicate, sending one copy together with the fees to the Extension Department of the College at the beginning of the course and keeping a careful record of attendance upon the other which is sent at the conclusion of the course to the Extension Department of the College.

Signed:

JOHN R. BELL

Director of Extension Service

# Colorado State Teachers College BULLETIN

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SERIES XX

DECEMBER, 1920

NUMBER 9

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## Sections Three, Four, and Five of the Educational Survey of Colorado State Teachers College

- III. ENTRANCE AND GRADUATION REQUIREMENTS
- IV. TEACHERS QUALIFICATIONS, SALARIES,  
AND TOTAL LOAD  
STUDENT LOAD
- V. ACCOUNTING AND COSTS



THE  
STATE TEACHERS  
COLLEGE OF COLORADO  
Greeley, Colo.

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GREELEY, COLORADO

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# Foreword

Herewith is presented to the faculty and the circle of those others who are genuinely interested in the improvement of the professional preparation of teachers the second installment of the work of the Survey Committee of the College. It will be noted that this section of the report comes out of the order planned by the chairman of the committee, and in explanation it may be stated that the variation is made in order to avoid further delay in the publication of results, more time being needed by those who are working on the report on the **Curricula and Courses of Study**.

It would seem that no one who reads this report attentively could fail to be impressed with the great practical advantages a school derives from a careful and impartial stock-taking such as was undertaken by the College through the Survey Committee. The modern business man would not embark upon a program of improvement and expansion without first finding out just where his business stood. A school has precisely the same need of intimate knowledge of its various activities and of how they mutually affect each other in the common purpose which they are expected to serve.

The general problems of organization received a qualitative treatment by the chairman of the committee in the report already published. In the report here presented a quantitative treatment is given to such problems as admit of it, and valuable guiding insights into complicated problems of organization and administration are offered in passing. The author's modest deprecation of the value of the report may be regarded as his tribute to scientific pragmatism. It seems clear enough, however, that the analysis of the distribution of training and experience over the faculty; of the relation existing between salary and training and experience; of the "turnover or tenure" of "inbreeding" (as the custom of electing to its staff its own graduates is called); of teaching load and extra-curricular activities; of student load; and of the traditional gap between preparation and pay of teachers in training schools and those in other departments—that all these have in spite of the defects of the data a very pertinent significance.

The value of the study would of course be greater if data from similar studies of similar schools were more abundant. But in the meantime, the study is clearly in line with the most promising educational investigations of the time, and the College may properly congratulate itself upon assisting to perform the useful service of stimulating frank inquiry; for the reports here brought together direct attention penetratingly to factors that seem nowhere else to have received much attention before Bulletin Number Fourteen of the Carnegie Foundation (on The Professional Preparation of Teachers) appeared. It is gratifying that the work of this committee should have been so early in the field of qualitative studies of teacher-preparation.

Necessarily a report that impersonally analyses actual conditions will deal with such inadequacies as it finds. It will hardly be necessary to defend this feature of the report to those who will read the study. The essential condition of such a report is simply that it deals with conditions truthfully and without bias or prejudice. No discriminating reader of this report will need to have the marks of its veracity pointed out to him. In this connection, however, it is appropriate to remind the reader, as was done in the preceding study, that there is no doubt at all that a similarly searching and impersonal examination of similar schools would reveal similar inadequacies. It may also not be unfitting to remind the reader again that the school has been

steadily at work since the survey began at the task of profiting from its findings. Inspection of the successive Year Books affords easy access to the record of this sort of activity.

Attention is called to the fact that the data of the report are for the year 1917. Since that time the salary schedule has been materially raised; it is still lower than is to be desired but until additional funds are available it could only be increased by reducing teaching staff and reducing departmental and teaching budgets.

It is to be regretted that no comparisons were made in the report on accounting and costs, but real difficulties were in the way of pertinent comparisons.

As for the specific inadequacies disclosed by this report, there can be but one useful attitude—that of desiring to correct them as speedily as the faculty can be brought to bear upon them. The work of shaping an educational program is no one person's but a co-operative undertaking of all who share the daily work of the school. The complexity of the problem, as well as consideration of the most effective means of proceeding, requires this. The most complex problem of a professional school for teachers is that of co-ordinating all its activities upon its central purpose. How to succeed in organizing the preparation of teachers around the work of student teaching is the most complex part of this task. The specific findings of this report direct attention from an unusual angle to certain traditional inequalities of preparation, experience, and pay which parallel the traditional failure of schools for teachers to make the practice function central in the organization of the curriculum. The failure in the past has been due in large measure to the lack of a unifying theory of the professional preparation of teachers. But even with so complete a statement of theory as that provided by Bulletin Number Fourteen of the Carnegie Foundation, such facts as are set forth by this report make it clear that the organizing of curricula about the work of student teaching can not be successfully accomplished immediately after the desirability of such an organization is recognized. There is a preliminary work of equalization of preparation to be achieved. To this end administrative provisions for further study are apparently the first step. A system of leaves of absences, though very inconvenient to the College and attended with a certain inevitable cost to effective operation, seems nevertheless to be the most feasible procedure. Such provision has been in effect for four years with good results.

In conclusion attention may be called to the sections of the Survey Report that are yet to appear. They are:

Section VI—The Courses of Study.

Section VII—The Training Schools.

J. G. CRABBE,  
President.



SECTION THREE  
of the  
EDUCATIONAL SURVEY  
OF COLORADO STATE TEACHERS COLLEGE

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ENTRANCE AND  
GRADUATION REQUIREMENTS

E. A. CROSS  
*Dean of the College*



## REQUIREMENTS FOR ENTRANCE AND GRADUATION, 1917-1918

I. The requirements for admission to the College in the year 1917-18 (Year Book p. 15) were as follows:

"Admission to the College is granted to those who present a certificate of graduation showing the completion of fifteen units in an acceptable high school. This certificate must be presented at the time of matriculation in the College.

"Mature students, not high school graduates, may be assigned to the Ungraded School for Adults. As soon as they have completed the equivalent of fifteen units, or shown the learning power which such completion usually gives, they may be granted a certificate of high school graduation and admitted to the College.

"Experienced teachers who have obtained marked success in their profession may be admitted as Special Students upon the recommendation of the Committee on Entrance. Special Students will be admitted regularly to the College only after having met all the requirements set by the committee. Special Students who fail to meet the college requirements and to do work of college grade will be assigned to the Ungraded School for Adults."

### Observations Upon the Requirements

1. It will be observed that the College was not a member of the North Central Association at that time, and that it did not require graduation from an Association high school to gain admission, nor did the College recognize the accredited list of the State University. In fact there was no accredited list. Each case was judged upon the credentials submitted. The College did not prescribe the nature of the units. Any fifteen units which an approved high school would accept for graduation were accepted for admission to the College. Thus students might come with no mathematics, or any number of units for hand-work if his own high school had graduated him upon these terms. This was not the result of indifference or carelessness on the part of the College authorities. It was their deliberate conclusion that the College would best serve the state by disregarding the conventional entrance requirements. For example, they believed that a good primary teacher could be made of a girl who had failed to pass in algebra.

2. In practice, students who had neglected to bring their high school transcripts were allowed to enroll temporarily upon their own statement that they were graduates and their promise to produce the transcript. The College did not record the transcripts upon the students' permanent record, nor did it issue a letter of admission. The only note on the permanent record was like the following:

"School graduated: Victor, Colorado H. S. 4 yr. Course." A student having once made this statement and having got it on the records could with comparative safety neglect to produce the evidence of graduation. As a matter of fact the degree of honesty of the students was remarkable. From a careful inquiry into the matter not more than one, two, or possibly three students per year took advantage of the laxity of the College in this matter.

3. The School for Adults was a school doing high school work. Its students were grouped with high school students and not with the College. The certificate of graduation given to these students was different from the certificate given to regular high school graduates. It did not certify fifteen units, but stated that the student had had the equivalent of fifteen units.

4. The provision for special students is somewhat loose. After a special student had once been admitted to the College, there was very little effective machinery to prevent his unquestioned continuation in the College and

finally his graduation. The Survey Committee is not aware of a single case of such a student being reassigned to the Adult School. Perhaps none deserved to be.

II. The requirements for graduation from the College for the year 1917-1918 were as follows:

1. At least three terms of residence work. A term is twelve weeks, but at that time the summer term of six weeks was accepted as satisfying the residence requirement.

2. Every student entering the College and beginning a two-year course must select one of the group-courses in which to do his work. These are explained in the section dealing with **Course of Study**.

3. In that year the number of hours required for graduation was reduced from 120 to 96, and the normal number per quarter from 20 to 16.

4. The group courses were outlined for only two years.

5. A student who expected to complete the four-year course was required after completing his two-year group-course to select a major subject for the third and fourth year. This major subject might be a continuation of the main line of work the student might choose. Forty-eight hours was the minimum number of hours required in the major subject and sixty hours the maximum allowed in the four-year course. At least 48 hours of the work in the major subject was required to be done in the third and fourth year.

6. A total of 192 hours was required for graduation from the four-year course.

7. No degree was granted for the completion of the two-year course, but a Life Certificate to teach in any public school of any kind in Colorado was granted. In fact, the law makes the certificate of graduation itself a life certificate.

8. The degree of Bachelor of Arts in Education was granted upon the completion of the requirements of the four-year course.

9. A graduate school was maintained with the following requirements for the degree of Master of Arts in Education. (In the statement of conditions prevailing in 1917-1918 which follows as stated in the year book the tenses of the verbs in the original statements have been kept.)

**Residence**—Three quarters of work are required in residence at the College in advance of the requirements for the A. B. degree. This is three quarters of work beyond a four-year college course.

**Units of Work**—A year's work shall be interpreted as forty-eight term-hours. Forty hours' credit will be given for graduate courses pursued and eight hours for the Master's thesis which is required. Sixteen hours' credit a term during the regular school year is the maximum, inclusive of the research involved in the thesis requirement.

#### **The Nature of Graduate Work—**

1. It shall be in professional lines of work. In keeping with the function of a teachers college, graduate work shall be confined to professional lines of work.

2. It shall represent specialization and intensive work. As soon after enrollment as possible, the graduate student shall focus attention upon some specific problem which shall serve as the center for the organization of his year's work, including courses to be taken and special investigations to be conducted. No graduate credit will be given for scattered and unrelated courses.

3. **Thesis.** Research work culminating in the writing of a thesis upon some vital problem of education shall be an integral part of the work for the Master's degree.

4. **Breadth and Range of Professional Outlook.** In addition to the intensive and specialized work which is required of candidates for the Master's degree, they are expected to know the fundamentals of professional education.

5. **Final Examination Upon the Whole Course.** There will be a final

examination, oral or written, upon the whole course. An oral examination of two hours' duration is customary. This examination will cover the following ground: (a) The field of the thesis and special research, including topics closely related thereto; (b) The field covered by the special courses taken by the candidate; (c) The general fields of Psychology, Sociology, Biology and Education.

### Supplementary Data Affecting Graduation

#### 1. Advanced Standing.

Credits for advanced standing are granted only for actual work done in normal schools, colleges, and universities which maintain standards on a level with our own except in such cases as are noted below.

Students who receive advanced standing are held for all required subjects (Junior or Senior College) which have not already been passed. They must also satisfy the requirements set by the head of the department in which they are majoring.

Credit may be granted for private lessons in music, art, language, business courses, penmanship, etc., etc., or for courses in such subjects in private or special schools not of collegiate rank only upon a recommendation, after careful examination, by the heads of the departments giving such work in the college. Whenever thus recommended the work must be certified as similar to, and as a substitute for, certain specified courses which such departments offer or recognize as a part of the training of a teacher in that particular field.

Recognition of what is usually termed "life experience," such as travel, housekeeping, experience in a profession or trade, private reading, club work, etc., etc., is given only in connection with the usual credit granted for teaching.

The total amount of credit granted for teaching experience shall never exceed twelve hours. But additional credit for extended and successful supervision of teaching up to a maximum of eight hours may be granted.

#### 2. The Grading System.

A student who takes a four-hour course may earn a little more than four hours of credit by doing unusually good work. On the other hand, less than four hours will be granted for work of poorer quality than a reasonable expectation would demand. The system is as follows:

A mark of AA for a course gives 20 per cent above the number of hours indicated as normal for the course.

A gives 10 per cent above normal.

B gives the normal credit.

C gives 10 per cent below normal.

D gives 20 per cent below normal.

F indicates failure.

For example:

4B on a student's permanent record means that a student has taken a four-hour course and made the normal credit in it.

4AA would indicate most excellent work in a four-hour course and would carry 4.8 hours credit.

4AA gives 4.8 hours credit on a four-hour course.

4A gives 4.4 hours credit on a four-hour course.

4B gives 4 hours credit on a four-hour course.

4C gives 3.6 hours credit on a four-hour course.

4C gives 3.2 hours credit on a four-hour course.

These marks, both the figure and letter, go on the student's permanent record for later reference to indicate the quality of the work done.

A student who enters school late in the quarter or is compelled to leave early may receive partial credit for the course in such a way as to indicate both the quality and the amount of credit. For example: A student may

complete with exceptional distinction but two-thirds of a three-hour course. The mark should be 2AA, and not 3C. Each mark would give 2.4 hours, but the first mark would indicate the quality of the work as well as the amount of credit.

### 3. Maximum Hours of Work Per Quarter.

A student registers for from twelve to sixteen hours a quarter. If the work is to count as resident work, the student must carry at least twelve hours. In addition to the regular program a student may register for Bible Study or Community Co-operation without special permission. But a student who wishes a larger program than sixteen hours made up of courses within the College walls must set forth the reasons in writing and apply to the Committee on Student Programs. Even then no program is to extend beyond eighteen hours.

No credit is given, either directly or indirectly, for work done in College Clubs.

In case a student makes one D or two C's during a given quarter, he will be limited to fifteen hours the following quarter.

It shall be a part of the duties of the Committee on Student Programs to learn at the close of the first half of each college quarter the quality of the work of each student carrying more than sixteen hours, and to reduce the number of hours in each and every one regarding which any instructor reports the student's work as either weak or unsatisfactory.

#### Comment:

Modifications in the requirements for entrance and graduation and in the regulations concerning credits and grades have been made since these observations were made. In the main the regulations still prevail. Only such changes have been made as were needed to correct the defects discovered as the regulations were applied.

SECTION FOUR  
of the  
EDUCATIONAL SURVEY  
OF COLORADO STATE TEACHERS COLLEGE

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*PART I*  
TEACHERS' QUALIFICATIONS, SALARIES,  
AND TOTAL LOAD

*PART II*  
STUDENT LOAD

J. D. HEILMAN  
*Professor of Educational Psychology*





## PRELIMINARY STATEMENT

There are a few forward-facing college presidents who are beginning to realize that, unaided by numerous agencies, the college president is unable to administer the duties of his office efficiently and justly. Therefore, they are fostering in their schools the development of a more elaborate and adequate administrative organization. Deans, directors, principals, heads of the departments, and committees are still a part of the organization; but their functions and modes of operation are in the process of mutation. They are playing a more dominant role. Committee work is gradually ceasing to be a pleasant social hour, and the personnel of the committee is selected more for its special fitness than for the qualities of sociability and administrative trickery. The number of committees has increased; they are more permanent in character; their functions are more highly specialized, and the boundaries of their work are more clearly delineated.

Recently a new committee with a relatively new and most important function appeared. This is the Survey Committee. Its permanence has not yet been assured, but we are confident that it has come to stay because it meets irresistible demands. The longer this committee operates the more acutely will its importance be felt. It has not yet learned to perform its new task well, but it will improve with practice. What appears on the following pages is only the result of two feeble spasms on the part of a very small section of the Survey Committee of our College. The whole report is full of *lacunae* which need to be filled in. No attempt has been made to do this because we are convinced that the general and spasmodic survey should yield its place to the survey which attacks more specific problems and operates unremittingly. Instead of collecting materials for a survey in 1917-18 and compiling the data during the holiday season of 1920-21 as was done in this case, the results should be ready for presentation directly after the collection of the materials. Unless surveys can be made in this manner, the findings will be obsolete before they are made known. No one can confidently affirm that many of the conditions described in this section of the survey do or do not prevail at the present time in our institution.

A general survey is to be condemned because, before it is possible to put all of its recommendations into effect, most of them have become ancient history and should be replaced by something more modern. There is also the danger that recommendations grow stale with age and so lose what dynamic power they may have had. We are of the conviction that every educational institution in the land is in dire need of a permanent survey committee, operating continuously and composed of the flower of the faculty. Good luck to such committees for the welfare of our educational institutions and the cause of education in general.

I am indebted to Mr. A. F. Carter for much assistance in compiling the data involved in this report; also to Mr. E. D. Randolph for helpful suggestions in modifying the questionnaires.

Greeley, Colorado, January, 1921.

J. D. H.



## PART I

### TEACHERS' QUALIFICATIONS

Two methods may be used to determine the probable efficiency of a college faculty. The one is direct and the other indirect. The direct method consists of an attempt to evaluate the direct results of the faculty's efforts. This may be done by collecting and evaluating samples of the teacher's classroom instruction and of his contributions to the literature of his special field and related fields. Our committee considered the use of the method of collecting samples of classroom work, but finally abandoned the idea on account of the amount of labor and time involved. This method would doubtless be the best if sufficient samples were collected and if enough men capable of rating the samples were at hand.

The indirect method makes use of the teacher's so-called qualifications, factors which tend to vary concomitantly with excellence in teaching ability. This is the method which has been used in this section of the survey. The factors which we attempted to collect may be divided into two groups, the native and the experiential. An attempt was made to obtain information on native qualities by the use of intelligence tests, but the attempt was not very successful. When the Army Alpha tests were given to the students of the school, the members of the faculty were invited to take the tests in a separate group, but only nine of the members appeared. In spite of this small number and the fact that little is known of the correlation of the results of intelligence tests in their present form with teaching ability, I am giving the results of the tests in the following table:

TABLE I  
Results of the Army Alpha Examination

Groups	Number	Median	Mean	Extreme Range
Men .....	6	148	149	134-161
Women .....	3	127	127	96-157
Both .....	9	144	141	96-161
Heads of Departments.....	5	157	154	144-161
Assistants .....	4	131	125	96-134

All but three of the teachers received grade A. Of these three, two made grade B and one C plus. As heads of departments made a median score of 157, it appears that there is excellent talent in this group. The median for heads of departments is 7 points higher than the median for the male students of the college which ranked highest among a group of twenty colleges and universities; it also lacks only 7 points of being equal to the upper quartile of the students of this college of high rank. But as the members of our faculty were a volunteer group, it might be argued that the high rating was due to the element of selection. If this was the case, then the writer and other members of our faculty know absolutely nothing about the relative mental capacities of the teachers of our school. It would be interesting to point out to which departments of our school the teachers who made the lowest scores belong, but this would lead to identification.

The heads of departments surpassed the assistants by a score of 26. If it be permitted to make generalizations on the basis of the results of so small a group, it may be said that, from the standpoint of native ability, heads of departments in relation to the assistants are well chosen. The median score of the men is 21 points higher than that of the women.

The experiential factor consists in the main of the items of scholastic preparation, teaching and administrative experience, the number of publications, public addresses, and the amount of assistance rendered during a limited period to superintendents in making courses of study. In collecting the

data on experience, the instructions of the Committee on Normal School Standards and Surveys have substantially been followed. The following form was used to collect data on scholastic preparation.

### Questionnaire on Scholastic Preparation

1. Specify below with a check mark the amount of training you have had:

	Check
High school graduation or equivalent only.....	1
Number of years beyond the high school.....	2
	3
	4
	5
	6
	7 or more

2. Fill in the following forms:

Names of degrees	Institutions which conferred them	Year received
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Names of fellowships and scholarships	Institutions in which they were held.	Year received
---------------------------------------	---------------------------------------	---------------

*Names of courses which belong to the departments in which you teach and for which you received credit as a student.	Institutions from which credits were received.	Year received
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\*Those who have doctor's degree need specify only major and minor subjects. Star graduate courses.

### Results on Scholastic Preparation

The number of teachers replying to this questionnaire and to all other questionnaires employed in this section of the survey was 56—27 men and 29 women. With one exception, apart from those who were absent on leave, this included the entire faculty, deans, directors, principals of the training school and the high school, and the librarian; also the two assistant librarians, who do not do any teaching. The number of men would have been larger if the positions of those who were granted leave for war work had been filled at this time.

The first tabulation of results is on the amount of training beyond the high school and is set forth in Table II. In this table the teachers are distributed both according to the number of years of training and the type of work in which they are engaged. In classifying the type of work, I have followed the survey made by the Iowa State Teachers College at Cedar Falls. The classes are collegiate, including those teachers who teach only in the college (the librarian and the principals of the high school and training school are also included in this group); collegiate and sub-collegiate, including those who teach in both the high school and the college; sub-collegiate and non-collegiate, including those who teach in the high school, and the assistant librarians; training school, including the regular teachers of the training school.

The classes are sub-divided into two groups, the one composed of men and the other of women. For the two last classes there are no men. In this we have not followed the survey of the Iowa State Teachers College, in which the sub-divisions are made on the basis of the kind of preparation, those whose preparation was chiefly along academic lines forming one group and

those whose preparation was chiefly along special art lines the other. On account of the small numbers in the latter group in our school, this plan of sub-grouping could not be followed.

TABLE II

Distribution of Teachers According to Amount of Training and Type of Work

High School Graduation or :	Collegiate		*Collegiate & Sub-Col.		Sub-Col. & Non-Col.		Training School		Totals			Percents		
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	Both	Men	Women	Both
Equivalent only	..	..	..	1c	..	..	..	..	1	1	....	3.4	1.8	
1 year beyond	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 years beyond	..	..	1	..	..	..	..	..	1	1	3.7	1.8		
3 years beyond	..	1	..	..	2	..	1	..	4	4	....	13.8	7.1	
4 years beyond	3	2	..	2ch	7	..	6	3	17	20	11.1	58.6	35.7	
5 years beyond	5	1	2	1h	1	..	7	3	10	25.9	10.3	17.9		
6 years beyond	7	2	1	..	..	..	1	8	3	11	29.6	10.3	19.6	
7 years beyond	6	1	2	..	..	..	..	8	1	9	29.6	3.5	16.1	
Totals.....	21	7	6	4	0	10	0	8	27	29	56	99.9	99.9	100

\*All of the men in this class teach primarily in the College. The small letters c and h in the column for the women indicate whether they teach primarily in the college or in the high school.

Several noteworthy facts may be gathered from Table II. First, there are no men in the last two classes and only 6 or 22 per cent in the second class. As these men really belong to the college faculty and do most of their teaching in the college, it follows that the high school is practically without men teachers. This condition has often been deplored, but it is quite prevalent in most American high schools.

Second, the frequencies in the table slope from the lower left hand side diagonally upward toward the right. This means that the training of the teachers in the college surpasses that of the teachers who work in the high school and the training school. The tendency with which the amount of training falls from the collegiate to the training school type of work may be expressed by a coefficient of correlation. The coefficient as determined by Yule's expression of Pearson's method of mean-square-contingency is .62, which is fairly high. This condition may be expressed more simply by giving the average amount of training for each class of work. Following the classes from left to right in the table, the averages are 5.57, 4.50, 3.90, and 4.13 years respectively. The corresponding figures for the Iowa school are 5.06, 4.50, 3.93 and 4.25. This tendency in the latter school to have teachers with more nearly equal training in all classes of work is very desirable. The work in our training school and high school is very different from the work in the elementary grades and the ordinary high school, because it consists not only of teaching children but also of supervising the formation of correct teaching habits and aiding in the acquisition of modern educational ideas in prospective teachers. Well established and practical psychological principles are often violated by inefficient training school teachers to the disadvantage of the student.

Third, out of 27 men 21 are doing wholly collegiate work and the remaining 6 chiefly collegiate with some sub-collegiate work, while out of a total of 29 women only 7 are doing wholly collegiate work, 2 collegiate with some sub-collegiate, and 2 more sub-collegiate with some collegiate work. The remaining 18 women teach in the high school and in the training school. The women have much less scholastic preparation than the men. Only 24 per cent of the women have more than four years training beyond the high school, while 85 per cent of the men exceed the four year limit.

I have also computed medians, quartiles, and coefficients of variation for

training. They are given in the following tabulation together with the means:

	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation
Men .....	5.78	6.31	5.39	7.25	.93	.147
Women .....	4.14	4.50	4.11	4.89	.39	.087
Both .....	4.93	5.20	4.40	6.55	1.07	.191

The median training of the men is 6.31 years; of the women 4.50 years. The men therefore average almost two years more than the women. As is shown by the coefficient of variation, the women vary much less in the amount of their training than the men. Out of 29 women 17 have taken just four years beyond the high school. There is no such bunching of the men for any given amount of training. Perhaps uniformity in the amount of training may be regarded as desirable if there has been enough of it.

The average amount of training for both sexes is 4.93 years. For the Teachers College at Cedar Falls, the average amount of training for both sexes is 4.48 years or .45 years less than in our school. The difference in the amount of preparation between our faculty and that of Iowa Teachers College may be expressed in different form as follows:

	High School Graduation		Years Beyond High School					
	Only	1	2	3	4	5	6 or more	7
Per Cent of C. T. C. Faculty.....	2	..	2	7	36	18	19	16
Per Cent of I. T. C. Faculty.....	2	..	10	4	33	33	9	9

Only 11 per cent of the C. T. C. teachers have less than four years preparation beyond the high school, while 16 per cent of the I. T. C. teachers fall below the four-year mark. Moreover, in our school 53 per cent have more than four years preparation and 37 per cent more than five years. The corresponding figures for Iowa are 51 and 18, respectively.

In the number of teachers holding degrees our faculty also surpasses somewhat the faculty at Cedar Falls. The following figures express the comparison:

	Per Cent of Whole Number of Teachers	
	C. T. C.	I. T. C.
Number with Bachelor's degree only.....	48.21	34.14
Number with Master's degree.....	32.14	34.14
Doctor's degree .....	12.50	8.94

In the Missouri Normal Schools, according to the survey of these schools made by the Carnegie Foundation for the Advancement of Teaching, 29 per cent of the teachers do not have four year degrees, while in our school only 12 per cent are without a four year degree. One of those belonging to this 12 per cent has only the equivalent of a high school education, one has two years beyond the high school, four have three years beyond, and one has four years beyond the high school. In connection with the subject of degrees, I wish to point out that three of our teachers who hold the Ph.D. do not also have the A. M. degree.

The following table gives a comparison of the percentage of our teachers who hold degrees with the percentage of those who hold degrees in the Missouri Normal Schools and in the University of Missouri.

TABLE III

Percentage of Teachers Holding Degrees in Colorado State Teachers College, the Missouri Normal Schools, and the University of Missouri.

Schools	Whole Number of Teachers	Percentage of Teachers With			
		A. B.	A. M.	Ph. D.	
Men {	Colo. Teachers College.....	27	96	63	22
	Missouri Normal Schools.....	106	78	37	6
Women {	Colo. Teachers College.....	29	79	3	3
	Missouri Normal Schools.....	93	62	14	1
Men and Women {	Colo. Teachers College.....	56	88	32	13
	Missouri Normal Schools.....	199	71	26	4
	University of Missouri.....	151	92	57	48

The training of the men in our school is distinctly superior to that of the men in the Missouri Normal Schools. Each degree is held by approximately 20 per cent more men in our school than in the Missouri schools. The training of the women is doubtfully, if at all, superior. In the percentage of men holding the A. B. and the A. M. degrees our school slightly surpasses the University of Missouri, but in the percentage holding the Ph. D. degree our school is surpassed by the University by 26. For men and women combined our teachers do not compare as favorably with the University. Our school has 4 per cent less with the A. B., 25 per cent less with the A. M., and 35 per cent less with the Ph. D. degree. However, it must be recognized that there are more women in our school than men and that this is not true of the university. Just what percentage of the teachers of the university are men I am unable to say, as the Carnegie report does not give the figures for the sexes separately. Of course, the women who are employed by the university may have as much advanced training as the men.

In spite of the fact that the Missouri Normal Schools employ more men than women, the percentage of teachers with the A. B. degree is 17 lower than ours; it is also 6 per cent lower for the A. M. degree and 9 per cent lower for the Ph. D. degree.

The excellence of a faculty, however, is indicated not only by the number of degrees held by its members but also by the standing of the institutions which conferred the degrees. A list of the institutions from which the degrees were received is therefore set forth in Table IV. Only six of these

TABLE IV  
Sources of Degrees

Name of Institution	No. of Men Holding			No. of Women Holding			Totals
	A.B.	A.M.	Ph.D.	A.B.	A.M.	Ph.D.	
California University	1	..	..	..	..	..	1
Chicago University	1	3	..	1	..	..	5
Clark University	..	1	..	..	..	..	1
Colorado College	..	..	..	1	..	..	1
Colorado State Teachers College	5	1	..	13	..	..	19
Colorado University	1	1	..	1	..	..	3
Columbia University	1	2	1	1	..	..	5
Denver University	2	3	2	..	1	..	8
DePauw University	1	1	..	..	..	..	2
George Peabody College	..	..	..	1	..	..	1
Grenoble University	..	1	..	..	..	..	1
Illinois State Normal	..	..	..	1	..	..	1
Illinois University	1	..	..	..	..	..	1
Indiana State Normal School	1	1	..	..	..	..	2
Indiana State Normal College	..	..	..	1	..	..	1
James Milliken University	1	..	..	..	..	..	1
Kansas State Agricultural College	1	..	..	1	..	..	2
Kansas State Normal School	1	..	..	..	..	..	1
Kansas University	1	1	..	..	..	..	2
Leipzig University	..	1	..	..	..	..	1
Lombard College	1	1	..	..	..	..	2
Meridian College	1	..	..	..	..	..	1
Michigan University	1	..	..	..	..	..	1
Muhlenberg College	1	..	..	..	..	..	1
Oberlin College	1	..	..	..	..	..	1
Ohio Wesleyan University	1	..	..	..	..	..	1
Ozark College	1	..	..	..	..	..	1
Pennsylvania University	..	..	1	..	..	1	2
Southern Illinois State Normal	1	..	..	..	..	..	1
Syracuse University	1	..	..	..	..	..	1
Temple University	..	..	..	1	..	..	1
Western Normal College	..	..	..	1	..	..	1
Wisconsin University	..	1	..	..	..	..	1
Totals	26	17	6	23	1	1	74
Percents	96.29	62.96	22.22	79.31	3.45	3.45	
Totals Men and Women							
	A.B.	A.M.	Ph.D.				
Number	49	18	7				
Percents	87.50	32.14	12.50				

institutions are not on the accredited list compiled by the Department of Education of Washington in 1917. Because practically all of the degrees were received before this date, it would probably have been better to have made use of an earlier list. All but one of the teachers who graduated from schools not on the accredited list, more than made up for this deficiency later by taking advanced degrees from institutions of very high standing.

Although the variety of institutions from which the degrees were received is large and the general standing of the schools is good, an examination of Table IV will show certain shortcomings such as the geographical distribution of the schools and the unevenness of the distribution of the degrees among the schools. Only three first class eastern schools are represented. The percentage of teachers who received their degrees from Colorado institutions can best be presented in tabular form.

	A.B. Degree		Advanced Degrees	
	Whole Number with Degree	% Who Received It from Colo. Schools	Whole No. With Degrees	% Who Received Them from Colo. Schools
Men .....	26	30.77	23	30.43
Women .....	23	65.21	2	50.00
Men and Women.....	49	46.94	25	32.00
Missouri Normal Schools	138	55.00	59	40.00

Of the men holding the A.B. degree almost one-third received it from schools within the state and almost one-fifth from our own school. Only one of their advanced degrees was received from our college. Of the 23 women who have A.B. degrees, 15, almost 70 per cent, received them from local institutions, and 13 of these 15 received them from our own school. This is perhaps the greatest deficit of our degrees. Out of a total of 74 degrees, 31, or 42 per cent, were conferred by institutions of the state. It is interesting to note that there are approximately as many men with advanced degrees as there are women with the four year degree. The teachers in the Missouri Normal Schools receive about 8 per cent more of their degrees from schools in Missouri than what were received by our teachers from the schools of Colorado. It would have been very instructive to know just what percentage of the teachers in the University of Missouri obtain their degrees from the university and the schools of the state, but this information I have been unable to extract from the Carnegie report. It may have been an oversight.

If it is important to know something about the standing and variety of schools from which degrees were received, it is also important to know something about the variety and character of the schools which the members of the faculty attended as students. The number of schools attended and the number of individuals attending each school are given in Table V. Our own school was attended by exactly one-half of the members of our faculty. Ten have attended Columbia, 8 Chicago, and 5 the University of Denver. It may be very undesirable that 28 of the members of our faculty should have attended our own school; but whatever tendency this may have had toward perpetuating the limited educational ideas peculiar to a locality and toward stultifying the mental life of the school, it must certainly have been offset to a large degree by the fact that our teachers also attended as matriculated students 52 other institutions of learning. It should also be remembered that schools which select teachers largely from their own graduates have the advantage of choosing the very best. Perhaps no amount of scholastic training in schools of high standing is as valuable as a superior native equipment trained in schools of more mediocre standing. In this connection it should also be pointed out that during our summer quarter many of the best scholars from all sections of the country teach and lecture in our school. In this way there is no lack of the invigorating influence which comes from a knowledge of the educational ideas which obtain elsewhere.



TABLE V

Number of Schools Attended and Number Who Attended Each School

	Men	Women	Both
Boston Normal School.....	..	1	1
California University .....	1	..	1
Chicago University .....	6	2	8
Clark University .....	1	..	1
Colorado College .....	..	1	1
Colorado State Teachers College.....	8	20	28
Colorado University .....	1	1	2
Columbia University .....	5	5	10
Cornell University .....	1	..	1
Cumberland University .....	1	..	1
Dallas Kindergarten Training School.....	..	1	1
Denver University .....	4	1	5
DePauw University .....	1	..	1
Eastern Illinois State Normal.....	1	..	1
Eastern Kentucky State Normal.....	..	1	1
Emerson College .....	..	1	1
George Peabody College.....	..	1	1
Grenoble University .....	1	..	1
Harvard University .....	..	1	1
Illinois State Normal University.....	..	2	2
Illinois University .....	1	..	1
Indiana State Normal School.....	1	..	1
Indiana State Normal College.....	..	1	1
Iowa State College.....	1	..	1
Iowa State Teachers College.....	1	..	1
Iowa Christian College.....	1	..	1
James Milliken University.....	1	..	1
Johns Hopkins University.....	1	..	1
Kansas State Agricultural College.....	1	1	2
Kansas State Normal School.....	2	1	3
Kansas University .....	1	..	1
Keystone State Normal School.....	1	..	1
Leipzig University .....	1	..	1
Lombard College .....	1	..	1
Meridian College .....	1	..	1
Michigan State Normal College.....	1	..	1
Michigan University .....	1	..	1
Missouri University .....	2	..	2
Mt. Union College.....	1	..	1
Muhlenberg College .....	1	..	1
North Western University.....	..	1	1
Oberlin College .....	1	..	1
Ohio Wesleyan University.....	2	..	2
Oshkosh Normal School.....	..	2	2
Ozark College .....	1	..	1
Pennsylvania University .....	1	1	2
Southern Illinois State Normal.....	1	..	1
State Normal University.....	1	..	1
Syracuse University .....	2	..	2
Twin City Normal School.....	..	1	1
Western Normal College.....	..	1	1
Wisconsin University .....	1	..	1
Totals .....	62	47	109
Average .....	2.30	1.62	1.95

If the number of degrees and the nature of their sources are important factors in appraising the worth of a faculty, then the age of degrees should also be of some value. If the degree is very old and the possessor failed to keep up his studies, it is very probable that the degree does not represent anything of importance. If on the other hand the degree is very young, there has been insufficient time for the individual holding it to acquire efficient reaction systems in the light of his training. The following tabulation shows the age of each degree in years in terms of the arithmetic mean or average and the median.

	A.B.		A.M.		Ph.D.	
	Mean	Median	Mean	Median	Mean	Median
Men .....	12.69	11.50	7.97	4.25	5.83	4.50
Women .....	4.10	3.38				
Men and Women.....	7.01	7.38				

For the men and women separately the median is consistently less than the mean. This is due to the effect of a few extreme cases. For example, for the women one degree had been received 29 years ago, while the next oldest degree had been received only 11 years ago. The median is therefore the best average. Probably the modal average would have been the most significant, but for the wide range the cases were too few to give any well defined mode. The age of the A. B. degrees for the men may be regarded as desirable, but the A. B. degree for the women and the other degrees for the men are certainly quite recent. It should be mentioned that the single A. M. degree and the single Ph. D. held by the women were classified with the A. B. degrees.

There are several factors which may be taken as indices of the quality of work done by students. Among them are grades, honors, and scholarships and fellowships. Our questionnaire called only for data on scholarships and fellowships. The question yielded the following results:

	Graduate	Undergraduate	Total	No. Held in Our School
Number Held by Men.....	15	9	24	2
Number Held by Women.....	1	12	13	11
Men and Women.....	16	21	37	13

The men average almost one scholarship apiece, but this does not mean that practically every member of our faculty has held a scholarship, because several members held more than one. The number of scholarships held by the women is somewhat less than half the number of women. Most of the men have held their scholarships in graduate work, while most of the women held theirs in undergraduate work. Moreover all but two of the women were scholars in our own school. The total number of scholarships held by our teachers is 64 per cent of the number of faculty members.

Light may also be thrown upon a teacher's preparation for his work by making a study of the relation which the courses of his training bear to the kind of work in which he is engaged. To collect material on this point we asked the following question: "Name the courses which belong to the departments in which you teach and for which you received credit." Those holding the doctor's degree were asked to name their major and minor subjects.

All of those with the doctor's degree were teaching the subject in which they had majored. For the remaining men the average number of courses which were taken and which belonged to the department in which the men were teaching, is 13.3; for the women, 10.3. The women did most of their specialization in their undergraduate courses, while the men were inclined to postpone specialization until they took up their graduate work. Undergraduate courses should not be regarded as equivalent to graduate courses. From the number of courses listed we may perhaps infer that from this standpoint, the members of our faculty have had a fair preparation for their work.

A definite and precise statement of the standing of our faculty in respect to its scholastic preparation and native ability is at this time impossible on account of a lack of adequate standards. More surveys of teachers colleges will have to be made and the methods of making such will have to become more uniform before these standards will be at hand. There is at least a slight indication, as shown by the results of intelligence tests, that our faculty compares favorably with other schools in mental capacity. In scholastic preparation our faculty surpasses the faculties of the Missouri Normal Schools and the Teachers College at Cedar Falls. The women of the faculty reduce our standing very much. The men make a fairly good showing when compared with the University of Missouri for the number of academic degrees; our men excel by 4 per cent in the number holding the A. B. degree and by 6 per cent in the number with the A. M. degree but are excelled by 26 per cent in the number with the Ph. D. There is less of local character in the training of our teachers than there is in the training of the teachers of the Missouri Normal Schools. How our school compares in this respect with the faculty of the University of Missouri we are unable to say on account of a

lack of information. In the matter of age of degrees and the number of scholarships and fellowships held by our teachers, I have not had figures from other schools upon which to base comparisons. On the whole the men of our school compare very favorably with other schools in the scholastic preparation for their work.

A third factor which may be employed to throw light upon a teacher's qualifications consists of his teaching experience and such other experience as is involved in or related to his work. The kind of data on experience which were asked for may be gathered from the following questionnaire:

### Questionnaire on Experience

#### 1. TEACHING EXPERIENCE

##### a. State teaching experience before entering faculty here:

In elementary school	No. of Yrs.		No. of Yrs.
Primary grades.....		Upper grades .....	
Intermediate grades		Mixed schools .....	
		Total number of years	

In high school  
 Subjects taught: \_\_\_\_\_ No. of Yrs.  
 Total years' experience in high school.....

In normal school  
 Subjects taught: \_\_\_\_\_ No. of Yrs.  
 Total years' experience in normal school.....

In college  
 Subjects taught: \_\_\_\_\_ No. of Yrs.  
 Total years' experience in college.....

##### b. State teaching experience in present position

In training school	No. of Yrs.		No. of Yrs.
Primary grades ....		Upper grades .....	
Intermediate grades.		Total years' experience	

In high school  
 Subjects taught: \_\_\_\_\_ No. of Yrs.  
 Total years' experience in high school.....

In normal department  
 Subjects taught: \_\_\_\_\_ No. of Yrs.  
 Total years' experience in normal department.....

#### 2. ADMINISTRATIVE EXPERIENCE

##### a. Before entering faculty here

Kind of positions	No. of Yrs.
Total years of experience.....	

##### b. In present position

Kind of positions	No. of Yrs.
Total years of experience.....	

#### 3. PRACTICAL EXPERIENCE

State practical experience you have had which is directly involved in your work, excluding teaching and administrative experience.

Kind of experience	No. of Yrs.
--------------------	-------------

## Results On Experience

The results of teaching experience are presented in four main divisions. The first deals with public school experience, the second with the whole amount of teaching experience before entering the faculty, the third with experience in the present position, and the last with the total teaching experience. The numerical results are set forth in Tables VI, VII, VIII and X respectively. These tables are constructed on the same plan as the table on scholastic preparation. The caption or column headings are precisely the same as in the previous table, and the stub or row headings show the number of years of experience instead of the years of scholastic preparation. None in these headings means any amount of experience less than 1. One means 1 and any amount less than 2 and so on. In the selection of these class-intervals, the Iowa Survey was followed to make comparisons possible.

In Table VI, showing the results on public school experience, the frequencies are distributed in the same way as in the table on scholastic preparation; they slope upward and toward the right from the lower left-hand side. This means that the teachers of the college have more public school experience than those of the high school and the training school. The teachers, therefore, who should on account of the nature of their work know most about public schools know least about them. However, this lack of experience in the public schools is undoubtedly somewhat offset by the fact that the training school work resembles public school work more than teaching in

TABLE VI

Distribution of frequencies according to the amount of public school experience and the type of work.

No. of Years	Collegiate		Sub-Collegiate & Non-Col.		Training School	Totals		Percents					
	M. W.	M. W.	M. W.	M. W.		M. W.	Both	Men	Women	Both			
None	3	3	. 1	. 3	. .	3	7	10	11.1	24.1	17.9		
1—	. . . . .	. . . . .	. . . . .	. 1	. 1	. 2	2	2	. . . . .	6.9	3.6		
2—	. . . . .	2	. . . . .	. 2	. 1	2	5	7	7.4	17.2	12.5		
3—	. . . . .	7	1	. 1	. 2	. 4	7	8	15	25.9	27.6	26.8	
6—	. . . . .	5	1	4	2	. 1	. 1	9	5	14	33.3	17.2	25.0
11—	. . . . .	1	. . . . .	1	. . . . .	. 1	2	1	3	7.4	3.4	5.4	
16—	. . . . .	1	. . . . .	1	. . . . .	. 1	2	1	3	7.4	3.4	5.4	
21-31	. . . . .	2	. . . . .	. . . . .	. . . . .	. . . . .	2	. . . . .	2	7.4	. . . . .	3.6	

the college. It is, moreover, not necessary, as some contend, for teachers to have the same amount of practice in teaching before taking charge of a school as surgeons have before beginning surgery, because the former kind of work is far less foreign to the student than the latter on account of having spent from 10 to 15 years in the public schools as pupils. The Iowa table does by no means show the same upward slope, an index of a condition which is certainly in their favor.

The amount of public school experience as shown by the mean and the median is given in the following tabulation:

Men and Women	Means	Collegiate	Collegiate and Sub-Collegiate	Sub- and Non-Collegiate	Training School
		6.09	7.20	3.60	4.81
Medians	4.60	4.75	2.50	4.50	

The experience of the high school teachers is exceedingly low as indicated by both the mean or average and the median. The experience of the training school teachers is low in comparison with college teachers as shown by the mean; but as shown by the median, it is almost as high as for the college teachers.

The following tabulation shows the means and medians, first and third quartiles, the quartile deviation, and the coefficient of variation of the total

amount of public school experience for the men and women separately and for both combined.

	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation
Men .....	7.67	5.83	2.92	10.81	3.95	.678
Women .....	3.79	3.50	1.13	5.92	2.40	.686
Both .....	5.66	4.67	2.16	8.50	3.17	.679

The men far surpass the women in the amount of their public school experience, regardless of the form in which it is expressed. In this respect our school appears to have the same problem which the public schools have. There is of course little hope for a profession of teaching as long as the experience and training of the women remain so low. The women also vary somewhat more in their experience than the men as is shown by a slightly higher coefficient of variation. Our teachers surpass the Iowa teachers somewhat in the amount of public school experience. The average for the former is 5.42, which is .24 less than our average.

In the following tabulation the percentage of teachers with varying amounts of public school experience is given:

		Percentage of Teachers								
No. of Years		None—	1—	2—	3—	6—	11—	16—	21-31	
Colorado	No.									
Men .....	27	11.1	...	7.4	25.9	33.3	7.4	7.4	7.4	
Women ....	28	24.1	6.9	17.2	27.6	17.2	3.4	3.4	...	
Both .....	56	17.9	3.6	12.5	26.8	25.0	5.4	5.4	3.6	
Iowa										
Both .....	123	27.6	4.9	7.3	23.6	21.1	12.2	2.4	.8	

Our school has 10 per cent less teachers than Iowa with no public school experience. The largest percentage of our teachers falls in the class-interval 6-11, while the largest percentage of the teachers at Cedar Falls falls in the class-interval 3-6. For this region of the scale, I think the class-intervals are too large, because an additional year's experience in this region should be of considerable value and because the largest number of frequencies fall in this region. In the Carnegie report smaller intervals are used for this part of the scale.

The results on the total number of years of teaching experience before entering our faculty are given in Table VII. The table again shows the upward slope, indicating less experience in the high school and the training school. How much less is shown by the following means and medians:

Men and Women	{	Means ...	Collegiate	Collegiate and Sub-Collegiate	Sub- and Non-Collegiate	Training School
			Medians ..	8.43	9.95	4.30
		7.50	10.50	3.00	4.50	

TABLE VII

Distribution of frequencies according to the type of work and the total number of years of teaching experience before entering our faculty.

No. of Years	Collegiate		Sub-Collegiate & Non-Col.		Training School	Totals			Percents			
	M. W.		M. W.			M. W. Both	Men	Women	Both			
	M.	W.	M.	W.								
None .....	1	2	.	3	.	1	5	6	3.7	17.2	10.7	
1—.....	.	.	.	.	1	.	1	1	....	3.4	1.8	
2—.....	2	1	.	2	1	2	4	6	7.4	13.8	10.7	
3—.....	4	2	1	2	3	4	8	12	14.8	27.6	21.4	
6—.....	6	1	2	3	2	1	8	7	15	29.6	24.1	26.8
11—.....	4	1	3	.	.	1	7	2	9	25.9	6.9	16.1
16—.....	1	.	1	.	1	2	2	4	7.4	6.9	7.2	
21-31 .....	3	.	.	.	.	3	.	3	11.1	....	5.4	

The teachers in the training school average about 3 years less teaching experience before entering the faculty here than the teachers in the college; and the high school teachers average from 4 to 5 years less. If teaching experience is required anywhere, it is in the high school where there are usually a number of troublesome adolescent children and where the children are in a period of life in which the final broad lines of character are laid down.

The means, medians, first and third quartiles, the quartile deviation, and the coefficient of variation for the total amount of teaching experience before entering the faculty here are given in the following tabulation:

	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Iowa Mean
Men .....	10.22	10.63	5.88	13.63	3.88	.365	....
Women .....	5.21	4.75	2.63	7.88	2.63	.553	....
Both .....	7.61	6.80	3.50	11.67	4.09	.601	8.85

The variation in experience for the men is very much less than that for the women. The men also have about twice as much experience as the women and about one year and one-half more than both men and women of the Iowa College; but for men and women combined the latter school far surpasses ours, by about one year and one-fourth.

The median experience for the men before entering our faculty is 10.63; for the women 4.75; and for both 6.80 years. The medians for public school experience are 5.83 for the men; 3.50 for the women; and 4.67 for both men and women. Now if the figures for public school experience be deducted from those for the total teaching experiences before entering our faculty, the median teaching experience in higher institutions before entering our faculty may be obtained. These figures are for the men 4.80; for the women 1.25; and for both 2.13. If the mean instead of the median experience be taken, then the number of years of teaching experience in higher institutions before entering our faculty will be 2.55 for the men; 1.42 for the women; and 1.95 for both.

The following figures show the percentage of teachers with varying amounts of teaching experience before entering our faculty:

No. of Years	No.	Percentage of Teachers							
		None—	1—	2—	3—	6—	11—	16—	21-31
Colorado									
Men .....	27	3.7	...	7.4	14.8	29.6	25.9	7.4	11.1
Women .....	29	17.2	3.4	13.8	27.6	24.1	6.9	6.9	....
Both .....	56	10.7	1.8	10.7	21.4	26.8	16.1	7.2	5.4
Iowa									
Both .....	123	3.3	4.1	8.9	26.8	22.0	24.4	7.3	3.25

The largest percentage of our teachers again falls in the class-interval 6-11 and for Iowa again in the interval 3-6, but Iowa has a much larger percentage in the interval 11-16. Perhaps we may fairly claim that after 10 years of teaching experience not very much is to be gained by additional experience. This would improve somewhat the showing of our school. It should also be mentioned that during the year of the survey two heads of departments were away on leave. Both of them had much teaching experience before coming to our school, and one of them had more teaching experience in this school than any other faculty member. A few irregularities of this kind have quite a disturbing effect where numbers are so small as in this survey. At the low end of the distribution, however, we see that more of our teachers are without any teaching experience.

How much experience the teachers with different types of work have had in their present position may be seen in Table VIII. In this table the frequencies again slope upward toward the right until the third caption heading is reached, but from this point they slope downward toward the right. This means that the teachers of the training school excel the teachers

of the high school in this kind of experience. A clearer or more definite view of the amount of difference in experience for the different types of work may be obtained from the following figures:

Men and Women	Means	Collegiate	Collegiate & Sub-Collegiate	Sub- and Non-Collegiate	Training School
		5.36	3.85	1.90	6.41
Medians	3.50	3.00	1.20	3.33	

Both means and medians decrease regularly from the first to the third group; but for the fourth group there is a marked increase so that this group has the highest mean and next to the highest median. In comparison with the high school group, the training school group has had considerably more experience in their present positions. The fact that the median is so much smaller than the mean for the training school teachers means that there were a few teachers with very much experience, but that the majority had little experience. In the training school there has been a rather rapid change of most of the teachers, the effect of which was undoubtedly bad, but certainly not as detrimental as making a rapid change of all of the teachers; this occurred in the high school.

Following our previous plan, we are giving means, medians, first and third quartiles, quartile deviations, and coefficients of variation for the teaching experience in the present position.

	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Iowa Mean
Men	5.70	3.50	2.42	9.63	3.61	1.030	....
Women	3.62	2.79	1.56	4.44	1.44	.516	....
Both	4.63	3.00	2.12	5.33	1.61	.535	8.74

TABLE VIII

Distribution of frequencies according to the type of work and the number of years of experience in present position.

No. of Years	Col. legi-ate		Sub. Col- legiate & Non- Col.		Train- ing School		Totals			Percents		
	M.	W.	M.	W.	M.	W.	M.	W.	Both	Men	Women	Both
None	1	.	1	.	2	.	1	5	6	3.7	17.2	10.7
1—	1	2	1	1	2	.	2	5	7	7.4	17.2	12.5
2—	8	2	2	.	4	1	10	7	17	37.0	24.1	30.4
3—	3	2	2	2	1	3	5	8	13	18.5	27.6	23.2
6—	4	.	.	.	1	.	4	1	5	14.8	3.4	8.9
11—	2	1	.	.	.	.	2	1	3	7.4	3.4	5.4
16-21	2	.	1	.	.	2	3	2	5	11.1	6.9	8.9

In the length of time the men have been members of the faculty they surpass the women from one year and one-half to two years. The men have a very large coefficient of variation, but this is due to the fact that the third quartile fell by one frequency beyond a three unit space on the scale for which there were no frequencies. This unusual condition is shown by the fact that the variation for both men and women is only a little more than that for the women alone. This is one of the results of attempting to subject to statistical treatment an insufficient amount of statistical material.

The teachers' tenure on the Iowa faculty is just about twice as long as that of the teacher on our faculty. This is not due to the fact that the teachers in the Iowa College are better paid than our teachers. Why is it so? It is certainly a very undesirable feature. By the time the teacher comes to know the workings of our school, he leaves. College presidents may not realize the enormous loss due to a large turn-over, because they have no very adequate means of measuring it; it does not appear in terms of dollars and cents. But in business where the large turn-over does manifest itself in dollars and cents, the large losses due to it are more fully realized. This condition of low tenure, however, is not peculiar to our institution alone.

In the Missouri Normal Schools, according to the Carnegie report, the median tenure is only 4 years, in the University of Missouri 5 years and in Washington University between 6 and 7 years. Our median tenure is only 3 years, but the mean is 4.63. If the half year of 1917-18 before the survey was made had been counted, our tenure would have been raised by this amount.

In order to determine the actual tenure of college teachers in a given school it is not sufficient to ask the teachers how long they have held their present positions, find the average or median from these figures and base upon them the length of tenure; for in a small school there may have been few changes for a number of years, when suddenly there may have occurred a change of one-half of the faculty. If just before the occurrence of such a catastrophe a survey had been made, it would have been found that the turn-over was very small; but if it had been made just after the period of sudden change, it would, on the contrary, have been found that the turn-over was very large. In Table IX, the percentage of eliminations from the faculty is given for a period of ten years. According to this table it takes at least 7 years for 100 per cent elimination. This means that the actual tenure in our school is 7 years instead of 3 as shown by our median, or 4.63 as shown by our mean. Now it happened, as may be seen from Table IX, that at the close of 1914, 33 per cent of the teachers left the school, and as this was just three years before our survey, we were bound by our method to find a low tenure. If the survey had been made at the beginning of 1913, the average tenure would probably have been 10 years. This, however, is not the only factor which disturbs the reliability of our method of determining the length of time teachers in our school hold their positions. In Table IX, under the caption of "Per Cent Additions," it may be seen that in the beginning of 1915-16 there were 14 per cent more additions to the faculty than eliminations at the close of the previous year, and in 1914-15 there were 16 per cent more additions than eliminations at the close of 1914. This is a condition which cannot be avoided in a growing faculty, but it reduces the tenure. If a faculty fails to grow, the tenure may by virtue of this fact be much longer than if the faculty and school had developed. A brief median tenure may therefore be a symptom of a very wholesome condition, a thriving, prosperous school. I suppose spasmodic surveys have their value, but I am convinced that the survey which is of most value is the continuous survey conducted by an expert who has a passion for the truth and who is not dependent upon any one connected with the school for his own tenure.

TABLE IX

Showing the growth of the faculty for the last ten years, the yearly additions and the yearly eliminations.

Year	Whole No. Belonging to Faculty	Number of Additions	Number of Eliminations	Per Cent Additions	Per Cent Eliminations
1908-09	36	5	5	13.89	13.89
1909-10	37	6	1	16.22	2.70
1910-11	38	2	1	5.26	2.63
1911-12	44	7	11	15.78	25.00
1912-13	38	5	3	13.16	7.89
1913-14	36	1	12	2.78	33.33
1914-15	47	23	6	48.94	12.76
1915-16	57	16	7	28.07	12.28
1916-17	63	13	6	20.63	9.52
1917-18	64	13	6	20.31	9.38
	460	91	58	185.04	129.38



From the figures below, the percentage of teachers for varying lengths of tenure in our faculty may be seen.

No. of Years	None	1—	2—	3—	6—	11—	16—	21—	31—	41-51
Colorado	No.									
Men	27	3.7	7.4	37.0	18.5	14.8	7.4	11.1	....	... ..
Women	28	17.2	17.2	24.1	27.6	3.4	3.4	6.9	....	.81 .81
Both	56	10.7	12.5	30.4	23.2	8.9	5.4	8.9	....	... ..
Iowa										
Both	123	4.8	20.3	8.9	21.1	16.3	7.3	11.4	8.13	.81 .81

More than 75 per cent of the teachers in our school have been members of our faculty for a period no longer than three years. This percentage was obtained from the original data, not from the above table. The reason for this was pointed out on the preceding pages. In fact all of the tables involving the tenure of our teachers are almost valueless except to point out how spurious they are and how inadequate the method of determining the real tenure of teachers in a small school, at least, is. The Iowa Survey does not give the above percentages; I computed them from their tables. Neither does the Iowa Survey give the mean tenure. This I also computed by using the mid-points of the class-intervals. From the above table, it appears that the high average tenure for the Iowa school is due to a large extent to extreme cases. Their largest frequency falls in the intervals 3-6, but the frequency in the interval 1-2 is almost as large. In fact it is easy to see that their median would fall in the interval 3-6. It probably would be about 5, which is 3.74 years less than the mean.

In a final series of tables on experience there is set forth the total teaching experience of our teachers. In Table X, the frequencies are distributed according to the type of work and the total number of years of teaching experience. There is no longer the regular slope of the distributions from the lower left-hand side upward and toward the right. A fuller discussion of this can be given better in connection with the following figures on the average amount of total teaching experience for the different types of work.

	Collegiate	Collegiate & Sub-Collegiate	Sub- and Non-Collegiate	Training School
Men and Women { Means ..	13.78	13.80	6.20	12.50
{ Medians.	12.50	13.50	5.50	10.00

The total teaching experience for the different groups is almost the same, excepting the third group which is composed almost entirely of high school teachers. This certainly shows that the high school is the weakest division of our college from the standpoint of the experience of its faculty. Excepting the high school teachers, the training school teachers average about two years less total teaching experience than the other groups. In Table X it may be seen that the men of the second group have considerably more experience than the women of this group. As the men do primarily collegiate work and the women primarily sub-collegiate work, it follows that our college teachers have considerably more teaching experience than our training school teachers and far more than twice as much experience as our high school teachers. An approximate equalization of teaching experience for the different divisions of our school would, we believe, very much improve its efficiency.

The following figures show the central tendencies and the deviations from the central tendencies for total teaching experience.

	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Iowa Mean
Men	15.92	15.17	12.44	21.25	4.61	.304	.....
Women	8.83	7.70	5.13	11.75	3.31	.430	.....
Both	12.25	12.00	7.00	17.00	5.00	.417	17.33

The men have just about twice as much total teaching experience as the women; and in proportion to the amount of teaching experience, the men

show a much smaller variation. The men then far excel the women as a teaching force from the standpoints of amount of teaching experience and the uniformity in amount of that experience. As our teachers average 12 years in total teaching experience and the Iowa teachers 17, the latter excel by 5 years. This does not necessarily mean that they have a superior teaching force on the side of experience, because their high average may be due to a small number of teachers with very high teaching experience. There is a limit in teaching experience beyond which little or nothing is gained. On account of this fact Table XI will give us a better basis of comparison with the Iowa school.

TABLE X

Distribution of frequencies according to type of work and total number of years of teaching experience.

No. of Years	Collegiate		Sub-Collegiate & Non-Col.		Training School		Totals			Percents		
	M. W.	M. W.	M. W.	M. W.	M. W.	M. W.	M. W.	Both	Men	Women	Both	
None												
1—												
2—	1			2			3	3		10.3	5.4	
3—	1	2		4			1	6	7	3.7	20.7	
6—	4	1		2		4	4	9	13	14.8	31.0	
11—	8	2	3	2		1	1	11	6	17	40.7	
16—	2	1	2		1		1	4	3	7	14.8	
21-31	6		1			2	7	2	9	25.9	6.9*	
											16.1	

TABLE XI

Percentage of Teachers

Number of Years	Colorado Teachers College			Iowa Teachers College	Missouri Normal Schools			University of Missouri			
	Men	Women	Both		Both	Men	Women	Both	Men	Women	Both
None				.8							
1—		10.3	5.4	3.3	3	8	5	7	28	9	
3—	3.7	20.7	12.5	14.6	6	13	9	24	14	23	
6—	14.8	31.0	23.2	17.9	31	41	36	30	22	29	
11—	40.7	20.7	30.4	24.4	16	11	14	11		10	
16—	14.8	10.3	12.5	13.8	15	12	14	11	22	12	
21—	25.9	6.9	16.1	12.2	21	14	17	13	14	13	
31—				7.3	8	1	5	4		4	
41-51				5.7							
Total	27	29	56	123	101	91	192	132	14	146	

The teaching experience of 41 per cent of the men of our faculty falls between the limits 11 and 15.99 years, and only 28 per cent of the men have less experience than this. Moreover, none of the men reach the 31-year limit. Only 21 per cent of the women fall in the class-interval 11 to 15.99, and 62 per cent have less experience than this. In the Missouri Normal Schools only 16 per cent of the men and 11 per cent of the women have a teaching experience of 11 to 15.99 years, while 56 per cent of the men and 62 per cent of the women have less than this amount. The percentages for the university are lower for the high intervals and higher for the lower intervals. These statements in regard to the Missouri schools are not quite true, because I changed the 12-year limit used in the Carnegie report to 11 in order to make their limits conform to ours. For the Normal Schools the figures 16 and 11 should therefore be a little larger and 31 and 41 a little smaller. This explanation also applies to the percentages for the teachers of the university.

Everything considered, I think we may venture the opinion that the choicest part of a teaching body is that which has a teaching experience ranging from approximately 10 to 20 years. I have therefore tabulated for each of the above schools the percentage of teachers with about this amount of experience. But, lest there are some who might disagree with me, I have

also tabulated the percentages for other intervals, all of which are given below. The percentages include both men and women.

Number of Years	Colorado Teachers College	Iowa Teachers	Missouri Normal Schools	University of Missouri
11-20.99 .....	43	38	28	22
6-20.99 .....	66	56	64	51
6-30.99 .....	82	68	81	64

For every one of the above class-intervals our faculty makes the best showing; the Missouri Normal Schools probably the next best, especially when we remember that the percentages of the Missouri teachers for the first interval are slightly inaccurate as explained above; the Iowa school stands third, and the university last. As the teachers of the university are not engaged in making teachers, it is probably not as important for them to have as much teaching experience as the other schools. It is perhaps worth while pointing out that those teachers who have taught for the largest number of years do not necessarily have the most teaching experience, because some teachers, especially many of those in the universities, do not devote much of their time to teaching. There is a tendency at the universities for the inexperienced instructor to do the teaching while the heads of departments and professors devote most of their time to lecturing and writing. On account of this practice it has become possible for the universities to produce most of our literature on educational and other subjects.

If we have succeeded in making our figures tell a true story, the total amount of teaching experience for the members of our faculty is somewhat superior to that of the teachers in the schools with which we have made comparisons. But the amount of teaching experience is not the only important thing to be considered. Whether the teachers teach the subjects in which they have had their experience and whether their teaching is sufficiently restricted in subject matter to be efficient are also important matters. In regard to the latter we may say that the departments in the college are well differentiated and that the work of each teacher is limited strictly to his own department. The same is true of the training school and to a large extent of the high school.

In regard to the former we may say that our teachers are with a fair degree of uniformity teaching in the fields in which they have had their experience before entering our faculty. Of the 26 men who have had such experience 58 per cent are following the teaching of their former experience; 27 per cent are doing so only partly; and 15 per cent may be said to follow a different line of work. The corresponding percentages for the 24 women who had some experience before entering our faculty are 54, 33, and 12. Of the assistant librarians who have been included in our tabulations one had five years of teaching experience but no experience in library work, while the other had no teaching experience but seven years of library experience. Our tables on teaching experience would have been improved somewhat if both the librarians would have been omitted from the tabulations, as the one with library experience was given no credit for it here.

Including the librarian, 7 men are engaged in some kind of administrative work. In their present positions, they have an average experience of 5 years. Before occupying their present positions they had an average experience in administrative work of 10 years. All but one of the positions, that of the librarian, were superintendencies and principalships. Practically all of the superintendencies were of such importance as not to require teaching in connection with them. Eight other men had administrative experience, principally as superintendents of small school systems and principals of high schools which required some teaching. Their average experience in these positions is about 6 years. Not one of the men had administrative experience before entering the faculty, which was very similar to that required by their present positions, excepting the librarian.

Of the women 5 have administrative work in their present positions.

Their average experience amounts to 3 years. Of these 5, one had 2 years' experience as principal of a small high school and the remainder had no previous administrative experience. Four other women had administrative positions previous to entering our faculty. They consisted of principalships of small schools. One had been a county superintendent. Their average experience was a little less than 4 years. Both in amount and kind the administrative experience of the women is not very commendatory. For the men it is considerably better, although they also are weak in the kind of experience before entering upon their present administrative duties.

The last group of factors employed to throw light upon the qualifications of the faculty consists of publications, public addresses, and assistance rendered to superintendents in making courses of study. The public addresses counted were limited to the year preceding the survey, and the magazine articles and the assistance rendered to superintendents were limited to the period of five years just preceding the survey. The following questionnaire was used:

**Questionnaire on Publications, Public Addresses, and Assistance Rendered in Making Courses of Study**

1. List publications as indicated below.

Names of books	Date of Publication
Names of Articles	Names of Journals
	Date

2. List public addresses for 1916-17.

Subject of address	Organization	Place
--------------------	--------------	-------

3. What assistance have you rendered in the past five years to superintendents in making courses of study?

**Results on Publications, Public Addresses, Etc.**

TABLE XII

The Number of Publications Put Out by the Faculty Under the Limitations Set Forth in the Questionnaire.

	Men	Women	Both	Mean	Iowa Mean
No. of Books.....	12	1	13	.232	.179
No. of Bulletins.....	9	0	9	.165	.203
No. of Magazine Articles....	47	16	63	1.125	.797

The men published 12 times as many books and 3 times as many magazine articles as the women. The women did not report the publication of bulletins. This does not mean that they did not publish any, because the questionnaire did not ask for this kind of publication. For the same reason not all of the bulletins published by the men were reported. The books were published by 9 of the teachers. Four of the books were monographs written to fulfill the requirements for the Ph.D. degrees. Several translations from the French, German, and other languages were made. These are not included in the tabulation. Only 13 men and 5 women published magazine articles. One of the men published 22 articles and one of the women published 9 articles. It is perhaps more important to know the quality than the quantity of the publications. In order to throw some light upon this, the articles published in state journals were separated from those published in journals of wider character. Only 24 of the articles were published in other than state journals. On the whole the record of our publications, to put it charitably, is very mediocre. The conditions for publications in most teachers colleges and normal schools are not very good. Some of the teachers whose publications ranked fairly high both in numbers and quality when in other positions have produced nothing since they have become members of our faculty. There is

too much other work; there is inadequate recognition for writers to flourish in our school. We might add, however, that conditions have improved somewhat since the survey. The Research Committee alone, which had produced only one Research Bulletin before the survey, has published six since then. We seem to rank favorably with the Iowa school, although their survey reports 13 parts of books and 4 books in preparation which are not included in the percentages given in the table. The 200 teachers of the Missouri Normal Schools produced only 15 bound volumes in the last 20 years.

TABLE XIII  
Public Addresses

Organization	Number of Addresses Made By			
	Men	Women	Both	Iowa Col.
State Teachers Association.....	9	6	15	...
Teachers' Institutes .....	26	6	32	...
Clubs .....	30	4	34	...
Parent-Teacher Associations ...	3	1	4	...
Farmers' Institutes .....	2	1	3	...
Technical Addresses .....	2	0	2	...
Alumni Addresses .....	1	0	1	...
Commencement Addresses .....	3	0	3	...
General Educational .....	25	7	32	...
Totals .....	101	25	126	183
Averages .....	3.74	.86	2.25	1.49

The men make more than four times as many addresses as the women, but they make seven times as many addresses at men's and women's clubs. In the average number of addresses our school surpasses Iowa Teachers College by .76. However, the Iowa school lists institute service separately. Just what the nature of this service was, the report does not make clear. If the institute work be left out of account, our average is still in excess by .19.

A total of 32 teachers, 20 men and 12 women, made public addresses during the year. More than one-half of our teachers made public addresses, while less than one-fourth of the Iowa faculty made such addresses, excluding institute service.

A total of 65 superintendents and principals have received assistance from our teachers in making courses of study; 48 received assistance from the men and 17 from the women. Just how helpful and valuable this assistance was, it is difficult to estimate. In some cases very valuable assistance appears to have been rendered.

### TEACHERS' SALARIES

The salaries in our school are paid in twelve monthly installments, but they are based upon a forty-two weeks term of service. This fact should be kept in mind in comparing our salaries with those paid in other schools. It should also be borne in mind that our normal teaching load per week for full-time class-room teachers is 16 fifty minute periods. The first tabulation involves the salaries of all of the members of the faculty. In other tabulations, salaries for college, high school, and training school teachers are separated.

TABLE XIV  
Salaries of the Entire Faculty.

	No.	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Extreme Range
Men ...	27	\$2,246	\$2,300	\$1,900	\$2,500	\$300	.130	\$1,600-2,900
Women..	29	1,435	1,400	1,185	1,700	257	.184	800-2,350
Both ...	56	1,838	1,825	1,400	2,300	450	.247	800-2,900

The median salary for the men is 900 dollars more than that for the women. This difference can be justified upon the basis of large differences in qualifications, unless our method of determining the qualifications of teachers

is totally inadequate. The coefficient of variation is larger for the women than for the men, but so is the coefficient for experience. The coefficient for training is much smaller for the women than for the men, but training plays no part in fixing salaries for the men and but a small part in fixing salaries for the women.

The following figures give a comparison of our salaries with those paid by the Missouri Normal Schools and the University of Missouri. As the latter are based upon a forty-eight weeks term of service, the salaries in Table XIV are only seven-eighths of what they should be and have therefore been raised to put them on the same basis.

		Colorado Teachers College	Missouri Normal Schools	University of Missouri
Men	Medians	\$2,629	\$1,800	\$2,200
Women	Medians	1,600	1,400	1,467
Both	Medians	2,086	1,650	2,200

The median salary of our men exceeds the median for the Normal Schools and the university by \$800 and \$400 respectively. For the women the differences are \$200 and \$150. For both men and women our salaries exceed those of the Normal Schools by more than \$400, but the salaries at the University exceed ours by more than \$100. The median salary for the men at the University is no higher than the median salary for both men and women, because the number of women involved in the study was very low in comparison with the number of men. It is not to be inferred from the above comparisons that our salaries are very high but that the salaries in the Missouri schools are notoriously low. At the Iowa State Teachers College the average salary for 73 full-time classroom teachers (39 men and 34 women) when put upon the basis of 48 weeks is just a little less than \$2,000. We shall make more accurate comparisons with this school later.

TABLE XV  
Salaries of the College Faculty

	No.	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Extreme Range
Men	27	\$2,246	\$2,300	\$1,900	\$2,500	\$300	.130	\$1,600-2,900
Women	9	1,622	1,500	1,275	1,860	293	.195	1,050-2,350
Both	36	2,108	2,100	1,875	2,400	263	.125	1,050-2,900

	No.	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Extreme Range
H. Sch.	10	1,265	1,250	1,000	1,400	200	.160	900-1,700
Tr. Sch.	8	1,575	1,525	1,425	1,750	163	.107	1,400-1,800
Both	18	1,403	1,400	1,200	1,700	250	.179	900-1,800

In this table the four groups of our previous tables have not been followed. The collegiate and sub-collegiate group has been eliminated by transferring the teachers who teach primarily in the college into that group and those who teach primarily in the high school into that group. This placed all of the men and two more women into the college group. The college group includes the principals of the high school and the training school and the librarian. The two assistant librarians have been left out of the tabulations.

The median salary of the college men is \$800 more than that of the college women and their coefficient of variation is much smaller. Both of these differences can be justified from the distributions of Table II and Table X. In the former it can easily be seen that the college men have much more preparation than the women; in the latter it appears that the men have not only more experience than the women but that they vary less in this than the women.

The median salary of the women who teach in the college is \$25 less than the median salary of the training school teacher, but their mean salary is about \$50 higher. If we look at Table II, we can see that the college women have more training than the women of the training school; but Table X

shows that the training school teacher has more experience than the college teacher. The training school teachers also vary less in their training and probably less in their experience, and their salaries vary less.

The median salary of the training school teachers is \$275 more than that of the high school teachers, but their experience far surpasses that of the high school teachers and their training is about the same. The variation in experience appears to be in accordance with the variation in salary.

For the college teachers the median salary is \$900 more than for the high school and training school teachers. On account of differences in training and experience this much difference in salary and probably more is justifiable; but as was pointed out before the training and experience of the teachers in the high school and training school should be such as to merit just as high a salary as that received by the college teacher.

The salary differences of the larger groups of the faculty can be fairly well or perhaps adequately justified upon the basis of differences in training and experience. Can individual salary differences also be justified in a general way upon the same basis? In order to determine whether there is a tendency toward concomitant variation between salaries on the one hand and training and experience on the other, I have computed the coefficients of correlation for the salary series and the training series and for the salary series and the experience series by the product-moment method. For the entire faculty the coefficient for salary and training is .52, a fairly high coefficient. The coefficient for salary and experience is .63. Experience plays a more dominant role in fixing the salary schedule than training does. The probability is that much of the correlation between salary and training must be attributed to the fact that those who have the most experience tend to have the most training also. I have found that the coefficient for training and experience is .41. Some of the relation then between salary and training is probably due to their respective relations to experience. On the other hand some of the relation between salary and experience may be due to their respective relations to training. In order to eliminate the relation between two factors which is due to their respective relations to a third, I have made use of the method of partial correlations. By this method the correlation between salary and training, independent of their relations to experience, is .37, or .15 less than what it appeared to be. On the other hand the coefficient for salary and experience, independent of their respective relations to training is .54 or .09 less than what it appeared to be.

But this fairly high correlation between salary and experience and the lower one between salary and training may be spurious on account of a combination of heterogeneous groups. The correlations have been worked out for the faculty as a whole, but men are paid more than women even though they have no more training and experience. Now as they happen to have more training and experience in our faculty, the correlation appears to be due to training and experience, although in reality it may be due to the difference in sex. Moreover, it has always been the custom to pay less to the training and high school teachers than to the college teachers. As the training and high school teachers have less preparation and experience than the college teachers, the correlation again appears to be due to differences in the amount of scholastic preparation and teaching experience, but in reality it may be due to custom. It is for these reasons that I have separated the men and women and worked out coefficients for each group separately. In doing this we also eliminate all high school and training school teachers from the men's group. The numbers are too small to warrant any further subdivisions.

For the group of women the coefficient between salary and training is .36; that is .17 less than what it was for men and women combined. The correlation between salary and experience is .46, which is also .17 less than for the whole faculty. But these coefficients are too high for the same reason that the corresponding coefficients for the whole group were too high. The method of partial correlations will give the correct coefficients. For salary

and training and salary and experience they are .20 and .36 respectively. The former is .17 lower than for men and women combined and the latter is .18 lower.

For the men the coefficient between salary and experience is .56. This is a fairly high coefficient, but the coefficient between salary and training or scholastic preparation is rather surprising. It turns out to be  $-.11$ . This means that the men's salaries in our school do not increase with their training. If the size of the coefficient were not covered by the probable error, it would mean, because it is negative, that there was a tendency for salaries to decrease as training increased. Perhaps there is no provision in our salary schedule for an increase in salary with an increase in training when that training has reached the four-year limit beyond the high school. This may explain why there is a slight positive correlation between the women's salaries and their training and no such correlation for the men. However, our school grants the A. M. degree and if it has any confidence in it, should give adequate relative remuneration to those who hold it. The coefficient for training and experience also is negative,  $-.04$ . Because the two last named coefficients are so low it is not necessary to compute the partial correlations. I have, however, done so and found them to be  $-.11$  and  $.57$  for training and salary and experience and salary respectively. In order that all of the above mentioned correlations may be easily surveyed and compared, I have brought them together in the following table.

\*TABLE XVI  
Coefficients of Correlation Between Salary and Training, Salary and Experience, and Training and Experience

	Coefficients of Correlation		
	Men	Women	Men and Women
Salary and Training.....	$-.109$	.358	.516
Salary and Experience.....	.564	.459	.631
Training and Experience.....	$-.038$	.431	.408
Partial Correlations—			
Salary and Training.....	$-.107$	.201	.365
Salary and Experience.....	.567	.362	.538

\*I did not compute coefficients for correlations between salary and combined training and experience for men and women separately. I did so for the faculty as a whole and found that this increased the coefficient by only .07 over that for salary and experience alone. Team correlations should probably have been computed.

It is interesting and probably instructive to bring together the coefficients of variation for training, total experience, and total load and salaries. These are shown in the following table:

	Coefficients of Variation For			
	Training	Experience	Total Load	Salaries
Men .....	.147	.304	.121	.130
Women .....	.087	.430	.075	.184
Both .....	.191	.417	.105	.247

The women have a larger coefficient than the men for salaries and also for experience, but much smaller coefficients for training and total load. This may be taken as further confirmation of the fact that experience, not training and the amount of work, determines the distribution of salaries. But if salaries were determined by experience alone, then we should expect a much larger variation in salaries, especially so as there are no cases of such extreme experience as to indicate the presence of other undesirable factors, because the coefficients for experience are about twice as large as the coefficients for salaries. Leaving other possible factors upon which the distribution of salaries might be based out of consideration, it is very probable that our best teachers are paid far too little in proportion to our poorest teachers.

In addition to the amount of training and experience, the amount and quality of work should be considered in fixing a teacher's salary. The quality



of work we have no means of determining, but perhaps we may assume that in general those who spent most time on their school work also do the best work. At any rate there is a tendency for the brighter pupils to put more time on their school work than the duller ones, and it may be that this tendency also prevails among the teachers. The amount of school work done by each of our teachers was determined by our survey and will be presented in subsequent pages. For the total school work done by 26 of the men (the director of the extension department failed to make a report of his total load) and their respective salaries the coefficient of correlation was found to be .012. This means that the salaries for the men do not increase with the amount of time they put on their school work. There is no causal connection between the amount of work done and the amount of salary, unless the hours of work reported by the teachers are very unreliable. A similar computation for the women was not made, but it is pretty safe to make the prediction that the coefficient would have been very low, had it been worked out. From the size and nature of the coefficients which have been computed, it appears that experience alone is an important factor in our school in determining teachers' salaries. There are, of course, many other possible factors, such as neatness, promptness, and sociability, which doubtless have considerable power over the school's exchequer; but for them we cannot work out correlations because we have no ratings on them.

There should be some basis for apportioning salaries among the larger divisions of the school and among the individual teachers within these divisions; but there should also be some basis for apportioning salaries among the several departments. When teachers feel that the apportionment is entirely arbitrary and manifestly unfair they lose their willingness for cheerful cooperation and become disheartened by the sense of a lack of a real appreciation of their efforts. When such moods persist among a large proportion of the teachers, the effort to build a great school is absolutely futile. Under such conditions the teachers are constantly on the lookout for other positions and make a change on the occurrence of the first opportunity. In the following table the money paid for salaries in the several departments of the school is set forth.

Distribution of Departmental Salaries  
(Forty-Two Weeks Basis)

Department	Total Salary	No. of Teachers	Mean
Practical Arts .....	\$7,800	4	\$1,950
Music .....	6,550	5	1,310
English .....	6,400	3	2,133
Social Science .....	5,350	2	2,650
Education .....	5,050	2	2,525
Biological Science .....	4,700	2	2,350
Home Economics .....	4,500	3	1,500
Educational Psychology .....	4,400	2	2,200
Library .....	4,050	3	1,350
Commercial Arts .....	3,850	2	1,925
Physical Education .....	3,700	2	1,850
Fine and Applied Arts .....	3,200	2	1,600
Geography .....	2,400	1	2,400
Oral English .....	2,350	1	2,350
County Schools .....	2,350	1	2,350
Physical Sciences .....	2,300	1	2,300
History .....	2,150	1	2,150
Mathematics .....	2,000	1	2,000
Modern Foreign Languages .....	1,900	1	1,900
Chemistry .....	1,900	1	1,900
Agriculture .....	1,700	1	1,700

The above departments are arranged in the order of the amount of money put into each one for salaries. This should give us a fair idea of the relative importance of the departments in a teachers' college as seen by the administration. The Practical Arts Department which receives the most money includes Woodworking, Drafting, Bookbinding, and Printing. Next to the Practical Arts Department, the Music Department receives the most money. More than half of the total amount is collected from the students

in music fees. English, Social Science and Education are next on the list in the order named.

Following the Carnegie report I have attempted to group the departments into academic, professional, and other departments upon the basis of the kind of subjects taught in them. This grouping is, however, very imperfect as I shall point out later.

TABLE XVIII

Departmental Salaries Grouped

Academic	Salaries	Teachers	Other Departments	Salaries	Teachers
English	\$6,400	3	Practical Arts	\$7,800	4
Biological Sciences	4,700	2	Music	6,550	5
Geography	2,400	1	Fine and Applied Arts	3,200	2
Oral English	2,350	1	Home Economics	4,500	3
Physical Sciences	2,300	1	Commercial Arts	3,850	2
History	2,150	1	Physical Education	3,700	2
Mathematics	2,000	1			
Modern For. Lang.	1,900	1	Totals	\$29,600	18
Chemistry	1,900	1	Mean	1,644	
Agriculture	1,700	1	Professional—		
			Social Sciences	\$5,350	2
Totals	\$27,800	13	Education	5,050	2
Mean	2,138		Ed. Psychology	4,400	2
			County Schools	2,350	1
			Totals	\$17,150	7
			Means	2,450	

Most money is put into the group of "Other Departments" and least into the professional group. Into the latter group the Social Sciences have been placed, but many of the courses of this department should not be called professional in character. This is however more than offset by the fact that professional courses are offered by the Department of Biological Sciences and by the High School and Training School Departments. This practice makes it impossible to determine just how much money is spent on salaries for the professional subjects. For the mean salaries the order is just reversed, the highest occurring in the professional group and the least in the unclassified group. In the Missouri Normal Schools, the average salaries for the academic, professional, and unclassified groups are \$1,569, \$1,505, and \$1,425 respectively. The Ancient Language Department is not included in the above groups because the teacher of this department was absent on leave.

TOTAL LOAD, TEACHING HOURS, STUDENT HOURS AND OTHER SCHOOL WORK

Questionnaire on Total Load, Teaching Hours, Student Hours, and Other School Work

1. State the amount of teaching for this quarter (winter, 1918) as indicated by the form below (do not include extension work):

1	2	3	4	5	
Course	No. Rec. Per Week	Net Min. in Rec. Per Week	No. in Course	Student Periods Per Week	
					For each line multiply figures in column 2 by figures in column 4 to obtain figures for column 5, but before entering them multiply by 10/11. Count 3 laboratory or shop hours as equivalent to 2 class-room hours.
Totals					

2. Other school work for which there is no extra pay (winter quarter).

Clock Hours Per Week

Teaching in Training School.....
Regular Conference work.....
Observation work .....
Preparation for class work.....
Correction of papers.....
Faculty meetings .....
Committee meetings .....
Committee work outside of meetings.....
Student societies .....
Debating .....
Coaching .....
Office work .....
Clinical work .....

Other items may be added:

Total.....
Total hours per week spent in recitations (55 min.)
Sum of totals.....

3. Work not directly connected with school service (winter quarter).

Kind of Work	Clock Hours Per Week
Total .....	

The preceding questionnaire, as all others used in this section of the survey, is a modification of the one given in the "Instructions for a Survey of a State Normal School," issued by the Committee on Normal School Standards and Surveys. It should also be noted that the questionnaires were not, as might be inferred from this report, sent separately to the teachers but as a single questionnaire.

### Results on Total Load, Teaching Hours, and Student Hours

The results are not based on any work for which there is extra pay such as teaching extension classes and conducting correspondence work. The amount of such work done by the faculty is described on pages 125 and 134 of the bulletin consisting of sections one and two of the survey. The first tabulation is on the total load. It includes all of our questionnaire returns, excepting that made by the Director of the Extension Department, who failed to give any definite figures on the amount of his work. In all of the tabulations on the total load, teaching hours, and student hours, the recitation period is based on 55 minutes and all other work on the clock hour.

TABLE XIX  
Total Amount of School Work

	No.	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Extreme Range
Men ....	26	40.82	41.75	35.00	45.25	5.13	.123	23-68
Women..	29	41.65	40.00	36.13	42.19	3.03	.076	29-66
Both ....	55	41.26	41.00	35.88	44.58	4.35	.106	23-68

In computing the above medians and all others on the amount of work, the whole numbers were taken as the mid-points of the intervals; because in distributing the frequencies over the scale, fractions less than one-half were disregarded and larger fractions were treated as units. The women have a slightly larger mean for total amount of school work but the men surpass the women by more than twice this difference in the median amount. There are only 6 women who do more than 42 hours work, but there are 11 men who exceed this amount. The variation is high, especially for the men. There are some men who do almost three times as much work as others. This difference in amount is not offset on the part of the slothful by superior training,

native ability, and quality of work. Neither can this difference in many cases be justified by a smaller remuneration, for, as pointed out before, the coefficient of correlation between salary and the amount of work is zero. As a matter of fact some of the teachers who draw the largest salaries do the least work. Evidently the school employs no very effective means of checking up the amount of work done by individual teachers. Such measures should evidently not be necessary in schools of higher learning, but they appear to be. Work in these schools should not be degraded to the level of common labor, but I fancy that a checking up system will not be offensive to the workers, and to the drones it might as well be so.

In treating the results on teaching hours and other school work, it was necessary to make divisions of the faculty in order to secure a more homogeneous grouping. Deans, Directors, principals, librarians, and high school and training school teachers were not included in the group used for tabulations on teaching hours and other school work. The group consists essentially of full-time classroom instructors. This resulted in a very small group of women teachers, but I have, nevertheless, tabulated the results for them separately.

TABLE XX  
Teaching Hours Weekly

	Colorado Men	Iowa Men	Colorado Women	Iowa Women	Colorado Both	Iowa Both
Number .....	20	39	6	34	26	73
Mean .....	15.55	18.35	13.62	16.74	15.11	17.60
Median .....	16.00	17.80	14.50	17.25	15.30	17.63
Q <sub>1</sub> .....	14.00	16.84	13.00	15.38	13.67	16.52
Q <sub>3</sub> .....	18.00	18.45	15.25	18.00	17.67	18.24
Q .....	2.00	.81	1.13	1.31	2.00	.86
V .....	.125	.045	.078	.076	.131	.049
Range .....	7-21	14-31	7-18	12-21	7-21	12-31

The Iowa figures in the above table are not directly comparable with ours because they are based on clock hours and full time for laboratory work. A correction for this difference will reduce the mean time for both the men and the women by one-tenth of an hour. Several facts are clear from the above table: first, in the Iowa College the teachers' program is about two hours longer than in our school. In our school a full time classroom teacher is supposed to teach 16 fifty-minute periods; at Iowa probably 18, while in the Missouri Normal Schools 20 and 25 periods are predominant. Second, the variation in our school is about 3 times as large as at Iowa. Our variation is due primarily to the fact that some classes are discontinued on account of their size and that some departments are too large for one teacher and yet too small for two. In the latter case the teacher must do excessive teaching unless relieved by men from other departments, but this practice is not followed in our school. Small classes should probably not be discontinued especially if they occur in the senior college. The most effective instruction can be given in small classes and their continuance does not increase costs. How these situations are met at Iowa is to my knowledge not revealed in their report. Third, in both schools the men teach approximately from one to two hours more than the women.

For this same group of teachers doing work of much the same character, I have also made tabulations on "Other School Work" and on the total amount of school work as provided under items one and two in the questionnaire. For "Other School Work" the hours are clock hours and for the total amount of school work 55-minute hours are combined with clock hours. The total is simply a combination of teaching hours and hours devoted to other school work.

The difference in the weekly amount of "other school work" between the men and women at Iowa is very small, while in our school it is from 4 to 5 hours. The men in our school do more work than the men at Iowa, but for the women the reverse is true, so that on the whole our teachers do not do

TABLE XXI  
Hours Devoted to Other School Work

	Colorado Men	Iowa Men	Colorado Women	Iowa Women	Colorado Both	Iowa Both
Number .....	20	39	6	34	26	73
Mean .....	25.50	24.32	21.67	24.06	24.62	24.20
Median .....	26.00	24.67	20.50	23.90	24.00	24.25
Q <sub>1</sub> .....	17.00	20.38	18.00	21.75	17.75	21.13
Q <sub>3</sub> .....	31.50	28.75	28.00	26.25	31.00	28.19
Q .....	7.25	4.19	5.00	2.25	6.63	3.53
V .....	.279	.170	.244	.094	.276	.146
Range .....	7-56	11-36	11-32	6-38	7-56	6-38

any more "other school work" in spite of the fact that they teach two hours per week less. Perhaps altitude and climate are more conducive to hard work at Iowa than here.

In this table the coefficients of variation are from two to three times as large as in Table XX. This, of course, means that when the amount of the teacher's work is not controlled through a fixed program, there is a very much larger difference in the amount of work done than when this is the case. Some work when there is no control, and others do not. Perhaps it would be a good plan to control the hours for all school work just as rigidly as the recitation hours. The extreme range, of course, is also much larger for uncontrolled than for controlled work. Many of us are naturally lazy and require the stimulating effect of some supervision. Just as for recitation or teaching hours, the variation in our school is much larger than that for the Iowa Teachers College.

Thirteen of the men and 8 of the women engaged in work not directly connected with school work. The 13 men average 2.90 hours per week and the 8 women 3.06 hours per week. The weekly averages for all of the men and all of the women are 1.40 and .84 hours respectively. For practically all of this work there was no remuneration. One of the teachers was taking a correspondence course to which 8 hours per week was devoted, but this is not included in the above averages.

TABLE XXII  
Total for Teaching Hours and Hours Devoted to Other School Work

	Colorado Men	Iowa Men	Colorado Women	Iowa Women	Colorado Both	Iowa Both
Number .....	26	39	6	34	26	73
Mean .....	41.06	42.7	35.28	40.8	39.69	41.82
Median .....	42.25	42.40	35.00	41.50	41.70	42.05
Q <sub>1</sub> .....	36.00	39.25	33.00	39.00	34.25	39.06
Q <sub>3</sub> .....	45.00	47.81	39.00	43.75	44.00	46.69
Q .....	4.50	4.28	3.00	2.38	4.88	3.82
V .....	.107	.101	.086	.057	.117	.091
Range .....	23-68	29-55	29-42	23-57	23-68	23-57

In total amount of school work the men surpass the women, especially in our school where the difference runs as high as five hours weekly. The women vary less than the men, although at Iowa they have a larger extreme range than the men. The median amount of school work is only one-third of an hour more at Iowa than in our school, but the difference in the mean amount is over one hour in favor of Iowa. The variation in amount of total school work is, of course, much higher in our school as it was for teaching hours and the amount of time devoted to other school work.

Based upon this same group of full-time class-room instructors in the college, composed of 20 men and 6 women, I am giving additional tables on weekly salary, cost per teaching hour, student hours and cost per student hour. The following table shows total and mean salaries of full-time class-room teachers for the periods of one year and of one week.

TABLE XXIII

## Total and Mean Yearly and Weekly Salaries

	No.	Total Yearly Salary	Mean Yearly Salary	Total Weekly Salary	Mean Weekly Salary	Iowa Weekly Salary
Men . . . . .	20	\$42,650	\$2,133	\$1,015.48	\$50.77	\$49.29
Women . . . . .	6	10,150	1,692	241.66	40.28	32.12
Both . . . . .	26	52,800	2,031	1,257.14	48.35	41.29

For both men and women combined our mean weekly salary exceeds that of the Iowa State Teachers College by about \$7. For the women alone the difference is a little more than \$8 in favor of our school; for the men alone our weekly salary is only \$1.50 in excess.

Table XXIV gives the total and mean teaching hours (55 min.) per week, the mean weekly salary, and the cost per teaching hour.

TABLE XXIV

## Total and Mean Teaching Hours Per Week, Weekly Salary, and Cost Per Teaching Hour

	No.	Total Teaching Hours Per Week	Mean Teaching Hours Per Week	Mean Weekly Salary	Mean Cost Per Teaching Hour	
					Colorado	Iowa
Men . . . . .	20	311.09	15.55	\$50.77	\$3.26	\$2.71
Women . . . . .	6	81.72	13.62	40.28	2.96	1.93
Both . . . . .	26	392.81	15.11	48.35	3.20	2.35

Every teaching hour costs 85 cents more in our school than in the college at Cedar Falls. Some excess, of course, was to be expected because we had already found that our salaries were higher and our teaching program shorter. Much of the excess is due to the small number of women included in our computations. On our college faculty there are more than three times as many men as women who are full-time class-room teachers, while at Iowa there are 39 men and 34 women. This difference has a marked effect on the mean for both men and women. It should also be noted that the mean cost per teaching hour is about \$1 more in our school than at Iowa for the women, but for the men it is only 55 cents more.

TABLE XXV

## Total and Mean Student Hours Per Week, Mean Weekly Salary, and Mean Cost Per Student Hour

	No.	Total Student Hrs. Per Week	Mean Student Hrs. Per Week	Mean Cost Per Student Hour	
				Colorado	Iowa
Men . . . . .	20	5,613	280.65	\$0.181	\$0.121
Women . . . . .	6	1,144	190.66	.211	.088
Both . . . . .	26	6,757	259.88	.186	.106

The above figures show that in our school it costs 8 cents more to teach each student one 55-minute period than what it does in the Teachers College at Cedar Falls. One of the most interesting features of the table is that for the women the mean cost per student hour is 4 cents more than for the men in spite of the fact that their salaries are much smaller. In making comparisons between the men and the women in which student-hours are involved, it is important to determine which group teaches the most required courses in which the classes are always large, and which group teaches most senior and graduate college courses in which the classes are usually small. I found that the women averaged half a class in required work and the men a little less than this; also that the women averaged two-thirds of a class in senior college work and the men one class for the quarter in which the data were collected. In the college at Cedar Falls, the mean cost per student hour is 3 cents less for the women than for the men. In connection with all of the comparisons between the men and the women teachers in so far as this pertains to full-time class-room work, it is important to remember that the group

of women for our school is too small for the purpose of generalizations. The number of teachers colleges and normal schools thus far surveyed is also too small for this purpose.

For the remaining groups of teachers I have not made computations similar to those presented in the preceding six tables on account of the small size of the groups. However, in Table XXVI, I am giving the primary data for these groups.

TABLE XXVI  
Teaching Hours, Other School Work, and Totals for Small Groups  
Engaged in Similar School Work

Deans, Directors and Principals					
	College Teaching 55 min.	Tr. Sch. Training and Supervision 60 min.	High School Teaching 55 min.	Other School Work 60 min.	Totals
1	4.4	....	....	37	41.4
2	3.6	....	....	52	55.6
3	7.3	....	....	40	47.3
4	3.6	....	....	20	23.6
5	7.3	....	....	24	31.3
6	3.6	....	....	..	....
7	9.0	....	....	32	41.0
8	6.4	....	....	60	66.4
9	....	....	....	36	36.0
Total					342.60
Mean					42.83
Assistant Librarians					
1	....	....	....	42	42.0
2	....	....	....	42	42.0
Music Assistants					
1	15.0	....	....	18	33.0
2	25.0	....	....	11	36.0
Training School					
1	4.0	9.0	....	53	66.0
2	....	28.0	....	32	60.0
3	....	9.0	....	32	41.0
4	....	20.0	....	20	40.0
5	5.4	6.0	....	28	39.4
6	....	8.0	....	43	51.0
7	....	18.0	....	22	40.0
8	....	30.0	....	11	41.0
Total					378.40
Mean					47.30
High School					
1	3.6	....	13.7	24	41.3
2	....	....	13.6	34	47.6
3	4.5	....	13.7	20	38.2
4	....	....	18.2	22	40.2
5	....	....	18.2	20	38.2
6	....	....	18.2	27	45.2
7	....	....	9.4	21	30.4
8	....	....	18.2	24	42.2
Total					323.30
Mean					40.41

## PART II

### STUDENT LOAD

One of the most important parts of a survey of an educational institution is the determination of the activities in which the students are primarily engaged. The institution should, after all, exist directly for the sake of the students. Therefore the amount of time which they devote to school work and the distribution of this time over the different kinds of school activities should be given the main consideration. The main purpose of any school should be the efficient and economic modification of the responses of its students, and such modifications occur only through the activities of the students. All of the various parts of a school, the faculty, the buildings, school organization and administration, the course of study, and the arrangement of the program have the single purpose of furnishing a situation in which the students may engage in desirable activities. Most surveys, including this one, have made only a superficial inquiry into what the students do and to what kind of activity they devote most of their time. It is, of course, easier and not unimportant to determine the age, sex, nationality, and previous training of the students and the size of the family from which they come. This may account for the fact that such facts have received more attention than the native ability and the school life of the students.

The data for this division of the survey were obtained by means of a questionnaire based on the instructions issued by the Committee on Normal School Standards and Surveys. The instructions follow:

"Give each student a card on which he is asked to keep for a week an accurate account of time spent in recitations and preparation therefor. Ask them to exclude all time between classes, assembly periods, and time spent in traveling.

"These cards should not be shown to individual teachers. The summaries should be made so as to show the curriculum followed, the year of the student in the curriculum, and also men and women.

"When this information has been taken from the cards, they should be turned over to the president for further analysis.

"In this connection it is well worth while to find out to what societies students belong and how many other student activities they take part in. The tabulation and study of this material will raise the question of the advisability of establishing a "Point System" by means of which participation in these student activities can be kept within reasonable limits."



## Questionnaire on Student Load

PLEASE FILL IN BLANK WITH UTMOST CARE AND ACCURACY

Note Number of Minutes Spent in:

Totals

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Minutes	Clock Hrs.
Teaching .....									
Observation .....									
Conference .....									
Prep. for Teaching...									
Recitations .....									
Prep. for Recitations..									

Other Work, Not Connected with School Work.      Other School Work, Clubs, etc. (1) Total.....  
 Kind                      Hrs. Per Week                      Kind                      Hrs. Per Week

(2) Total.....

Sum of Totals (1) and (2).....

(3) Total.....                      Sum of Totals (1), (2) and (3).....

COURSE—General (If so write yes).....Special (If so, state which).....

School Year.....Name.....

The blank has three main divisions: regular school work which includes, excepting Bible study, all work appearing on the quarterly program and such activities as are directly involved in performing this work; other school work, which is primarily socio-educational in nature; and all other work not directly connected with school work. A more detailed statement of the kinds of activities embraced by each heading will appear below.

The blank was placed in the hands of the students on the Thursday morning of March 7, 1918, at the regular assembly. The students were told that the information called for by the blank was required to complete a general survey of the school which was being made at that time; that similar blanks had been filled in by the members of the faculty; and that the purpose of making the survey was to determine the effective and ineffective policies and practices of the school with a view to a gradual elimination of the latter and a continuation of the former. They were told that the information which they gave would not in the least affect them as students in the school. In general an effort was made to impress them with the necessity of endeavoring to fill in the blank with reliable data.

The following directions for filling in the blank were then dictated to the students: 1. Do not fill in the blank until next Thursday evening, March 14th. 2. During each of the next seven days, beginning tomorrow, make a record on a separate sheet of paper of the kind of work you do and the amount of time devoted to each kind. 3. In the columns headed Satur-

day and Sunday note only the time devoted on these days to conferences and preparation for teaching and recitations. For your other activities on these days, space is allowed elsewhere on the blank. 4. Under the heading "Other Work not Connected with School Work" note clerking, house-work, Red Cross work, choir practice, etc. 5. Under the heading "Other School Work, Clubs, etc.," enter such school activities as are not directly involved in regular school work, including Bible study, debating, chorus work, and community co-operation. Other examples are Y. W. C. A. work, departmental club activities, and all work connected with plays and student publications. 6. Use decimals to express fractions of hours. 7. Do not consult your teachers in regard to filling in the blanks. 8. Return the blanks on Friday, March 15th; leave them in the Registrar's office. Now examine every item of the blank to see if you can fill in the blank correctly. If you are in doubt, ask questions.

To avoid inaccurate replies the students were not told that they were obliged to fill in the blank. This method has several disadvantages. In the first place it introduces an element of selection, and in the second place it secures a smaller number of returns. Although the assembly was attended by about three hundred students, only one hundred and twenty-nine returned the blank. On the whole, however, the voluntary method is probably better than the method of compulsion. The sample received appeared to be sufficient for such items as pertained to the whole or even one-half of the group. But the number was far too small for determining such facts as the desirability of sororities and the distribution among the several departments of the time devoted to regular school work, many departments having only one to three representatives in the group.

#### Results on Student Load

The primary data for all types of student work as presented in the questionnaire on student load are given in Table XXXII at the close of this section. In Table XXVII the central tendencies and the measures of variation for the same types of work are set forth. The figures for boys and girls are not kept separate in the following tables, because only five boys answered the questionnaire.

The conferences, observation, and teaching included in Table XXVII all occur in the training school, and preparation for teaching is controlled by work assigned in the training school. Conferences occur only as they are required by the student's work in the training school, but observation and teaching are regular assignments. At the time the survey was made, it was the practice in the training school to substitute observation for part of the teaching requirements. The wisdom of this may be questioned, but I mention it here for the purpose of pointing out that since this was the practice, it becomes necessary to consider observation and teaching as a single item; hence the combination of these two factors in the table. Our student teachers are required to teach eight hours, four during each of two quarters. Both the mean and the median for observation and teaching show that this requirement is well met, especially when we remember that our 50-minute periods have been reduced to 60 minutes. The coefficient of variation for teaching and observation combined is very large, .290. This large variation it is difficult to explain in other terms than gross mismanagement, especially when we compare it with the coefficient for recitations which is only .125. There is far more reason for uniformity in the amount of teaching than in the hours spent in recitations, because teaching takes the place of a four-hour recitation. The distribution for observation and teaching shows that there are 5 students who teach and observe only 1 hour and that one student teaches and observes 8 hours. This single case may be explained on the grounds of double teaching which is sometimes allowed; but this does not explain why 11 students teach 5 hours and 5 students 6 hours out of

TABLE XXVII  
Central Tendencies and Variations on Various Types of School Work

	No.	Mean	Median	First Quartile	Third Quartile	Quartile Deviation	Coefficient of Variation	Range
Conference .....	46	1.48	1.33	.85	2.04	.60	.447	0- 4
Observation .....	29	2.14	1.58	1.02	2.63	.81	.509	1- 6
Teaching .....	47	3.00	2.73	1.73	4.15	1.71	.626	1- 8
Obser. and Teach.....	47	3.79	4.05	2.81	5.16	2.35	.290	1- 8
Prep. for Teach.....	51	6.00	5.00	2.75	9.56	3.41	.681	1-13
Recitations .....	129	13.20	13.40	11.45	15.01	1.68	.125	3-20
Reci. Obser. and Teach.....	129	14.61	14.37	12.92	16.21	1.65	.114	8-20
Prep. for Recita.....	129	18.92	17.44	14.04	22.97	4.47	.256	1-48
(1) Total .....	129	36.67	34.91	30.04	42.25	6.11	.175	14-64
(2) Other Sch. Work.....	129	3.14	2.13	.62	4.13	1.76	.824	0-16
(3) Other Work.....	129	10.08	5.42	1.04	16.38	7.67	1.415	0-47
Total Columns 1 and 2.....	129	39.78	38.72	32.38	46.25	6.94	.179	17-70
Total Columns 1, 2 and 3.....	129	49.92	47.19	40.58	59.69	9.56	.202	24-86

a total of 47 students. On account of these wide variations where practically no variation should occur, I give here the whole distribution table for teaching and observation combined:

	Clock	Frequen-
	Hours	cies
Under preparation for teaching it will be noted that there are 51 cases, but that there are only 47 cases engaged in teaching. I have no explanation for this. The mean number of hours spent in preparation for teaching for the 47 cases who are actually engaged in teaching is .16 higher than the mean given in the table. For every hour of teaching the students spent about .6 of an hour more in preparation than in preparation for an hour of recitation. Taking the mean as the basis, there are 2 hours of preparation for every hour of teaching, but there are only 1.4 hours of preparation for every hour of recitation. From this it follows that the student who is engaged in teaching is carrying a much heavier load than the one who does not teach. If either one of these loads is adapted to the capacity of the learner, the other is not. Probably some readjustment is demanded by the situation.	1	5
	2	4
	3	9
	4	10
	5	11
	6	5
	7	2
	8	1

One of the most interesting phases of the amount of time spent in preparation for teaching is its enormous variation. A comparison of this variation with that for observation and teaching shows that the former is more than two and one-third times the size of the latter. This shows very clearly the effect of a more rigid control upon the uniformity of human application. A comparison of the variation of preparation for teaching with that of preparation for recitations is probably still more interesting. The coefficient of preparation for teaching is almost twice the size of the coefficient of preparation for recitations. Part of the enormous coefficient of the former may be due in part to the fact that some teaching requires a little more preparation than other teaching; but perhaps we may say the same in regard to the preparation required for recitations. Some of the variation may be due to the variation in the amount of teaching; but curiously enough the coefficient of correlation between the amount of teaching and the amount of preparation is by the method of rank-differences only .164 with a probable error of .097. There is, therefore, practically no evidence of any such correlation.

The variation in the hours spent in recitations is perhaps somewhat larger than what we might expect, because all but the best students are supposed to carry approximately a 16-hour program. There are, however, a number of factors which raise the variation. In the first place there are part time students who do not carry a full program. This can easily be seen in the distribution on page 55. In the second place 47 out of 129 students who were engaged in teaching could carry only 12 hours of recitation. This factor can be eliminated by combining the time devoted to teaching and such observation as was evidently a substitute for teaching with the time given to recitations. This reduces the coefficient from .125 to .114.

The variation in preparation for recitations is represented by the coefficient .256. This is very high, but the coefficient of preparation for teaching is more than two and one-half times as large, even though we have good reasons for expecting it to be very much lower. However, the variation in preparation for recitations is more than twice as large as the variation in the amount of time spent in recitations. This again shows the effect of a lack of firmness in control. While some of the variation may be ascribed to the variation in the students' recitation load, it is probably that there is no more intimate correlation between these two series than we found for teaching and preparation for teaching. I think the bulk of it must be attributed to a lack of control of the preparation for recitations through the recitation. It stands largely as a reflection upon our teaching and our failure to weed out such students as will not study. Some teachers fail to control the preparation

for recitations through the recitations, because it interferes with their bid for large classes, probably a self-preservation reaction. This situation appears to require some change in administrative control.

There is, however, at least one other factor which must be considered in this connection. It may be that the brightest students can prepare their work in so much less time as to account for practically all of the variation. As 27 of the students who had filled in the blank had also taken the Army Alpha examination, I worked out the coefficient of correlation between the results of these tests and the amount of time spent in preparation for recitations. If the students who made the lowest scores in the examination devote most time to preparation, then we shall get a negative correlation; but the correlation was found to be plus .16, just the opposite of what we might expect. While the coefficient is too low to establish the fact that in general the brightest student applies himself more assiduously to his lessons than the duller one, it is nevertheless probable that this is the case. The brighter students succeed better than the duller ones and are therefore more interested in their tasks.

The best examples of wide variations in uncontrolled, or essentially uncontrolled human activities, appear in the coefficients of variation for other school work and other work, the coefficient for the former being .824 and for the latter 1.415. The extreme ranges for these types of work are 0 to 16 and 0 to 47 respectively. It is reasonable to suppose that those students who spent most time in other school work will devote less time to regular school work, but the coefficient of correlation between these activities for all of the students is only  $-.044$ . The product-moment method was used. Similar coefficients were computed for regular school work and other work and for regular school work and combined other school work and other work. The coefficients are  $-.14$  and  $-.19$  respectively. For the students involved in this study there is some evidence for the fact that those who engage most actively in socio-educational work and non-scholastic work do a little less regular school work than those students who are not engaged in these types of work. For conclusive evidence on this point more studies of a similar nature are required.

The total amount of regular school work reported by the students is set forth in the row labeled (1) in the table. The median amount is 34.91 hours per week. They report 6.09 hours less than the faculty. The members of the faculty apply themselves somewhat more assiduously to school work than the students, but on the whole neither students nor the faculty appear to suffer from over-application to regular school work. The average per day on the basis of six days to the week is less than 6 hours for the students and less than 7 for the teachers.

The second last row in Table XXVII gives the mean and median amounts of all school work for the students; the mean is 39.78 and the median 38.72. The coefficient of variation is .179 and the extreme range 17-70. The last row of the table gives the figures for all types of work reported. The amount is 47.17. On the basis of 6 days to the week, although Sunday work was included, our students have approximately an 8 hour day. If they sleep 8 hours, there are 8 hours left for eating, recreation, primping, etc. Perhaps the conclusion is warranted that in general our students live an easy life.

In the above table under the stub-heading, Recitations, Observation, and Teaching, the number of clock hours which the students carried on their schedules is given. The mean number of hours per week is 14.61. If this be converted into the recitation hour of 50 minutes it will be 17.53. But this does not include the hours for Bible study, chorus work, debating, and community co-operation which some of the students carried on their schedules. In order to determine the number of hours for which the students who made questionnaire returns were scheduled, I took the data from the official records for 121 of the students. The results are given in the following table:

TABLE XXVIII

Number of Hours Carried on Schedules and Number of Hours for Which Credits Were Received

College Year	Number Students	Hours Carried on Schedules		Hours Credit Received	
		Total	Mean	Total	Mean
First . . . . .	61	1,069	17.52	1,084.4	17.84
Second . . . . .	47	839	17.85	865.9	18.42
3, 4 and 5. . . . .	13	251	19.31	263.1	20.24
Total . . . . .	121	2,159	17.84	2,213.4	18.29

Apart from Bible study, chorus work, debating, and community co-operation, the normal schedule is supposed to carry 16 recitation hours. As the students carried 17.53 hours, this was 1.53 hours in excess of the normal. If the above types of work, Bible study, etc., are included, the excess is 1.84 hours. Although students who make excellent grades are allowed to carry from one to two hours extra, this does by no means account for the excess, unless three-fourths of the students are permitted to carry two extra hours on the basis of very superior grades. This appears to be inconceivable. The control must have been exceptionally deficient. Second year students are allowed to carry one-third of an hour more than first year students and third, fourth, and fifth year students are allowed to carry one hour and one-half more than second year students. The hours for which credits were received are in excess of those carried on the schedules by approximately one-third, three-fifths, and one for the first, second, and third, fourth and fifth year students respectively. For the whole group the mean amount of credit is 2.29 hours in excess of the normal 16 hours. In five quarters this amounts to 11.45 hours. If properly distributed this means that about 70 per cent of our students can complete the first two years, or six quarters, in five quarters. All of the third and fourth year students can complete the six quarters of these two years in five quarters with an average of five hours to spare. Perhaps this is a commendable feature, but it is unlikely that our co-workers will regard it as such.

I have also compiled data to show for the different college years the mean number of hours of regular school work, other school work, other work, and various combinations of these kinds of work.

TABLE XXIX

Mean Number of Hours of Regular School Work, Other School Work, and Other Work for the Different College Years

College Year	Number	Regular Sch. Work	Other Sch. Work	Other Work	Regular & Other Sch. Work	
					Regular Sch. Work	Total of All Kinds
First . . . . .	63	35.98	2.90	9.79	38.89	48.68
Second . . . . .	50	35.80	3.24	11.12	39.04	50.16
3, 4, 5. . . . .	16	42.13	3.75	7.94	45.88	53.75
Total . . . . .	129	36.67	3.14	10.08	38.81	49.89

The first year students do more regular school work than the second year students. The difference is very small, but when we remember that first year students do not teach and therefore have no conferences and no observation, and that they carry .33 of an hour less on their recitations, it means that they devote considerably more time to their studies. Now if we succeeded in making students, the second year class should devote far more time to studying than the first year class. This is a rather sad commentary on our work. Is it true that second year students have learned how to pick their Profs or "get by" in college? The regular school work of the remaining group is over six hours more than that of the second year students. But let us not flatter ourselves with the belief that with them our efforts have been

more successful, for we must bear in mind that they are considerably older, have profited more by experience in life, and are a more highly selected group. For all of the other kinds of work and their combinations, excepting other work, there is an increase with the school year.

In order to determine whether the students in some courses and some departments do more work than those in other courses and departments, I have compiled the data presented in Table XXX. As pointed out before, the number of students who specialized in any one department was far too small for practically all of the departments to obtain anything like complete data on this point. We were, at this time, in the act of abandoning the General Course.

TABLE XXX

Hours of Regular School Work Carried in Different Courses and Departments

Courses and Departments	Number Students	Mean Hours Per Week
General Course .....	65	36.36
All Other Courses.....	64	37.01
Primary Department .....	20	37.94
Home Economics Department	19	34.97
All Other Departments.....	25	38.05

The totals from which these averages were computed were not obtained from the distribution table. Their sum is about three units less than the total of the distribution table. This is due to the fact that in the distribution table all fractions

less than one-half were neglected and all higher fractions were taken as units.

Students enrolled in the general course have .65 of an hour less to their credit than the students enrolled in all other courses. Perhaps there is a tendency on the part of students toward better application in work which has a more specific aim such as the specialized courses naturally would have over the general course. Excepting the Home Economics Department, the mean hours per week for the remaining departments are considerably higher than the mean hours for the General Course. The tendency shown by these figures is worthy of further investigation.

I made an attempt to secure data for the purpose of determining whether College Sororities have a wholesome influence upon the realization of the general purposes of the school. In the first place I determined the number of sorority members who made questionnaire returns. There are five sororities with a total membership of 131. Of these, 14 or 10.62 per cent made returns, but of the whole student body approximately 25 per cent made returns. This certainly cannot be regarded as a favorable index for the sororities. Out of the five, there was one sorority of which 23.08 per cent made returns; the percentage of returns from the remaining four is only 7.61. In Table XXXI, in which mean hours for the various kinds of school work are presented, the hours for this one sorority are tabulated separately.

TABLE XXXI

Mean Hours Per Week on School and Other Work for Sorority Members

Type of Work No. of Students	Mean Hours Per Week for Returns Made By			
	All Students	All Sororities	Sorority Sigma	All Other Sororities
	129	14	6	8
Prep. for Recitation.....	18.92	19.33	23.15	16.45
(1) Total Reg. Sch. Work..	36.67	33.31	38.10	29.71
(2) Other School Work.....	3.14	5.69	6.44	5.13
(3) Other Work.....	10.08	4.80	3.83	5.50
Total 1 and 2.....	39.78	38.93	44.74	34.90
Total 1, 2, and 3.....	49.92	43.92	48.31	40.64

A comparison of the results for all students who made returns with those for all sorority members who made returns shows that the sorority members are excelled for all items excepting preparation for recitations and the socio-

educational activities; in the former they excel by .41 of an hour and in the latter by 2.55 hours. The sororities appear to be more interested in the socio-educational activities than in those which are less socialized. Their standing in preparation for recitations is entirely due to the single sorority which made the high percentage of returns. With this sorority omitted they are excelled by the whole group by about two hours and one-half. In total regular school work the sororities are surpassed by three hours and one-third, in spite of the excellent showing of the sorority named Sigma in the table. Without this sorority the difference in favor of all students is about 7 hours. In brief the one sorority makes an excellent showing, but the other sororities must take a very inferior rank in the comparisons; and this in spite of the fact that rather strenuous efforts are made to control all of the work and activities of the sororities. It appears then that there may be good sororities and sororities with marked deficits as far as school work is concerned, but that the latter predominate.



TABLE XXXII

Showing How the Frequencies Are Distributed for the Various Kinds of Activities Called for by the Blank

Scale of Clock Hrs.	ence Confer-	Observation	Teaching	Prep. for Teaching	Recitations	Prep. for Recitations	Scale of Clock Hrs.	(1) Total
0	3	..	..	..	..	..	14	1
1	24	14	9	2	..	1	15	1
2	14	6	12	9	..	..	..	..
3	4	5	11	7	1	..	20	1
4	1	1	5	4	..	..	21	..
5	46	1	7	7	..	2	22	1
6	Total.. 68	2	2	2	1	3	23	3
7	Aver..1.48	29	..	3	..	2	24	1
8	Total.. 62	1	1	1	6	1	25	1
9	Aver..2.14	47	3	4	2	2	26	2
10		Total..141	4	7	5	5	27	4
11		Aver... 3	3	14	2	2	28	7
12			5	10	4	4	29	7
13			1	24	7	7	30	6
14			51	21	6	6	31	12
15			Total..306	17	11	11	32	1
16			Aver... 6	13	11	11	33	8
17				4	8	8	34	6
18				5	6	6	35	6
19				1	8	8	36	6
20				1	9	9	37	5
21				129	4	4	38	6
22				Total..1703	1	1	39	3
23				Aver...13.2	8	8	40	3
24					4	4	41	5
25					1	1	42	1
26					1	1	43	3
27					2	2	44	5
28					3	3	45	2
29					2	2	46	2
30					..	..	47	1
31					2	2	48	2
32					1	1	49	1
33					2	2	50	3
34					..	..	51	2
35					2	2	52	1
36					2	2	53	1
37					..	..	54	..
38					..	..	55	1
39					..	..	56	1
40					..	..	57	3
41					3	3	58	..
42					..	..	59	1
43					..	..	60	..
44					1	1	61	1
45					1	1	62	1
46					..	..	63	..
47					..	..	64	1
					1	1		129
					129			
					Total..2441		Total..4731	
					Aver..18.92		Aver..36.67	

TABLE XXXII—Continued

Scale of Clock Hrs.	(2) Other Sch. Work	(3) Other Work	Scale of Clock Hrs.	Total Col. 1 and 2	Total Col. 1, 2 and 3	Scale of Clock Hrs.	Total Col. 1, 2 and 3
0	30	29	17	1	..	71	4
1	20	6	..	..	..	72	..
2	23	9	22	1	..	73	1
3	15	4	23	2	..	74	..
4	14	11	24	1	1	75	1
5	3	6	25	4	1	76	2
6	5	1	26	2	..	77	..
7	3	4	27	1	..	78	1
8	5	6	28	2	1	79	..
9	2	3	29	3	2	80	1
10	1	5	30	2	..	81	..
11	3	..	31	8	6	82	1
12	1	3	32	6	..	83	..
13	1	2	33	4	4	84	1
14	..	3	34	4	..	85	..
15	2	3	35	8	5	86	1
16	1	2	36	2	5	Total..6441	
17	129	..	37	5	..	Aver..49.92	
18	Total..405	1	38	7	2		
19	Aver..3.14	3	39	7	3		
20		1	40	2	2		
21		1	41	9	3		
22		2	42	4	6		
23		3	43	3	4		
24		3	44	1	4		
25		3	45	7	6		
26		1	46	1	4		
27		1	47	4	8		
28		2	48	7	3		
29		5	49	3	1		
30		1	50	2	3		
31		..	51	1	3		
32		..	52	1	6		
33		1	53	2	2		
34		1	54	..	2		
35		1	55	1	2		
36		..	56	1	2		
37		..	57	2	2		
38		..	58	1	2		
39		..	59	..	1		
40		..	60	1	4		
41		1	61	3	1		
..		..	62	..	1		
47		1	63	1	1		
		129	64	..	4		
	Total..1300		65	..	4		
	Aver..10.08		66	..	2		
			67	1	1		
			68	..	..		
			69	..	1		
			70	1	1		
				129			
			Total..5132				
			Aver..39.78				

SECTION FIVE  
of the  
EDUCATIONAL SURVEY  
OF COLORADO STATE TEACHERS COLLEGE

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ACCOUNTING AND COSTS

A. O. COLVIN

*Professor of Commercial Education*

G. W. FINLEY

*Professor of Mathematics*



## ACCOUNTING AND COSTS

Under this heading the things considered were as follows:

1. The inventory showing present valuation of the plant.
2. Receipts from all sources.
3. Expenditures for all purposes.
4. Costs per student hour and per capita.

In working out the following statements and results, the committee has followed as nearly as possible the outline submitted in the report of the Committee on Normal School Standards and Surveys.

### 1. Inventory—

a Land and Land Improvements.....	\$170,000.00	
b Buildings .....	452,000.00	
c Furniture and Furnishings.....	51,663.27	
d Apparatus .....	24,246.75	
e Library .....	50,525.00	
f Museum .....	20,000.00	
	<hr/>	
Total .....		\$768,435.02

### 2. Receipts from All Sources—

a Direct Appropriation .....	\$158,283.81	
b Indirect Income .....	1,491.68	
c Incidental and Laboratory Fees.....	42,337.27	
	<hr/>	
Total Income .....		\$202,112.76

All of the above receipts were available for use at the discretion of the administration.

### 3. Classification of Expenditures—

a Capital Outlay (Equipment).....	\$ 2,000.00	
b Maintenance .....	5,000.00	
c Operation:		
(1) Administration .....	26,095.25	
(2) Physical Plant .....	21,693.40	
(3) Instruction .....	135,522.40	
	<hr/>	
Total Expenditures .....		\$190,311.05
Excess of Income Over Expenditures....		11,801.71
		<hr/>
		\$202,112.76

### 4. Cost for Summer School 1918 included above.

## COSTS IN COLORADO STATE TEACHERS COLLEGE

1.	For costs on Teaching Hours and Student Hours, see Section IV.	
2.	The annual cost per capita based on the average enrollment—	
	a 4% of the Value of the Plant.....	\$ 30,737.40
	b 2% of the Cost of the Buildings.....	9,040.00
	c Cost of Maintenance and Operation.....	185,311.05*
	Total .....	\$223,088.45
	Average Enrollment Per Quarter.....	1,228**
	Per Capita Cost.....	\$181.67
3.	Additional data—	
	a Cost of Maintenance and Operation for Three Regular Quarters (Average).....	\$160,994.11
	Average Attendance for These Three Quarters.....	1,123.00
	Cost Per Capita.....	143.36
	Per Capita Cost Per Quarter.....	47.79
	b Cost for Summer Quarter.....	62,094.34
	Average Attendance, Summer Quarter.....	1,542.00
	Per Capita Cost.....	40.27

Notes\*—Expenses of conducting the Extension Department are not included.  
 \*\*College and Training School, not including Extension Department.











# Colorado State Teachers College BULLETIN

Series XX

January, 1921

Number 10

*Preliminary Announcement of the*  
**SUMMER QUARTER, 1921**  
GREELEY, COLORADO



West Gateway, Teachers College Campus

June						
S	M	T	W	T	F	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

July						
S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

August						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## THE CALENDAR

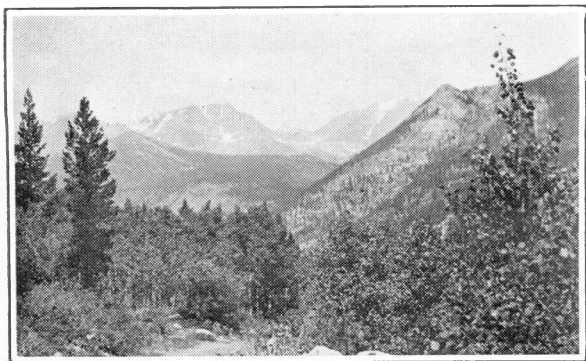
Registration day for the summer Quarter, Monday, June 20.

Classes begin Tuesday, June 21.

First half-quarter closes Friday, July 22.

Second half-quarter begins Monday, July 25.

The Quarter closes Friday, August 26.



Mountain View near Teachers College Summer Camp

mittee of Colorado State Teachers College will be continued this year on a larger scale than ever before.

Two new features of unusual interest are to be included this summer; first, a night in camp at Timberline on Long's Peak, and second, a climb to the summit of Long's Peak in the early morning hours of the following day.

A booklet giving full particulars will be published in a short time and can be had by sending to the Extension Department of the College a written request for the same.

#### OUTLINE OF THE WEEK-END TRIP INTO THE ROCKY MOUNTAIN NATIONAL PARK

The automobiles start from the West Gate of Teachers College at 11:00 a. m. each Friday of the Summer Quarter, pause for lunch at the Loveland Falls, 29 miles away, reach camp C. T. C. in Estes Park in time for a mid-afternoon dinner, then proceed to Long's Peak Inn.

The cars are left a mile above the Inn, and the party climbs in the late afternoon and early evening, with the aid of horses, to Camp Timberline, where tents and bonfires are in readiness.

Rising early on Saturday morning the party reaches the summit of Long's Peak, 14,255 feet high, by ten or eleven o'clock and then returns to Camp C. T. C. by five in the afternoon.

The third day of the trip is utilized in visiting the scenic places in the Rocky Mountain National Park, visited by a quarter of a million people each year.

#### COST AND EQUIPMENT

The entire auto charge for the one hundred and fifty miles covered in the three days is \$10.00—less than seven cents a mile. The seven meals cost four dollars. The two nights' lodging costs \$1.50. The total cost to those who go as far as Long's Peak Inn is fifteen dollars and fifty cents. Those who wish to climb Long's Peak must pay an additional \$2.50 to cover the cost of horses and guides.

All persons expecting to make this trip must provide themselves with warm underwear, common work dresses (outing suits preferred), heavy soled shoes, that you are willing to have scuffed, and a rain coat.

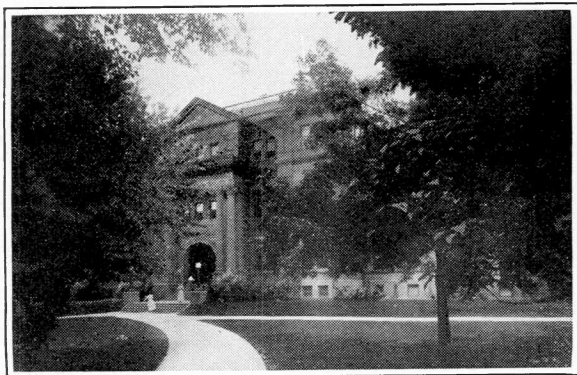
# *The Summer Quarter of 1921*

Colorado State Teachers College announces to all who are depending on it for further professional training that the progress already made toward perfecting a summer school for those who are in active service as teachers will be used as a point of departure for still other upward steps. The Quarter will begin Monday, June 20, after all public schools have closed, and will continue until Friday, August 26, closing in time for teachers to get back to their schools in ample time for the opening day. The ten weeks will again be divided into two half-quarters for the convenience of those who find it impossible to be here for the full quarter. Most of the courses, however, are arranged for the full quarter.

The College policy of adding to the faculty fifteen to twenty educators of national and international reputation as summer school lecturers and class-room teachers will be continued and extended.

Fuller opportunity for recreation, mountain trips, and entertainment will be provided for the week-ends, and a wider range of academic and professional courses will be listed than ever before.

Heretofore the College has assumed that all who enroll for the Summer Quarter intend eventually to complete a course and graduate from the College. For the past two or three years, however, there has been a large enrollment of practical teachers from both neighboring and distant states. Many of these have no intention of establishing standing with this College and eventually graduating in one of its courses of study. The College this year announces a change of policy for the accommodation of such teachers. Any teacher or prospective teacher over twenty years of age will be enrolled as an unclassified student and allowed to select any subject which he or she might reasonably be expected to carry profitably. No records of such work will be made upon the permanent College cards until such students have complied with the full terms of College entrance. Certificates of work done will be supplied to the students.



Administration Building, Colorado State Teachers College

five years. The Graduate School is maintained for students doing work beyond the bachelor's degree. Graduate students come from many states, and represent over forty colleges and universities. More than one-fourth of the whole number of Summer Quarter students are enrolled in the Senior College.

### ADVANCED STANDING

Students who come to the College after having done work in another college, normal school, or university will be granted advanced standing for all such work which is of college grade, provided that the college or normal school in question has required high school graduation as a condition for admission.

### GRADUATION, DIPLOMAS, THE LIFE CERTIFICATE, DEGREES, ETC.

Upon the completion of the Junior College Course, ninety-six hours, or the ordinary work of six quarters of twelve weeks each, a diploma is granted, and this diploma is a life certificate to teach in any position in any public school in Colorado. A similar diploma-certificate is granted upon the completion of the three-year course. Upon the completion of the four-year course the student is granted the degree of Bachelor of Arts in Education. The degree of Master of Arts in Education is granted for a year's work beyond the bachelor's degree. Both these diplomas are also life certificates and are recognized in Colorado and most other states.

### THE COURSES OF STUDY

For the Summer Quarter there will be regular work in all the departments of the College, and a number of departments will have the assistance of teachers outside the regular faculty. These are:

Agriculture, Biology, Chemistry, Commercial Arts, County Schools, Education, Educational Psychology, Fine and Applied Arts; Geology, Physiography and Geography, Grammar Grades, History and Political Science, Household Art, Household Science, Intermediate Grades, Industrial Arts, Kindergarten, Latin and Mythology, Literature and English, Mathematics, Modern Foreign Language, Music, Oral English, Physical Education and Playground Supervision, Physics, Primary Grades, Social Sciences.

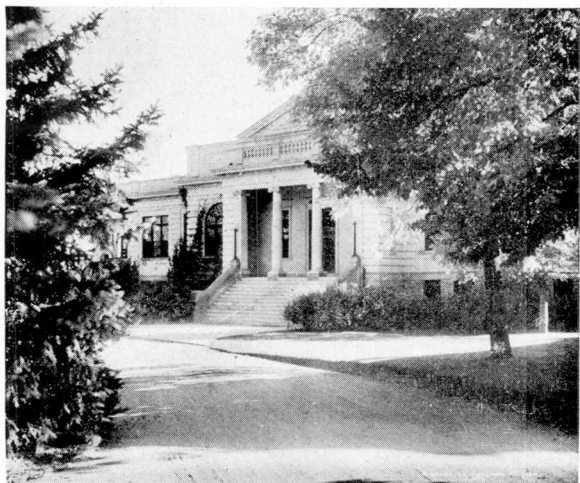
### LENGTH OF COURSE

Each course is planned to occupy twelve quarters (a quarter is approximately twelve weeks in length). Upon the completion of the course the degree of Bachelor of Arts in Education will be granted. The diploma is a Colorado life certificate. Each course is so arranged that it may be divided into Junior College (two years) and Senior College (two additional years). The Junior College course may be completed in six quarters. The student who chooses to be graduated at the end of the Junior College course receives the Colorado life certificate, but no degree. Students who come to the college with advanced standing, and those who gain time by doing work of exceptional quality, may shorten the course somewhat.

### CAMP DUNRAVEN

The Mountain Summer Camp of Colorado Teachers College

The now celebrated Week-End Excursion to the Rocky Mountain National Park conducted by the Outing Com-



College Library

### LOCATION

Colorado State Teachers College is situated in Greeley, a beautiful town of 12,000 people, 52 miles north of Denver on the Union Pacific Railroad. Greeley has the distinction of being the town which was founded by Union Colony, the group encouraged and directed by Horace Greeley when he said, "Go West, young man." From the beginning it has been made as nearly an ideal home town as possible. It has never allowed the sale of intoxicants, and has always encouraged sober-minded, earnest citizens to make their homes in Greeley. The streets are wide and shaded; the lawns are beautiful; the surroundings are satisfying and health-giving; the air is clear and invigorating, and the water supply abundant and pure. The water is piped forty miles from a fine stream in the mountains.

The College itself is located upon a slight elevation in the southern residence section of the city, and is surrounded by grounds that are a marvel to all who come to Greeley. The lawns are spacious and well kept, the trees varied and beautiful, and the garden effects of flowers, shrubs and trees very attractive indeed. The campus of Teachers College is praised all over the country.

The country surrounding Greeley is one of the richest sections of farming land in the world. It is an education in itself to see the farms and to come to understand the fine types of scientific, irrigated and dry farming that are carried on in the Greeley district. Beet sugar, potatoes, alfalfa, beans, cabbage, garden produce and the grains are the chief products. Cattle and sheep feeding is an important industry.

While Greeley is on the plains 30 miles from the mountains, the main range is a magnificent view for a stretch of 100 miles. Well-kept roads lead to the hills, and auto excursions are the regular week-end recreation.

## LIVING ACCOMMODATIONS

Students room in homes near the College. A great many citizens have built commodious modern homes with a view to taking student roomers. An approved list of rooms is kept in the office of the dean of women, and an assistant is ever ready to aid students either before coming to Greeley or after to secure suitable rooms. A limited number of rooms for light house-keeping are available. The cost of rooms is from \$14 to \$20 a month, with two students in a room to share the expense.

Boarding may be had in private houses and in boarding houses at reasonable charges. The rate at present is from \$6 to \$6.50 a week. The College also maintains a clean and attractive cafeteria in the Home Economics Building, where meals are served at a trifle above cost. The average cost of meals per week in the cafeteria for the past summer was \$4.

## FEES AND EXPENSES

The Summer Quarter is self-supporting. The annual income of the College derived from a millage on all state taxable property is devoted to the other three quarters. On this account the college is obliged to charge a fee for the Summer Quarter considerably in excess of the usual charge for the Fall, Winter or Spring Quarters. This fee is \$30 for Colorado citizens or \$35 for others. For a half quarter the charge is one-half those amounts.

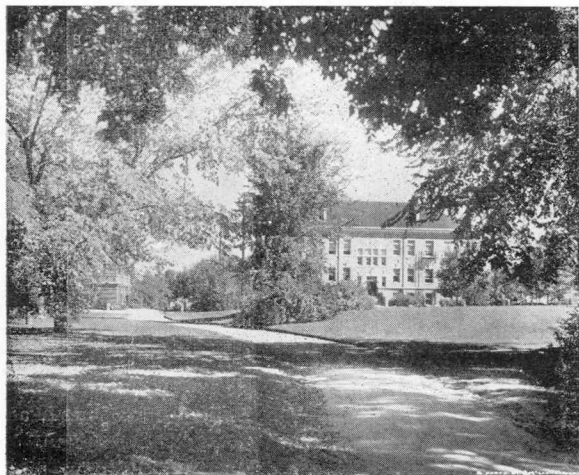
Estimated average expense for the Summer Quarter:

College fees .....	\$30.00
Board, ten weeks.....	45.00
Room, ten weeks.....	20.00
Books .....	5.00
	<hr/>
Total.....	\$100.00

Books are bought from the College book room and may be re-sold to the book room at the end of the quarter if the book is still on the "used" list and is in good condition.

## ORGANIZATION

The College is an institution strictly for the training of teachers. It graduates students upon the completion of a two-year course. Advanced students are graduated upon the completion of courses covering three, four, or



College Campus and Guggenheim Hall



## THE FACULTY

The regular faculty of seventy-five teachers will all be in residence for the Summer Quarter. In addition, fifteen men of international reputation will both lecture and teach in the summer quarter classes.

- Dr. Edward Howard Griggs, author and lecturer on literature and philosophy, New York City—June 27 to July 1.
- Dr. Edward Carey Hayes, head of the department of sociology in the University of Illinois and author of standard books on Sociology and Economics—June 20 to July 22.
- Dr. Lincoln Hulley, president of John B. Stetson University of Deland, Florida, will give courses of lectures on literature and history—July 25 to July 29.
- Dr. Edward A. Steiner, professor of Sociology in Grinnell College, Iowa. Lectures on social, industrial and immigration problems—August 15 to August 19.
- Dr. Charles Chadsey, formerly Superintendent of Schools, Denver, Colorado, Detroit, Michigan, and Chicago, now Dean of the School of Education, University of Illinois—August 15 to August 26.
- Dr. John W. Withers, Superintendent of Schools, St. Louis, Missouri. Dr. Withers, at the expiration of his term in St. Louis will become Dean of the College of Education of the New York University. Courses in Education.
- Mr. Harry S. Gruver, Superintendent of Schools, Worcester, Mass. Courses in Education, continuing his work of the past two summer quarters—July 25 to August 26.
- Dr. Edward L. Thorndike, head of the Department of Educational Psychology, Teachers College, Columbia University. Lectures and class room work in Educational Psychology—July 11 to July 22.
- Dr. Daniel Starch of the Department of Psychology, University of Wisconsin. Lectures and courses in Educational Measurements, Educational Psychology, etc.—August 15 to August 26.
- Miss Genevieve Kirkbride, specialist in Kindergarten and Primary Education, University of Chicago. This will be Miss Kirkbride's second summer quarter in Colorado Teachers College. She will continue the fine work she began last summer—July 25 to August 26.
- Dr. Ernest Horn, formerly of Colorado Teachers College faculty and of Teachers College, Columbia. At present head of the Department of Experimental Education, Iowa State University. Courses in Education—July 25 to August 26.
- Mr. Alfred L. Hall-Quest, College for Teachers, University of Cincinnati. Will give lectures on Supervised Study and other phases of Education—July 18 to July 22.
- Superintendent Jesse H. Newlon, Superintendent of Schools, Denver, Colo. Courses in Education—June 20 to July 1.
- Dr. Frank B. Dyer, formerly Superintendent of Schools, Cincinnati, Ohio, and Boston, Massachusetts. Courses in Education—July 25 to August 12.
- Dr. Frederick E. Pierce, Professor of English, Yale University, New Haven, Connecticut. Courses in English Literature—July 25 to August 26.
- Dr. William F. Snow of New York City. Lectures and class-room work in Hygiene and Public Health.

## DAILY SCHEDULE OF CLASSES

Classes begin at 7:00 and close at 1:00, leaving the afternoon open for study, outdoor recreation, physical education, etc. The open lectures by special lecturers are at 7:00 in the evening.

## BUILDINGS, BUILDING PROGRAM, AND MAINTENANCE

At present the College has six commodious and well-arranged buildings for its class-rooms, schools, and offices. In addition it has six other subsidiary buildings, such as the President's House, Women's Club House, Domestic Science Cottage, temporary gymnasium, greenhouse, etc. It has also an appropriation of approximately a million dollars to be spent within the next eight years for additional college buildings, dormitories, etc. The income for salaries and maintenance is sufficient to support a teachers' college of the first rank.

## SUMMARY

Population of Greeley, 12,000.

Altitude, 4,597 feet.

Fifty-two miles from Denver.

Sunny days and cool nights; low percentage of humidity.

Pure mountain water.

Fifty-two miles from Estes Park (Colorado National Park).

## PUBLICATIONS

Complete Summer Quarter Bulletin will be ready about March 15th.

Annual Catalog.

Extension Bulletin.

All these sent free upon request.

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### Address

COLORADO STATE TEACHERS COLLEGE

J. G. Crabbe, President

Greeley, Colorado



Club House, Social Center of Teachers College

# Colorado State Teachers College Bulletin

Series XX

FEBRUARY, 1921

Number 11

THE SUMMER QUARTER  
1921



GREELEY, COLORADO

June 20 to August 26

Published Monthly by the State Teachers College, Greeley, Colorado

Entered as Second Class Matter at the Postoffice at  
Greeley, Colorado, under the Act of August 24, 1912

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## IMPORTANT ANNOUNCEMENTS

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### THE SUMMER QUARTER OPEN TO ALL

Any person twenty years of age or over, whether a high school graduate or not, may enroll in the College for the summer quarter and take such subjects as they are interested in and able to carry. A record of attendance and a list of the subjects taken will be kept. College credit toward graduation is given only to those who meet the entrance requirements as stated on page 8. Students who attend the summer quarter without submitting high school credentials may later present these and have their marks previously earned transferred to the regular credit records of the College.

The College, as usual, divides the Summer Quarter into two equal half quarters for the convenience of the few students who can attend for only a part of the time. Only those courses which are designated "First Half," "Second Half," or "Either Half" carry credit for less than the full quarter. All other courses must be carried for the full quarter, if taken for college credit. There are fewer of these half quarter courses this year than formerly, because of the lessening demand for them. Most summer school students are arranging to remain for the full quarter and earn a full quarter's credit toward graduation.

### REGISTRATION—PAYMENT OF FEES

All students who expect to be in attendance for the full quarter should make up a program card for the whole quarter. The quarter fees may be paid all at once or for the student's convenience in two parts—one-half June 20, and the second half July 25.

**Late Registration**—Students registering after June 20 (for the first half quarter) or July 25 (for the second half) pay a fee of \$2.00 for late registration. Except by special permission of the Dean of the College, no student, after his first quarter of school work during any given school year, who registers after the first day of the quarter shall under any consideration be allowed to take more than sixteen hours of work, and no additional credit for A's or AA's will be allowed such student for the work of the quarter in which he has registered late. If the student is more than three days late the total number of hours on his program will be reduced in proportion to the time lost.

Any student absent from class on the last day of the quarter will have his quarter report for that class turned in as incomplete unless he has a written permit from the President or Dean to leave before the close of the quarter. No teacher has authority to excuse a student from one of his courses before the close of the quarter.

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# Colorado State Teachers College Bulletin

THE  
SUMMER QUARTER  
1921

THE  
STATE TEACHERS  
COLLEGE OF COLORADO  
Greeley, Colo.

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## DATES

The Quarter: June 20-August 26

First Half: June 20-July 22

Second Half: July 25-August 26

## The Faculty

Summer Quarter, 1921

- JOHN GRANT CRABBE, A.B., A.M., Pd.M., Pd.D., LL.D., President.  
 FRANCIS LORENZO ABBOTT, B.S., A.M., Professor of Physical Science.  
 LEVERET ALLEN ADAMS, A.B., A.M., Ph.D., Professor of Biology.  
 W. D. ARMENTROUT, A.M., Director of the Training School.  
 LELA M. AULTMAN, Pd.B., Pd.M., A.B., Training Teacher, First Grade.  
 GRACE M. BAKER, Professor of Fine and Applied Arts.  
 W. E. BAKER, A.M., High School Science.  
 GEORGE A. BARKER, M.S., Professor of Geology, Physiography and Geology.  
 JOHN R. BELL, Ph.B., A.M., D.Litt.  
 WILLIAM GRAY BOWERS, Ph.D., Professor of Chemistry.  
 A. E. BROWN, A.M., Director of Secondary Education.  
 RALPH T. BISHOP, Instructor in Printing.  
 MARK BURROWS, A.B., Director of Rural Administration.  
 ALBERT FRANK CARTER, A.B., M.S., Librarian; Professor of Library Science.  
 ELIZABETH CLASBEY, Instructor in Household Science.  
 AMBROSE OWEN COLVIN, B.C.S., Professor of Commercial Education.  
 EDITH CREMEANS, Assistant Librarian.  
 E. A. CROSS, A.B., A.M., Dean of the College. Professor of Literature and English.  
 LUCY B. DELBRIDGE, Violin.  
 HULDA A. DILLING, B.E., Training Teacher, Third Grade.  
 EDWIN STANTON DUPONCET, A.B., Ph.D., Professor of Modern Foreign Languages.  
 FLORA ELDER, A.B., Instructor in Commercial Education.  
 GEORGE WILLIAM FINLEY, B.S., A.M., Professor of Mathematics.  
 CHARLES M. FOULK, Pd.B., Professor of Manual Training.  
 HELEN GILPIN-BROWN, A.B., Dean of Women.  
 SAMUEL MILO HADDEN, Pd.B., A.B., A.M., Dean of Practical Arts. Professor of Industrial Education.  
 MORRIS HANCOCK, A.B., Assistant Professor of Educational Psychology.  
 W. H. HARGROVE, B.S., Professor of Agriculture.  
 JOSEPHINE HAWES, A.B., A.M., English, High School.  
 JACOB DANIEL HELLMAN, A.B., Ph.D., Professor of Educational Psychology.  
 RAYMOND H. HUNT, A.B., Reed and Brass Instruments.  
 EDWARD KAMINSKI, Instructor in Fine and Applied Arts.  
 ELIZABETH HAYS KENDEL, Pd.B., Pd.M., A.B., Training Teacher, Sixth Grade.  
 JOHN CLARK KENDEL, A.B., Director of the Conservatory of Music. Professor of Public School Music.  
 HAZEL KENNEDY, A.B., Assistant in Music, Piano.  
 JOSEPHINE KNOWLES KENDEL, Voice.  
 MARGARET JOY KEYES, A.B., Assistant in Physical Education and Dramatic Interpretation.  
 BLANCHE LOUDEN, B.S., Training Teacher, Fourth Grade.  
 GENEVIEVE LYFORD, B.S., Kindergarten.  
 GLADYS E. KNOTT, B.S., M.S., General Science, High School.  
 H. PEARL LIPP, M.D., Medical Adviser of Women.  
 ROYCE REED LONG, A.B., Director of Hygiene and Physical Education.  
 THOMAS C. MCCRACKEN, A.B., A.M., Ph.D., Dean of the Graduate School. Professor of the Science and Art of Education.  
 FLORENCE LOWE, Pd.M., Instructor in Fine and Applied Arts.

LUCY MCLANE, A.B., English, High School.  
 MARIE GUSTAVA LUNDBERG, B.S., Assistant Professor of Household Science.  
 ARTHUR E. MALLORY, A.B., Mathematics, High School.  
 SENORA METSKER, A.M., Training Teacher, Fifth Grade.  
 GURDON RANSOM MILLER, Ph.B., A.M., Ph.D., Professor of Sociology and Economics.  
 KATHERINE OMMANNEY, A.M., Instructor in Literature and English.  
 BERNICE ORNDORFF, Ph.B., Training Teacher, Seventh Grade.  
 EVELYN NEWMAN, A.M., Assistant Professor of Literature and English.  
 WILLIAM B. PAGE, M.D., Assistant Librarian.  
 ORA B. PEAKE, A.B., A.M., History; High School Preceptress.  
 O. W. SCHAEFER, Bookbinding.  
 MARGARET SCHEMEL, B.S., Training Teacher, Eighth Grade.  
 WILLIAM E. SEARCH, Assistant Professor of Physical Education.  
 BELLA BRUCE SIBLEY, Pd.B., Pd.M., A.B., A.M., Training Teacher, Second Grade.  
 EDWIN B. SMITH, B.S., A.M., Professor of History and Political Science.  
 EDITH STEPHENS, A.B., Assistant Librarian.  
 FRANCES TOBEY, B.S., A.B., Professor of Oral English.  
 EDNA F. WELSH, Pd.B., Pd.M., Commercial Education, High School.  
 EDITH GALE WIEBKING, Instructor in Household Arts.  
 GRACE WILSON, Pd.B., A.B., Assistant to the Dean of Women.  
 FRANN LEE WRIGHT, A.B., A.M., Professor of Education.  
 M. EVA WRIGHT, Piano and Pipe Organ.

### GENERAL LECTURERS AND SPECIAL TEACHERS

#### Summer Quarter, 1921

The College announces the completion of plans for the summer lectures and special teachers for the coming summer quarter to include the following men of national educational fame.

Ten of the men will be called upon for evening lectures, each lecturer giving a series of five lectures during the evenings of one week. In addition to this most of the general lecturers will teach in regularly organized classes for periods of from one week to a full quarter.

In certain courses several of the visiting instructors teach through consecutive weeks. The classes will be in charge of resident instructors when not under the direction of visiting teachers and lecturers.

- EDWARD HOWARD GRIGGS, A.M., L.H.D., Lecturer on Literature, Ethics and Philosophy, New York.
- DR. EDWARD CAREY HAYES, Head of the Department of Sociology in the University of Illinois, and author of standard books on Sociology and Economics.
- DR. LINCOLN HULLEY, President of John B. Stetson University of Deland, Florida. Literature and History.
- DR. EDWARD A. STEINER, Professor of Sociology in Grinnell College, Iowa. Lectures on social, industrial and immigration problems.
- DR. CHARLES E. CHADSEY, formerly Superintendent of Schools, Denver, Colorado; Detroit, Michigan, and Chicago; Dean of the School of Education, University of Illinois.
- MR. HARVEY S. GRUVER, Superintendent of Schools, Worcester, Massachusetts. Courses in Education.
- DR. EDWARD L. THORNDIKE, Head of the Department of Educational Psychology, Teachers College, Columbia University. Educational Psychology.
- DR. DANIEL STARCH of the Department of Psychology, University of Wisconsin. Lectures and courses in Educational Measurements, Educational Psychology, etc.

- MISS GENEVIEVE KIRKBRIDE, Specialist in Kindergarten and Primary Education, University of Chicago.
- DR. ERNEST HORN, formerly of Colorado Teachers College faculty and of Teachers College, Columbia. Head of the Department of Experimental Education, Iowa State University. Courses in Education.
- MR. ALFRED L. HALL-QUEST, College for Teachers, University of Cincinnati. Lectures on Supervised Study, and other phases of Education.
- DR. JOHN W. WITHERS, Superintendent of Schools, St. Louis, Missouri. Dr. Withers, at the expiration of his term in St. Louis will become Dean of the College of Education of the New York University. Courses in Education.
- MR. JESSE H. NEWLON, Superintendent of Schools, Denver, Colorado. Courses in Education.
- DR. FRANK B. DYER, formerly Superintendent of Schools, Cincinnati, Ohio, and Boston, Massachusetts. Courses in Education.
- DR. FREDERICK E. PIERCE, Professor of English, Yale University, New Haven, Connecticut. Courses in English Literature.
- DR. WILLIAM F. SNOW of New York City. Lectures and class room work in Hygiene and Public Health.
- DR. O. T. CORSON, Editor Ohio Educational Monthly. General lectures on Education, Theory and Practice.
- MISS LOUISE TUTCHER, Primary Supervisor, Lawrence, Kansas.

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## The Summer Quarter, 1921

The Summer Quarter of 1921 will in general follow the plans begun in 1918. The quarter will be but a little shorter in actual time than the other three quarters of the college year. Each instructor will include all the material in his courses that he regularly uses and will give full time to each topic. A student will carry sixteen hours of work the same as in other quarters. This includes the usual two hours' credit for the evening lectures.

This year the policy of bringing in from other institutions, not only lecturers, but class-room teachers as well will be continued and extended. Twenty lecturers and teachers from other educational institutions will be in Greeley to give the best they have to the summer school students.

### THE GROWTH OF THE SUMMER SCHOOL

The Summer School of Colorado State Teachers College began its work in 1905 with a small faculty group and about two hundred students. In 1910 practically the whole faculty, exclusive of the training school and high school teachers, remained to teach through the six weeks of the summer school. In that year there were 443 students. In 1918 the summer term was placed upon an academic level with the other quarters of the college year. The term was lengthened to a quarter and the credits were made equal in value with those of the college year. With this step the college entered upon the four-quarter year. The change proved to be a popular one. The attendance increased instead of falling off with the lengthened term, augmented expense, and diminished credit for the work done. Today the teachers, not only of Colorado but of neighboring and distant states as well, recognize the fact that the College is doing a large service to the profession of teaching by making it possible for active teachers to keep up with the development of modern educational practice and to continue their professional education without losing time from their teaching. Fifteen hundred teachers each year avail themselves of the opportunity.



### WHO MAY ATTEND THE SUMMER QUARTER CLASSES

Admission to the College at other times is limited to those who have completed fifteen units of high school work. The strict observance of this rule during the summer would make it impossible for hundreds of experienced teachers, who are not high school graduates, to get into touch with all the new movements in education which the College faculty and visiting instructors are presenting to the summer quarter students. This year for the first time the College is opening the summer classes to all who may profit by the instruction offered.

Any student twenty years of age or over may be enrolled in Teachers College for the Summer Quarter without reference to meeting the College requirement for admission. The College believes it can render a valuable service to the teachers of Colorado and surrounding states by allowing any mature man or woman who is teaching or expecting to teach, but who has not graduated from a high school, to enroll in the College for the Summer Quarter and take from the complete College program such work as he or she may be able to carry.

No college credit will be recorded, however, for any student until the requirements for college entrance have been fully met. A record of attendance and work done will be kept. This may later be transferred to the permanent records and counted toward graduation when the entrance requirements have been complied with.

### FEES AND EXPENSES

**Board**—Students board in private homes, boarding houses, and in the College Cafeteria. The cafeteria was started to enable students to keep the outlay for board down to a figure of approximate cost. Last summer the average cost of board for 300 students in the cafeteria was \$4 a week. It will not be higher than that this year.

**Room**—Private houses in the vicinity of the College provide rooms for students. With two students in a room the cost is seven, eight, or nine dollars a month for each student.

**Light Housekeeping**—A limited number of rooms for light housekeeping are available at a reasonable rental. The assistant to the dean of women, Miss Grace Wilson, will supply prospective students with lists of rooms upon request.

**College Fees**—The state provides funds for the maintenance of the College for three quarters in the year. The Summer Quarter has the use of the College buildings and equipment but finds it necessary to draw its financial support largely from student fees. Each student pays fifteen dollars for a half quarter, or thirty dollars for the full quarter. Students, not citizens of Colorado, pay an additional fee of five dollars for the full quarter.

All students who expect to be in the College for the full quarter make out their programs of studies for the full time. The fees, however, may be paid in two parts, one-half on June 20, and the other, July 25.

**Books**—Books may be bought from the College book room. At the end of the quarter any book in good condition and still to be used as a college text book, may be resold to the book room at a slight discount.

The table below represents a median of expense—neither the least possible nor the highest—and covers the three large items of college expense.

#### APPROXIMATE EXPENSE FOR TEN WEEKS

Room .....	\$20.00
Board .....	40.00
College Fees .....	30.00
Books and supplies .....	5.00
Total .....	\$95.00

### DIPLOMAS, CERTIFICATES AND DEGREES

The Colorado Life State Certificate is granted to all graduates of any of the two-year or three-year courses of study. This certificate is honored as a life state certificate for elementary school teachers in practically all Western states and in many Southern and Eastern states as well. The degree of Bachelor of Arts in Education is granted to candidates who complete any of the four-year courses. The degree of Master of Arts in Education is conferred upon candidates who carry their school studies with distinct success one full year beyond a recognized bachelor's degree. A thesis is also required for the master's degree. Both the bachelor's and master's diplomas are also life state certificates under the laws of Colorado.

### LOCATION OF THE COLLEGE

As this bulletin goes to several thousand teachers and students who have never visited Colorado, a few words may fittingly be said here regarding Teachers College and Greeley as to location and climate.

Greeley is one of the most beautiful small cities to be found anywhere. It is situated 52 miles north of Denver, within plain view of the Rocky Mountains, in the heart of the richest farming country in the world. Its homes shelter an intelligent population of over 12,000 persons, overwhelmingly American. Its streets are broad and shady, its lawns well kept; its water supply is piped 38 miles from a mountain canon, and is pure and soft. It is pre-eminently a city of homes, schools, and churches.

The altitude, 4,567 feet above sea level, insures clear, dry air, sunny days and cool nights. Seldom does the night temperature go above 70 degrees, even in the hottest part of the summer; 60 or 65 degrees at night is usual. Because of the low percentage of humidity, even the hottest midday is seldom oppressive, and sunstroke is unknown.

One may accomplish a given amount of brainwork here with the minimum of energy and fatigue, while recuperation comes quickly. This statement is true of the entire year.

### RECREATION

The now celebrated Week-end Excursion to the Rocky Mountain National Park conducted by the Outing Committee of Colorado State Teachers College will be continued this year on a larger scale than ever before.

Two new features of unusual interest are to be included this summer: First, a night in camp at Timberline on Long's Peak, and second, a climb to the summit of the Peak in the early morning hours of the following day.

A Year Book giving full particulars will be published in a short time and can be had by sending to the Extension Department of the College a written request for the same.

**Summary of the Week-end Trip**—The autos start from the west gate of Teachers College at 11:00 A. M. each Friday of the Summer Quarter, pause for lunch at the Loveland dam, 29 miles away, reach camp C. T. C. in Estes Park in time for a mid-afternoon dinner, and then proceed to Long's Peak Inn.

The cars are left a mile above the Inn and the party climbs in the late afternoon and early evening, with the aid of horses, to Camp Timberline, where tents and bonfires are in readiness.

Rising early on Saturday morning, the party reaches the summit of the Peak by ten or eleven o'clock and the return to Camp C. T. U. effected by five in the afternoon.

The third day of the trip is utilized in visiting the scenic places in the Rocky Mountain National Park, visited by a quarter of a million people each year.

**Cost and Equipment**—The entire auto charge for the one hundred and fifty miles covered in the three days is \$10.00—less than seven cents

a mile. The seven meals cost four dollars. The two nights' lodging cost \$1.50. The total cost to those who go as far as Long's Peak Inn is fifteen dollars and fifty cents. Those who wish to climb Long's Peak must pay an additional \$2.50 to cover the cost of horses and guides.

All persons expecting to make this trip must provide themselves with warm underwear, common work dresses (outing suits preferred), heavy soled shoes, that you are willing to have scuffed, and a rain coat.

### BUILDINGS AND EQUIPMENT

**Buildings**—The buildings which are completed at the present time consist of the administration building, the library building, the residence of the President, the training school and the industrial arts building. The main, or administration building, is 240 feet long and 80 feet wide. It has in it the executive offices, class-rooms, and class museums. Its halls are wide and commodious and are occupied by statuary and other works of art which make them very pleasing.

The library is a beautiful building. The first floor is entirely occupied by the library, consisting of more than fifty thousand volumes. The furniture in the library is of light oak and harmonizes with the room in a most pleasing manner. The basement is occupied by committee rooms, text-book department, taxidermy shop, wild animal museum, and the departments of hygiene and agriculture.

The Training School is a commodious building of red pressed brick similar in style to the administration building. In its construction no pains or expense have been spared to make it sanitary, fireproof, and in every possible way an ideal building for a complete graded school from the kindergarten to the high school, inclusive.

The Simon Guggenheim Hall of Industrial Art is a beautiful structure in the classic style of architecture. It is constructed of gray pressed brick. It accommodates the departments of Manual Training and Art, including every branch of hand work and art training applicable to the highest type of public school of the present and immediate future. This building is a gift to the College from ex-Senator Simon Guggenheim.

The President's House is on the campus among the trees. In this beautiful home are held many social gatherings for students during the school year.

A temporary wooden structure was completed to take care during the war period of the needs for a modern gymnasium and auditorium.

**The Campus**—Surrounding the buildings is a beautiful campus of forty acres. It is covered with trees and grass, and dotted here and there with shrubs and flowers, which give it the appearance of a natural forest. During the summer, birds, rabbits, squirrels and other small animals make the campus their home, thus increasing its value as a place of rest, recreation, or study.

During the summer and fall quarters the faculty gives its evening reception to the students on the campus. At this time it presents a most pleasing appearance, being lighted, as it then is, by electric lights and Japanese lanterns.

In the rear of the buildings is a large playground, which covers several acres. In the southwestern portion of this playground is a general athletic field, a complete view of which is secured from a grandstand, which will accommodate more than a thousand spectators. On the portion of the grounds adjacent to the building there is a complete outdoor gymnasium. To the south of the buildings are located the tennis courts and the garden theater.

During the summer, courses on the organization of playgrounds will be given, and demonstration of how to carry out these courses in the public schools will be made on the campus.

**Equipment**—The institution is well equipped in the way of laboratories, libraries, gymnasiums, playgrounds, an athletic field, art collection,

museum, and a school garden. The library has 50,000 volumes bearing on the work of Teachers College. There is ample opportunity to work out subjects requiring library research. There is a handicraft department with the library wherein a student may learn how to conduct a library. The gymnasium is well equipped with modern apparatus. Games of all sorts suitable for schools are taught.

### ADMISSION TO THE COLLEGE, COURSES OF STUDY, GRADUATION, ETC.

**Regular Admission to the College**—Admission to the College is granted to those who present a certificate of graduation showing the completion of fifteen or more units in an acceptable high school. This certificate must be presented at the time of matriculation in the College, and should be accompanied by a transcript of the high school record, showing what subjects were studied and the number of units or the fraction of a unit made in each. A "unit" is a subject pursued for thirty-six weeks, with five recitations per week.

**Conditional Admission**—An applicant who is twenty years old or over, who is not a high school graduate, but who is credited with fourteen high school units may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of fourteen units. This admission is conditioned. Such students are limited to a maximum program of twelve hours per quarter and must make up the deficient high school unit in the Industrial High School during the student's first year in the College. The student could not be enrolled for the second year until the entrance condition had been removed.

**School for Adults**—Mature students over twenty years of age who have less than fourteen high school units of credit will be assigned to the School for Adults—a division between the high school and the College. As soon as they have completed the equivalent of fifteen high school units, or shown the learning power which such completion usually gives, they may be granted a certificate of high school graduation and admitted to the College.

**Special Registration for the Summer Quarter Only**—Many students come to the College for the Summer Quarter only and do not wish to go through the formality of presenting credentials for entrance. They do not expect to graduate and so do not care to have a permanent record of their credits made. Provision for these is made in the statement printed inside the front cover of this bulletin.

**Organization**—The College is an institution for the training of teachers. It graduates students upon the completion of a two-year course. Advanced students are graduated upon the completion of courses covering three, four, or five years.

**Function**—The purpose of the College is to train teachers for public school service. Being supported by public taxation of all the property of the State of Colorado, the College aims first to prepare teachers for all the kinds of public schools maintained within the State of Colorado. This includes rural schools, kindergartens, primary, intermediate grade, upper grade, junior high school departments, and high schools. The College also accepts the responsibility of training supervisors for rural schools, principals, superintendents, teachers of home economics, practical arts, fine and applied arts, critic teachers, teachers of defective and a-typical children, teachers for adult night schools, etc.

While the College is supported for the training of Colorado teachers, it welcomes students from any state or country and sends its teachers anywhere that they may be called. Students come to Colorado Teachers College from many states and its graduates go in large numbers into the neighboring states and in smaller numbers into distant states and countries.

The College recognizes as its plain duty and accepts as its function the training of students to become teachers in every type of school at present supported by the state, to meet actually all the demands for the best in the public school system of the present, and to forecast those improvements and reforms which the evolution of public systems of education is to bring about in the immediate future and to train teachers to be ready to serve in and direct the new schools which are in the process of being evolved.

**Advanced Standing**—Students who come to the College after having done work in another college, normal school, or university will be granted advanced standing for all such work which is of college grade, provided that the college or normal school in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all the prescribed "core" subjects in the course they select, unless these prescribed subjects or their substantial equivalents have been taken already in the normal school or college from which the student comes. Only the heads of the departments involved have the power to excuse students from taking these prescribed "core" subjects. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course. If college subjects have been studied in a fifth year in a high school, such credit as these subjects deserve will be allowed.

After September 1, 1921, credit will be given only for regular college work taken in institutions regularly recognized as standard colleges or colleges maintained primarily for the training of teachers. On and after that date Colorado Teachers College will discontinue giving college credit for teaching experience, county institutes, reading circles, penmanship certificates, music certificates, drawing certificates, private study, private lessons of any kind, or work in business colleges, conservatories of music, dramatic schools, or for any other kind of work not done in an institution ranking as a standard normal school college, teachers college or university.

Those who expect to attend the Summer Quarter of Colorado State Teachers College and who desire advanced standing, should write for application blanks for advanced standing at their earliest convenience, and should return those as soon as possible together with credentials to the College, so that they may be considered before the opening of the Summer Quarter. It is exceedingly important that full credentials, relative to all the work for which credit is expected, be forwarded. This saves the student much delay and inconvenience.

**The Unit of College Credit**—All credit toward graduation is calculated in **quarter-hours**. The term **quarter-hour** means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the college courses call for four recitations a week. These are called four-hour courses. A student usually selects sixteen quarter-hours, the equivalent of four courses each meeting four times a week, as his regular work.

Forty-eight quarter-hours are a student's regular work for the usual school year of nine months, or three quarters.

**Maximum and Minimum Hours of Credit**—A student registers usually for fifteen or sixteen hours each quarter. If the work is to count as resident work, the student must carry at least twelve quarter-hours.

A student who wishes to take a larger program than sixteen hours made up of any other additions than those mentioned above must take one of the standard mental tests. Applications for permission to take more than sixteen hours are made to the Committee on Students' programs. This committee will decline to grant permission to students to take more than eighteen hours, on the ground that it is better for the most brilliant student to do extended and careful work on eighteen hours, rather than to do twenty hours or more superficially.

It shall be a part of the duties of the Committee on Student Programs to learn at the close of the first half of each College quarter the quality of the work of each student carrying more than sixteen hours, and reduce the number of hours in each and every case regarding which any instructor reports the student's work as either weak or unsatisfactory.

**Minimum Residence Requirement**—The College does not grant any certificate or diploma for less than three full quarters of residence study, during which time the student must have earned at least forty-eight quarter hours of credit. Students who have already taken the two-year diploma must spend in residence at least one quarter out of each year required for the three-year or four-year courses in the College. Extension group classes, conducted by members of the College faculty, are considered as resident work and may be counted as such to the extent of one quarter out of each six quarters required for the student's graduation.

**The Grading System**—A student who takes a four-hour course may earn a little more than four hours of credit by doing unusually good work. On the other hand, less than four hours will be granted for work of poorer quality than a reasonable expectation. The system is as follows:

A mark of AA for a course gives 20 per cent above the number of hours indicated as normal for the course.

A gives 10 per cent above normal.

B gives the normal credit.

C gives 10 per cent below normal.

D gives 20 per cent below normal.

F indicates failure.

For example:

4B on a student's permanent record means that a student has taken a four-hour course and made the normal credit in it.

4AA would indicate most excellent work in a four-hour course and would carry 4.8 hours credit.

4A gives 4.4 hours credit on a four-hour course.

4B gives 4 hours credit on a four-hour course.

4C gives 3.6 hours credit on a four-hour course.

4D gives 3.2 hours credit on a four-hour course.

These marks, both figure and letter, go on the student's permanent record for later reference to indicate the quality of the work done.

A student who enters school late in the quarter or is compelled to leave may receive partial credit for the course in such a way as to indicate both the quality and the amount of credit. For example: A student may complete with exceptional distinction but two-thirds of a three-hour course. The mark should be 2AA, and not 3C. Each mark would give 2.4 hours, but the first mark would indicate the quality of the work as well as the amount of credit.

**The School Year**—The school year is divided into four quarters of approximately twelve weeks each. These are:

1. **The Fall Quarter.**
2. **The Winter Quarter.**
3. **The Spring Quarter.**
4. **The Summer Quarter.**

This division of the year is especially well suited to a teachers' college, for it gives teachers in active service an opportunity equal to any of securing a complete education while actually teaching.

**Shortening the College Course**—The Quarter plan, the Extension Work, and the grading system make it possible for students who are physically strong enough to stay in school with only short vacations to complete a college course in a shorter time than that usually required in the colleges. Ninety-six quarter-hours constitute the usual two-year college course, and one hundred and ninety-two quarter-hours make up the

four-year course required for the A.B. degree. By carrying an average of seventeen hours a quarter and making an average grade of "A," a strong student can earn 18.7 hours each quarter. At this rate he could complete the course for the two-year life certificate in five quarters, from the middle of June of one year to the end of August of the next. Or such a student could complete the course for the A.B. degree in two and a half years—ten quarters. By doing some work in Extension courses through the school year while teaching, it is possible for teachers in service to reduce the time of their courses also.

**Student Teaching**—Teachers who have had less than two years of college training take their practice teaching in the Elementary School. Those who have had two years of college training may choose between the Elementary School and the High School according to their own personal needs and interests. Most students are required to do two quarters of practice teaching before being granted the diploma of graduation from the two-year course. Experienced public school teachers may be excused from one quarter of this practice teaching by presenting to the superintendent of the Training School satisfactory evidence warranting such exemption.

Students who expect to teach in the Training Department, either the Elementary School or High School, during the summer session, are asked to correspond with the Director of the Training School before the opening of the quarter.

**The State Board of Examiners**—Every student before being granted a life certificate appears before the State Board of Examiners to teach a model lesson. Only students who have had at least a quarter's practice in the Training School are admitted to this examination. A second examination is not required of those who are taking the higher diplomas and degrees if they have already taught successfully before the State Board.

### APPLICATIONS FOR GRADUATION

Application for graduation must be filed in the Dean's office at least 30 days before the diploma is to be granted.

### THE DAILY PROGRAM

#### Summer Quarter

- 7:00 to 7:50—First Class Period
- 8:00 to 8:50—Second Class Period.
- 9:00 to 9:50—Third Class Period.
- 10:00 to 10:50—Fourth Class Period.
- 11:00 to 11:50—Fifth Class Period.
- 12:00 to 12:50—Sixth Class Period.

The afternoon is open for study in the Library and on the Campus and for Physical Education classes and informal recreation.

7:00 to 8:00 p. m. the General Lectures in the new Gymnasium-Auditorium.

### ELEMENTARY TRAINING SCHOOL

The Elementary Training School is an educational laboratory where useful educational problems are being worked out under the direction of skilled experts. New methods that save time, new schemes for better preparing the children for life, new curricula and courses of study are continually being considered by this school and are tried out provided they are sound educationally. The aim is not to develop a school that is entirely different from the elementary schools of the state, but to reveal conditions as they are and as they should be. The elementary training school strives to be the leader in the state that is new and modern. Effort is made to maintain such standards of excellence in the work that it may at all times be offered as a demonstration of good teaching under conditions as nearly normal as possible in all respects.

The Elementary Training School is a complete elementary school unit containing Kindergarten, First, Second, Third, Fourth, and Fifth grades. The Sixth, Seventh, and Eighth grades are organized on the departmental plan for the purpose of exploring and diagnosing earlier than usual the interests, attitudes, and abilities of pupils and at the same time to provide better for individual differences. This organization affords splendid opportunity for studying Junior High School problems. In the elementary training school the training teacher spends approximately one-half of her time teaching and the other half observing student teaching. The work of the student teacher consists of observation, supervision, and teaching under the direction of the training teacher.

#### Modern School of Supervised Study

There will be two rooms in the Elementary Training School set aside for supervised study. Dr. Hall-Quest will supervise this work the first half of the Summer Term and Dr. Horn the second half.

#### Secondary Training School

The primary function of the Secondary Training School is to train that group of teachers who intend to enter the field of secondary education. The State High School of Industrial Arts, the Secondary Training School of Colorado State Teachers College, is being built upon the theory that the highest interests of the pupils and the highest interests of the secondary training school can be made to harmonize.

Student teachers are to spend two-fifths or more of their time in teaching under the training teacher and the remainder in observing the training teacher. Student teachers are to be assigned teaching in terms of problems or units. Each problem requires at least five consecutive recitations or as many more as the training teacher may think necessary. Student teaching in the secondary training school consists of teaching, observing, lesson plans, readings, individual conferences with the training teacher, and general conferences with the director of Secondary Education and the director of the Training School.

#### School of Reviews of Colorado State Teachers College

To the elementary school teachers of Colorado the School of Reviews of the State High School of Industrial Arts offers an opportunity to strengthen one's grip on the subject matter of instruction. It does more than that. It affords a chance to observe good teaching and to receive sound instruction in teaching technique. The teachers thus receive a thorough review of the subject matter (with some amplification and expansion of the subject matter), and expert instruction in methods. Elementary teachers who are desirous of preparing for examinations or of



improving their proficiency in their work will find in the School of Reviews a real opportunity.

Courses will be given in Geography, Grammar, Arithmetic, Primary Methods, American History, General Science, School Management and Law, Rural Life and Education, General Methods, Hygiene, and Reading Circle books. Rates of tuition are \$18.00 for the Summer Quarter. The School of Reviews opens Monday, June 20th, and closes Friday, August 26th. For further information address A. E. Brown, Principal State High School of Industrial Arts, Greeley, Colorado.

### **Rural Training Schools**

It is the aim of the Department of County Schools to awaken an interest and develop initiative and constructive thinking toward solving the problems met with in rural, village, and consolidated schools. To this end an earnest study of the needs of rural and community life will be made, and the necessary changes in curricula, school organization, and administration. Some type of rural school must serve about one-half of all the children in the United States, and educational leaders with vision and initiative are in great demand.

Observation. During the second half of the quarter a two-teacher rural school will be opened for observation. A limited number of practice teachers will be accepted who will work in co-operation with the regular teachers. Students enrolled in the observation course will be conveyed to the school at least once each week to observe the work of the teachers, the methods employed and the general plan of management. The work will be so planned as to make the minimum amount of conflicts with other work.

Students who are regularly enrolled in college courses will receive credit for work done in the Demonstration School; special students may receive credit in the Industrial High School.

## The Graduate School

The Graduate School offers advanced instruction leading to the degree of Master of Arts in Education. The principal aim of graduate study is the development of power of independent work and the promotion of the spirit of research. The various departments of the College which offer graduate courses are willing to offer not only the courses regularly scheduled but others of research and advanced nature which the candidate wishes to pursue. Each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work.

Persons holding the degree of Bachelor of Arts, Philosophy, Science, or other four-year degree, from a reputable institution authorized by law to confer these degrees and approved by this Institution may be admitted as graduate students in Colorado State Teachers College upon the presentation of official credentials, including transcript of records of undergraduate work.

The prospective student should obtain the blank "Application for Admission" and send it to the Committee on Advanced Standing for their approval before the opening of the quarter. Such blanks may be secured by addressing the State Teachers College, Greeley, Colorado. Original credentials should be submitted with the application for admission.

### General Plan of Work for the Degree of Master of Arts in Education

**Residence**—Three quarters of work are required in residence at the College in advance of the requirements for the A.B. degree. This is three quarters of work beyond a four-year college course.

**Units of Work**—A year's work shall be interpreted as forty-eight quarter-hours. Thirty-eight hours' credit will be given for graduate courses pursued and ten hours for the Master's thesis which is required. Sixteen hours' credit a quarter during the regular school year is the maximum, inclusive of the research involved in the thesis requirement.

**Admission to Candidacy for Degree**—Admission to the Graduate School does not guarantee admission to candidacy for the M.A. degree. The student shall not be admitted to candidacy for the degree earlier than the close of his first quarter's work (completion of sixteen credit hours). Such admission shall be determined by a committee consisting of the President of the College, the Dean of the College, the Dean of the Graduate School, the Head of the Department in which the student is majoring, and two professors with whom the student has had work, these to be chosen by the Dean of the Graduate School. The merits of each student shall be the basis for the decision of this Committee; personal fitness, the ability to use good English both oral and written and the ability to do superior work in the field of specialization are among the important things to be considered by the Committee.

### The Nature of Graduate Work

**Specialization**—In keeping with the function of a teachers' college, graduate work shall be confined largely to professional lines of work. It shall represent specialization and intensive work. As soon after enrollment as possible, the graduate student shall focus attention upon some

specific problem which shall serve as the center for the organization of his year's work, including courses to be taken and special investigations to be conducted. No graduate credit will be given for scattered and unrelated courses.

**Thesis**—Research work culminating in the writing of a thesis upon some vital problem of education shall be an integral part of the work for the Master's degree.

**Breadth and Range of Professional Outlook**—In addition to the intensive and specialized work which is required of candidates for the Master's degree, they are expected to know the fundamentals of professional education.

**Final Examination Upon the Whole Course**—There shall be a final examination, oral or written, upon the whole course. An oral examination of two hours' duration is customary. This examination will cover the following ground: (a) The field of the thesis and special research, including topics closely related thereto; (b) The fields covered by the courses taken by the candidate; (c) The general fields of Psychology, Sociology, Biology, and Education.

#### General Information

1. All courses taken by graduate students must be approved in advance by the Dean of the Graduate School.
2. No graduate student may enroll for more than sixteen hours of work in any quarter. This regulation is essential to the maintenance of the standard of intensive work for the Master's degree. In determining the maximum amount of work permitted, research upon the thesis topic must be included within the limit stated. To this end, the student doing research work upon his thesis topic must enroll for the same.
3. Twelve hours shall be the minimum number of hours considered as a term in residence. If for any reason a student cannot carry more than twelve hours a quarter, the remaining hours may be taken in extension when approved in advance by the Dean of the Graduate School.
4. In order that the standard of intensive and specialized work for the Master's degree may be maintained, no graduate credit will be given for elementary courses, for scattered and unrelated courses, for public platform lectures or public platform lecture courses, or for courses in which the element of routine is large as compared with the theoretical and professional aspects.
5. Excess A.B. work may be applied toward the M.A. degree only when arrangement is made in advance with the Dean of the Graduate School so that he may see that the work is of M.A. standard and that it is in line with the specialization necessary for the M.A. degree. Such credit will be granted only to students in their fourth year who do not need all their time for the completion of their undergraduate work.
6. The courses which may be taken for graduate credit must be of an advanced character, requiring intensive study and specialization. Certain approved undergraduate courses may be pursued for graduate credit; but, when so taken, the character of the work done and the amount of ground to be covered must be judged by a higher standard than that which applies to the regular undergraduate student. The standard of intensive work set for the graduate student must be maintained even if special additional assignments have to be made to the graduate student who works side by side with the undergraduate.

7. Satisfactory teaching experience shall be regarded as a prerequisite to graduation with the Master's degree. Teaching in some department of the College or its training schools may, under certain conditions, be included in the graduate work of candidates for the Master of Arts degree. Routine teaching will not be recognized for graduate credit. When graduate credit is given to teaching, this work must be of an advanced character, so organized, controlled, and supervised as to insure some decided growth of the teacher in the scholarship of the subject or professional insight into its value and problems.

8. Sixteen hours of credit toward the M.A. degree shall be the maximum amount allowed to be earned in a regular school year by any one who is employed on full time, except upon the recommendation of the Dean of the Graduate School.

9. Before the M.A. degree may be conferred a student must have had at least 72 hours of college work in his major and not less than 32 hours of professional work in Education and related fields which is acceptable in the various states as requirements for certification.

10. All work for the M.A. degree shall be done with distinction; work barely passed (marks of D and C under the present marking system) shall not be considered worthy of such an advanced degree.

11. The thesis subject of the graduate student must be approved in advance by the Dean of the Graduate School and by the head of the department concerned. Before the degree is conferred the thesis, as a whole, and in detail, must be approved by the head of the department or the instructor under whose direction the thesis work has been done and also by the Dean of the Graduate School. Two typewritten copies of the thesis must be placed on file with the Dean of the Graduate School, both of which he shall place in the library for permanent reference.

12. Before the candidate for the Master of Arts degree is admitted to final examination the thesis requirement must be met in full, and the thesis must be in such a state of readiness at least three weeks previous to final examination, that only minor reconstructions need to be made, which will not delay its being put in final typewritten form for filing before the end of the quarter in which graduation falls.

13. The final examination will be presided over by the Dean of the Graduate School and conducted by the head of the department in which the candidate has done the main part of his work. Other members of the faculty may be given an opportunity to participate in the examination. An official visitor, or official visitors, from outside the department in which the candidate has specialized shall be appointed to attend the examination.

#### Directions as to Form of the Thesis

Students submitting theses should present them in typewritten form, upon paper of good quality, of customary size (8½x11), leaving a margin at the left adequate for binding—fifteen points by the typewriter, twenty if the manuscript is thick.

A title page should be prepared, containing in neat lettering at the top, the name of the institution, THE STATE TEACHERS COLLEGE OF COLORADO; below this at some distance the title of the thesis; about the middle of the page the statement: A THESIS SUBMITTED IN CANDIDACY FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION; at a lower level of the page the author's name, and at the bottom the address, and the year.

All theses should contain a brief analysis or table of contents at the beginning; should give footnote references to literature quoted by author, title of book or article, and exact page; and should contain at the end a bibliography of the literature of the subject. In giving bibliographical material, the customary form of publishing houses should be used, which is quite uniformly that of the author first, followed by title, price, copyright date, and publisher, and in case of magazine references, this by title of magazine, volume or date and page.

### **Fees for Graduate Courses**

Fees for graduate students in the Summer Quarter and in the regular school year will be on the same basis as fees for all others.

### **Graduate Scholarships**

For the encouragement of research and scholarship several scholarships are available for graduate students for the school year 1921-22. These range from \$100 to \$600 in value. Except in a few instances, where a certain amount of time is required in return for the stipend offered, the student will be expected to devote all of his time to graduate work.

Applications for scholarships should be filed with the Dean of the Graduate School not later than May 15th. A complete list of available scholarships is published regularly in the Year Book and Catalog of the College.

## The Courses of Study

Throughout this catalogue courses numbered 1 to 99 are primarily first and second year subjects; 100 to 199 are third and fourth year. Those numbered 200 and above are Graduate School.

Colorado State Teachers College is a technical school like a medical or engineering school. Its business is to train teachers for all types of schools maintained by the state. The College has abandoned the idea that there is a possibility of training teachers for the various kinds of teaching through the medium of a single course of study or a scattered elective course.

To meet the requirements for teachers of all kinds of schools the college provides the following courses of study, and asks each student entering October 1, 1918, or after, to select a course definitely and to consult as a permanent adviser the head of the department directing that course of study. Students who registered previous to that date may continue with the old course of study and complete that course if they can do so within reasonable limits of time; but all who can readily make the adjustment are advised to select one of the new courses and complete their work under the new plan.

**Length of Course**—Each course is planned to occupy twelve quarters (a quarter is approximately twelve weeks in length). Upon the completion of the course the degree of Bachelor of Arts in Education will be granted. The diploma is a Colorado life certificate. Each course is so arranged that it may be divided in the middle. The first part of each course may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives the Colorado life certificate, but no degree. Students who come to the college with advanced standing, and those who gain time by doing work of exceptional quality, may shorten the course somewhat.

Two-year and four-year courses of study for teachers are arranged for in the following departments:

- |  |   |
|--|---|
| 1. Agriculture (2 years only).   | 8. Geology, Physiography and Geography.   |
| 2. Biology.  | 9. History and Political Science.   |
| 3. Chemistry.  | 10. Home Economics.   |
| 4. Commercial Arts.  | 11. Hygiene and Physical Education.   |
| 5. Education.<br>Superintendents, H. S. Principals and Teachers.<br>Kindergarten.<br>Primary.<br>Intermediate.<br>Junior High School.<br>County Schools. | 12. Industrial Arts.<br>13. Literature and English.<br>14. Mathematics.<br>15. Music.<br>16. Physics.<br>17. Romance Languages and Latin.<br>18. Social Sciences. |
| 6. Educational Psychology.   |   |
| 7. Fine and Applied Arts.  |   |

The complete courses of study are shown in the Year-Book.

Each of the courses differs somewhat from the others in the subjects required by the respective departments, but each course contains the following subjects:

## First Year

1. The Professional Core:	Hours
Biol. 2—Educational Biology.....	3
Ed. 8—Educational Values.....	3
Soc. 3—Educational Sociology.....	3
<b>2. Other Required Subjects:</b>	
Eng. 4—Speaking and Writing (Students may be excused by proving proficiency).....	3
Ethics 1—(Required only of women students).....	1
Hygiene 8 is required of first year students and Hygiene 7 of second year students.	
Phys. Ed.—Physical Exercise (required each quarter).	

All first and second year students are required to take an active course each quarter. Third, fourth and fifth year students are exempt from this requirement but may elect any of the courses offered and receive credit towards graduation. Where physical disability makes it inadvisable for a student to participate in regular class activities, work in a corrective class, or special work in Hygiene is assigned.

## Second Year

1. The Professional Core:	Hours
Psych. 2a—Educational Psychology.....	3
Psych. 2b—Ed. Psychology (continued).....	3
Ed. 10—The Elementary School Curriculum.....	3
Pol. Sc. 30—Political Adjustment.....	3
Ed. 1—Principles of Teaching.....	3
<b>2. Other Required Subjects:</b>	
Phys. Ed.—Physical Exercise Courses (each quarter)	
The following work is required of all students who expect to take the two-year diploma.	
Two quarters Practice Teaching.	

**Students may graduate and receive the Colorado Life State  
Certificate at the end of the two-year course.**

## Third Year

1. The Professional Core:	Hours
Psych. 104—Psychology of the Elementary School Subjects, or Psych. 105—Psychology of the High School Subjects.....	4
Soc. 105—Social Maladjustments .....	4
<b>3. In the Third or Fourth Year</b>	
The following courses are required of those who expect to teach in high schools:	
Ed. 105—Principles of High School Teaching.....	4
Two quarters Practice Teaching in the High School.	

## Fourth Year

1. The Professional Core:	Hours
Ed. 111—Principles of Education.....	4
Ed. 116—The High School Curriculum.....	4
Psych. 108—Educational Tests and Measurements.....	3
(Ed. 116 and Psych. 105, Ed. 105 and H. S. practice teaching may be omitted by students who do not expect to become High School teachers. Additional practice teaching in the elementary school will be required instead.)	

## REQUIREMENTS FOR GRADUATION

**The Two-Year Course**—A student must do full work in residence during at least three quarters before being granted a certificate of graduation from the two-year course. Thus, at least forty-eight of his ninety-six required hours must represent resident work; the remaining forty-eight hours may be granted on advanced standing or for extension courses. Applications for graduation must be filed with the registrar at least 30 days before the close of the Quarter in which the diploma is to be granted.

**Time Limit for Completing a Course**—The expression “within reasonable limits of time” in the second paragraph under **Courses of Study** means within four years after beginning resident work on a course of study. Thus, a student selecting the General Course in September, 1916, would have until the end of the Summer Quarter of 1920 to complete the two-year course thus selected. Failing to complete the course within that time he or she would be required to complete one of the courses of study in effect in the Year Book current at the time of his or her application for graduation. If such a student completed the two-year course on or before September, 1920, then he or she would be required to elect one of the senior college courses of the year 1920-1921 and complete all the requirements of the course thus selected for the A. B. degree. This course would have to be completed within another four years (that is, before September, 1924).

**Transfer of Credits from Other Colleges**—Since Colorado Teachers College is a college for training teachers, its courses of study are technical courses. Those who come from universities or liberal arts colleges with one, two, or three years of advanced credits may find that some of these will not apply upon the course of study they may select here. Colorado Teachers College accepts all credits from standard colleges at face value to apply as electives in its courses of study, but does not guarantee that a student having had a year's work in another school will be able to complete a two-year course here in three more quarters. Many students are able to apply their previous work upon the courses selected here without loss of time, but often students find it necessary to remain in Colorado Teachers College somewhat longer than they had expected because of the number of required technical courses in a given curriculum.

**Group Courses**—Students entering the College October 1, 1917, or after, are required to select one of the group courses given in detail under the departments of the College. If a student has taken courses elsewhere similar to those specified in his group course, he may, with the consent of the head of the department in which he is taking his course, be allowed to substitute the work he has already had for Colorado Teachers College work. The student may not, however, be excused from the “core required subjects” except by the heads of departments giving those courses.

**Diploma**—The diploma granted upon the completion of the two-year course is a life certificate to teach in any kind of school in Colorado, and is honored in many other states.

**The Three-Year Course**—A student who comes to the College with two years of advanced standing from another college or normal school may secure the Colorado Life Certificate by doing three quarters of residence work and meeting the requirements of the group course in which he or she is specializing.

**The Four-Year Course**—At least three quarters of residence study are required for the A.B. degree. For graduates of the two-year course in this college, two quarters of additional residence study are required. One quarter only is required of those who take the three-year diploma and life certificate.

**The Fifth-Year Course**—See the Graduate School, pages 12 to 15.

**Diploma and Degree**—At the end of the fourth year of study, and upon the completion of 192 quarter hours of credit, the degree of Bachelor of Arts (A.B.) in Education will be conferred, and a diploma, which is a life license to teach in the public schools of Colorado, will be granted to all students who have completed the requirements of the course they are pursuing.



**Regulation Concerning Overlapping of A. B. and A. M. Work**—No student will be granted the A.B. degree who has not completed 48 or more hours (three full quarters) in residence in the college. Twelve or more hours done in the group courses conducted in Denver, Pueblo, and other neighboring cities by the resident faculty of the College may be counted as one (but only one) of the resident quarters. Three additional quarters in residence are required for the A.M. degree, with the same provision concerning outside group courses.

To prevent overlapping of time and consequent misunderstanding the Advanced Standing Committee grants advanced standing never in excess of 144 hours to applicants who fall short of admission to the graduate school. Students transferring to Colorado State Teachers College when they are within one or two quarters of the A.B. degree must expect to lose some time by making the transfer.

### AGRICULTURE

The courses in Agriculture given in the Summer Quarter are designed to prepare teachers to teach the subject in rural, village, and town high schools. Subject matter is emphasized, but methods and principles of teaching are adequately treated along with subject matter. Field and laboratory practice is given as much as possible.

#### 4. Farm Crops—Four hours.

An introductory course dealing with the most important farm crops with special reference to Colorado conditions.

#### 5. Soil Physics and Soil Fertility—Four hours.

A study of the soil with reference to its formation, fertility, and relation to plant growth.

##### 1a. Animal Husbandry—Four hours.

A study of breeds of farm animals with special reference to market grades and classes and how to meet the market demands.

##### 2a. The Teaching of Agriculture—Four hours.

This will be a study of the "What and How" to teach of the subject in the different types of schools in which the subject is being taught. Much time will be spent in outlining courses and selecting subject matter for the student's special type of school in which he expects to teach.

### BIOLOGICAL SCIENCES

The department of Biological Sciences occupies a lecture room and two laboratories on the third floor of the main building. It is equipped with microscopes, lantern slide collection, and type specimens for the work of zoology and botany. A museum for the use of nature work is located on the first floor of the Library Building.

#### Biology

**2. Bionomics**—Required in the first or second years. Three hours. Five days a week.

A study of some of the fundamental facts and laws of biology that have a bearing on education. It forms a basis for the intelligent study of other educational subjects. It considers: Mendel's Law, heredity, eugenics, evolution and civic biology.

#### Zoology

**5. Bird Study**—Three hours. Five days a week.

A study of the Colorado birds. Consists of work in the field, combined with the laboratory and museum. The course is not a scientific study of birds, but rather, as the name implies, a study of their histories, habits, habitat, and economic importance. Students are expected to use three hours Saturday mornings for field trips. Bring outing clothes, outing shoes, and field glasses if you have them.

### Nature Study

**1. Nature Study**—Three hours. Five days a week. Three hours extra out of door work. Dr. Adams.

Aims and principles of nature study, teaching nature, study in the grades, making of nature study programs, topics of the different seasons. The practical work consists of a study of fifty topics with outlines for their presentation in the lower grades. Students are supplied with their outlines. This work is from both the animal and plant field. Much of the work is carried on out of doors, and for this reason students should bring outing suits and shoes.

### CHEMISTRY

The increasing importance of the applications of chemistry to the industries since the European War has led to intensified interest in this subject. More comprehensive and practical courses in Chemistry are being given in the High Schools than heretofore, and more Chemistry is being given in connection with the courses in Home Economics since the realization of the magnitude of the world's food problems. Likewise, teachers of Chemistry, and teachers of Home Economics with some knowledge of Chemistry, are being demanded. It is the duty of every teacher to know something of the source, preparation, and properties of foods, dyes, poisons, etc.

In the program offered by the Chemistry Department, the teacher of Chemistry will find an opportunity to augment his or her knowledge of this subject. The prospective student of Chemistry will find the program suited to his or her needs; and Home Economic students of the regular school year will be enabled to pursue one or more of the required chemistry courses.

**1. General Chemistry**—Three hours. Fee, \$4.00.

Two lectures and one laboratory period on the theory of chemistry and non-metals.

**2\*. General Chemistry**—Three hours. Fee, \$4.00.

Two lectures and one laboratory period. A continuation of Course 1.

**3\*. General Chemistry**—Three hours. Fee, \$4.00.

Two lectures and one laboratory period on the chemistry of metals. A continuation of Course 2.

**4. General Chemistry**—Four hours. Fee, \$4.00.

This course covers the same text book work as Course 1, but requires more laboratory work. Two lectures and two laboratory periods.

**5\*. General Chemistry**—Four hours. Fee, \$4.00.

A more extensive course than Course 2. Two lectures and two laboratory periods. Continuation of Course 4.

**6\*. General Chemistry**—Four hours. Fee, \$4.00.

A continuation of Course 5. Two lectures and two laboratory periods. Courses 4, 5, and 6 are required of all science students (excepting those specializing in biology, who may elect 1, 2, and 3 instead; and of Home Economics students taking the four-year course).

**7. Qualitative Analysis**—Four hours. Fee, \$4.00.

A laboratory and consultation course on the separation and identification of the common elements. Eight hours attendance. Prerequisite Courses 1, 2, and 3 or 4, 5, and 6.

**108. Organic Chemistry**—Three hours. Fee \$4.00.

Two lectures and one laboratory period. A study of the hydrocarbons and their derivatives.

\*2 and 5 or 3 and 6 to be offered, depending on which is in greatest demand.

**109\*. Organic Chemistry**—Three hours. Fee, \$4.00.

Two lectures and one laboratory period. A continuation of course 108. A study of the carbohydrates, proteins and benzene derivatives. Prerequisites for 108 and 109 are 1, 2, 3 or 4, 5, 6. Recommended to students specializing in biology or physics.

**110. Organic Chemistry**—Four hours. Fee, \$4.00.

Two lectures and two laboratory periods. Same text book work as Course 108, but more extensive laboratory work.

**111\*. Organic Chemistry**—Four hours. Fee, \$4.00.

Two lectures and two laboratory periods. A continuation of Course 110. Prerequisites for Courses 110 and 111 are Courses 4, 5, 6. Required of students specializing in chemistry and of four-year Home Economics students.

**112. Food Chemistry**—Three hours. Fee, \$4.00.

Two lectures and one laboratory period. A study of foods, detection of adulterants, metabolism and dietary lists. Recommended as a general cultural course. Prerequisite for 112 is 1, 2, 108 and 109.

**113. Food Chemistry**—Four hours. Fee, \$4.00.

A more comprehensive course than 112. Required of students specializing in chemistry and of four-year Home Economics students. Prerequisites 4, 5, 6, 110, 111.

**114 and 114B. Quantitative Analysis**—Four or eight hours. Fee, \$4.00.

Gravimetric and volumetric analysis. A laboratory and consultation course. Eight or sixteen hours attendance. Prerequisites, Courses 4, 5, 6, 7.

**117. The Teaching of Chemistry**—Three hours. Fee, \$4.00.

Discussion and reports on the teaching of high school chemistry, and practice in setting up demonstration apparatus. Required of chemistry students specializing to teach the subject.

**COMMERCIAL ARTS**

Courses in the Commercial Department divide themselves into two groups: 1. Accounting. 2. Stenographic. Students who expect to major in the department and secure a two-year certificate should elect courses accordingly. The two-year stenographic course should be followed as outlined in the year book, with possibly some electives from the accounting course, or vice versa. Mixing courses from the two groups with no attention to the requirements in the year book might make it necessary for the student to remain in school longer in order to satisfy either of the requirements of the two-year certificate. A combination of the two two-year courses referred to above constitutes the requirement for the A.B. degree. Either of them may be taken in the first two years.

**1. Principles of Shorthand**—Required of Majors in Commercial Arts. Four hours. Full quarter.

A study of the first ten lessons in Gregg Shorthand with supplementary exercises.

**2. Principles of Shorthand**—Required of Majors in Commercial Arts. Four hours. Full quarter.

A study of the last ten lessons of Gregg Shorthand with supplementary exercises. This course completes the study of the principles of shorthand.

**3. Dictation**—Required of Majors in Commercial Arts. Four hours. First half or full quarter.

A brief review of word signs, phrasing and the vocabulary of the Gregg Manual, after which dictation will be given of both familiar and unfamiliar matter. Enough work will be given in this course to make one proficient in taking accurately ordinary dictated correspondence.

\*To be offered in case of sufficient demand.

**4. Speed Dictation**—Required of Majors in Commercial Arts. Four hours. First half or full quarter.

In this course more stress will be placed upon speed in shorthand, with the idea in mind that a student finishing this course should be able to take any dictated matter. The use of the Dictaphone will be given in this course.

**6. Methods in Commercial Education**—Required of Majors in Commercial Arts. Three hours. Full quarter.

The entire commercial field will be included in this study; equipment; the course of study; special methods; equipment of teacher; relation of business school to the community.

**11. Elementary Typewriting**—Required of Majors in Commercial Arts. Four hours. First half or full quarter.

Beginning work in touch typewriting, covering position at machine, memorizing of keyboard, proper touch and correct fingering, with instruction in care of machine.

**12. Typewriting. Business Letter Writing**—Required of Majors in Commercial Arts. Four hours. First half or full quarter.

Study of approved forms and circular letters, addressing envelopes, manfolding and tabulating.

**13. Advanced Typewriting**—Required of Majors in Commercial Arts. Three hours. First half or full quarter.

**17. Office Practice**—Required of Majors in Commercial Arts. Four hours. Either half or full quarter.

This course consists of intensive practice in a "Model Office." Students are required to do two hours of continuous work daily, four days per week, taking dictation and transcribing. This course also includes the operation and use of modern office appliances such as the mimeograph, mimeoscope, dictaphone, adding machines, filing systems, etc. This work is very carefully systematized and consists of actual correspondence. This comes from the president's office, the deans, and heads of departments. Outside work from churches and charitable institutions is solicited also.

**40. Business English**—Four hours. Full quarter.

The elementary principles involved in writing correct English. The sentence, the paragraph, grammatical correctness, effectiveness, clearness, and punctuation.

**50. Elementary Accounting**—Required of Commercial Majors. Four hours. First half or full quarter.

A general introduction, giving the historic background of the subject and a brief statement of the profession. The foundation of double entry book-keeping. Assets, liabilities, proprietorship, the balance sheet, income, expenses, profit and loss statement. The entire class period is given to discussion and an average of one hour daily is required for laboratory work.

**51. Intermediate Accounting**—Required of Commercial Majors. Four hours. First half or full quarter.

Partnerships, introduction to corporation accounting, and many miscellaneous accounting and business methods. Two complete sets of books are written up in this course, one illustrating a partnership and another some features of corporation accounting.

**53. Commercial Arithmetic**—Required of Commercial Majors. Four hours. First half or full quarter.

A thorough treatment of arithmetic from the modern commercial point of view.

**56. Penmanship**—Required of Majors in Commercial Arts. Two hours. First half or full quarter.

Drill in rapid, arm-movement, business writing. The Palmer system will be used.

## EDUCATION

The purpose of the course offered by the Department of Education is to give to the student a broad acquaintance with the most essential fields of educational activity. Although the work of the department must necessarily deal largely with the fundamental theories underlying the educative process, every course is so planned that the student should be able to make the application of these theories to actual practice in the school room.

**1. Principles of Teaching**—Three hours, required of all second year students.

Mr. Armentrout.

This course will consist of readings, discussions, and observations of classroom work in the elementary training school. It will deal with such topics as, types of classroom procedure; standards for judging both the subject matter and classroom instruction; development and use of lesson plans; socialized recitations and the project method; the ideas of enrichment, development and control of experiences and the methods appropriate to a realization of these ideas in the various grades of the elementary school from the kindergarten to the eighth grade.

**2. Student Teaching in Elementary Training School**—Four hours.

Mr. Armentrout.

This will include observations, conferences, supervision, and teaching on the part of student teachers.

**3. Primary Methods**—Four hours.

Mrs. Sibley, first half; Miss Dilling, second half.

This course is based on the needs of the child between the ages of seven and eight years. This course leads up to the selection of subject-matter which functions in the child's life. To this end a brief comparison of courses of study in some of our larger city schools is made. The latest and most scientific articles on primary methods are read and discussed. Many devices for teaching beginning reading, phonics, rhythm, spelling, songs, as well as methods for dramatization of stories, multiplication table, and practice in blackboard illustrating are given.

**4. Intermediate Grade Methods**—Four hours.

Miss Metsker.

The course is based on the needs of the child between the ages of ten and twelve. It will consist of (1) a review of the most significant things in child study common to children of this period; (2) a comparison of courses of study for these grades; (3) the building of a course of study; (4) methods of presenting the material of the curriculum of the intermediate grades.

**7. Practical Projects in Primary Grades**—Two hours first half, one hour second half. Either or both half quarters.

Miss Tutcher, first half; Miss Kirkbride, second half.

This course will deal with practical problems and projects in the work of the primary grades.

**8. Educational Values**—Three hours. Full quarter. Required of all students, first year.

Mr. Wright.

The purpose of this course is to give the student a critical attitude toward the material presented in the various school subjects. Each subject of the elementary school will be considered as to the reason it has for a place in the curriculum today; how it has been justified in the past; and how it may be presented now so as to be more fully justified. Recent magazine articles and text-books will be studied with a view to developing the attitude of looking for the material which is of greatest educational value of the child.

**10. The Elementary School Curriculum**—Three hours. Full quarter. Required of all students, second year.

Mr. Hall-Quest, first half quarter; Dr. Horn, second half quarter.

This course will deal with the aims, materials, and methods of the elementary school. The course should make the student intelligently critical of programs of study in the elementary school.

**13. The Teaching of Spelling—Two hours. First half.**  
Mr. Armentrout.

The purpose of this course is to present the most reliable and certain facts in teaching of spelling and to present them in their relation in the practical problems which the teacher has to face every day in the class room. The following problems will be discussed: The selection and classification of words; testing for word difficulty; a psychological basis of spelling; the presentation of words; the prevention and treatment of errors; the measurement of spelling ability; factors effecting spelling ability.

A study and classification of the different types of stories, songs, and games according to their fitness for various ages and purposes.

**15.—Vocational Guidance—Two hours. First half quarter.**  
Dr. McCracken.

This course will deal with the place of vocational guidance in public school systems. Among other subjects it will treat of the need and value of the study of occupations, vocational analysis, opportunities for vocational education, opportunities for employment, the work of placement and vocational bureaus and various guidance agencies in this and other countries.

**16. Girls' Camp Fire Work—One hour. Each half quarter.**  
Miss Lee.

This course is intended for those who wish to become Camp Fire Guardians. Groups will be organized into regular camp fires and do the work usually required of girls in such groups.

**17. Boy Scout Work—One hour. Each half quarter.**  
Dr. Adams and others, first half; Mr. Gruver, second half quarter.

This course is intended for those who wish to become Boy Scout Masters.

**21. County School Problems—Two hours. Each half quarter.**  
Mr. Burrows.

This course considers the problem of the county school, the teacher, the child, the school board, and the community.

**22. Student Teaching in County Demonstration Schools—Two hours. Second half quarter.**  
Mr. Burrows.

A two-teacher rural school will be available for observation and teaching. The work is intended to meet the needs of those who expect to work in rural schools.

**26a. The County School Curriculum and the Community—Two hours each half quarter.**  
Mr. Burrows.

This course will present the problems of the teacher who desires to instruct country children in terms of their environment. Methods and materials for such instruction will be outlined and discussed. Special attention will be given to ways and means for vitalizing the subjects in the course of study.

**27. The General Lectures—Required of all undergraduate students.**

Lecturers: Dr. E. C. Hayes, Dr. Edward H. Griggs, Dr. Lincoln Hulley, Dr. Edward A. Steiner, Dr. Edward L. Thorndike, Dr. William F. Snow, Dr. O. T. Corson, and others.

**51-53. Literature, Songs and Games for Kindergarten and Primary Children—Four hours.**  
Miss Lyford.

A study and classification of the different types of stories, songs, and games according to their fitness for various ages and purposes.

**103. Student Teaching in the Secondary Training School—Four hours.**  
Mr. Armentrout.

This course will include conferences, observations, supervision and teaching under the direction of the training teacher.

**105. Principles of High School Teaching—Four hours.**

Mr. Brown.

This course is designed to develop those principles of teaching and features of methodology which are particularly applicable to high school teaching. A text-book is used as a basis, but this is supplemented by individual reports, class discussions, and special papers. There will also be directed observation of high school teaching. Some of the topics to be considered are: Characteristics of adolescence; types of disciplinary control; economical classroom management; types of instruction; lesson planning, and supervised study.

**108. Educational Supervision—Two hours. Each half quarter.**

Mr. Newlon, Dr. Dyer and Dr. Chadsey.

This course will deal with problems of supervision in school systems. It will be of especial value to those who expect to become superintendents or supervisors.

**109. High School Supervision—One hour. Each half quarter.**

Mr. Hall-Quest, first half quarter; Dr. Horn, second half quarter.

Persons who have shown an unusually high degree of efficiency in high school teaching may be allowed to assist in the supervision of the high school work. This training will afford them a more comprehensive view of the work and practice in the supervision of the training of younger teachers. This experience is intended primarily for those who are preparing themselves to be principals and superintendents or to fill other positions of responsibility in public school work.

**110. Supervised Study—Two hours. Each half quarter.**

Mr. Hall-Quest, first half quarter; Dr. Horn, second half quarter.

This course will deal with the entire field of supervised study. Model supervised study rooms will be available for observation.

**110a.—Observation of Supervised Study—One hour. Each half quarter.**

Mr. Hall-Quest, first half quarter; Dr. Horn, second half quarter.

The purpose of this course is to acquaint students with the actual administration of supervised study as carried out in the model school of supervised study.

**111. Philosophy of Education—Four hours. Full quarter. Required fourth year.**

Mr. Wright, first half quarter; Dr. Horn, second half quarter.

This course is designed to set forth the underlying principles of educational theory. It treats of the theory of instruction and training with the child as the concrete basis; the aim and meaning of education; educational values; the theory of management and control; and the technic of practice. Some of these are discussed very briefly as they form the basis of other courses. Practical applications of theory are constantly made.

**113. Organization and Administration of the Junior High School—Two hours. Each half quarter.**

Mr. Wright, first half quarter; Mr. Gruver, second half quarter.

In this course the following points will be considered: Organization; standards for judging junior high schools; historical development; the program of studies; the daily schedule of classes; courses of study for the various subjects; the qualification of teachers, etc. After many representative junior high schools of the United States have been considered from the above mentioned standpoints, each student will arrange a program of studies, and a course in one subject for a junior high school in some designated community.

**114. Primary Supervision—Two hours. Each half quarter.**

Miss Tatcher, first half quarter;

Miss Kirkbride, second half quarter.

This course is intended to meet the needs of kindergarten and primary supervisors.

**116. The High School Curriculum**—Two hours. Each half quarter. Required fourth year.

Mr. Wright, first half quarter; Mr. Gruver, second half quarter.

In this course a practical study of the curriculum of various small high schools and junior high schools of this and other states will be made. Educational values and the needs of the community will be considered in the course. A detailed course of study for both the junior and the senior high school will be outlined by each student.

**142. Educational Administration**—Two hours. Each half quarter.

Mr. Newlon, first and second weeks; Dr. Dyer, third to eighth weeks; Dr. Chadsey, ninth and tenth weeks.

This course is designated primarily for students preparing themselves as principals, superintendents and supervisors. After making a survey of the field of educational administration, the students may select the line of administration in which he is most interested for study and research.

**152. Principles Underlying the Education of Children in the Kindergarten and Primary grades**—Two hours. Each half quarter.

Miss Lyford, first half quarter; Miss Kirkbride, second half quarter.

This course is intended to be of help to kindergarten and primary teachers and supervisors.

#### Courses Primarily Graduate School

**223. Research in Education**—Hours dependent upon amount of work done. Open only to students who are present the full quarter.

Mr. Armentrout, Mr. Burrows, Dr. McCracken and others.

This course is intended for advanced students capable of doing research in educational problems. Each student may choose the problem of greatest interest to him, provided sufficient opportunity is at hand for original investigation. The results of such research are to be embodied in a thesis. Conference course at hours convenient to instructor and student.

**229a. Current Educational Thought**—Two hours. First half quarter.

Dr. McCracken.

This course will consist of reviews and discussion of recent books in the various fields of education.

**229b. Current Educational Thought**—Two hours. Second half quarter.

Dr. McCracken.

This course will consist of reviews and discussions of recent magazine articles in the various fields of education. One of the chief purposes of the course is to acquaint teachers with the best educational magazines.

**246. Seminar for Superintendents and Principals**—One hour. Each half quarter.

Mr. Newlon, Dr. Dyer and Dr. Chadsey.

This course is intended to be a clearing house where superintendents and principals may discuss their special problems with a view to a proper solution of them. It will be primarily a discussion group.

#### EDUCATIONAL PSYCHOLOGY

The courses of this department have been arranged with the general purpose of making the student familiar with the important contributions which psychology has made to such phases of education as school organization and administration, the aims of education, and the best means of realizing these aims. The whole public school system is viewed from the standpoint of the nature and needs of the child. An attempt is made to point out what the school should be in order to preserve the child's physical and mental health, respect his native capacities and tendencies, secure his normal development, utilize his most natural modes of learning, and promote and check up the efficiency of his responses. More specific statements of the purposes of the department are given below in the descriptions of the individual courses.

The department offers two curricula, the one in Psychology and the other in Special Schools and Classes. The first prepares the student to teach psychology in normal schools and high schools and to fill such positions in clinical psychology as are developing in connection with



public school systems. The second prepares the student to take charge of special schools and classes, especially such as are designed for backward and feeble-minded children. Students who elect either of these curricula are advised to take at least six courses of the curriculum of some other department. See Year Book for outline of curricula.

All of the courses of this department run through the full quarter, but they are open to students who can attend only one of the half quarters.

**1. Child Hygiene**—First year. Three hours. Full quarter. Required of students who specialize in any of the curricula of the Training School.

The main purposes of this course are: (a) to point out how the child's school progress and mental and physical development are arrested, and how his health and behavior are impaired by the physical defects which are very prevalent among school children; (b) to discuss the causes of defects, the methods of preventing and detecting them, and the measures which are required for an effective amelioration or cure.

The following topics will be treated: educational and economic values of health; the need of health conservation; deformities and faulty postures; air requirements; malnutrition and school feeding; hygiene of the mouth; enlarged adenoids and diseased tonsils; defective hearing; defective vision.

**2. Educational Psychology**—

**a.** Three hours credit, four hours recitation. Required of all students. Second year. Full quarter.

The purposes of this course are: (a) to make the student familiar with the child's capacities, tendencies and native responses and to show him how they, and the nature and order of their development, are involved in the process of educating the child; (b) to discuss such conditions of the school-room and school activities as will avoid fatigue and promote work.

The following topics will be treated: The child's native equipment; mental work and fatigue.

**b.** Three hours credit, four hours recitation. Required of all students. Second year. Full quarter.

Purposes of the course: (a) to acquaint the student with the various modes of learning and the conditions which facilitate learning; (b) to discuss the nature of individual differences and point out their significance for instruction and the arrangement of school work.

General topics: The psychology of learning; individual differences.

**104. Psychology of Elementary School Subjects**—Third year. Four hours. Required. Full quarter.

The purposes of this course are: (a) to make an analysis of the school subjects with the object of determining what mental processes, and modes and conditions of learning are involved in studying them; (b) to review the results of experimental studies on the methods of teaching and learning the school subjects; (c) to discuss the necessity of varying the methods of teaching, and learning the school subjects with the progress made and with individual differences in children; (d) to criticize methods of instruction in the light of individual requirements, the results of experimental studies, and the mental processes involved in a given subject.

Topics treated: The elementary school subjects.

**105. Psychology of the High School Subjects**—Third year. Four hours. Required of students preparing to teach in the high school in lieu of Course 104. Full quarter.

The purposes of the course are: (a) the same as those enumerated in Course 104; (b) to familiarize the student with educational tests which are designed to measure the level of the child's performance in the high school subjects.

Topics treated: The high school subjects.

**107. Mental Tests**—Four hours. Full quarter.

The purposes of the course are: (a) to make the student familiar with the means and methods which are employed to determine the child's general intelligence and the efficiency of his individual mental processes; (b) to point out the social, educational, psychological, and vocational significance of tests.

Topics treated: Various forms of individual tests, such as the Binet series and its modifications; various forms of group tests, such as the Army, Otis, National, and Pressey tests; tests of perception, memory, imagination, thinking, attention, psycho-motor control, and various combinations of mental processes.

**108. Educational Tests and Measurements**—Four hours. Fourth year. Required. Full quarter.

Chief purposes of the course: (a) to give the student a working knowledge of the best instruments for measuring the child's school progress and his performance level in the school subjects; (b) to discuss the methods of using the educational tests and tabulating the results; (c) to point out their educational significance in all of its phases.

Topics treated: Tests and standards of reading, writing, spelling, arithmetic, geography, and all the other elementary school subjects.

**212. Psychological and Statistical Methods Applied to Education**—Four hours. Full quarter.

Purposes: (a) to give school officials the technique necessary for the solution of educational problems involving the accurate measurements of mental processes; (b) to present the statistical methods employed in the treatment of educational data.

**213. Conference, Seminar, and Laboratory Courses**—Hours depending upon the amount of work.

Purposes: To make possible more intensive and exhaustive work by the student on problems of special interest to him.

Topics: Formal discipline; sex hygiene; retardation; mental tests; learning; retinal sensations; space perception, etc.

### FINE AND APPLIED ARTS

The Department of Fine and Applied Arts aims to prepare teachers to meet all the demands made upon regular teachers in public schools from the kindergarten through the high school in all branches of drawing, and to train special students to act as departmental teachers and supervisors in Fine and Applied Arts. The courses are open as electives to all students of the College.

The department is well equipped. In addition to the regular equipment there is a museum of ceramics, original paintings, reproductions, and copies of masterpieces. The Museum of Ceramics is a collection of pottery, containing ancient and modern specimens from different countries.

**2. Primary Grade Methods**—Four hours.

Freehand drawing, elementary perspective adapted to lower grade illustrations, color, elementary design, animal drawing, nature, blackboard drawing.

**13. Applied Art for Primary Grades**—Four hours.

Weaving, folding, cutting, stick printing, problems for special days, clay modeling, sand table projects.

**3. Freehand Drawing**—Four hours.

Perspective, drawing from objects and casts, nature drawing. Mediums, charcoal, pencil, colored chalk.

**5. Water Color Painting**—Three hours.

Studies from still life, nature and landscape.

**1. Grammar Grade Methods**—Four hours.

Elementary perspective, object drawing, elementary design, correlation of art with the other subjects of the curriculum.

**7. Constructive Design**—Four hours.

Design and its application to problems in wood, block print, leather, toys and basketry.

**102. Commercial Art**—Four hours.

Lettering, posters and pictorial advertising, design and color.

**12. Household Art Design**—Four hours.

The execution of designs for interior decorations and costumes.

**16. Antique Charcoal Drawing from Casts**—Four hours.

**101. Drawing from Life Study from Costumed Model**—Four hours.

**14. Applied Art for Intermediate and Grammar Grades**—Four hours.

Application of design and color to paper construction, toys, basketry, book covers, block print. Relation of Art to three other subjects in the curriculum.

## FOREIGN LANGUAGES

## French

**1. Beginning French—Four hours.**

Holbrook's Living French and easy texts.

**5. Intermediate French—Four hours.**

A review course in French grammar for teachers of French and others whose foundation in this language has not been strong enough to meet present day requirements. Carnahan's Grammar and Composition book will be used as the basis for this course.

**106. Advanced French—Four hours.**

Devoted to French drama of the 19th century. Lavedan, Brioux, and Bernstein will be some of the authors studied. For students who have had two or more years of French. Conducted entirely in French.

**210. Graduate French—Four hours.**

A course in 17th century fiction. A choice of eight or ten authors of this period will be given.

## Spanish

**1. Beginning Spanish—Four hours.**

Wilkin's First Spanish Course and elementary readings.

**5. Intermediate Spanish—Four hours.**

A course based upon the texts usually read in second and third year's work in high schools, with abundant drills in grammar and composition work and sight reading and dictations. Texts of very recent appearance will be chosen. For teachers of Spanish and students intending to teach the language.

**105. Advanced Spanish—Four hours.**

Devoted to modern Spanish fiction. Alarcon, Galdos, Ibanez, and Sierra. Conducted in Spanish.

**210. Graduate Spanish—Three hours.**

A course in old Spanish readings and outside work in Vulgate Latin and Old Provençal. For students who have had considerable Spanish. A knowledge of French and Latin is desirable, though not absolutely necessary.

**Note.** Any of the above courses, excepting Courses 1 in both French and Spanish, may be taken for three hours instead of four. In which case, the days will be Monday, Wednesday, and Friday instead of first four days.

## Latin

**1. Beginning Latin—Four or five hours.**

A beginning course in Latin, using Bennett's First Year Latin. For high school and college students.

**5 or 10. Intermediate Latin—Four hours.**

Using any one of the following authors: Caesar, Cicero, or Virgil. For high school teachers of Latin.

**105. Advanced Latin—Four hours.**

Devoted to any one of the following authors: Livy, Horace, Juvenal, or Plautus. One hour a week to be devoted to a study of Latin manuscripts or to prose composition.

All of the above courses will be continued and the numbers of each course will be advanced so as to read as follows: 2, 6, 106, 211, in both French and Spanish. In Latin courses will read: 2, 6, 11, and 106.

## Other Languages

A first-year course will be offered, by advanced enrollment only, in any of the following languages: Italian, Portugese, Esperanto, and German. Advanced courses in German may be offered if desired.

**GEOLOGY, PHYSIOGRAPHY AND GEOGRAPHY**

The courses listed in this department are not review courses covering merely the material taught in the common schools. Such review courses are listed in the high school department for which no credit is given toward graduation from the college. Geography is not just a group of facts about different parts of the world. It is a definite science in which, in the underlying climatic and geologic causes, the superstructure of commercial and human factors is built. It is from this point of view that the work of this department is given.

**12. Geography Method**—Two hours. Repeated second half quarter.

A course in which the history of geography teaching is taken up, followed by a discussion of the relative values of various methods of presentation. The materials suitable for each grade will be discussed.

**5. Geography of Europe**—Four hours. Continuous through the full quarter.

It is recommended that this course follow Course 4, as it is based upon the material presented in that course. We endeavor to understand Europe in climatic and geologic terms of our own continent. The new boundaries and new countries are stressed.

**103. Climatology**—Four hours. Continuous through the full quarter.

This is a thoro study of the climatological basis of the science of geography designed for those who desire to know more in detail the climatological aspect of geography. The observational side of the subject will be stressed. Advantage will be taken of our meteorological apparatus to compile weather data. The sources of meteorologic and climatic statistics will be noted in the lectures and the students will be encouraged to write themselves and build up a library of statistical material for use in their schools later.

**8. Human Geography**—Four hours. Continuous through the full quarter.

The relation of man to his environment and the various type environmental realms, as, for instance, the desert, tropical forest, mountains, etc., will be taken up. Required in the Intermediate, Sociology and History Courses.

**HISTORY AND POLITICAL SCIENCE**

**11. Commercial History of the United States**—Four hours. Full quarter.

A survey of commerce in early times; colonial commerce and its influences; the several periods of American commerce, domestic and foreign; government aid; relation of commerce to business development; and government supervision.

**30. Political Adjustment**—Three hours. Full quarter.

American political theory; democratic ideals and values; opportunities and obligations of citizenship; principles of American Government; inter-relations of the individual, education, and the forms and processes of community organization.

**13. The Teaching of History**—Two hours. First half quarter.

History of history instruction in the schools; aims and values of history instruction; the course of study; methods and materials; testing results of instruction; school problems related to history teaching.

**26. The Teaching of Civics**—Two hours. Second half quarter.

The development of civics instruction from the study of the Constitution to the present community civics; value of civics in education for citizenship; purposes of instruction in government; courses of study; methods and materials for the several grades of instruction.

**123. International Relations**—Four hours. Full quarter.

A study of the principles of international relations, traced historically; development and application of these principles in recent European relations; American international ideals and policies; the working of the League of Nations.

**212. American Constitutional Development**—Three hours.

Origin of the Constitution; interpretation of the document; services of the law courts; great cases of interpretation of the Constitution.

## HOME ECONOMICS

The Home Economics Course not only trains teachers of Home Economics, but also trains homemakers in the selection, use, and care of materials for the home. It has as an ideal the establishment of sane standards of living, including the economic, social and aesthetic sides of life.

It will be the policy of the Home Economics Department in future to recommend, as teachers of the subject, only those students who have completed the four years' course.

## Household Arts

**5. Drafting and Pattern Making**—Four hours. Double period. Fee, 35 cents. Mrs. Wiebking.

This course teaches the making of patterns, by drafting, modeling, and designing. It is a prerequisite to the dressmaking.

**108. Advanced Costume Design**—Four hours. Double period. Mrs. Wiebking.

This course is a continuation of Course 107, and will offer opportunity for effective draping of fabrics on the human figure. It requires the purchase of suitable materials for a formal dress.

**110. Millinery**—Four hours. Double period. Miss Roudebush.

A course in renovation, pattern making, and construction of hats for summer and fall.

## Household Science

**108. Home Management**—Four hours. Single period. Miss Roudebush.

This course includes the care of the family, budgets, relation of home to community interest.

**1 or 3. Foods and Cookery, or Cookery and Table Service**—Four hours. \$3.00 fee. Double period. Miss Lundberg.

H. Sc. 1 offers instruction in the principles of cooking, while H. Sc. 3 teaches the planning, preparation, and serving of various types of meals.

**103. Dietetics**—Four hours. Fee \$3.00. Three lectures and one laboratory period. Miss Lundberg.

The study of food values for families living under varying conditions. Chemistry is a prerequisite. A general course in nutrition will be offered. This course will be suited to those not having had the chemistry required by Dietetics students.

## HYGIENE AND PHYSICAL EDUCATION

Students registering for the first time should make an appointment on registration day for the required health and dental examinations. **Registration is not completed until these examinations have been made and recorded.** These examinations are for the purpose of assisting students with their personal health problems and are free. The Medical and Dental Advisers keep regular office hours for free consultation regarding any or all individual health matters. The College does not, however, undertake any medical or dental treatment.

Students registering for practical (exercise) courses should dress in gymnasium costume and be ready for work at the first meeting of the class. Students coming to class in street clothing will be marked "absent." No exceptions will be made to this rule.

The courses offered by this department are divided into two classes as follows:

### I. Information Courses in Hygiene, Physical Training and Play.

These courses do not fulfill the College requirement for activity. Hygiene and Physical Education Courses Nos. 7 and 8 are required of all except third and fourth year and graduate students. Hygiene and Physical Education No. 8 should be taken during the first year; Hygiene and Physical Education No. 7 during the second year.

### II. Practical Courses in Physical Training, Play and Athletics.

One course is required each quarter during the first and second years.

#### I. Information Courses

##### 1. Physiology and Hygiene of Exercise—Four periods. Four hours.

Lectures, demonstrations, recitations. A required course for Physical Education Majors, but open to others who have had biology.

##### 2. Anatomy and Kinesiology—Four periods. Four hours.

Lectures, demonstrations, recitations. Use is made of skeleton, mannikin, charts and anatomical atlases in connection with text book assignments. Required of Physical Education Majors during the first year. Open to others who have had biology.

##### 6. Research in Physical Education. (See also Education 223.)

Qualified third and fourth year and graduate students may select a subject for research in Physical Education. The following subjects are suggested, but other suitable subjects may be chosen:

1. The status of physical education in the schools of Colorado, with a proposed plan for improvement.

2. The playground and recreation movement; its rise, growth, and present status.

3. A recreation survey of a selected community with a suggested plan for improvement.

4. Analytical study of the educational values of certain plays and group games.

5. Educational Athletics: Plan for a county or city school system.

6. Effects of the World War on the status of physical training in different countries.

7. Physical Education in the reconstruction program.

8. Physical efficiency forms for elementary school children

By arrangement. Three or more hours, depending on the amount and quality of work accomplished.

##### 7. General Hygiene—Three periods. Three hours. Required of all second year students. Men and women.

A lecture, discussion course on general hygiene. Many lectures are illustrated. Consideration is given to: (a) mortality statistics as a basis for effective hygiene; (b) agents injurious to health; (c) carriers of disease; (d) causes of poor health; (e) defenses of health; (f) producers of health.

##### 8. Individual Hygiene—Three periods. Full quarter. Required of all first year students. Men and women.

An informational course on the essentials of individual health conservation and improvement. Different sections for men and women.

##### 9. Child and School Hygiene—Four periods. Four hours.

A course in Child and Educational Hygiene (see Education Psychology 1).

##### 12. First Aid—Four periods. Two hours. Either half quarter.

A course covering the essentials of first aid in cases of accident or illness. The Red Cross Text Book is followed. Those who complete course may receive the Red Cross Certificate for First Aid.

#### II. Practical Courses

In order to secure credit for a full quarter in fulfilling the administrative regulation requiring "physical education exercise courses during each quarter in residence" during the first two years, it is necessary to carry one practical course throughout the entire Summer Quarter.

Carrying one or more practical courses through a half quarter does not give credit for a full quarter nor relieve a student from the necessity of carrying a practical course through the second half to secure credit for a full quarter's work.

**The Following Are Activity Courses:**

**106. Singing Games and Elementary Folk Dancing**—Four periods. One or two hours. Either half or full quarter. First year students.

A course for those desiring rhythmic material for the lower grades.

**107. Folk and National Dances**—Four periods. One or two hours. Either half or full quarter. First year students.

A selected list of folk and national dances suitable for school and playground use, especially for upper grade and high school groups. Two sections.

**108. Esthetic Dancing**—Four periods. One or two hours. Half or full quarter. Students entering second half must secure approval of instructor. Second year students only.

Technic of the dance; plastic exercises, the development of bodily coordination and rhythmical responsiveness.

**111. School Gymnastics**—Four periods. One or two hours. Either half or full quarter. First or second year students.

Class organization and conduct, marching, free, dumb-bell, wand, and Indian club drills, principles of selection and arrangement of exercises, practice in organizing and leading drills, working out daily programs for different grades under school conditions.

**112. Plays and Games**—Four periods. One or two hours. Half or full quarter. First year students.

A selected list of plays and group games suitable for use in the lower grades.

**113. Play, Playground Organization and Conduct**—Four periods. Three hours. Full quarter. Second year students.

The meaning of play; relation to mental and physical development; importance in moral and social training. One lecture and three practice periods per week. Required reference work.

**114. Athletics for Women**—Four periods. One or two hours. Half or full quarter. Second year students.

A course in group and team games. Play material suitable for upper grades and high school will be presented.

**115. Recreation Course**—Four periods. One or two hours. Half or full quarter. Open to all.

A recreational activity course for men and women.

**116. Athletic Team Games (Men)**—Four periods. One or two hours. Half or full quarter.

Lectures, field practice, competition; administration of athletics, athletic budgets and equipment, training and conditioning teams; discipline, etc., will be the topics. The course is planned to meet the needs of school principals and teachers interested in the athletic problems of schools.

**117. Gymnastics (Men)**—Four periods. One or two hours. Either half or full quarter.

A course in heavy gymnastics and combat games for men.

## LITERATURE AND ENGLISH

The courses offered in Literature and English fall into three classes:

1. Courses in grammar and composition.
2. Courses in methods of teaching Literature and English in elementary and high schools.
3. Literary courses, cultural in nature, or intended to equip a high school teacher of English with the teaching materials and a literary background.

**Required English**—The College wishes to assure itself that all students who go out as graduates to teach children and all who teach in its training school will not misuse the English language in the presence of school children. It realizes that students, who have all their lives spoken incorrect English, cannot altogether change their habits in three or six months. The best thing it can do, then, seems to be to require all students to take a course in grammar and oral and written composition. The head of the English department may excuse from taking this course any student who speaks and writes English exceptionally well. But those whose speech habits are unusually bad may be required to take a second practice course. The College will positively refuse to graduate a student who cannot write and speak the English language with a fair degree of accuracy and ease. It will also qualify its recommendation of a student to a superintendent or school board if the student's English is only passable.

**Co-operation of Other Departments With the English Department**—All the departments in the College are invited to co-operate with the English department to secure a reasonable degree of correctness in spoken and written English. Teachers are invited to call the attention of the English department to any student whose English is poor.

Any instructor may require any student in his department who shows a deficiency in oral or written English to report to the English department for further instruction, even though the student has already met the catalog requirement in English.

**1. Material and Methods in Reading and Literature**—Two and a half hours.

A study of motivation in the field of reading, oral and silent, for children; the consideration of principles governing the choice of literature in the grades; practice in the organization and presentation of type units, including dramatization and other vitalizing exercises. A somewhat flexible course, affording opportunity for intensive work within the scope of any grade or grades, according to the individual need or preference.

**2. The Teaching of Written English**—Two and a half hours.

This course takes up the problems of teaching formal English, both spoken and written, in the intermediate grades, and the junior high school. The functional teaching of grammar is included.

**3. Public Speaking and Oral Composition**—Two and a half hours.

The endeavor of this course is to establish the student in habits of accurate speech, and to encourage fluency, vigor and logical marshalling of his thought in discourse of varied types, including exposition, description, narrative, oratory, argumentation, free dramatization.

**4. Speaking and Writing English**—Required of all students unless excused by the head of the English department. Three hours.

Grammar, and oral and written English, from the point of view of their function in guiding the student in the correct use of English in speaking and writing. Practice in sentence making, sentence analysis, recognition of speech faults, and the means of correcting them; and practice in both oral and written composition.

**6. American Literature**—Four hours.

A course in American literature following the plan of Courses 8, 9, and 10 in English literature.

**9. The History of English Literature**—Four hours.

A reading course following the development of our literature from 1625 to 1798.

**13. The Art of Story Telling**—Two and a half hours.

A study of the main types of narrative, with emphasis upon the diction and manner suitable for each. Practice in the art of story telling.



**15. Types of Literature—Two and a half hours.**

A reading course looking toward an appreciation of literature and covering all the types of literature that can be made **interesting** to young people and to contribute to the formation of good taste in reading. This would include English, American, and Foreign literature which has become classic. But no matter how "classic" it is, it still must be attractive. The types covered will be lyric, narrative, and epic poetry, drama, essay, story, novel, letters and biography.

**16. Types of Contemporary Literature—Two and a half hours.**

A second appreciation course similar to Course 15, but dealing with the literature of not more than ten years back. Most teachers of literature leave the impression that literature must age like fiddles and wine before it is fit for human consumption. Such is not the case. Much good literature is being produced every year. After students leave school it is just this current literature that they will be reading if they read at all. We want to help them form a discriminating taste for reading, and to acquire a liking for reading so that they will be alive to what the world is thinking, feeling, doing, and saying after they leave the school.

**105. Oral English in the High School—Two hours.**

The discussion of practical problems concerning the direction of Oral English in the secondary school: oral composition, literary society and debating activities, festivals, dramatics.

**106. The Teaching of English in the High School—Two and a half hours. Spring quarter.**

Principles for the selection of literature for senior high school pupils considered critically; illustrative studies in the treatment of selected pieces; study of types of composition work for high schools, with illustrative practice in writing.

**121. Nineteenth Century Poetry—Two and a half hours.**

A study of English poetry from Wordsworth to Tennyson, including Coleridge, Byron, Shelley, Keats, and the lesser writers from 1798 to 1832.

**122. Victorian and Contemporary Poetry—Two and a half hours.**

Tennyson and Browning, and the general choir of English poets from 1832 to 1892, and an attempt to estimate the significance of current tendencies in poetry, English and American; supplemented by sufficient reference to current verse of other literature to afford comparison or analogy.

**127. Selected Plays of Shakespeare—Two and a half hours.**

The life of Shakespeare and a literary study of the plays which are appropriate for high school use, with a proper amount of attention to the method of teaching Shakespeare in high schools. Some account of the theater in Shakespeare's time.

**134. Modern Plays—Four hours.**

Reading and class discussion of thirty plays that best represent the characteristics, thought-currents, and the dramatic structure of our time.

**Graduate Courses**

Graduate students may take any course in the Department of Literature and English numbered above 104.

**230. Conference Course—**This course number is intended to cover special study in collecting material for the thesis required for the degree of Master of Arts in the department of English. The assignments will of necessity be made individually to each student preparing a thesis.

**MATHEMATICS**

There has been a rather wide-spread idea among school administrators that anyone with a knowledge of subject matter could teach mathematics. As a result we have in many of our schools specialists in English, History, Latin, and various other subjects assigned to take classes in Algebra and Geometry. This again has led to some severe statements as to the value of the whole subject of mathematics in the secondary schools. What we need is a great number of teachers trained to teach mathematics as it should be taught.

The aim of every course given here is to train students to go out and teach this ancient branch of science so that it will have the very highest value to the one taught.

**1. Solid Geometry**—First half or full quarter. Four hours.

This course takes up the ordinary theorems of solid geometry and at the same time emphasizes the main points to be kept in mind by the teacher in presenting the subject of geometry.

**2. Plane Trigonometry**— First half or full quarter. Four hours.

Of all the secondary mathematics subjects trigonometry presents the greatest number of contacts with actual problems outside of the classroom. This fact is used in presenting the subject here. The surveyor's transit and chain are used freely.

**6. College Algebra**—Either half or full quarter. Four hours.

The work begins with a review of the work of elementary algebra with special attention to a clear understanding of the principles involved. The needs of those who expect to teach high school algebra are constantly kept in mind.

**7. Analytic Geometry**—First half or full quarter. Four hours.

Modern high school algebra is of such a nature that no teacher of this subject can come anywhere near reaching full efficiency without a knowledge of analytics. This course gives a clear logical treatment of the subject that can be easily mastered in a quarter's work.

**8. The Teaching of Arithmetic**—Two hours, first half quarter.

This course deals with modern movements and methods in the teaching of arithmetic. The actual problems of the class room are considered and ways and means of solving these problems presented and discussed. The aim is to give those who take the course something they will find of real help in teaching when they get into the school room.

**100. The Teaching of Secondary Mathematics**—Two hours. Sec-

In this day of unrest and progress the teacher who stands still is soon far behind his fellows. The object of this course is to consider the recent developments in the teaching of Secondary Mathematics and to give such suggestions and help as will make the teaching of algebra and geometry vital.

**101. Differential Calculus**—First half or full quarter. Four

It is in the subject of calculus that the student gets his first real glimpse of the almost unlimited power of mathematics. To the teacher of even secondary subjects it gives an inspiration and a breadth of view that means much for his success in the class room. The course as here given covers the usual fundamentals of differential calculus.

More advanced work in the field of mathematics may be arranged for by consultation with the head of the department.

## MUSIC

The courses offered by the department are of two kinds: (a) Courses which are elementary and methodical in their nature and are meant to provide comprehensive training for teachers who teach vocal music in the public schools.

(b) Courses which treat of the professional, historical, literary and esthetic side of music, or for those who wish to become supervisors or professional teachers of vocal and instrumental music.

Courses for grade teachers and general students: Music 1, 2 and 3.

Courses for supervisors and professional teachers of music: Music 2, 105, 7, 8, 9, 10, 12, 13 and 14.

Courses which are cultural in their nature, and meant for the general or special student: Music 7, 10, 12, 13 and 14.

### Private Instruction

The Conservatory will be in full operation during the entire Summer Quarter. Students wishing to begin vocal or instrumental study or to continue their study while attending the Summer School will find an ideal opportunity to study with unusually accomplished teachers at very attractive rates.

The fixed policy of the Conservatory is to provide individual instruction of the highest possible artistic type at a considerably lower cost than is usually charged for the same grade of instruction. This is made possible because the state assumes all actual expense of salaries of teachers, and other overhead expenses, as it does in all other college subjects.

Especially attractive rates will be made to professional students or serious students who may wish to take two or more lessons per week. A flat reduction of 10 per cent will be made to students wishing to take advantage of this opportunity. Rates will be furnished upon application. Practice rooms may be secured at the College.

Recitals by the Musical Faculty and by students will be given during the summer session.

The Chorus will present a program of worth-while numbers during the quarter. Those interested in choral singing should register for Music 6 the first week of school. Frequent recitals will be presented by the Philharmonic Orchestra to which all students will be invited.

Vesper concerts will be held each Sunday afternoon, to which the students of the College and their friends are invited. A comic opera will be presented during the Summer Quarter. Students interested in participating should apply to the director during the first week of the quarter.

In case there is sufficient demand a special group of carefully picked students will form a Glee Club. Students interested in this organization should report to the director as early in the quarter as possible.

## 2. Methods for the First Eight Grades—Three hours.

A very practical course for teachers, in which the material used in the public schools is studied and sung, with suggestions as to the best ways to present all phases of the work. Prerequisite for this class, Music 1 or its equivalent.

### Music 2a—Required of Majors in Music. Three hours.

Methods for the Primary Grades. The teaching of Rote Songs. How to help Monotones. The development and care of the child voice. A delightful repertoire of Rote Songs is acquired. The work of the first three grades is studied intensively. The first steps in technique.

### Music 2b—Required of Majors in Music. Three hours.

Methods for the Intermediate Grades. An intensive study of the problems of the teacher of these grades. Sight Reading, Interval Drill, Signature of keys (major and minor), Care of the Voice. All problems of these grades considered and practical solutions offered.

### Music 2c—Required of Majors in Music. Three hours.

Methods for Junior High School. Material and methods for the crucial period in the musical career of the child. The changing boy voice. Intensive study of part singing. Musical appreciation for these grades. A practical course to meet the needs of the teacher.

## 3. Kindergarten and Primary Music—Two hours.

Designed especially for kindergarten and primary teachers. Songs and music adapted to children of these departments will be studied and sung. The care and development of the child voice; the teacher's voice; methods of instruction; practice singing and rhythm exercises will be presented.

## 6. Chorus Singing—One hour.

Worth-while music and standard choruses are studied and prepared to present in concert.

### 8a. Harmony—Required of Majors in Music. Three hours.

Beginning harmony. The work consists of written exercises on basses (both figured and unfigured) and the harmonization of melodies in four voices. These are corrected and subsequently discussed with the students individually. Work completed to the harmonization of dominant discords and their inversions.

**8b and 8c—Required of Majors in Music. Six hours.**

Harmonization of all discords. The circle of chords completed, modulation, etc. The harmony courses continue throughout the year, and the work is planned to meet the individual needs of the class.

**9. Advanced Harmony—Three hours.**

A continuation of Courses 8a, 8b, and 8c.

**10. Methods in Appreciation—Required of Majors in Music. Two hours.**

This course is planned to prepare teachers to present more intelligently the work in Appreciation of Music, for which there is such a growing demand in all our schools. A carefully graded course suitable for each grade is given. The lives and compositions of the composers from Bach to Wagner are studied.

**12. Individual Vocal Lessons—Required of Majors in Music.**

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers. To make arrangements for this work, consult the director of the department.

**13. Individual Piano Lessons—Required of Majors in Music.**

Piano work is arranged to suit the needs and ability of the individual. From beginning work to artistic solo performance. To arrange work, consult the director.

**14. Individual Violin Lessons.**

The work will be outlined according to the ability of the student. To arrange work, consult the director.

**15. Individual Organ Lessons.**

Organ work is arranged to meet the needs of the individual student. Some knowledge of Piano is a prerequisite. To arrange work consult the director.

**105. Supervisor's Course—Four hours.**

The material used in the grades and high school is taken up and studied from a supervisor's standpoint. Actual practice in conducting works of a standard nature will be offered those interested in this course.

**119. Interpretation and Study of Standard Operas—Two hours.**

Operas of the classical and modern schools are studied, through the use of the talking machine, and their structure and music made familiar to the class.

**PRACTICAL AND INDUSTRIAL ARTS**

The Practical Arts Division includes industrial arts, fine and applied arts, and commercial arts. The courses are varied and are organized especially along lines dealing with the technical phases of practical arts education, opportunity being given for study along historical, practical and theoretical lines. An excellent training department, housed in the Training School Building, gives full opportunity to put into practice in a teaching way the ideas presented in the various courses. This gives an opportunity for the individual students not only to become acquainted with the underlying principles in the work, but also the added advantage of teaching these branches in the Training School under expert supervision.

**Woodworking, Drafting, Printing and Bookbinding**

The Woodworking, Drafting, Printing and Bookbinding Departments of the State Teachers College are the most modern departments to be found in the Middle West. The departments occupy the first and second floors of the Guggenheim Hall of Industrial Arts. The rooms are large, well ventilated and well lighted. The students in these departments are never crowded for room or hindered in their work from lack of equipment. All equipment is of the latest and best type and is always kept in first-class working condition. It is the aim of the departments to employ methods in woodworking, drafting, printing and bookbinding as thorough and practical as are to be found in the regular commercial shops.

**5. Vocational Education**—Required of all Majors in Industrial Arts, Commercial Arts, and Fine and Applied Arts. Four hours.

The course deals with the historical development and the fundamentals of teaching practical arts subjects in their relations to other subjects of the school curriculum and their application in future activities that the child will enter.

**1. Elementary Woodwork**—Required of Industrial Arts Majors. Four hours. Fee \$1.00.

This course is arranged for those who have had no experience in wood-working and is designed to give the student a starting knowledge of the different woodworking tools, their care and use. The construction of simple pieces of furniture is made the basis of this course.

**2. Intermediate Woodwork**—Required of Industrial Arts Majors. Four hours. Fee \$1.00.

This course is a continuation of Course 1 and is designed for those who wish to continue the work, and deals with more advanced phases of wood-working.

**8. Elementary Art Metal**—Required of Industrial Arts Majors. Four hours. Fee 50 cents. Every quarter.

(a) This course has in mind the designing and creation of simple, artistic forms in copper, brass and German silver.

(b) Also simple, artistic jewelry, including monograms and the setting of semi-precious stones.

**19. Wood Turning**—Required of all Industrial Arts Majors. Four hours. Fee \$1.00.

The aim of this course is to give the student a fair knowledge of the woodworking lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

**105. Advanced Architectural Drawing**—Four hours. Spring quarter.

This course is designed to give the student a simple working knowledge of the great historic material such as columns, capitals, pediments, etc., in their application to modern buildings, such as churches, schools, and other public buildings.

Each student will be expected to design a public or semi-public building as a part of this course.

**118. Advanced Machine Design**—Four hours.

A study is made of the transmission of motion by belts, pulleys, gears and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motors and gas or steam engines.

**104. Pre-vocational Education**—Two hours.

The course is divided into two definite sections: First, the fundamental basis for pre-vocational work, the movement from the standpoint of special governmental and state schools, rural schools, state movements and vocational clubs, with suggestions for furthering the movement from state and community standpoints; second, the course of study and special plans for organization of pre-vocational work in public education.

**109. Advanced Art Metal**—Four hours.

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals, including all the steps that are fundamental in stone setting and finishing.

**201. Seminar**—Four hours. On demand.

Individual research work in the field of practical arts. Problems to be selected upon consultation.

This is a conference course. Conference hours will be arranged to meet the demands of students in the course.

**Note.** Other courses listed in the regular Year Book not listed in the Summer Catalog may be taken by special arrangement with departments in which courses are offered.

### Printing

#### 1a. Elementary Printing—Four hours.

The aim of this course is to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type-composition. He will carry simple jobs through the various stages from composition to making ready and printing on the press.

#### 2a. Intermediate Printing—Four hours.

A continuation of elementary printing with a view to making the student more proficient in the fundamentals of the art. The principles of typographic designs will be studied in the designing and composing of letter-heads, tickets, programs, etc. Color study in selection of papers and inks.

#### 3a. Advanced Printing—Four hours.

A continuation of the study of typographic design in the laying out and composition of menus, title and cover-pages, advertisements, etc. Imposition of four- and eight-page forms, advanced press work and a study of plate and paper making will be given.

#### 4. Practical Newspaper Work—Four hours.

The various processes incident to the printing of a newspaper will be performed by the student in this course.

#### 5. Shop Management—Four hours. On demand.

Organization of the various forces of the shop to maintain production with efficiency. Planning for the mechanical processes of printed product. Planning and selection of equipment. Maintenance of equipment.

#### 6. Shop Accounting—Four hours. On demand.

Keeping of shop records and accounts. Purchase of printing materials.

### Leather Craft Art and Bookbinding

#### 1a. Elementary Bookbinding—Four hours.

This course includes the following: Tools, machines, materials and their uses, collating and preparing their sheets for sewing, sewing on tape and cord, preparing of end sheets, trimming, gluing, rounding and backing, head-binding, banding and preparing backs for covers, selecting cover materials, planning and making of covers and all steps necessary for the binding of full cloth, buckram, and paper bindings, having spring or loose backs; also the binding of one-quarter loose and tight back leather bindings with plain and fancy edges. The making of small boxes, writing pads, memoranda books, leather cases, cloth portfolios and kodak albums.

#### 1b. Elementary Bookbinding—Four hours.

A continuation of Bookbinding 1a.

#### 1c. Elementary Bookbinding—Four hours.

A continuation of Bookbinding 1b.

#### 2a. Intermediate Bookbinding—Four hours.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers; also the planning and making of full leather travelers' writing cases, music cases, and art leather work.

#### 2b. Intermediate Bookbinding—Four hours.

A continuation of Bookbinding 2a.

#### 2c. Intermediate Bookbinding—Four hours.

A continuation of Bookbinding 2b.

#### 3a. Advanced Leather Craft Art Work—Four hours.

This course is a review of both of the other courses in higher grade work and construction. Full leather bindings with raised panels is given in this course. Gilt edging, fancy edges including starch and agate edges.

Finishing in antique and gold, hand lettering in all its phases, tooling in gold and antique, stamping on stamping machines, of cloth, leather, and other materials in blind, gold and other metals and foils.

**3b. Advanced Leather Craft Art Work—Four hours.**

A continuation of Bookbinding 3a.

**3c. Advanced Leather Craft Art Work—Four hours.**

A continuation of Bookbinding 3b.

**4. Shop Management—Four hours.**

The organization of the various forces of the shop to maintain production and efficiency in the work. Planning of the mechanical work of binding. Laying out and selection of materials and methods of equipment. Floor space planning and arrangement for public schools and colleges.

**5. Shop Accounting—Four hours.**

Keeping of shop records and accounts. Purchasing and selection of materials such as tapes, papers, buckram, leathers, etc.

**6. Cost Accounting—Four hours.**

Advanced work growing out of shop management, shop accounting and equipment, dealing with the factors that enter into the estimating of production costs, such as materials and general shop expenses, etc.

**Note.** All advanced courses by special arrangement.

**PHYSICS**

It is the purpose of this department to make the work in physics as valuable as possible to ALL students who are to teach in the public schools. The importance of knowing the fundamental principles of physics, and the application of these principles to those things which make for our comfort and well-being is becoming more manifest and urgent every year; but the importance of knowing the fundamental principles of physics when one is going to teach geography, physiology, agriculture, and the like is seldom appreciated by the public school teacher. Every course here offered has been carefully planned so that it may be of the greatest helpfulness in illuminating and vitalizing public school work, especially the work of the elementary school. Much pains has been taken to work out interesting methods, whereby essential but difficult subjects may be presented to young people in the light of their many common and relevant experiences so as to make the difficult subjects understandable.

**4c. General Science for Intermediate and Junior High Grades—Four days. Two hours. Either half quarter.**

An elementary course planned to give teachers of the elementary schools and superintendents a better understanding of the fundamental principles of many of the common school subjects, such as geography, physiology, hygiene, agriculture, etc. The course seeks to explain many of the ordinary happenings of every day life. Fully illustrated with simple apparatus easily obtained in any community.

**6. Theory and Practice of the Automobile—Four days. Two hours. Either half quarter.**

Lack of knowledge as to the proper care, construction and operation of a car is responsible for much of the trouble, expense and short life of a car.

The purpose of the course is at least two-fold. (1) To give such instruction in the theory of the construction and operation of a car that the repair expenses may be materially reduced, the life of the car much lengthened and the driving more of a pleasure.

(2) That teachers taking the course may be well enough informed in the subject to disseminate a correct knowledge of the automobile, thereby increasing a scientific education in the community.

Connected with the department is a large garage and repair shop which is well equipped with tools, parts of cars and a demonstrating car.

**104. The New Physics**—Four days. Two hours. Either half quarter.

This course is devoted to the study of electrons, cathode rays, X-rays, alpha rays, beta rays, gamma rays, and radium and its disintegration products. We are well equipped to illustrate this course.

**3. General Physics**—Four hours. Full quarter.

A course in magnetism and electricity. Text-book: Kimball's College Physics.

**201. Visual Instruction**—Two days. One Hour. Either half quarter.

The course is designed for superintendents, principals and others who have or contemplate having visual instruction, by means of moving pictures, in their schools.

The function of the course is two-fold: (1) Of giving information where and how to secure educational films. (2) How to take care of and operate a moving picture machine. The school owns a moving picture machine which is available for actual practice work.

### SOCIAL SCIENCE

This department offers a series of courses which it desires shall appeal to both the needs and ambitions of many students. The courses are liberal and varied in scope. Many of them will meet the immediate practical needs of teachers. Some of them are technical, and are intended for teachers and students of special subjects. Still others are advanced courses in social theory, or are practical studies in applied sociology.

Social Science deals with the knowledge on which true theory in Education must be based. It is equally essential in the training of high school and elementary teachers.

The major four-year course offered by this department is a superior opportunity for high school teachers, superintendents, principals, supervisors, and all students desiring liberal training in Modern Social thought and its inevitable effects on Education and human progress.

**3. Educational Sociology**—Four hours. Full quarter. Required in first year. Dr. Miller and Dr. Hayes.

A course giving (1) a background of information concerning origins and interrelations of present social problems; (2) a brief formulation of the methods of social progress; and making (3) a definite attempt to show the relation of education to the problems of control and progress.

**105. Social Institutions and Social Maladjustments**—Four hours. Full quarter. Required in third year. Dr. Miller and Dr. Hayes.

The relation of Sociology to Psychology; the evolution of mind as a Social progress, the Social emotional basis of mind and its development as a directive agent. Social institutions, their relation to social maladjustment, and social progress.

**161. Modern Social Changes**—Four hours. Full quarter.

Dr. Miller.

A study of modern social problems, and of present day reconstruction policies in America, with special emphasis on the Ethics of the Labor Problem.

**132. The Family**—Three hours. First half quarter.

Dr. Miller.

A very profitable study of the family from the standpoint of education, industry, ethics, and as a social unit. Desirable for teachers, but of great value to all students of either theoretical or practical Sociology.



# Colorado State Teachers College

Greeley, Colorado

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## SUMMER QUARTER 1921

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### The Calendar

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June 20, Monday—Registration Day for the Summer Quarter.

June 21, Tuesday—Classes begin.

A fee of two dollars is collected for late registration after Monday, June 20.

July 22, Friday—The first half of the Summer Quarter closes.

Students, if possible, should enroll June 20 for the Full Quarter, but they have the privilege of enrolling for either Half Quarter independent of the other. Many courses run through the first Half Quarter only. Some run through the Second Half Quarter only. Most of the courses, especially the required courses, must be taken throughout the whole quarter before any credit will be given.

Normal hours of credit: Either Half Quarter, 8 hours; Full Quarter, 16 hours.

July 25, Monday—New enrollment for the Second Half Quarter. Classes begin.

August 26, Friday—The Summer Quarter closes. Graduation Day.

### FALL QUARTER

The Fall Quarter begins Monday, October 3, 1921. Ask for the Annual Catalogue. Address State Teachers College, Greeley, Colorado, J. G. Crabbe, President.



Series XX, No.11, Sup.

Program of Courses, Summer, 1931

February 1931, Oblong

(see separate volume)



Series XX, No.13

Campus Views

March 1921, Oblong

(see separate volume)

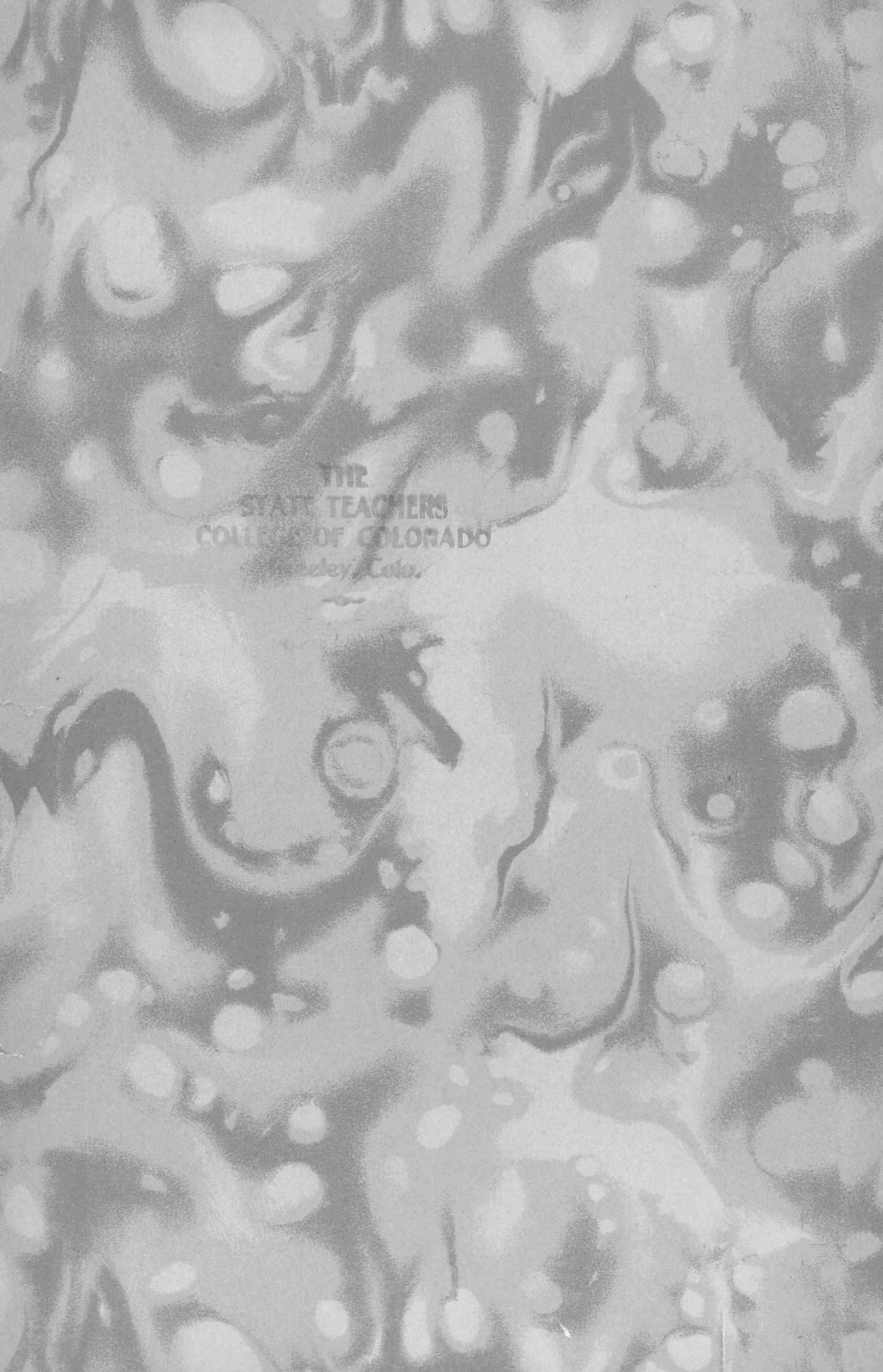










The background of the entire page is a marbled paper pattern. It features a repeating motif of stylized, somewhat abstract faces or masks. These faces are rendered in shades of gray and white, with some appearing to have large, circular eyes or openings. The overall effect is a dense, textured, and somewhat surreal pattern.

THE  
STATE TEACHERS  
COLLEGE OF COLORADO  
 *Greeley, Colo.*

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Colorado State Teachers College  
Bulletins  
1920 - 21  
Series 20  
Table of Contents

Colorado State Teachers College Bulletin.  
Year Book and Catalog 1920-21. April,  
1920. Series 20, No.1.

Colorado State Teachers College Bulletin.  
Preliminary Fall Announcement 1920.  
Series 20, No.2.

"Series 20, No.2. Supplement. Program of  
Courses, Summer, 1920. March 1920,  
Oblong. (see separate volume)" Not in  
Volume.

Colorado State Teachers College Bulletin.  
Education Tests and Measurements,  
Research Bulletin, No.7. June, 1920.  
Series 20, No.3.

Colorado State Teachers College Bulletin.  
A Comparative Study of Three Diagnostic  
Arithmetic Tests. July, 1920. Series  
20, No.4.

Colorado State Teachers College Bulletin.  
Alumni Register, 1891-1919. August,  
1920. Series 20, No.5.



1920-21

Colorado State Teachers College Bulletin.  
Sections One and Two of the Educational  
Survey of Colorado State Teachers  
College. August, 1920. Series 20,  
No.5(6?)

Colorado State Teachers College Bulletin.  
Hand Book of the Extension Service.  
October, 1920. Series 19(20?), No.7.

Colorado State Teachers College Bulletin.  
Announcement of Extension Courses in  
Denver 1920-21. November, 1920. Series  
20, No.8.

Colorado State Teachers College Bulletin.  
Sections Three, Four, and Five of the  
Educational Survey of Colorado State  
Teachers College. December, 1920.  
Series 20, No.9.

Colorado State Teachers College Bulletin.  
Preliminary Announcement of the Summer  
Quarter, 1921. January, 1921. Series  
20, No.10.

Colorado State Teachers College Bulletin.  
The Summer Quarter 1921. February,  
1921. Series 20, No.11.



1920-21

"Series 20, No.11. Supplement. Program  
of Courses, Summer, 1921. February  
1921, Oblong. (see separate volume)  
Not in Volume.

"Series 20, No.12. Campus Views. March,  
1921, Oblong. (see seperate volume)  
Not in Volume.

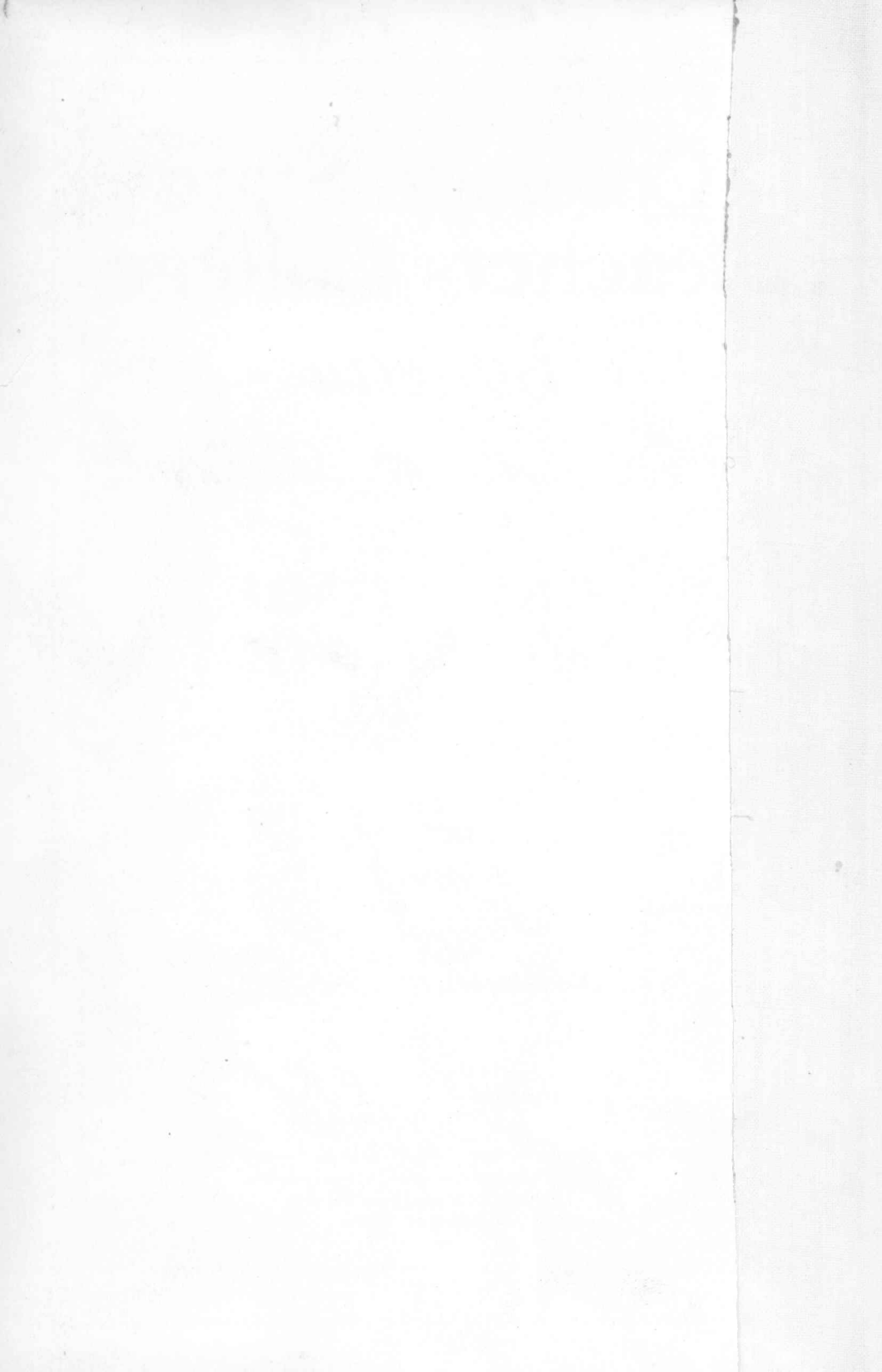




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THE  
STATE TEACHERS  
ASSOCIATION OF COLORADO  
Denver, Colo.



# Colorado State Teachers College *Bulletin*

SERIES XX

APRIL, 1920

NUMBER 1

## YEAR BOOK AND CATALOG

1920-1921



Published Monthly by State Teachers College, Greeley, Colo.  
Entered as Second-Class Matter at the Postoffice  
at Greeley, Colo., under the the Act  
of August 24, 1912

## Certificates of High School Graduation

Students enrolling for the first time in the College and those whose admission to the College has not yet been formally arranged must show a certificate of graduation from an acceptable high school. This certificate must cover at least fifteen units.

Students not high school graduates may be admitted conditionally upon presenting a certificate showing the completion of fourteen units. This condition must be removed during the first year by taking one unit of work in the Industrial High School.

**SPECIAL STUDENTS**—See page 13 for a statement concerning admission as special students.

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*See the College Calendar inside of the back cover*

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# Announcements and Catalog *of* Courses

FOR THE YEAR 1920-1921

## *Catalog*

of the Faculty for 1920-1921  
and of Students for 1919-1920

AND

*Announcement of Courses  
for 1920-1921*



THE  
STATE TEACHERS  
COLLEGE OF COLORADO  
Greeley, Colo.

PUBLISHED AUGUST 25, 1920

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STATE TEACHERS COLLEGE  
Greeley, Colorado

### THE BOARD OF TRUSTEES

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State Superintendent of Public Instruction

### OFFICERS OF THE BOARD OF TRUSTEES

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### STANDING COMMITTEES

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### STATE BOARD OF EXAMINERS

- MRS. MARY C. C. BRADFORD, State Superintendent of Public Instruction.  
MISS EMMA T. WILKINS, County Superintendent of Schools, Larimer  
County, Fort Collins.  
THE PRESIDENT, Colorado State Teachers College.

### OFFICERS OF ADMINISTRATION

- JOHN GRANT CRABBE, LL.D., President of the College.  
ALBERT FRANK CARTER, M.S., Librarian.  
VERA CAMPBELL, Assistant Librarian.  
WM. B. PAGE, M.D., Assistant Librarian.  
EDITH STEPHENS, A.B., Assistant Librarian.  
R. G. DEMPSEY, Superintendent of Grounds and Buildings.  
J. P. CULBERTSON, Secretary to the President.  
GEO. P. WILLIAMS, Bookkeeper.  
T. O. BELLWOOD, Registrar and Secretary to the Dean.  
CLEO JOHNSON, Stenographer.  
ROY M. CARSON, Stenographer.  
MABEL MOUNT, Stenographer.

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# The Faculty

JOHN GRANT CRABBE

*President*

A.B., M.A., Ph.D., Phi Beta Kappa, Ohio Wesleyan University; Pd.M., Ohio A.B., A.M., Pd.D., Phi Beta Kappa, Ohio Wesleyan University; Pd.M., UniOhio University; LL.D., Berea College; Ph.D., Miami University; LL.D., FlinUniversity of Kentucky. Head of Department of Greek and Latin, tuckFlint Normal College; Superintendent of City Schools, Ashland, Kentucky; State Superintendent of Public Instruction of the Commonwealth of Kentucky; President Eastern Kentucky State Normal School.

FRANCIS LORENZO ABBOTT

*Professor of Physical Science*

B.S., A.M., DePauw University; graduate, student John Hopkins University. Teacher of Science, Fond du Lac High School; teacher of Science, La Junta, Colorado, High School; teacher of Science and Principal of Trinidad, Colorado, High School.

LEVERET ALLEN ADAMS

*Professor of Biology*

B.A., M.A., Kansas University; Ph.D., Columbia University. Museum assistant in Zoology, Kansas University.

HESTER ANN ALLYN

*Assistant Professor, Household Science*

A.B., University of Illinois; Student, Omicron University. Teacher, Graded Schools, Wainwright, Oklahoma; Teacher, Libertyville High School, Libertyville, Illinois; Critic Teacher Home Economics, Louisiana State Normal School.

MRS. LELA AULTMAN

*Training Teacher, First Grade*

Pd.B., Pd.M., Colorado State Teachers College. Teacher City Schools, Trinidad, Colorado; training teacher, Oregon State Normal School; teacher, County Institutes.

GRACE M. BAKER

*Professor of Fine and Applied Arts*

Graduate, Collegiate Institute, Geneseo, Illinois; graduate, Chicago Art Institute; student, Illinois State Normal University; student, University of Chicago; student, Fine Arts Academy, Chicago. Supervisor of Drawing, Oak Park; teacher of Art, Chicago Art Institute Evening and Summer Schools; supervisor of Drawing, Shawnee, Oklahoma; Head Art Department, State Normal School, Edmond, Oklahoma; and Head Art Department, State Normal School, Whitewater, Wisconsin.

GEORGE A. BARKER

*Professor of Geology, Physiography, and Geography*

B.S., M.S., University of Chicago; graduate scholarship in Geography; Sigma Xi, University of Chicago, Illinois. Department of Physiography, Joliet High School; assistant professor of Geography, Illinois State Normal University; head of the Department of Geography, Colorado Springs High School; teacher of Geology, Colorado College.

MARVIN FOSTER BEESON

*Director Cooperative Extension Service  
Western Colorado*

A.B., Meridian College; graduate student, University of Jena, University of Berlin, University of Grenoble; Ph.D., University of Leipzig; post graduate work, Leland Stanford Junior University. Carnegie Exchange Teacher to Potsdam, Germany; Head Department of German and French, Meridian College; instructor, New Mexico Military Institute; instructor, University of Colorado Summer Session.

JOHN RANDOLPH BELL

*Director of Extension Service*

Pd.B., Colorado State Teachers College; Ph.B., M.A., University of Colorado; Litt.D.; University of Denver. Principal, City Schools, Alma, Colorado; Principal of Byers School, Edison School, Denver, Colorado.

RALPH T. BISHOP

*Assistant Professor of Industrial Arts*

Graduate, Western Illinois State Normal School; Special Manual Arts Diploma, Graduate Inland Printer Technical School; Instructor of Printing, Western Illinois State Normal School; Instructor of Printing, Edmonton (Canada) Technical School.

RAE E. BLANCHARD

*Professor of Literature and English*

Graduate, Boston Normal School; student, Lowell Institute, Boston; A.B., Colorado State Teachers College; A.M., Chicago University; Teacher, Rica School, Boston; Teacher of English and Science, Milton, Iowa, High School; Teacher of English, Durango, Colorado, High School.

WILLIAM GRAY BOWERS

*Professor of Chemistry*

B.S., Ohio Wesleyan University; A.M., Indiana University; special work, University of California; Ph.D., Ohio State University; teacher, public schools, West Virginia four years; Instructor, High School Sciences at Leesburg, Ohio, two years; Professor of Chemistry and Physics, State Normal School, Ellendale, North Dakota ten years; Professor of Food Chemistry, Agricultural College, Fargo, North Dakota, two years.

ALBERT FRANK CARTER

*Librarian; Professor of Library Science*

B.E., M.E., B.S., M.S., Indiana, Pennsylvania, State Normal School; A.B., Colorado State Teachers College. Graduate student, Chicago University; member Colorado State Library Commission. Teacher, Public Schools, Tyrone, Pennsylvania; assistant professor of Mathematics, Botany and Physiography, Indiana, Pennsylvania, State Normal School.

ELIZABETH CLASBEY

*Instructor in Household Science*

Student, Northwestern Normal School, Maryville, Missouri; graduate, Stout Institute; student, University of Colorado; teacher, Savannah Public Schools.

AMBROSE OWEN COLVIN

*Professor of Commercial Education*

B.C.S., Denver University. Graduate, Commercial Department, Tarkio College; teacher, Stanberry Normal School; teacher, Coffeyville Business College; teacher, Central Business College, Denver; teacher, Cass Technical High School, Detroit.

FAITH COX

*Commercial Education, High School*

A.B., Colorado College; Teacher, Colorado Springs High School.

EDITH CREAMEANS

*Assistant Librarian*

Graduate, Urbana High School, Urbana, Illinois; student, University of Illinois; Student, Brown's Business College, Champaign, Illinois; Teacher Champaign Commercial College; Assistant Librarian, University of Illinois.

ETHAN ALLEN CROSS

*Dean of the College; Professor of Literature and English*

Student, Southern Illinois Normal School and Cornell University; A. B., University of Illinois; A. M., University of Chicago. Principal, Sullivan, Illinois, High School; Superintendent of Schools and Instructor in High School History, Mathematics and English, Sullivan and Delavan, Illinois. Author: "The Short Story," and "Story Telling for Upper Grade Teachers."

BESS V. CUNNINGHAM

*Teacher, Kindergarten Training School*

B.S., Toledo University, Toledo, Ohio; student, Teachers College, Columbia University, New York City. Director Public School Kindergarten, Toledo, Ohio; Supervisor Kindergarten Department, San Francisco State Normal School. Teacher, University of California.

HULDA A. DILLING

*Training Teacher, Fourth Grade*

Graduate, Oshkosh State Normal School; B.E., Teachers College, Illinois State Normal University; graduate student, University of Chicago; teacher, City Schools, Indianapolis, Indiana; critic teacher, Training School, Eastern Kentucky State Normal School.



- EDWIN STANTON DU PONCET *Professor of Modern Foreign Languages*  
 Ph.D., University of Grenoble. Instructor in Romance Languages, University of Missouri; instructor in Latin and Greek, Scarritt College, Ozark College and Red River College; professor of French and German, Memorial University; professor of Modern Languages, Southern State Normal School, University of Utah; associate professor of Latin and Spanish, Throop College; professor of Romance Languages, University of Redlands; head, Department of French and German, Salt Lake City High School; graduate student at the Universities of Missouri, Michigan, Heidelberg, Buenos Aires, and Grenoble.
- FLORA ELDER *Instructor Commercial Education*  
 A.B., Denver University; student, Central and Barnes Business Colleges, Denver; student, Browns Business College, Colorado Springs. Commercial work, Albany, Oregon; Tenino, Washington; Denver and Colorado City, Colorado.
- GEORGE WILLIAM FINLEY *Professor of Mathematics*  
 B.S., A.M., Kansas State Agricultural College. Student, Kansas State Normal School; Student, University of Chicago; teacher, County Schools of Kansas; U. S. Army, Spanish-American War; teacher in City Schools, Wanneta, Kansas; Principal of Schools, Peru, Kansas; head of the Department of Mathematics, Oklahoma University Preparatory School.
- CHARLES M. FOULK *Professor of Manual Training*  
 Student, Edinboro State Normal School; graduate, architectural course, International Correspondence School; Pd.B., Colorado State Teachers College. Building foreman and superintendent in Pennsylvania, Idaho, Colorado, and Washington; conducted classes in Trade Problems in Pennsylvania, Idaho, and Colorado.
- HELEN GILPIN-BROWN *Dean of Women*  
 A.B., Colorado State Teachers College. Teacher, Livermore, Colorado; principal, Private School, Fort Collins, Colorado.
- ROSS M. GRINDLE *High School Teacher, Training Courses*  
 Teacher, Colorado Springs High School. Assistant, Federal Vocational Board, Denver, Colorado.
- SAMUEL MILO HADDEN *Dean of Practical Arts; Professor of Industrial Education*  
 Student, Cooper Memorial College, Sterling, Kansas, Pd.B., Colorado State Teachers College; A.B., A.M., University of Denver; student, Teachers College, Columbia University; student, Chicago University. Training teacher, Sterling, Kansas; teacher, Tawner, Colorado.
- WILLIAM HENRY HARGROVE *Professor of Agriculture*  
 Pd.B., State Normal School, Cape Girardeau, Missouri; B.S., in Education and B.S. in Agriculture, University of Missouri; teacher, Missouri rural schools; principal, Sikeston, Missouri high school; superintendent of city schools, Bloomfield, Missouri; superintendent, Extension Schools and Farmers meetings under direction of College of Agriculture, Missouri University.
- JOSEPHINE HAWES *Assistant Professor of English*  
 A.B., A.M., Colorado State Teachers College; graduate, Kansas State Normal School; student, University of Colorado; student, Columbia University. Head Department of English, Las Vegas, New Mexico; principal grade school, Emporia, Kansas; Head Department of English, Newton, Kansas.
- JACOB DANIEL HEILMAN *Professor of Educational Psychology*  
 Student, M. E. Keystone State Normal School; A.B., Muhlenberg College, Allentown, Pennsylvania; Ph.D., University of Pennsylvania. Author of "A Clinical Study of Retarded Children;" author of "A Study in Addition;" Harrison Fellow in Pedagogy; assistant in Psychological Clinic and lecturer in Child Study, University of Pennsylvania.

WALTER F. ISAACS\*

*Professor of Fine and Applied Arts*

B.S., James Milliken University, Decatur, Illinois; Art Students' League of New York; student, Art Institute of Chicago. Supervisor of art, Jeffersonville, Indiana.

EDWARD KAMINSKI

*Instructor in Industrial Arts*

Student, St. Bonaventures College; student, Milwaukee State Normal Art School; student, Sagatuck Summer School of Painting. Art Instructor, Shorewood School, Milwaukee, Wisconsin.

ELIZABETH HAYS KENDEL

*Training Teacher, Sixth Grade*

Pd.B., Pd.M., A.B., Colorado State Teachers College; student, Chicago University; student, Columbia University.

JOHN CLARK KENDEL

*Director of the Conservatory of Music; Professor of Public School Music*

Pd.B., Pd.M., A.B., Colorado State Teachers College; student, John C. Wilcox; student, John D. Mehan; student, David Abramowitz. Supervisor of Music, Pueblo City Schools.

HAZEL KENNEDY

*Assistant in Music, Piano*

Student Nebraska State Normal, student, Nebraska University School of Music three years; student, Bible Teachers Training School, New York City two years; PdM., A.B., Colorado State Teachers College.

MARGARET JOY KEYES

*Assistant Professor of Physical Education and Dramatic Interpretation*

Student, Columbia College of Expression; student, Chicago University; A.B., Colorado State Teachers College; student, California Normal School of Dancing. Instructor in Physical Training and Dramatic Art, Prescott School of Music, Minot, North Dakota; instructor in Physical Training and Dramatic Art, Grafton Hall, Fond du Lac, Wisconsin.

GLADYS E. KNOTT

*General Science, High School*

B.S., M.S., Purdue University; student, University of California. Instructor High School Mathematics, Montmorenci, Indiana; instructor High School Science and English, Woodland, Washington; Watseka, and Stockland, Illinois.

FLORENCE LOWE

*Instructor Fine and Applied Arts*

Pd.B., Pd.M., Colorado State Teachers College. Teacher two years, Laramie, Wyoming Public Schools.

H. PEARL LIPP

*Medical Adviser of Women*

Graduate, Jerseyville High School, Jerseyville, Illinois; graduate, Medical Department, University of Illinois; examiner at Child Labor Certificate Bureau, Chicago; resident physician, Psychopathic Hospital, Chicago; school health officer, Chicago; medical examiner, Chicago Telephone Co.; assistant medical examiner to Medical Adviser of Women, University of Chicago; two and one-half years general practice.

ROYCE REED LONG

*Director Physical Education*

A.B., Leland Stanford Junior University; student, University of Chicago; graduate student, Johns Hopkins University. Physical Director, Y. M. C. A., Dixon and Aurora, Illinois; Director of Athletics, Southern Y. M. C. A., Student Conference; Director of Athletics, Vanderbilt University, and medical student; also coached track team which won the Southern Intercollegiate Track Championship both in 1905 and 1906; Assistant Professor of Hygiene and Acting Head of Hygiene Department and medical student, Leland Stanford Junior University; First Lieutenant, Sanitary Corps, U. S. Army; Captain U. S. Army in direction of Educational work.

\*Leave of absence 1920-21.

MARIE GUSTAVA LUNDBERG *Assistant Professor of Household Science*

Graduate, Normal School Framingham, Mass.; teacher, public schools, Massachusetts, nine years; teacher, Simmons College, one year; teacher, University of Vermont, one year; teacher, Cornell University one year; instructor, Simmons College five years; teacher, Columbia University one year; B.S., Columbia University; instructor, Summer Preparatory Course for Nurses, Western Reserve University; instructor in Household Administration two years; assistant professor of Household Administration, 1919, Western Reserve.

GENEVIEVE LYFORD *Training Teacher, Kindergarten*

B. H. S. Oregon State Agricultural College; graduate, Kindergarten Normal School, Galesburg, Illinois; B.S. Teachers College, Columbia University. Teacher, Public School Kindergarten, Howarden, Iowa; Supervisor Kindergarten, Waterloo, Iowa; Head of Kindergarten, Warrensburg, Missouri, State Normal School; Head of Kindergarten, State Normal School, Valley City, North Dakota; Supervisor of Kindergarten State Normal School, Moorhead, Minnesota.

THOMAS C. MCCracken *Dean of the Graduate College; Professor of the Science and Art of Education*

A.B., Monmouth College; A.M., Ph.D., Harvard University; special research student with Women's Municipal League of Boston. Head of Preparatory Department, Monmouth College; assistant principal, Bellefontaine, Ohio, High School; principal, Monmouth, Illinois, High School; director of research in Harvard, Wellesley and Radcliffe for Women's Municipal League; assistant professor of Education, University of Utah.

LUCY NEELY McLANE *English, High School*

A.B., Colorado State Teachers College; student, Lexington College; student, Columbia University. Teacher of English and Literature, Canon City, Colorado, City Schools.

ARTHUR E. MALLORY *High School Mathematics*

A.B., and Graduate Student of the University of Kansas; Instructor in Mathematics, Science and Junior Normal Training, Great Bend and Burrton, Kansas.

GURDON RANSOM MILLER *Professor of Sociology and Economics*

Ph.B., Phi Beta Kappa, Syracuse University; A.M., Ph.D., Denver University. Superintendent of Schools, Beacon City, New York; Superintendent of Schools, Binghamton, New York. Author, "Social Insurance in the United States."

J. C. MUERMAN *Director, Rural Administration*

Graduate, Hiram College; A.B., Washington State College; A.M., George Washington University, Washington, D. C.; teacher, Rural Schools, Ohio and Idaho; Superintendent, City Schools, Moscow, Idaho; Division Superintendent of Schools; Philippines; Deputy County Superintendent of Schools; Idaho; Specialist in Rural Education, U. S. Bureau of Education, Washington, D. C.

BERNICE ORNDORFF *Training Teacher, Seventh Grade*

Ph.B., University of Chicago; graduate student, Indianapolis Normal School; student, Indiana University; student, Columbia University; student, School of Applied Arts, Chicago; student, John Herron Art Institute, Indianapolis. Teacher, Indianapolis, Indiana, Public Schools.

WILLIAM B. PAGE *Assistant Librarian*

M.D., University of Michigan; D.O.S., Needles Institute of Optometry, Kansas City, Missouri.

HELEN PAYNE\*

*Director and Professor of Home Economics*

B.S., Kansas State Agricultural College; graduate, Kansas State Normal School. Life certificate course; teacher, Kansas City Schools; director, Home Economics, Parsons, Kansas, High School; head, Home Economics Department, State Agricultural School, Arkansas.

ORA B. PEAKE

*H. S. Preceptress and Head History Department*

A.B., Michigan State Normal College, Ypsilanti, Michigan; A.M., University of Michigan; Ann Arbor, Michigan; Teacher of History and Civics in the High Schools at Homer, Portland and Bay City, Michigan.

EDGAR DUNNINGTON RANDOLPH\*

*Director of Extension Service*

Graduate, Eastern Illinois State Normal School; A.B., University of Denver; student, University of Chicago; A.M., Teachers College, Columbia University; high school instructor, Mattoon, Illinois. Assistant in Philosophy of Education, Teachers College, Columbia University.

FRIEDA B. ROHR

*Training Teacher, Fifth Grade*

Pd.B., Pd.M., A.B., Colorado State Teachers College. Training teacher, Denver Public Schools.

MARGARET M. ROUDEBUSH

*Professor Household Arts*

A.B., Industrial Institute and College, Columbus, Mississippi; graduate student, Bryn Mawr College, Pennsylvania; student, University of Chicago. Teacher, Canton, Mississippi; instructor, English and History; Smith Academy, St. Louis, Missouri; supervisor Home Economics, Oshkosh, Wisconsin; Head Home Economics Department and Dean of Women, University of Mississippi.

OTTO W. SCHAEFER

*Instructor in Book Binding*

Student of William Walker, Art Binder of Edinburgh, Scotland. Head of Book Binding Department, B. F. Wade Printing Company, Toledo; head of Stamping and Finishing Department, Kistler Stationery Company, Denver; head of Binding Departments in Cleveland, Detroit, Asheville, Riverside and Los Angeles.

WILLIAM E. SEARCH

*Assistant Professor of Hygiene and Physical Education*

Student, Springfield College, Springfield, Massachusetts; director, Physical Education, Suffield School, Suffield, Connecticut; Physical Director, Y. M. C. A., Dupont Powder Works, Carney's Point; Director of Physical Education, Griffith Institute, Springfield, New York.

BELLA BRUCE SIBLEY

*Training Teacher, Seventh Grade*

Student, Truro Normal School, Nova Scotia; student, Dick's Normal School, Denver; student, Denver University; student, Columbia University; Pd.B., Pd.M., A.B., Colorado State Teachers College; A.M., Denver University. Instructor in High School, East Halifax, Nova Scotia; training teacher, Denver Public Schools.

EDWIN B. SMITH

*Professor of History and Political Science*

Graduate, State Normal School, Oneonta, New York; student, Syracuse University; B.S., Columbia University; graduate student, University of California; A.M., University of Denver. Assistant in History, Teachers College, Columbia University; principal, Pacific Grove Academy, California; professor of History and Economics, California State Polytechnic.

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\*Leave of absence 1920-21.

EDITH STEPHENS

*Assistant Librarian*

A.B., Colorado State Teachers College.

MARK SWEANY

*Director of Secondary Education*

A.B., University of Michigan; A.M., Harvard University; graduate work, University of Chicago five quarters; teacher, country schools, Columbia County, Wisconsin three years; Principal, Magnolia, Illinois High School three years; Principal, Rossville, Illinois High School one year; Departmental Head in History and Social Sciences, Colorado Springs, Colorado High School seven years.

FRANCES TOBEY\*

*Professor of Oral English*

B.S., Western Normal College; A.B., Colorado State Teachers College; graduate, Emerson College of Oratory, Boston. Member faculty, Emerson College of Oratory, Boston; chair of English and Reading, Denver Normal School; editor, Emerson College Magazine.

EDITH GALE WIEBKING

*Instructor, Household Arts*

Student, Lairds Seminary for Young Ladies, Philadelphia, Pennsylvania; Pd.B., Colorado State Teachers College. Student, Philadelphia School of Design; Teacher six years, Greeley City Schools.

EDNA F. WELSH

*Commercial Education, High School*

Pd.B., Pd.M., Colorado State Teachers College.

CLARA M. WHEELER

*Training Teacher, Third Grade*

Graduate Bridgewater Normal School; B.S., Columbia University. Critic teacher Providence Normal School; principal of elementary department Hyannis Normal School; instructor Horace Mann School Teachers College; principal Sputyen Duyvil School.

GRACE H. WILSON

*Assistant to the Dean of Women*

Pd.B., Colorado State Teachers College; A.B., Colorado College. Secretary, Young Women's Christian Association, Iowa State Teachers College.

FRANK LEE WRIGHT

*Professor of Education*

A.B., Kansas State Normal School; A.M., University of Wisconsin. Director Normal Training Work, Emporia High School; Superintendent of Schools, Bucklin, Kansas; assistant in Education, University of Wisconsin.

M. EVA WRIGHT

*Piano and Pipe Organ*

Student under the artists and masters, W. H. Sherwood, of Chicago; Samuel Fabian, of Washington, D. C.; Alfred G. Robyn, of St. Louis; Chas. Borjes, interpreter of Spohr and pupil of Zeiss, of New York; Sig. Mattioli, and W. H. Jones; student, College of Music of Cincinnati. Organist and director Old Bruton Parish Church, Williamsburg, Virginia; twelve years' experience as teacher in William Woods College, Bollinger Conservatory, Alfred University and Norfolk, Virginia.

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\*Leave of absence 1920-21.

## Summer Quarter, 1920

- EDWARD HOWARD GRIGGS, AM., L.H.D., New York City.
- LINCOLN HULLEY, Ph.D., President Stetson University, Deland, Florida.
- EDWARD T. DEVINE, Ph.D., Columbia University, New York City.
- EDW. RYNEARSON, Ph.D., Director of Vocational Guidance, Pittsburg Public Schools, Pittsburg, Pennsylvania.
- ELWOOD P. CUBBERLEY, Ph.D., Dean of School of Education, Leland Stanford Junior University, California.
- E. C. HAYES, Ph.D., Professor of Sociology, University of Illinois, Urbana.
- HARVEY S. GRUVER, A.M., Superintendent of Schools, Worcester, Mass.
- HARRY L. MILLER, A.B., Principal, The University High School of University of Wisconsin, Madison.
- GUY M. WHIPPLE, Ph.D., University of Michigan, Professor of Experimental Education and Director of the Bureau of Mental Tests and Measurements, Ann Arbor, Michigan.
- GEORGE D. STRAYER, Ph.D., Professor of Educational Administration, Teachers College, Columbia University, New York City.
- ERNEST HORN, Ph.D., Head of Department of Experimental Education, University of Iowa, Iowa City.
- E. B. BRYAN, LL.D., H.L.D., President Colgate University, Hamilton, New York.
- A. L. HALL-QUEST, A.M., College for Teachers, University of Cincinnati, Ohio.
- H. B. WILSON, Superintendent of Schools, Berkeley, California.
- J. F. KEATING, Superintendent of Schools, Pueblo, Colorado.
- J. J. CAMMACK, Superintendent of Schools, Kansas City, Missouri.
- J. H. BEVERAGE, Superintendent of Schools, Omaha, Nebraska.
- WM. B. ITTNER, School Architect, St. Louis, Missouri.
- R. D. BURTNER, Specialist in Gymnasium Construction, Narragansett Machine Company, Chicago.
- GENEVIEVE KIRKBRIDE, Specialist in Kindergarten and Primary Education, University of Chicago, Illinois.
- FRANK B. DYER, Former Superintendent of Boston Schools, Cincinnati, Ohio.
- BERTHA WHITMAN, A.M., Teacher of History and English, Greeley High School.
- W. A. EVANS, Former Health Commissioner of Chicago, Illinois.

## Faculty Committees

The President of the College is ex officio, a member of each committee.

### Committee on Advanced Standing

The Dean of the College, the Principal of the High School, Mr. Smith, Mr. Bowers.

### Alumni Committee

Miss Blanchard, Mr. John R. Bell, Mr. Foulk, Miss Rohr, Mr. Hadden.

### Arts-Crafts Committee

Miss Baker, Mr. Kaminiski, Miss Lowe, Mr. Schaefer, Miss Wheeler.

### Committee on "Assembly"

Mr. Barker, Mr. Smith, Miss Baker, Mrs. Gilpin-Brown.

### Committee on Class Officers

First Year: Miss Roudebush. Second Year: Miss Lundberg. Third Year: Mrs. Weibking. Fourth Year: Miss Baker. Fifth Year: Miss Blanchard.

### Committee on Course of Study

Mr. Wright, Mr. Heilman, Mr. Miller, Mr. Cross, Mr. Smith, Mr. Barker, Mr. Sweany, Mr. Abbott.

### Committee on Entrance

The Principal of the High School, the Dean of the College.

### Estes Park Outing Committee

Mr. Bell, Miss Baker, Mr. Bishop, Mr. Adams, Mr. Hargrove.

### Committee on Extension Service

Mr. Bell, Mr. Smith, Mr. Wright, Mr. McCracken, Mr. Miller, Mr. Muerman.

### Faculty Club Committee

Mr. Muerman, Mrs. Gilpin-Brown, Mr. Long, Mr. McCracken, Miss Dilling, Miss Peake, Mrs. Weibking, Mr. Hadden.

### Federal Aid Committee

Mr. McCracken, Mr. Cross, Miss Roudebush, Mr. Hadden, Mr. Hargrove, Mr. Muerman, Mr. Long.

### Committee on Lyceum

Mr. Finley, Mr. Phillips, Mr. Colvin, Mr. Hansen, Mr. Hill, Mr. Camfield, Mr. Dodds, Mr. Cremeans, Mr. Culbertson, Secretary.

### Committee on Men's Welfare

Mr. Hadden, Mr. Barker, Mr. Long, Mr. Finley, Mr. Bishop.

*STATE TEACHERS COLLEGE***Museum Committee**

Mr. Adams, Mr. Hadden, Miss Elder.

**Committee on Official Publications**

Mr. Cross, Mr. Colvin.

**Press Bureau**

Mr. Barker, Mr. Bishop, Miss Blanchard, Mr. Muerman, Mr. Bowers, Mr. Carter.

**Committee on Physical Education**

Mr. Long, Mrs. Gilpin-Brown, Miss Keyes, Mrs. Sibley, Mr. Mallory, Mr. Search, Miss Wheeler, Mr. Wright, Mr. Barker.

**Committee on Public Exercises**

Miss Tobey, Mr. Kendel, Miss Kendel, Mr. Phillips, Miss Welsh, Miss Wright, Mr. DuPoncet, Miss Keyes, Miss McLane.

**Research Committee**

Mr. Heilman, Mr. Finley, Mr. Smith.

**Committee on School Calendar**

Mrs. Gilpin-Brown, Mr. Kendel, Mr. Long.

**Committee on Student Programs**

Mr. Heilman, Miss Orndorff, Mr. Hargrove, Mrs. Aultman, Miss Clasbey.

**Committee on Student Receptions**

Mr. Abbott, Miss Roudebush, Mrs. Aultman, Mr. Adams, Miss Baker.

**Committee on Special Funds**

Mr. Miller, Mr. Cross, Mr. McCracken, Mr. Sweany, Secretary to the Board.

**Committee on Scholarships**

Mr. Sweany, Mr. Bell, Miss Kendel.

**Teacher's Bureau**

Director of the Training School, Dean of the College, Mr. John R. Bell, Mr. Sweany, Mr. Culbertson, Secretary.

**Committee on Text Books**

Librarian, Dean of College, Heads of Departments in Question, Mr. Miller.

**Committee on War Council and Reconstruction**

Mr. Smith, Miss Roudebush, Mr. Beeson, Mr. Bowers, Mr. McCracken.

**Committee on Women's Welfare**

Dean of Women, Miss Hanno, Miss Wilson, Mrs. Sibbey, Miss Dilling, Miss Peake.

**Committee on Women's Building**

Dean of Women, Mr. Kendel, Miss Knott, Miss Wheeler.

**Committee on Y. M. C. A.**

Mr. Finley, Mr. Long, Mr. Wright, Mr. Bishop.

**Committee on Y. W. C. A.**

Miss Wilson, Mrs. Gilpin-Brown, Miss Dilling, Miss Hawes, Miss Blanchard.



## Colorado State Teachers College

**Location**—Teachers College is located at Greeley, in Weld County, Colorado, on the Union Pacific and the Colorado & Southern Railways, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre River, one of the richest agricultural portions of the state. The streets are lined with trees, forming beautiful avenues. The elevation and distance from the mountains render the climate mild and healthful. The city is one of Christian homes and contains churches of all the leading denominations. It is a thoroly prohibition town. There are 12,000 inhabitants.

**Function**—The purpose of the College is to train teachers for public school service. Being supported by public taxation of all the property of the State of Colorado, the College aims first to prepare teachers for all the kinds of public schools maintained within the State of Colorado. This includes rural schools, kindergartens, primary, intermediate grade, upper grade, junior high schools, and high schools. The College also accepts the responsibility of training supervisors for rural schools, principals, superintendents, teachers of home economics, practical arts, fine and applied arts, critic teachers, teachers of defective and atypical children, teachers for adult night schools, etc.

While the College is supported for the training of Colorado teachers, it welcomes students from any state or country and sends its teachers anywhere that they may be called. Students come to Colorado Teachers College from many states and its graduates go in large numbers into the neighboring states and in smaller numbers into distant states and countries.

The College recognizes as its plain duty and accepts as its function the training of students to become teachers in every type of school at present supported by the state, to meet actually all the demands of the best in the public school system of the present, to forecast those improvements and reforms which the evolution of public systems of education is to bring about in the immediate future, and to train teachers to be ready to serve in and direct the new schools which are in the process of being evolved.

**Admission**—Admission to the College is granted to those who present a certificate of graduation showing the completion of fifteen or more units in an acceptable high school. This certificate must be presented at the time of matriculation in the College.

Mature students, not high school graduates, may be assigned to the Ungraded School for Adults. As soon as they have completed the equivalent of fifteen high school units, or shown the learning power which such completion usually gives, they may be granted a certificate of high school graduation and admitted to the College.

**Conditional Admission**—An applicant who is twenty years old or over, who is not a high school graduate, but who is credited with fourteen high school units may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of fourteen units. This admission is conditioned. Such students are limited to a maximum program of twelve hours per quarter and must make up the deficient high school unit in the Industrial High School during the student's first year in the College. The student could not be enrolled for the second year until the entrance condition had been removed.

**Special Students**.—Experienced teachers, not high school graduates,

who have attained marked success in their profession may be admitted as **Special Students** upon the recommendation of the Committee on Entrance. Special students will be admitted regularly to the College only after having met all the requirements set by the committee. Special students who fail to meet the College requirements and to do work of College grade will be reassigned to the Ungraded School for Adults.

**Unclassified Students**—Any student who can meet the entrance requirements may enroll in the College and take any subjects he may elect without taking the prescribed subjects in any of the outlined courses of study. This provision makes it possible for students whose interests are in other types of work than teaching to live at home and get one year or more of general college work before going away to college. Such general academic work is accepted by the leading colleges of the country and applied upon the various courses which they offer.

**Advanced Standing**—Students who come to the College after having done work in another college, normal school, or university will be granted advanced standing for all such work which is of college grade, provided that the college or normal school in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all the prescribed subjects in the course they select, unless these prescribed subjects or their substantial equivalents have been taken already in the normal school or college from which the students come. Only the heads of the departments involved have the power to excuse students from taking these prescribed subjects. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course. If first or second year subjects have been studied in a fifth year in a high school, such credit as these subjects deserve will be allowed.

Credit may be granted for private lessons in music, art, language, business courses, penmanship, etc., or for courses in such subjects in private or public schools not of collegiate rank only upon a recommendation, after careful examination, by the heads of departments giving such work in the College. Whenever thus recommended the work must be certified as similar to, and as a substitute for, certain specified courses which such departments offer or recognize as a part of the training of a teacher in that particular field.

Those who desire advanced standing should write for application blanks for advanced standing at their earliest convenience, and should return these as soon as possible together with credentials to the College. It is exceedingly important that full credentials, relative to all the work for which credit is expected, be forwarded. This saves the student much delay and inconvenience.

**The Unit of College Credit**—All credit toward graduation is calculated in quarter-hours. The term quarter-hour means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the college courses call for four recitations a week. These are called four-hour courses. A student usually selects sixteen quarter-hours, the equivalent of four courses each meeting four times a week, as his regular work.

Forty-eight quarter-hours are a student's regular work for the usual school year of nine months, or three quarters.

**Maximum and Minimum Hours of Credit**—A student registers usually for fifteen or sixteen hours each quarter. If the work is to count as resident work, the student must carry at least twelve quarter-hours. In addition to a regular program of sixteen hours any student may add one or two of the following one-hour courses to his program without special permission: Bible Study, Community Co-operation, Conservatory Music Lessons or Chorus.

A student who wishes to take a larger program than sixteen hours

made up of any other additions than those mentioned above must have been in residence at least one quarter and have shown ability to do work of "A" or "AA" quality. Applications for permission to take more than sixteen hours are made in writing to the Committee on Students' programs. This committee will decline to grant permission to students to take more than eighteen hours, on the ground that it is better for the most brilliant student to do extended and careful work on eighteen hours, rather than to do twenty hours or more, superficially.

In case a student makes more than two grades below "B" during a given quarter he will be limited to fourteen hours the following quarter.

It shall be a part of the duties of the Committee on Student Programs to learn at the close of the first half of each College quarter the quality of the work of each student carrying more than sixteen hours, and reduce the number of hours in each and every case regarding which any instructor reports the student's work as either weak or unsatisfactory.

**Minimum Residence Requirement**—The College does not grant any certificate or diploma for less than three full quarters of resident study, during which time the student must have earned at least **forty-eight** quarter hours of credit. Students who have already taken the two-year diploma must spend in residence at least one quarter out of each year required for the three-year or four-year courses. Extension group classes, conducted by members of the College faculty, are considered as resident work and may be counted as such to the extent of one quarter out of each three quarters required for the student's graduation.

**The Grading System**—A student who takes a four-hour course may earn a little more than four hours of credit by doing unusually good work. On the other hand, less than four hours will be granted for work of poorer quality than a reasonable expectation. The system is as follows:

A mark of AA for a course gives 20 per cent above the number of hours indicated as normal for the course.

A gives 10 per cent above normal.

B gives the normal credit.

C gives 10 per cent below normal.

D gives 20 per cent below normal.

F indicates failure.

For example:

4B on a student's permanent record means that a student has taken a four-hour course and made the normal credit in it.

4AA would indicate most excellent work in a four-hour course and would carry 4.8 hours credit.

4A gives 4.4 hours credit on a four-hour course.

4B gives 4 hours credit on a four-hour course.

4C gives 3.6 hours credit on a four-hour course.

4D gives 3.2 hours credit on a four-hour course.

These marks, both figure and letter, go on the student's permanent record for later reference to indicate the quality of the work done.

A student who enters school late in the quarter or is compelled to leave early may receive partial credit for the course in such a way as to indicate both the quality and the amount of credit. For example: A student may complete with exceptional distinction but two-thirds of a three-hour course. The mark should be 2AA, and not 3C. Each mark would give 2.4 hours, but the first mark would indicate the quality of the work as well as the amount of credit.

**Late Registration**—Except by special permission of the Dean of the

College, no student, after his first quarter of school work during any given school year, who registers after the first day of the quarter shall under any consideration be allowed to take more than sixteen hours of work, and no additional credit for A's or AA's will be allowed such student for the work of the quarter in which he has registered late. If the student is more than three days late the total number of hours on his program will be reduced in proportion to the time lost.

Any student absent from class on the last day of the quarter will have his quarter report for that class turned in as incomplete unless he has a written permit from the President or Dean to leave before the close of the quarter. No teacher has authority to excuse a student from one of his courses before the close of the quarter.

**The School Year**—The school year is divided into four quarters of approximately twelve weeks each. These are:

1. **The Fall Quarter.**
2. **The Winter Quarter.**
3. **The Spring Quarter.**
4. **The Summer Quarter.**

This division of the year is especially well suited to a teachers' college, for it gives teachers in active service, an opportunity equal to any of securing a complete education while actually teaching.

**Shortening the College Course**—The Quarter plan, the Extension Work, and the grading system make it possible for students who are physically strong enough to stay in school with only short vacations to complete a college course in a shorter time than that usually required in the colleges. Ninety-six quarter-hours constitute the usual two-year college course, and one hundred and ninety-two quarter-hours make up the four-year course required for the A.B. degree. By carrying an average of seventeen hours a quarter and making an average grade of "A," a strong student can earn 18.7 hours each quarter. At this rate he could complete the course for the two-year life certificate in five quarters, from the middle of June of one year to the end of August of the next. Or such a student could complete the course for the A.B. degree in two and a half years—ten quarters. By doing some work in Extension courses through the school year while teaching, it is possible to reduce the time still further.

**Practice Teaching**—Teachers who have had less than two years of college training take their practice teaching in the Elementary School. Those who have had two years of college training may choose between the Elementary School and the High School according to their own personal needs and interests. Students are required to do two quarters of practice teaching before being granted the two-year diploma and life certificate. Students in the third and fourth years are expected to take one quarter of practice teaching in each year. Ed. 105 takes the place of one quarter of practice teaching for those who are to teach in high schools.

**The State Board of Examiners**—Every student before being granted a life certificate appears before the State Board of Examiners to teach a model lesson. Only students who have had at least a quarter's practice in the Training School are admitted to this examination. A second examination is not required of those who are taking the A.B. or A.M. degree if they have already taught successfully before the State Board.

### THE SUMMER QUARTER

The Summer Quarter of 1921 will in general follow the plans begun in 1918. The quarter will be but a little shorter in actual time than the other three quarters of the college year. Each instructor will include all the material in his courses that he regularly uses and will give full time to each topic. A student will carry sixteen hours of work the same

as in other quarters. This includes the usual two hours' credit for the evening lectures.

The policy of bringing in from other institutions, not only lecturers, but class-room teachers as well will be continued and extended. Twenty lecturers and teachers from other educational institutions will be in Greeley to give the best they have to the summer school students.

The Summer School of Colorado State Teachers College began its work in 1905 with a small faculty group and about two hundred students. In 1910 practically the whole faculty, exclusive of the training school and high school teachers, remained to teach through the six weeks of the summer school. In that year there were 443 students. In 1918 the summer term was placed upon an academic level with the other quarters of the college year. The term was lengthened to a quarter and the credits were made equal in value with those of the college year. With this step the college entered upon the four-quarter year. Today the teachers, not only of Colorado but of neighboring and distant states as well, recognize the fact that the College is doing a large service to the profession of teaching by making it possible for active teachers to keep up with the development of modern educational practice and to continue their professional education without losing time from their teaching. A thousand teachers each year avail themselves of the opportunity.

Admission to the College at other times is limited to those who have completed fifteen units of high school work. The strict observance of this rule during the summer would make it impossible for hundreds of experienced teachers, who are not high school graduates, to get into touch with all the new movements in education which the College faculty and visiting instructors are presenting to the summer quarter students. This year for the first time the College is opening the summer classes to all who may profit by the instruction offered .

Any student twenty years of age or over may be enrolled in Teachers College for the Summer Quarter without reference to meeting the College requirement for admission. The College believes it can render a valuable service to the teachers of Colorado and surrounding states by allowing any mature man or woman who is teaching or expecting to teach, but who has not graduated from a high school, to enroll in the College for the Summer Quarter and take from the complete College program such work as he or she may be able to carry.

No college credit will be recorded, however, for any student until the requirements for college entrance have been fully met. A record of attendance and work done will be kept. This may later be transferred to the permanent records and counted toward graduation when the entrance requirements have been complied with.

#### TEACHERS COLLEGE CO-OPERATION WITH ST. JOHN'S COLLEGE

St. John's College is a theological school maintained in Greeley by the Protestant Episcopal Church. Students in St. John's College are required to complete a course for the degree of Bachelor of Arts before that college will grant the degree of Bachelor of Divinity. Theological students take all their theological courses in St. John's College and their academic and teachers' professional courses in Colorado Teachers College. Such students take all of the required "core subjects" of the four-year course in Teachers College and count their St. John's courses as electives in the Teachers College curriculum. A total of 192 hours is required for the A.B. degree. For the requirements for the B.D. degree and for all other details concerning the theological school and its requirements address The Reverend B. W. Bonell, Dean of St. John's College, Greeley, Colorado.

## HISTORY OF THE COLLEGE

The State Normal School of Colorado was established by an act of the legislature of 1889. The first school year began October 6, 1890.

At the beginning of the second year the school was reorganized and the course extended to four years. This course admitted grammar school graduates to its freshman year, and others to such classes as their ability and attainment would allow.

At a meeting of the Board of Trustees, June 2, 1897, a resolution was passed admitting only high school graduates or those who have an equivalent preparation, and practical teachers. This policy made the institution a professional school in the strictest sense.

The Eighteenth General Assembly passed an act making the State Normal School at Greeley, Colorado, also the State Teachers College of Colorado. In the catalog and in all the official publications hereafter the title, "Colorado State Teachers College" will be used.

## COLORADO CLIMATE

Greeley is one of the most beautiful small cities to be found anywhere, situated 52 miles north of Denver, within plain view of the Rocky Mountains, in the heart of the richest farming country in the world. Its homes shelter an intelligent population of over 12,000 persons, overwhelmingly American. Its streets are broad and shady, its lawns well-kept; its water supply is piped 38 miles from a mountain canon, and is pure and soft. It is pre-eminently a city of homes, schools and churches.

**Altitude, etc.**—The altitude, 4,567 feet above sea level, insures clear, dry air, sunny days and cool nights. Seldom does the night temperature go above 70 degrees, even in the hottest part of the summer; 60 or 65 degrees at night is usual. Because of the low percentage of humidity, even the hottest midday is seldom oppressive, and sunstroke is unknown.

One may accomplish a given amount of brainwork here with the minimum of energy or fatigue, while recuperation comes quickly. This statement is true of the entire year. Hence students of Colorado schools make greater relative progress with the same effort than those of any other state.

## EQUIPMENT

This institution is well equipped in the way of laboratories, libraries, gymnasiums, playgrounds, an athletic field, art collection, museums, and a school garden. The library has 50,000 volumes bearing on the work of Teachers College. There is ample opportunity to work out subjects requiring library research. There is a handicraft department connected with the library wherein a student may learn how to conduct a library. The gymnasium is well equipped with modern apparatus. Games of all sorts suitable for schools are taught.

## THE GREELEY WATER

The water supply of Greeley is obtained from the canon of the Cache la Poudre, forty miles from Greeley, in the mountains. The water is passed thru settling basins and filters until all foreign matter is removed. The supply is clear, pure, and ample for all the needs of the city. The system was constructed at an expense of \$400,000 and is owned by the city.

## BUILDINGS

The buildings which are completed at the present time consist of those described below.

**The Administration Building**—The main, or administration building, is 240 feet long and 80 feet wide. It has in it the executive offices, classrooms, and class museums. Its halls are wide and commodious and are occupied by statuary and other works of art, which make them very pleasing.

**The Library**—The Library is a beautiful building. The first floor is entirely occupied by the library, consisting of more than fifty thousand volumes. The furniture in the Library is of light oak and harmonizes with the room in a most pleasing manner. The basement is occupied by committee rooms; text-book department, taxidermy shop, wild animal museum, and the department, rural schools and agriculture.

**The Training School**—The Training School is a commodious building of red pressed brick similar in style to the Administration building. In its construction no pains or expense have been spared to make it sanitary, fireproof, and in every possible way an ideal building for a complete graded school from the kindergarten to the high school, inclusive.

**Industrial Arts Building**—The Simon Guggenheim Hall of Industrial Arts is a beautiful structure in the classic style of architecture. It is constructed of gray pressed brick. It accommodates the departments of Manual Training and Art, including every branch of hand work and art training applicable to the highest type of public school of the present and immediate future. This building is a gift to the College from Senator Simon Guggenheim.

**The President's House**—The President's House is on the campus among the trees. In this beautiful home are held many social gatherings for faculty and students during the school year.

**The Club House and Model Cottage**—During the year 1915-1916, two new buildings were completed and opened. The first of these is a model cottage of five rooms for demonstrations in house furnishing and house-keeping for the department of Home Economics. The second is the club house for women students. This beautiful building is used for student social gatherings.

**The Gymnasium Auditorium**—A temporary wooden structure was completed to take care during the war period of the needs for a modern gymnasium and auditorium. The money was available and plans drawn for the permanent gymnasium and auditorium, but for patriotic reasons, the conservation of labor, materials, and money, these plans were put aside for the present and a large, airy, light wooden building was constructed at small cost to provide a suitable floor for athletic games and an auditorium for the Summer Quarter lectures.

**The Household Arts Building**—After the signing of the armistice and the consequent release of building materials, work was actively pursued on the new Home Economics building, the foundation for which had been already completed. This is a structure similar in construction, color, material and architectural design to the Industrial Arts Building. It is three stories high and will contain ample room for all the class rooms, laboratories, kitchens, dining rooms and work rooms for a well organized department of Household Arts in a teachers' college, including both Household Arts and Household Science. A well arranged cafeteria will be maintained to provide meals for students.

**Other Buildings**—Other service buildings, such as an ample heating plant, a greenhouse, stables, garages, automobile repair shop, etc., are maintained.

#### A NEW BUILDING PROGRAM

The legislature of 1916-17 provided a millage tax for building pur-

poses for all the state educational institutions. This taxation is to extend over a period of ten years and will give the Teachers College approximately \$100,000 a year for that period—a total of a million dollars for buildings.

None of this money was used until the war ended. Now the available funds will be used and the needed new buildings provided as rapidly as possible. Within the ten years the campus will be covered with all the buildings needed by a complete and modern teachers' training college, including a new gymnasium, an auditorium, ample class room expansion, science laboratories, an enlarged library, a completed training school unit, kindergarten, elementary school, junior high school, and senior high school, and dormitories for the housing of a large part of the students whose homes are outside of Greeley.

### THE CAMPUS

Surrounding the buildings is a beautiful campus of forty acres. It is covered with trees and grass, and dotted here and there with shrubs and flowers, which give it the appearance of a natural forest. During the summer, birds, rabbits, squirrels and other small animals make the campus their home, thus increasing its value as a place of rest, recreation, or study.

During the summer and fall quarters the faculty gives its evening reception to the students on the campus. At this time it presents a most pleasing appearance, being lighted, as it then is, by electric lights and Japanese lanterns.

In the rear of the buildings is a large playground, which covers several acres. In the southwestern portion of this playground is a general athletic field, a complete view of which is secured from a grand stand, which will accommodate more than a thousand spectators. On the portion of the grounds adjacent to the buildings there is a complete outdoor gymnasium. To the south of the buildings are located the tennis courts.

### SCHOOL GARDEN

One of the pleasing features of the spring, summer and fall quarters of the school is the school garden. This garden occupies several acres of ground and is divided into four units—the conservatory, the formal garden, the vegetable garden, and the nursery. From the conservatory the student passes into the large formal garden, where all kinds of flowers, old and new, abound. Here may be found the first snowdrop of early March and the last aster of late October. From the formal garden we pass to the school garden proper. Here in garden and nursery the student may dig and plant, sow and reap, the while gathering that knowledge, that handicraft, that is essential in the teaching of a most fascinating subject of the up-to-date school—gardening.

The greenhouse is one of the best equipped of its kind in the United States. After a hard day's work it is a rest and an inspiration to visit this beautiful conservatory. Here hundreds of varieties of flowers are kept blooming all winter, and the early spring flowers and vegetables are started for the spring planting.

### FEES AND EXPENSES

The expense of attending Colorado State Teachers College in as low as can be made by careful management. The total expense may be estimated by taking into account the three largest items: board, room, and college fees.

**Board and Room**—Table board costs from \$4.00 to \$5.00 per week in the college cafeteria where meals are supplied at cost to the student.



In private boarding houses the cost is usually a little more—from five to six dollars a week. Room rent costs \$6.00 to \$8.00 per month with two students in a room. Rooms equipped for light housekeeping cost from \$6.00 to \$10.00 a month.

- Tuition**—1. Tuition is free to Colorado students.  
 2. Tuition to non-Colorado students is \$5.00 per quarter.  
 3. Fee for diploma to non-Colorado students is \$5.00.

**Fees**—The incidental fee (except in the Summer Quarter) is \$8.00 per quarter. This includes matriculation, enrollment, graduation, diploma library, gymnasium and physical education fees: also a season ticket to all regular athletic events. This fee is paid by all and is never refunded. After the opening day, late comers pay \$2.00 extra fee.

Special private lessons in Piano, Organ, Violin and other musical instruments, and Voice are extra in the College Conservatory of Music.

The regular training of teachers in public school music, supervision of music, etc., is free.

**Text-Books**—Students may secure the regular text-books at the College Co-operative Book Store at a reduction from the publishers' list prices. These books will be bought back from the student if in good condition, and still regularly used as text-books.

#### Necessary Expenses for a 12-Week Quarter

Board .....	\$48.00
Room .....	18.00
Incidental Fee .....	8.00
	<hr/>
Total .....	\$74.00

Add to this your own laundry and a small fee for books.

#### MAINTENANCE OF THE COLLEGE

The maintenance of the College comes from a state mill tax and from special appropriations made by the legislature. The session of 1917 levied a special tax to run for a period of ten years to provide money for buildings and permanent improvements.

#### GOVERNMENT

That government of a school which brings about self-control is the highest and truest type. Discipline consists in transforming objective authority into subjective authority. Students who cannot conform to the government of the College, and who cannot have a respectful bearing toward the school, will, after due trial and effort on the part of the faculty to have them conform, be quietly asked to withdraw.

All students who come from abroad, boarding in homes other than their own, are under the control of the institution while they are members of the school. Their place of boarding must be approved by the faculty, and their conduct in the town and elsewhere must always be such as to be above criticism.

**Discipline—Moral and Spiritual Influence**—While the school is absolutely free from denominational or sectarian influence, the aim is to develop a high moral sense and Christian spirit. As an individual who is weak physically or mentally lacks symmetry of development, so does one who has not his moral and spiritual nature quickened and developed. One who is being trained to stand in the presence of little children, and

to lead, stimulate, and inspire them to higher and nobler lives, should not neglect the training of his higher nature. God has immortalized us with His divinity, and it is our duty to respond by continuously aspiring to a higher life.

**Conduct and Health**—The conduct and health of the women students while in this College, will be very carefully supervised by the Dean of Women and her assistant. It is earnestly desired that a friendly feeling of co-operation may exist between the women students and their advisers, so as to make possible the best conditions for efficiency during the years in residence.

While it is not the intention of those in authority to hamper the student with too many rules and regulations, it is necessary to emphasize the fact that the general conduct of young women students while in college is the greatest factor in influencing the decision of the authorities as to their suitability for the teaching profession; therefore, students are expected to conform to the rules recognized in good society in order that their conduct may not be questioned, either in College or in outside circles.

Entertainments not given by the College must be approved by the College authorities. Rules as to the frequency of these affairs will be strictly enforced, so that the student's health may not be impaired, and in order to conserve the proper number of her outside hours for regular study.

The rooming accommodations are looked into and must be approved by the Dean of Women. Certain requirements, such as quiet, cleanliness, suitable provision for heat, light, hot water, etc., are expected of the hostesses. Quiet behavior, consideration, prompt payment of bills, and, in a word, conduct becoming a future teacher of children, are expected of the women students in the rooming houses.

Finally the parents and guardians of our young women are urged to unite with the Dean of Women in the endeavor to make college life for the students such that health, good behavior, and efficiency may be maintained.

A series of lectures will be given to the women students, during the year, by the Dean of Women. The women students are cordially invited to consult with her at any time, in regard to their moral and physical well-being.

### THE STANDARD OF THE SCHOOL

It is the purpose of the trustees and faculty of State Teachers College to maintain a high standard of scholarship and professional training. Those who are graduated shall be thoroly prepared and worthy of all for which their diplomas stand. It is the policy of the school, by making all graduates "worthy of their hire," to protect those who employ them; for in so doing we protect no less the graduates and the children whom they teach.

### TEACHERS' BUREAU

It is the purpose of the Bureau to secure such information as will insure the selection of the best available person for a given position. Boards of Education wishing to employ teachers are invited to make their wants known. All correspondence should be addressed to the Secretary of the Teachers' Bureau.

### DEPARTMENTAL MUSEUMS

The museums of the State Teachers College are as fully developed for actual use as any in the whole country. Each department maintains a

well-arranged museum. The objects in the museums are such as may be used by way of illustrating lessons.

### THE CHRISTIAN ASSOCIATIONS

**Y. W. C. A.**—Realizing the necessity for religious and social culture in the school, and believing that much good comes of Christian association, a large number of interested students have organized themselves into the Young Women's Christian Association. Meetings are held at various times, and persons who have given considerable thought to the life and aspirations of young people are invited to address the meetings.

**The Newman Club**—The Catholic students of the college are organized into the Newman Club, the work of which is similar to that of the other Christian organization. This club has a membership of active young people. Both of the organizations have been co-operative in forwarding the religious work and welfare of the College.

### BIBLE STUDY—"The Greeley Plan"

Unusual opportunities for Bible Study are offered to students thru a system of co-operation between the churches of Greeley and the Teachers College. Perhaps Colorado Teachers College is more widely known nationally for this plan of Bible Study than for any single thing which it is doing. A number of magazine articles have been written about it, and there has been published, by the World Book Company, a book, "Bible Study in Schools and Colleges," by Judge Walter A. Wood of the New York Appellate Court, dealing with this plan and its adaptation and extension into more than half the states in the United States. It is a material advantage to a student to get into touch with this work in some one of the churches, Protestant or Catholic, and know at first hand what is being done here in progressive, modern Bible Study. One who knows this work is distinctly more valuable to the community where she teaches than she would be without it. Bible courses of college grade are maintained in all the larger churches. Under specified conditions, students may receive college credit for the work done in these classes. Last year 250 students availed themselves of the opportunity of Bible Study under this plan. A student may register for the regular number of hours in the College and then take either the Bible Study or Community Co-operation work in addition. The amount of credit given for either of these two pieces of outside work is one hour a quarter.

### COMMUNITY CO-OPERATION PLAN

The College has instituted a plan in which provision was made for allowing students to go out to various organizations in the community to assist them in their undertakings. This plan is known as the Community Co-operation Plan. It was agreed to allow students regular college credit for acting as teachers, leaders, or directors of such groups as Boy Scouts, Girls' Camp Fire, Boys' Clubs, Girls' Clubs, Sunday School Classes, Junior Christian Endeavor Societies, Junior Epworth Leagues, Sodalities, Children's Choir or Orchestra, Modern Language Classes, Civic Training Classes for the Adult Alien, Business Efficiency Classes, Story Telling Groups and similar organizations.

The College was willing to inaugurate the plan because of its promise of usefulness both to the community and to the prospective teacher. The plan will benefit the community by bringing to organizations the assistance of well-trained college students. The plan will be of vital aid to the student who is preparing to be a teacher. It will give him an opportunity to study children at close range outside of the school room. He will have a richer understanding of social problems and be better able to take a place of leadership in his community. All this will make a greater success possible for him and will extend his influence for good wherever he enters upon the work of teaching.

The College believes that the plan is worth while and hopes for its extension until all students may have had such training before going into actual work in the teaching profession.

### LOAN FUNDS

The following are a number of loan funds that are designed to help needy students to complete courses in State Teachers College.

**Students' Relief Fund**—The object of this fund is to afford pecuniary assistance to meritorious students who have exceptional need of such help. It not infrequently happens that a promising student who has entered upon his work with the expectation of carrying it thru until graduation, meets with an unexpected loss, thru sickness or other causes, which compels him either to leave the school or to continue the work under conditions that are not conducive to the best results. To meet the need of these students, a fund has been established, called the Students' Relief Fund, from which money is lent to such students until they are in a position to repay it.

The money constituting this fund consists of contributions from persons and organizations disposed to help in the work, and of the interest derived from loans. The secretary of the Board of Trustees of the College is the custodian of the fund.

Applications for loans are made to the Loan Committee, which is composed of members of the faculty of the school. This committee carefully investigates the record of the applicant, and grants his petition only in case it is satisfied that he is worthy of such help, and will be in a position to repay the money within a reasonable time. No loan is made unless a student has already completed the greater part of his course in the school, and is consequently well known to the teachers. The treasurer accepts the student's note and collects it when it becomes due.

**Y. W. C. A. Student Aid Fund**—The Young Women's Christian Association has a fund of several hundred dollars which is kept to aid students who need small sums to enable them to finish a term or a course. The fund is in charge of a committee composed of the treasurer of the society, two members of its Advisory Board and a member of the faculty. Loans are made without reference to membership in the society.

**Third and Fourth Year Scholarship Fund**—This Fund is an accumulation of money contributed by four-year graduates and others who may be interested in creating a fund for those who pursue courses leading to the A.B. degree. This fund now approximates one thousand dollars, from which loans are made to advanced students only. It has already helped many worthy students to continue to the end of their four-year courses. This fund is in charge of the Board of Trustees.

**First and Second Year Scholarship Fund**—This Fund is an accumulation of money contributed by first and second year graduates and others who may be interested in creating a fund for those who pursue two-year courses. This fund is in charge of the Secretary of the Board of Trustees and is subject to the control of the students of the first and second years.

**The William Porter Herrick Memorial Fund**—This fund, the gift of Mrs. Ursula D. Herrick, in memory of her husband, the late William Porter Herrick, consists of the principal sum of \$5,000. The proceeds or income of said fund are to be paid over and expended by the Board of Trustees of The State Teachers College of Colorado in aid of such worthy and promising under-graduate students of the College, of either sex, as the President of said College may from time to time designate; provided, however, that no student who uses tobacco in any form, or who uses intoxicating liquors of any kind as a beverage, shall participate in the benefits of this fund. The sum or sums, income or proceeds so

expended by the said Trustees shall be considered in the nature of a loan or loans to such students as may receive the same, and each of said recipients shall execute a note or notes promising to repay to said Trustee the amount or amounts so received, within five years after graduation or quitting the College, without interest; but it is the desire of said donor that no student shall be pressed for the payment of said note or notes when the same shall become due and payable, so long as the Board of Trustees shall be satisfied that the recipient is making every reasonable effort, according to his abilities, to repay the same and is not endeavoring to repudiate the obligation.

**Graduate Scholarships**—Other funds available for students are listed under the head of Graduate Scholarships. See page 32.

### GIFTS TO THE COLLEGE

From the beginning of the life of the College, friends and organizations have been generous in making gifts of land, money, books, museum specimens, and other articles of value. The authorities of the College gratefully acknowledge their obligation to all these donors, and invite any who may feel inclined, to make similar donations.

## Honorary Fraternities

### KAPPA DELTA PI

**Honorary Fraternity in Education**—In November 1919 the application of a group of students in Colorado State Teachers College for a chapter of said fraternity was granted by the Grand Council of that organization. After the preliminary arrangements had been completed the charter members of the new fraternity were initiated by representatives of the University of Colorado chapter as Theta Chapter.

The fraternity is open by invitation both to men and women. The scholastic standard set by the chapter requires that a candidate have at least fifty per cent of his marks "A's" and "AA's". The candidate must have attained at least junior standing in the College and must have had, or at the time of the application be taking, at least nine hours in Education.

Colorado State Teachers College is the first teacher's college to have the honor of a chapter of this honor society.

### PI KAPPA DELTA

**Honorary Debating Fraternity**—The national honorary fraternity, Pi Kappa Delta, was the first honorary society to be installed in Teachers College. It was installed in the College in the spring of 1918. The purpose of the organization is the encouragement of intercollegiate debate and oratory. Membership is limited to those who have taken part in recognized intercollegiate debates or oratorical contests, or are actively engaged in coaching such students. During the past year the following students have been elected to membership in Pi Kappa Delta: Calvin Alexander, Margaret Clark, Roy Harper, Alma Herfurth, Dewey Marker, Yvonne Letey, and Eric Smith. Members of debate teams are selected in try-outs open to the whole student body, so that every student has the opportunity of working for the honor of election to membership in this society.

# The Extension Department

## PURPOSES OF EXTENSION WORK

The purpose of an Extension Department in a teachers' college may be expressed from several points of view.

### CO-OPERATION WITH SUPERINTENDENTS

Primarily, it is a standing offer of the College's resources to **public school leaders** for the purpose of promoting their plans for public school improvement.

### TRAINING DURING SERVICE

As a result of constant supervision of the work of teachers, city and county superintendents of schools gather a valuable fund of information concerning the **deficiencies** of teachers and their **need of special study and training**. On the basis of such classified information about recurring needs superintendents frame their general programs for the cumulative improvement of the work of their teachers. At this point the College thru the Extension Department offers its services to superintendents. In consultation with the superintendent the College offers courses of instruction designed to meet the **ascertained needs** of the teachers, and provides an instructor to meet the teachers regularly in their own town. From this point of view the **Extension Department exists to co-operate with superintendents in the work of giving training during service.**

### DISCOVERING THE NEEDS OF SCHOOLS

As a result of the tendency to adopt scientific methods of working out the problems of Education, public school leaders are applying to their schools a familiar practice of the business world—the **inventory**. In Education this practice is called the **survey**. It consists in taking stock of the entire educational situation as a means of discovering the phases of the work which especially need attention. Thru the Extension Department the College offers its services to superintendents who wish, as the starting point of their campaign of improvement, the complete perspective which an educational survey provides. From this point of view also, the Extension Department exists for the purpose of co-operating with school superintendents in the task of giving training in service—because the survey discloses, among other things, the specific needs of training for teachers.

### PROMOTING THE PERSONAL GROWTH OF TEACHERS

Secondarily, the Extension Department is a standing offer of the resources of the College to ambitious teachers who can not at the time attend College.

### MEETING THE PROFESSIONAL NEEDS OF TEACHERS

The thoughtful teacher **discovers his needs** by the difficulties he meets in his daily work, by the suggestions of his superintendent, by comparison of his work with that of other teachers, and the like. The teacher with **scholarly tendencies** craves opportunity to follow up some interesting subject for the study of which he needs the direction of a specialist. The teacher with a **penchant for research work** in his field finds that he needs help in blocking out his problem and devising fruitful lines of attack, and so on. Or the teacher in line for promotion feels that he needs to be ready to teach a new subject next year.

To all such teachers the College offers thru the Extension Department a wide variety of courses in many fields of culture, and as much counsel upon specific problems as may be desired.

## THE WARRANT FOR EXTENSION SERVICE

In short, the Extension Department of Teachers College is organized to co-operate with public school leaders in their effort to give training during service; and to provide timely help to individual teachers in improving their mastery of their craft. It is the College's practical recognition of the fact that no vocational school can anticipate in its resident curricula all the problems that will arise in the work of its graduates under the varied conditions of life in the world of affairs. Schools of medicine and nursing, schools of philanthropy, schools of commerce and agriculture can not do it. Neither can schools for teachers. The period of school life is too short; the initial equipment of students is too uneven; and the social and economic conditions of the communities to which graduates go are too unequal to admit of more than partial success even in the attempt to equip students to meet the characteristic responsibilities of their occupation. Consequently, for the teacher as for the doctor, the nurse, the social worker, the business-man, and the farmer, the progressive higher school must provide an extra-school service directed at the exigencies that arise in practice. Beyond this Extension Department is the College's recognition of the fact that teaching is an occupation which may in many communities be entered with very slender initial preparation, and which oftentimes must be pursued with but little timely help.

Consequently, as a result of both sets of conditions, training during service properly and inevitably constitutes a very important part of the program of both superintendents and Teacher-training schools. The courses described in this bulletin, and the special courses asked for by superintendents and given in various forms under the group plan of instruction (see below) are a part of this College's contribution to the solution of the superintendents' problem of giving training during service.

## HOW EXTENSION WORK IS ORGANIZED AND CONDUCTED

There are two general schemes of instruction. In the following paragraphs each is described.

## THE GROUP PLAN OF INSTRUCTION

1. **Instruction by members of the College Faculty:** In centers close enough to the College to make such procedure possible, members of the College faculty will conduct courses for teachers. Realizing that the superintendent of schools is in a position to know better than anybody else the characteristic needs of his teachers, the College prefers that the superintendent should take the initiative in determining what courses ought to be offered at any given time in his town. Ordinarily such classes meet once a week in towns within 100 miles of Greeley. In towns farther away than this fortnightly meetings are usually necessary unless the class be exceptionally large. Under the best of circumstances, however, each such class involves a substantial deficit to the College, which must be provided for in the budget. So, instruction under this plan is restricted to groups of 15 or over.

Courses under the group plan are conducted as nearly as possible in the way in which they would be conducted in residence at the College. The periods are of course longer, and the meetings are necessarily less frequent—important variations which require definite adjustments from the instructor, both for the sake of the students and in the interest of the College's standards of work.

2. **Instruction by Local Representatives of the College:** In centers too remote from the College to admit of sending members of the faculty for regular class-work, it is frequently feasible to appoint a resident of the community to represent the College for a particular line of instruction. A person, usually a school-man, who possesses at least the degree of A.B. or its substantial equivalent, and who has had professional training and experience that would justify his appointment as a member of

the College faculty, may be appointed an Extension Instructor. Under the general direction of the College he gives the course agreed upon with the Extension Department, observing the same regulations as govern the group instruction conducted by members of the College faculty. He assumes full responsibility for the organization of the class, the keeping of the necessary records, the transmission of initial and final reports to the Extension Department, and the like. He transmits to the Extension Department the total fees collected from his class, and receives from the College for his services a percentage of these fees. Courses given under this plan are announced at the beginning of each semester in the towns where they are offered, and enrollment is accomplished as in the classes conducted by members of the faculty.

**3. Group Leadership by a Member of the Class:** Where the conditions presented in 2 can not readily be met, it may still be feasible to organize a modified form of **group study** by appointing a capable and energetic member of the class as **Class Leader**. The Class Leader acts as secretary of the group, keeping all necessary records, making the necessary reports to the Extension Department, and so on, receiving for his services the remission of his fee as a student in the class. In common with the other members of the class, the **Class Leader** uses the study directions and assignments of the **Correspondence Section** of the Extension Department. Every member of the class who is working for credit makes the usual written response to the Extension Department upon each **study unit** in the course; but all have the advantage of group discussion of their difficulties. The **Class Leader** meets the group regularly at some appointed place after each has done his best to meet the requirements of the assignments of the study unit under consideration. The difficulties of the members of the class are discussed in the meeting and all have the advantage of the stimulus afforded by such discussion. The **Class Leader** takes pains to surround these meetings with conditions insuring thoro and independent work from every member of the class. This combination of correspondence direction with group discussion of difficulties makes the nearest approach to the normal conditions of class work that can be provided in regions remote from the College.

#### INDIVIDUAL CORRESPONDENCE COURSES

**How to Enroll**—The process of enrollment for correspondence study is simple. The student chooses from the Handbook the course which he wishes to study. If it is a credit course, he notes how many hours of credit it carries. He reads the sections on **Fees** and **How to Obtain Books**. He then writes to the **Extension Department, State Teachers College, Greeley, Colorado**, enclosing a check, draft, or money order for the fees, stating clearly what course he wishes to take, explaining what his previous training and experiences have been, and mentioning the work he is now doing. Correspondence study may be begun at any time, but under a regulation of the business office of the College, **NO ENROLLMENT CAN BE MADE UNTIL THE NECESSARY FEES HAVE BEEN PAID**.

Upon receipt of the fees the secretary of the Extension Department enrolls the student for the course chosen and sends him the material he needs.

**The nature of Correspondence Courses**—Each **Correspondence Course** consists of (1) a set of "**study units**" containing questions such as might be asked in class, assignments such as might be made in residence study, and explanatory sections corresponding to the explanations which instructors often make in class; (2) a "**materials sheet**" which informs the student fully in regard to all the books and other materials needed for the course, with what study units each book will be needed, what material the College Library will provide, and so on; and (3) a sheet of "**general directions**" for preparing recitation papers. For a full description of how correspondence courses are conducted, see the Handbook of the Extension Department.



## The Graduate School

The Graduate School offers advanced instruction leading to the degree of Master of Arts in Education. The principal aim of graduate study is the development of power of independent work and the promotion of the spirit of research. The various departments of the College which offer graduate courses are willing to offer not only the courses regularly scheduled but others of research and advanced nature which the candidate wishes to pursue. Each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work.

Persons holding the degree of Bachelor of Arts, Philosophy, Science, or other four-year degree, from a reputable institution authorized by law to confer these degrees and approved by this Institution may be admitted as graduate students in the Colorado State Teachers College upon presentation of official credentials, including transcript of records of undergraduate work.

The prospective student should obtain the blank "Application for Admission" and send it to the Committee on Advanced Standing for their approval before the opening of the quarter. Such blanks may be secured by addressing the State Teachers College, Greeley, Colorado. Original credentials should be submitted with the application for admission.

### GENERAL PLAN OF WORK FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION

**Residence**—Three quarters of work are required in residence at the College in advance of the requirements for the A.B. degree. This is three quarters of work beyond a four-year college course.

**Units of Work**—A year's work shall be interpreted as forty-eight quarter-hours. Thirty-eight hours credit will be given for graduate courses pursued and ten hours for the Master's thesis which is required. Sixteen hours credit a quarter during the regular school year is the maximum, inclusive of the research involved in the thesis requirement.

**Admission to Candidacy for Degree**—Admission to the Graduate School does not guarantee admission to candidacy for the M.A. degree. The student shall not be admitted to candidacy for the degree earlier than the close of his first quarter's work (completion of sixteen credit hours). Such admission shall be determined by a committee consisting of the President of the College, the Dean of the College, the Dean of the Graduate School, the Head of the Department in which the student is majoring, and two professors with whom the student has had work, these to be chosen by the Dean of the Graduate School. The merits of each student shall be the basis for the decision of this Committee; personal fitness, the ability to use good English both oral and written and the ability to do superior work in the field of specialization are among the important things to be considered by the Committee.

### THE NATURE OF GRADUATE WORK

**Specialization**—In keeping with the function of a teachers' college, graduate work shall be confined largely to professional lines of work. It shall represent specialization and intensive work. As soon after enrollment as possible, the graduate student shall focus attention upon some specific problem which shall serve as the center for the organization of his year's work, including courses to be taken and special investigations to be conducted. No graduate credit will be given for scattered and unrelated courses.

**Thesis**—Research work culminating in the writing of a thesis upon

some vital problem of education shall be an integral part of the work for the Master's degree.

**Breadth and Range of Professional Outlook**—In addition to the intensive and specialized work which is required of candidates for the Master's degree, they are expected to know the fundamentals of professional education.

**Final Examination Upon the Whole Course**—There shall be a final examination, oral or written, upon the whole course. An oral examination of two hours' duration is customary. This examination will cover the following ground: (a) The field of the thesis and special research, including topics closely related thereto; (b) The fields covered by the courses taken by the candidate; (c) The general fields of Psychology, Sociology, Biology, and Education.

#### GENERAL INFORMATION

1. All courses taken by graduate students must be approved in advance by the Dean of the Graduate School.

2. No graduate student may enroll for more than sixteen hours of work in any quarter. This regulation is essential to the maintenance of the standard of intensive work for the Master's degree. In determining the maximum amount of work permitted, research upon the thesis topic must be included within the limit stated. To this end, the student doing research work upon his thesis topic must enroll for the same.

3. Twelve hours shall be the minimum number of hours considered as a term in residence. If for any reason a student cannot carry more than twelve hours a quarter, the remaining hours may be taken in non-residence when approved in advance by the Dean of the Graduate School.

4. In order that the standard of intensive and specialized work for the Master's degree may be maintained, no graduate credit will be given for elementary courses, for scattered and unrelated courses, for public platform lectures or public platform lecture courses, or for courses in which the element of routine is large as compared with the theoretical and professional aspects.

5. Excess A.B. work may be applied toward the M.A. degree only when arrangement is made in advance, with the Dean of the Graduate School so that he may see that the work is of M.A. standard and that it is in line with the specialization necessary for the M.A. degree. Such credit will be granted only to students in their fourth year who do not need all their time for the completion of their undergraduate work.

6. The courses which may be taken for graduate credit must be of an advanced character, requiring intensive study and specialization. Certain approved undergraduate courses may be pursued for graduate credit; but, when so taken, the character of the work done and the amount of ground to be covered must be judged by a higher standard than that which applies to the regular undergraduate student. The standard of intensive work set for the graduate student must be maintained even if special additional assignments have to be made to the graduate student who works side by side with the undergraduate.

7. Satisfactory teaching experience shall be regarded as a prerequisite to graduation with the Master's degree. Teaching in some department of the College or its training schools may, under certain conditions, be included in the graduate work of candidates for the Master of Arts degree. Routine teaching will not be recognized for graduate credit. When graduate credit is given to teaching, this work must be of an advanced character, so organized, controlled, and supervised as to insure some decided growth of the teacher in the scholarship of the subject or professional insight into its value and problems.

8. Sixteen hours of credit toward the M. A. degree shall be the maximum amount allowed to be earned in a regular school year by anyone who is employed on full time, except upon the recommendation of the Dean of the Graduate School.

9. Before the M.A. degree may be conferred a student must have had at least 72 hours of college work in his major and not less than 32 hours of professional work in Education and related fields which is acceptable in the various states as requirements for certification.

10. All work for the M.A. degree shall be done with distinction; work barely passed (marks of D and C under the present marking system) shall not be considered worthy of such an advanced degree.

11. The thesis subject of the graduate student must be approved in advance by the Dean of the Graduate School and by the head of the department concerned. Before the degree is conferred the thesis, as a whole, and in detail, must be approved by the head of the department or the instructor under whose direction the thesis work has been done and also by the Dean of the Graduate School. Two typewritten copies of the thesis must be placed on file with the Dean of the Graduate School, both of which he shall place in the library for permanent reference.

12. Before the candidate for the Master of Arts degree is admitted to final examination the thesis requirement must be met in full, and the thesis must be in such a state of readiness at least three weeks previous to final examination, that only minor reconstructions need to be made, which will not delay its being put in final typewritten form for filing before the end of the quarter in which graduation falls.

13. The final examination will be presided over by the Dean of the Graduate School and conducted by the head of the department in which the candidate has done the main part of his work. Other members of the faculty may be given an opportunity to participate in the examination. An official visitor, or official visitors, from outside the department in which the candidate has specialized shall be appointed to attend the examination.

#### DIRECTIONS AS TO FORM OF THE THESIS

Students submitting theses should present them in typewritten form, upon paper of good quality, of customary size (8½x11), leaving a margin at the left adequate for binding—fifteen points by the typewriter, twenty if the manuscript is thick.

A title page should be prepared, containing in neat lettering at the top, the name of the institution, THE STATE TEACHERS COLLEGE OF COLORADO; below this at some distance the title of the thesis; about the middle of the page the statement: A THESIS SUBMITTED IN CANDIDACY FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION; at a lower level of the page the author's name, and at the bottom the address, and the year.

All theses should contain a brief analysis or table of contents at the beginning; should give footnote references to literature quoted by author, title of book or article, and exact page; and should contain at the end a bibliography of the literature of the subject. In giving bibliographical material, the customary form of publishing houses should be used, which is quite uniformly that of the author first, followed by title, price, copyright date, and publisher, and in case of magazine references, this by title of magazine, volume or date and page.

#### FEES FOR GRADUATE COURSES

Fees for graduate students in the Summer Quarter and in the regular school year will be on the same basis as fees for all others.

## Graduate Scholarships for 1920-21

### THE HENRY STRONG GRADUATE SCHOLARSHIP\*

A scholarship of \$300 is offered by the Henry Strong Educational Foundation for the school year 1920-21.

It is open either to a young man or young woman not more than twenty-five years of age who desires to continue college work and to prepare more thoroughly for the work of a teacher. The A.B. or other baccalaureate degree of equivalent value must be held by the candidate since the scholarship is open only to a graduate student. The scholarship is designed primarily to assist a student who is not financially able to continue college work but scholarship and ability will be taken into consideration in the selection of the candidate.

Applications for the scholarship should be sent to the Dean of the Graduate School not later than July 1, 1920. The award will be made by Mrs. Charles Denison of Denver, who is one of the trustees in charge of the Henry Strong Educational Foundation. Blanks for application may be secured from the Dean of the Graduate School.

### THE PRESBYTERIAN CHURCH GRADUATE SCHOLARSHIP\*

The First Presbyterian Church of Greeley aided by the General Board of Education offers to a member of the Graduate School, a scholarship with a \$600 stipend for the school year, 1920-21.

This is open to any graduate student who is qualified by natural ability and Christian experience as well as scholarship to assist the local church, particularly as it endeavors to keep in touch with the Presbyterian students in the college and maintain classes in training for Christian leadership. The position in the church is to be The Director of Religious Education and half of the student's time is to be given to it.

Applications for this scholarship should be filed with the Dean of the Graduate School not later than July 1, 1920. The final assignment of the scholarship will be made by the church in cooperation with the college authorities.

### THE PRESBYTERIAN BROTHERHOOD SCHOLARSHIP\*

The Brotherhood of the First Presbyterian Church offers to a member of the Graduate School, a scholarship with a stipend of \$150 for the school year 1920-21. This is open to young men qualified to assist in the boy's work of the church. A fair amount of time of the holder of this scholarship will be asked in return for the stipend.

Applications for this scholarship should be filed with the Dean of the Graduate School not later than July 1, 1920. The final assignment of the scholarship will be made by the church in cooperation with the college authorities.

### WELD COUNTY SAVINGS BANK GRADUATE SCHOLARSHIP\*

The Weld County Savings Bank offers to a member of the Graduate School, a scholarship with a stipend of \$100 for the school year 1920-21. This is open to any young man or young woman who wishes to pursue advanced study in preparation for teaching. The scholarship is designed primarily to assist a student who is not financially able to continue college work, but scholarship and ability will be taken into consideration in the selection of the candidate.

\*Regular college fees will be waived for the holder of this scholarship.

Application for this scholarship should be filed with the Dean of the Graduate School not later than July 1, 1920. The final assignment of the scholarship will be made by the Weld County Savings Bank in cooperation with the college authorities.

CONGREGATIONAL CHURCH GRADUATE SCHOLARSHIP\*

The Park Congregational Church of Greeley offers to a member of the Graduate School, a scholarship with a stipend of \$300 for the school year 1920-21. This is open to a young man qualified to assist in the boy's work of the church. One-fourth of the time of the holder of this scholarship will be asked in return for the stipend.

Applications for this scholarship should be filed with the Dean of the Graduate School not later than July 1, 1920. The final assignment of the scholarship will be made by the church in cooperation with the college authorities.

GRADUATE SCHOLARSHIP\*

A scholarship with a stipend of \$450 is offered for the school year 1920-21 to a graduate student who desires to continue advanced study in preparation for the teaching profession. It is open either to a young man or a young woman who has had excellent training in French and is able to teach that language. Approximately six hours of teaching will be required in return for the stipend. The remainder of the student's time may be spent in advanced work in his major and allied studies looking toward the Master of Arts degree.

Applications for the scholarship should be sent to the Dean of the Graduate School not later than July 1, 1920.

GRADUATE SCHOLARSHIP\*

A scholarship with a stipend of \$450 is offered for the school year 1920-21 to a graduate student who desires to continue advanced study in preparation for the teaching profession. It is open to a young man or a young woman who has had excellent training in Spanish and is able to teach that language. Approximately six hours of teaching will be required in return for this stipend. The remainder of the student's time may be spent in advanced work in his major and allied subjects looking toward the Master of Arts degree.

Applications for the scholarship should be sent to the Dean of the Graduate School not later than July 1, 1920.

GRADUATE SCHOLARSHIP\*

A scholarship with a stipend of \$450 is offered for the school year 1920-21 to a graduate student who desires to continue advanced study in preparation for the teaching profession. It is open either to a young man or woman who has had excellent training in Latin and is able to teach that language. Approximately six hours of teaching will be required in return for the stipend. The remainder of the student's time may be spent in advanced work in his major and allied subjects looking toward the Master of Arts degree.

Applications for the scholarship should be sent to the Dean of the Graduate School not later than July 1, 1920.

DENVER TEACHERS GRADUATE SCHOLARSHIP\*

In appreciation of the work of Dean Thomas C. McCracken, the members of the Extension Course, Ed. 229, given in Denver, 1919-20,

\*Regular college fees will be waived for the holder of this scholarship.

offer a graduate scholarship with a stipend of \$100 for the school year 1920-21. This is open to any student who wishes to pursue advanced study in preparation for teaching. First preference will be given to a teacher in the Denver Schools. The scholarship is designed primarily to assist a student who is not financially able to continue college work but scholarship and ability will be taken into consideration in the selection of the candidate.

Application for this scholarship should be made not later than July 1, 1920. It should be sent to the Dean of the Graduate School.

DELTA PHI OMEGA GRADUATE SCHOLARSHIP\*

The Delta Phi Omega Sorority offers a graduate scholarship with a stipend of \$150 for the school year 1920-21. This is open to any student who wishes to pursue advanced study in preparation for teaching. First preference will be given to a member of the said sorority. The scholarship is designed primarily to assist a student who is not financially able to continue college work, but scholarship and ability will be taken into consideration in the selection of the candidate.

Applications for this scholarship should be made not later than July 1, 1920. This should be sent to the Dean of the Graduate School. The final assignment of the scholarship will be made by a committee from the sorority assisted by the Dean of the Graduate School.

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\*Regular college fees will be waived for the holder of this scholarship.

## THE COURSES OF STUDY

Thruout this catalog courses numbered 1 to 99 are primarily first and second year subjects; 100 to 199 are third and fourth year. Those numbered 200 and above are Graduate School.

Colorado State Teachers College is a technical school like a medical or engineering school. Its business is to train teachers for all types of schools maintained by the state. The College has abandoned the idea that there is a possibility of training teachers for the various kinds of teaching thru the medium of a single course of study or a scattered elective course.

To meet the requirements for teachers of all kinds of schools the college provides the following courses of study, and asks each student entering October 1, 1918, or after, to select a course definitely and to consult as a permanent adviser the head of the department directing that course of study. Students who registered previous to that date may continue with the old course of study and complete that course if they can do so within reasonable limits of time; but all who can readily make the adjustment are advised to select one of the new courses and complete their work under the new plan.

**Length of Course**—Each course is planned to occupy twelve quarters (a quarter is approximately twelve weeks in length). Upon the completion of the course the degree of Bachelor of Arts in Education will be granted. The diploma is a Colorado life certificate. Each course is so arranged that it may be divided in the middle. The first part course may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives the Colorado life certificate, but no degree. Students who come to the college with advanced standing, and those who gain time by doing work of exceptional quality, may shorten the course somewhat.

Two-year and four-year courses of study for teachers are arranged for in the following departments. Choose the department in which you wish to specialize:

- |   |   |
|---|---|
| 1. Agriculture (2 yrs. only).                   | 8. Geology, Physiography and Geography. |
| 2. Biology.                                     | 9. History and Political Science.       |
| 3. Chemistry.                                   | 10. Home Economics.                     |
| 4. Commercial Arts.                             | 11. Hygiene and Physical Education.     |
| 5. Education.                                   | 12. Industrial Arts.                    |
| Superintendents, H. S. Principals and Teachers. | 13. Literature and English.             |
| Kindergarten,                                   | 14. Mathematics.                        |
| Primary,  | 15. Music.                              |
| Intermediate,                                   | 16. Physics.                            |
| Junior High School,                             | 17. Romance Languages and Latin.        |
| County Schools.                                 | 18. Social Sciences.                    |
| 6. Educational Psychology.                      |   |
| 7. Fine and Applied Arts.                       |   |

Each of the courses differs somewhat from the others in the subjects required by the department, but each course contains the following subjects:

## First Year

1. The Professional Core:	Hours.
Biol. 2.—Educational Biology .....	3
Ed. 8.—Educational Values.....	3
Soc. 3.—Educational Sociology.....	3
<b>2. Other Required Subjects:</b>	
Eng. 4.—Speaking and Writing (Students may be excused by proving proficiency).....	3
Ethics 1.—(required only of women students).....	1
<b>3. Subjects Required by the Department, and Elective Subjects.....</b>	<b>35</b>
Phys. Ed.—Physical Exercise (required each quarter).	

All first and second year students are required to take one active course each quarter. Senior and Graduate students are exempt from this requirement but may elect any of the courses offered and receive credit towards graduation. Where physical disability makes it inadvisable for a student to participate in regular class activities, work in a corrective class, or special work in Hygiene is assigned.

## Second Year

1. The Professional Core:	Hours.
Psych. 2a.—Educational Psychology.....	3
Psych. 2b.—Ed. Psychology (continued).....	3
Ed. 10.—The Elementary School Curriculum.....	3
Pol. Sc. 30.—Political Adjustment.....	3
<b>2. Other Required Subjects:</b>	
Phys. Ed.—Physical Exercise Courses (each quarter)	
The following work is required of all students who expect to take the two-year diploma.	
Observation and Practice Teaching.....	8
<b>3. Subjects Required by the Department, and Elective Subjects.....</b>	<b>28</b>

Students may graduate and receive the Colorado Life State Certificate at the end of the two-year course.

## Third Year

1. The Professional Core:	Hours.
Psych. 104.—Psychology of the Elementary School Subjects, or Psych. 105.—Psychology of the High School Subjects.....	4
Soc. 105.—Social Maladjustment.....	4
<b>2. Courses Required by the Department, and Elective Courses.....</b>	<b>40</b>
<b>3. In the Third or Fourth Year</b>	
The following courses are required of those who expect to teach in high schools:	
Ed. 105.—Principles of High School Teaching.....	4
Ed. 103.—Practice Teaching in the High School.....	4

## Fourth Year

1. The Professional Core:	Hours.
Ed. 111.—Principles of Education.....	4
Ed. 116.—The High School Curriculum.....	4
Psych. 108.—Educational Tests and Measurements.....	3
(Ed. 116 and Psych. 105. Ed. 103 and Ed. 105 may be omitted by students who do not expect to become High School teachers. Additional practice teaching in the elementary school will be required instead.)	
<b>2. Courses Required by the Department, and Elective Courses.....</b>	<b>37</b>

## REQUIREMENTS FOR GRADUATION

The Two-Year Course—A student must do full work in residence during at least three quarters before being granted a certificate of graduation from the two-year course. Thus, at least forty-eight of his ninety-six required hours must represent resident work; the remaining forty-eight hours may be granted on advanced standing or for extension courses. Applications for graduation must be filed with the registrar at least 30 days before the close of the Quarter in which the diploma is to be granted.



**Group Courses**—Students entering the College October 1, 1917, or after, are required to select one of the group courses given in detail under the departments of the College. If a student has taken courses elsewhere similar to those specified in his group course, he may, with the consent of the head of the department in which he is taking his course, be allowed to substitute the work he has already had for Colorado Teachers College work. The student may not, however, be excused from the "core required subjects" except by the heads of departments giving those courses.

**Diploma**—The diploma granted upon the completion of the two-year course is a life certificate to teach in any kind of school in Colorado, and is honored in many other states.

**The Three-Year Course**—A student who comes to the College with two years of advanced standing from another college or normal school may secure the Colorado Life Certificate by doing three quarters of residence work and meeting the requirements of the group course in which he or she is specializing.

**The Four-Year Course**—At least three quarters of residence study are required for the A.B. degree. For graduates of the two-year course in this college, two quarters of additional residence study are required. One quarter only is required of those who take the three-year diploma and life certificate.

**The Fifth Year Course**—See the Graduate School pages 29 to 34.

**Diploma and Degree**—At the end of the fourth year of study, and upon the completion of 192 quarter hours of credit, the degree of Bachelor of Arts (A.B.) in Education will be conferred, and a diploma, which is a life license to teach in the public schools of Colorado, will be granted to all students who have completed the requirements of the course they are pursuing.

## Agriculture

W. H. HARGROVE, Pd.B., B.S.Ed., B.S.Ag.

The work of this department is designed to prepare teachers of Agriculture. The department of education will give the necessary professional training, and the departments of chemistry, biology, physics, industrial arts, sociology, economics, and mathematics will give the work in the related subjects. For the present the department has ample grounds for practical work in gardening, truck crops, and demonstration plots for field crops. Six months of supervised teaching of agriculture in the State High School of Industrial Arts (high school department of the Colorado State Teachers College) will be required of all students who expect to ask for recommendations as teachers of agriculture in high schools.

### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2.—Bionomics	3 hrs	Education 8	3 hrs	Sociology 3	3 hrs
Animal Husb	4 hrs	Animal Husb.	4 hrs	General Chem.	4 hrs
General Chem.	4 hrs	General Chem.	4 hrs	Gardening and	
English 4	3 hrs	English 15	3 hrs	Truck Crops	3 hrs
Electives	2 hrs	Electives	2 hrs	Ec. Botany	3 hrs
				Electives	2 hrs
				Ethics 1	1 hr

**Physical Education** is required each quarter of the first and second years, with or without credit.

### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sc. 30	3 hrs
Farm Crops	4 hrs	Zoology Lab.	3 hrs	Dairying	4 hrs
Zoology	4 hrs	Soils	4 hrs	Forage Crops	4 hrs
Ed. 2	4 hrs	Poultry Husb.	3 hrs	Ed. 2	4 hrs
Electives	1 hr	Ed. 10	3 hrs		

**Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.**

**1a. Animal Husbandry. Types and Market Classes of Live Stock—**  
Four hours. Fall Quarter.

A general survey of the development of the livestock industry and present conditions. The fundamentals of livestock judging and its relation to production. The work covers cattle, hogs, sheep, horses and mules.

**1b. Animal Husbandry. Types and Market Classes of Live Stock—**  
Four hours. Winter Quarter.

A continuation of 1a.

**2. Farm Arithmetic—**Four hours. Fall Quarter.

This course aims not only to review arithmetic and to present methods of instruction; but to consider practical farm problems that involve the science of arithmetic and elementary farm accounting; also problems of interest to the housewife, such as household weights and measures etc.

**3. Methods in Gardening and Truck Crops—**Four hours. Spring Quarter. Fee, 50 cents.

A study of the general subject dealing with the production of vegetables for the home as well as for the market. Lectures, demonstrations, reference reading, and practice work in gardening.

**4. Farm Crops—**Four hours. Fall Quarter. Fee, \$1.00.

An introductory course dealing with the most important farm crops with special reference to Colorado conditions.

**5. Soil Physics and Soil Fertility—**Four hours. Winter Quarter. Fee, \$1.00.

A study of the physical and chemical properties of soil and their relation to soil management.

**6. Elements of Dairying—**Four hours. Winter Quarter. Fee, \$1.00.

The lectures take up the composition of milk; the Babcock test; handling of milk and making of butter on the farm. The laboratory work includes testing milk, operating separator, and making butter.

**9. Forage Crops—**Four hours. Spring Quarter. Fee, \$1.00.

This course deals with the principal forage and pasture crops, with special reference to their economic value in the production of beef, pork, and mutton.

**10a. Poultry Raising—**Three hours. Winter Quarter.

Deals with the principles of poultry house construction, and a study of the characteristics of the more common breeds and varieties.

**10b. Poultry Raising—**Two hours. Spring Quarter.

Feeding and general care; common diseases of poultry; incubating, brooding, and handling of farm poultry.

**11. Feeds and Feeding—**Four hours. Fall or Winter Quarter.

A study of the most successful and economical methods of feeding farm animals. Growth of the young animal is emphasized. Results of various experiment stations are compared.

**12. Farm Management—**Three hours. Fall or Winter Quarter.

A course in selecting the farm, planning the rotation, locating the fields, lots and buildings, and keeping the farm accounts. Farming is considered as a big business and the need of a thoughtful plan in making it a success is carefully considered.

**13. Agricultural Education and Life—**Three hours. Spring Quarter.

This course deals with the educational aims in teaching Agriculture. Special attention is given to selection of material and subject matter that will correlate the work of the school with life in the community and rural life institutions in view of modern demands. Elective.

**14. Breeds of Live Stock—**Three hours. May be given any Quarter.

This course deals with the history, development and characteristics of the leading breeds of live stock; pedigree and performances of superior individuals among horses, cattle, sheep, and swine.

**41. Beef Production—**Three hours. Fall or Winter Quarter.

A discussion of practical methods of beef production, including a consideration of successful practices in feeding for market, fitting for shows, and general care and management of beef cattle.

**42. Dairy Feeding**—Two hours. May be given any Quarter.

This course applies the principles of animal nutrition to the special problems of feeding dairy cattle.

**50. Grain Judging**—Three hours. Fall Quarter.

A study of the important varieties of corn, oats, wheat, barley, and other cereals, and the commercial grading and marketing of grains.

**60. General Pomology**—Two hours. Elective. Fall or Spring.

A course dealing with climate and soil requirements, selection and arrangements of varieties, and the general management of fruits.

## Biological Sciences

LEVERET ALLEN ADAMS, Ph.D.

The biological department prepares teachers for the grades and high schools. It also endeavors to give a biological setting for the educational studies and for the activities of life.

The courses in zoology and botany are planned to combine laboratory and field work wherever this is possible, so that these studies of the laboratory may be correlated with the ecology, habits, and life histories of Colorado forms.

The department of Biological Sciences occupies a lecture room and two laboratories on the third floor of the main building. It is equipped with microscopes, lantern slide collection, and type specimens for the work of Zoology and Botany. A museum for the use in nature work is located on the first floor of the Library Building.

A new science course, combining Zoology, Botany, Chemistry and Physics, is offered to the students as a four-year course. The combination is made to train students for the teaching of sciences in high schools, as most of the science work is or should be taught by the teachers trained in general science lines. These sciences work well together, so it is desirable for prospective teachers to train themselves in related subjects. As will be seen from the catalog, students may major in one of the four subjects with the most closely related as a minor, i. e.: Zoology—Botany, Physics—Chemistry. In any case work must be taken in the other sciences.

### BIOLOGY. If Zoology is the major

#### First Year

Fall Quarter	Winter Quarter	Spring Quarter
Eng. 4                    3 hrs	Biol. 2                    3 hrs	Soc. 3                    3 hrs
Physics 1                4 hrs	Ed. 8                    3 hrs	Lib. Sci. 1                1 hr
Nat. Study 1            4 hrs	Ethics 1                1 hr	Art. 13                    2 hrs
Zool. 1                    4 hrs	Zool. 2                    4 hrs	Zool. 3                    4 hrs
Free Electives        1 hr	Electives                5 hrs	Ed. 1                    3 hrs
		Electives                5 hrs

**Physical Education is required each quarter in the first and second years, with or without credit.**

#### Second Year

Fall Quarter	Winter Quarter	Spring Quarter
Phych. 2a                3 hrs	Psych 2b                3 hrs	Ed. 2                    3-4 hrs
Ed. 2                    3-4 hrs	Ed. 10                    3 hrs	Po. Sci. 30                3 hrs
Gen. Chem. 1            3 hrs	Physics 4                3 hrs	Bot. 3                    3 hrs
Bot. 2                    4 hrs	Gen. Chem. 2            3 hrs	Electives                6 hrs
Electives                2 hrs	Electives                3 hrs	

**Students may graduate and receive the diploma and Life Certificate at the end of the two-year course as outlined above.**

## STATE TEACHERS COLLEGE

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Physics 1	4 hrs	Physics 2	4 hrs	Soc. 105	4 hrs
Organ. Chem. 108	3 hrs	Organ. Chem. 109	3 hrs	Ed. 103	4 hrs
Zool. 210	4 hrs	Psych. 105	4 hrs	Zool. 7	3 hrs
Electives	5 hrs	Biol. 102	2 hrs	Electives	5 hrs
		Electives	2 hrs		
		Ed. 105	4 hrs		

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Geog. 8	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Zool. 109	2 hrs	Chem. 7	4 hrs	Zool. 5	4 hrs
Electives	6 hrs	Zool. 108	2 hrs	Electives	4 hrs
		Bact. 1	4 hrs	Psy. 108	4 hrs
		Zool. 101	1 hr		
		Electives	1 hr		

The minor is in the physical sciences. The following are included:

Chem. 1	3 hrs	Physics 16	4 hrs
Chem. 108	3 hrs	Physics 4	4 hrs
Chem. 109	3 hrs	Physics 1	4 hrs
Chem. 7	4 hrs	Physics 2	4 hrs

## BIOLOGY. If Botany is the major interest

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Bot. 2	4 hrs	Biol. 2	3 hrs	Soc. 3	3 hrs
Physics 16	4 hrs	Ed. 8	3 hrs	Bot. 4	2 hrs
Nat. Study 1	4 hrs	Hyg. 1	1 hr	Zool. 5	4 hrs
Eng. 4	3 hrs	Art 13	2 hrs	Free Electives	9 hrs
Free Elective	1 hr	Free Elective	7 hrs		

Physical Education is required each quarter in the first and second years, with or without credit.

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 2	3-4 hrs	Ed. 2	3-4 hrs	Ed. 10	3 hrs
Gen. Chem. 1	3 hrs	Physics 4	4 hrs	Bot. 3	3 hrs
Geog. 8	4 hrs	Biol. 102	3 hrs	Free Electives	7 hrs
Free electives	5 hrs				

Students may graduate and receive the diploma and Life Certificate at the end the two-year course as outlined above.

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Physics 1	4 hrs	Physics 2	4 hrs	Soc. 105	4 hrs
Organ. Chem. 108	3 hrs	Organ. Chem. 109	3 hrs	Bot. 104	3 hrs
Zool. 109	2 hrs	Psych. 105	4 hrs	Bot. 102	1 hr
Free Electives	7 hrs	Bact. 1	4 hrs	Free Electives	4 hrs
		Free Electives	1 hr		
		Ed. 105	4 hrs		

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Bot. 103	4 hrs	Ed. 116	4 hrs	Ed. 103	3 hrs
Zool. 1	4 hrs	Qual. Anal. 7	4 hrs	Ed. 111	3 hrs
Free Electives	4 hrs	Zool. 2	4 hrs	Bot. 105	4 hrs
		Free Electives	4 hrs	Zool. 3	4 hrs
				Psy. 108	4 hrs

The minor is in the physical sciences. The following are included:

Chem. 1	3 hrs	Physics 16	4 hrs
Chem. 108	3 hrs	Physics 4	4 hrs
Chem. 109	3 hrs	Physics 1	4 hrs
Chem. 7	4 hrs	Physics 2	4 hrs

## BIOLOGY

2. **Bionomics**—Four hours. Each Quarter. Required of first year students.

A study of some of the fundamental facts and laws of biology that have a bearing on education. It forms a basis for the intelligent study of other educational subjects. It considers: Mendel's Law, heredity, eugenics, evolution and civic biology.

4. **Biological Seminar**—One hour. Each Quarter. Required of Biology majors.

## ZOOLOGY

1. **Invertebrate Zoology**—Four hours. Two-hour periods. Fall Quarter.

Morphology and natural history of the invertebrates with particular reference to the Protozoa, Porifera, and Coelenterates.

2. **Invertebrate Zoology**—Four hours. Two-hour periods. Winter Quarter.

Continues Course 1. A study of the invertebrates from the Platyhelminthes to the Cordates. Lectures and special topics.

3. **Vertebrate Zoology**—Four hours. Two-hour periods. Spring Quarter.

Vertebrate morphology, starting with the Protocordates and including the comparative work on the higher vertebrates. Lectures and special topics.

4. **Ornithology**—Four hours. By appointment.

Critical study of birds with the use of key, etc.

5. **Bird Study**—Four hours. Summer Quarter.

A study of Colorado birds. Consists of work in the field, combined with the laboratory and museum. The course is not a scientific study of birds, but rather, as the name implies, a study that should enable the student to identify the common birds and to know something of their life histories, ecology, habits and economic importance. Students in this course may expect to use Saturdays for some of the excursions that require time.

6. **Mammals**—Three hours. By appointment.

The systematic positions of the mammals, life histories, evolution, and geographical distribution.

101. **Zoological Technic**—One hour. Winter Quarter.

Work in making microscopic slides, preparation and preserving of specimens for class and museum use.

107. **Protozoology**—Three hours. Spring Quarter.

Study of Protozoans of Colorado. Laboratory course.

108. **Animal Behavior**—Two hours. By appointment.

A study of the behavior of various animals, in response to natural and artificial conditions and stimuli. Forms a basis for the study of instinct, intelligence, memory, and the learning process. Given by appointment. Laboratory course. Two-hour periods.

109. **Parasitology**—Two hours.

A study of animal parasites. Laboratory course. Two-hour periods.

110. **Problems in Zoology**—Four hours. By appointment.

A discussion of the present day problems in Zoology. For students majoring in the department.

210. **Comparative Vertebrate Anatomy**—Four hours. By appointment.

## BOTANY

1. **Elementary Botany**—Three hours. Spring Quarter.

Designed to meet the requirements of students preparing to teach in the elementary schools.

**2. General Botany—Four hours. Fall Quarter.**

Deals with the morphology, classification, ecology, and economic importance of plants. For majors in botany and students preparing to teach in high schools.

**3. Systematic Botany—Three hours. Spring Quarter.**

Prerequisite, some course in botany.

**4. Botany of Trees—Two hours. Spring Quarter.**

Considers the classification, morphology, growth, habits and characteristics of the more important trees found in the West. Recognition of trees in the field emphasized.

**101. Advanced Systematic Botany—Three hours. Given by appointment.**

**102. Botanical Technic—One hour. Winter Quarter.**

A laboratory course in the preparation of botanical slides; methods of preservation, collecting, etc.

**103. Problems in Botany—Four hours. By appointment.**

A discussion of the present day problems in Botany. For students majoring in the department.

**104—Plant Ecology—Three hours. By appointment.**

Deals with the effects of environmental changes on plants. Offered once every other year. Begins 1920. Spring Quarter.

**BACTERIOLOGY****1. Bacteria, Yeasts and Molds—Four hours. Winter Quarter.**

Morphology, classification, cultivation, observation, fermentative processes and pathogenicity of micro-organisms. Special attention is given to the needs of Household Science Majors

**NATURE STUDY****1. Nature Study—Four hours. Fall, Spring and Summer Quarters.**

Aims and methods of nature work. Planning of courses and outlines. Laboratory and field work on nature topics.

**2. Nature Study—Four hours. Spring and Summer Quarters.**

Nature work of the spring, with laboratory and field work.

**3. Nature Study—Four hours. By appointment.**

Special work in nature study for students who care to prepare for nature teaching.

**BIOTICS****101. Biotics—Three hours. Fall Quarter.**

History of man and his body from the standpoint of evolution. Derivation of the skeleton, organs and different systems. Study of the remains of the pre-historic men, their form and evolutionary significance.

**102. Biotics—Heredity—Three hours. Winter Quarters.**

This course takes up heredity and its significance. Study of the laws governing it and their importance to the future of the races. Relation of biological laws and education.

**103. Biotics—Eugenics, and Special Topics—One hour. Spring Quarter.**

The modern trend for the improvement of the race. Study of the laws of heredity and some of the legislation for the application of these laws to the races. Consideration of some of the problems.

# Chemistry

WILLIAM GRAY BOWERS, Ph.D.

It is the aim of this department to offer a schedule of courses which will fill the needs of the following classes of students:

- A. Students taking chemistry as a requirement of the Home Economics Department.
- B. Students desiring to specialize in Chemistry in order to enter the chemical industries or the teaching profession.
- C. Those taking the new Science Course with Chemistry as a minor subject.

The prerequisite of the department will constitute the inflexible part of the Course program. No student will be allowed to offer a course in high school chemistry, as the prerequisite in lieu of General College Chemistry, as the latter course is more intensive and extensive than the high school course. General College Chemistry is a prerequisite of Organic Chemistry or Qualitative Analysis. Organic Chemistry is required as a foundation for Food Chemistry; and the completion of a course in Qualitative Analysis authorizes the student to pursue Quantitative Analysis, after which any other remaining course or courses may be selected. Thus a student who has completed General Chemistry, Organic Chemistry, Qualitative and Quantitative Analysis, may enter upon any of the following specialties: Chemistry of Agriculture; Steel; Oil; Fuel; Water; Textiles; Food, etc. These specialties offer a means of practical application of the principles of chemistry. The technical methods followed are those in use in the various chemical industries of the country.

During the four years of the European war a new impetus was given to the chemical industries of this country. Over 150 millions of dollars have been invested in new chemical enterprises. In the future, we are not to depend on Germany for fertilizers, dyes and chemicals. This vast and constantly increasing expansion of chemical industries will require men and women trained in chemistry, and teachers will be necessary to train them. The next decade offers a splendid future for chemists and teachers of chemistry.

- A. Students in Home Economics will find the chemistry requirements outlined under their department.
- B. Those specializing in chemistry for industrial work or to become teachers of chemistry will follow the program outlined below.
- C. Students taking the new Science Course with Chemistry as a minor will find the requirements in Chemistry outlined under the Department of Physics or the Department of Biology.

## SCIENCE COURSE—Major in Chemistry

Designed to meet the requirements of prospective teachers of Chemistry in High Schools, Academies, Normal Schools and Colleges.

First Year					
Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs.	Ed. 8	3 hrs
Ethics 1 (women)	1 hr	Eng. 4	3 hrs	Nat. Study 1	4 hrs
Gen. Chem. 4	4 hrs	Gen. Chem. 5	4 hrs	Gen. Chem. 3	3 hrs
Physics 1	3 hrs	Physics 2	3 hrs	Physics 3	3 hrs
Free Electives	5-6 hrs	Free Electives	3 hrs	Ed. 1	3 hrs
				Free Electives	3 hrs

**Physical Education is required each quarter of the first and second years with or without credits.**

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sc. 30	3 hrs
Physics 16	3 hrs	Ed. 10	3 hrs	Botany 2	4 hrs
Organ. Chem. 110	4 hrs	Physics 4	4 hrs	Qual. Anal. 7	4 hrs
Ed. 2	3 hrs	Organ. Chem. 111	4 hrs	Ed. 2	3 hrs
Free Electives	3 hrs	Free Electives	2 hrs	Free Electives	2 hrs

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Elective	4 hrs	Psych. 105	4 hrs	Food Chem. 113	4 hrs
Quan. Anal. 114	4 hrs	Quan. Anal. 114b	5 hrs	Free Electives	8 hrs
Zool. 1	4 hrs	Zool. 2	3 hrs	Ind. Chem. 115	4 hrs
Soc. 105	4 hrs	Ed. 105	4 hrs		

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 103	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Ind. Chem. 115	4 hrs	Ind. Chem. 115b	4 hrs	Teach. Chem. 117	3 hrs
Free Electives	4 hrs	Radioactive 118	3 hrs	Free Electives	5 hrs
Ag. Chem. 116	4 hrs	Free Electives	5 hrs	Psych. 108	4 hrs

## Description of Chemistry Courses

## 1. General Chemistry—Three hours. Fall Quarter. Fee, \$4.00.

Two lectures and one laboratory period on the theory of chemistry and non-metals.

## 2. General Chemistry—Three hours. Winter Quarter. Fee, \$4.00.

Two lectures and one laboratory period. A continuation of Course 1.

## 3. General Chemistry—Three hours. Spring Quarter. Fee, \$4.00.

Two lectures and one laboratory period on the chemistry of metals. A continuation of Course 2.

Courses 1, 2, and 3 are recommended to Home Economics students taking the two-year course, and to students taking chemistry as an elective.

## 4. General Chemistry—Four hours. Fall Quarter. Fee, \$4.00.

This course covers the same text book work as Course 1 does, but requires more laboratory work. Two lectures and two laboratory periods.

## 5. General Chemistry—Four hours. Winter Quarter. Fee, \$4.00.

A more extensive course than Course 2. Two lectures and two laboratory periods. Continuation of Course 4.

## 6. General Chemistry—Four hours. Spring Quarter. Fee, \$4.00.

A continuation of Course 5. Two lectures and two laboratory periods.

Courses 4, 5, and 6 are required of all science students (excepting those specializing in biology, who may elect 1, 2, and 3 instead; and of Home Economics students taking the four-year course).

## 7. Qualitative Analysis—Four hours. Any Quarter. Fee, \$4.00.

A laboratory and consultation course on the separation and identification of the common elements. Eight hours attendance. Prerequisite, Courses 1, 2, and 3 or 4, 5, and 6.

## 108. Organic Chemistry—Three hours. Fall Quarter. Fee, \$4.00.

Two lectures and one laboratory period. A study of the hydrocarbons and their derivatives.

## 109. Organic Chemistry—Three hours. Winter Quarter. Fee, \$4.00.

Two lectures and one laboratory period. A continuation of course 108. A study of the carbohydrates, proteins and benzene derivatives.

Prerequisites for 108 and 109 are 1, 2, 3 or 4, 5, 6. Recommended to students specializing in biology or physics.

## 110. Organic Chemistry—Four hours. Fall Quarter. Fee, \$4.00.

Two lectures and two laboratory periods. Same text book work as Course 108, but more extensive laboratory work.



**111. Organic Chemistry**—Four hours. Winter Quarter. Fee \$4.00.  
Two lectures and two laboratory periods. A continuation of Course 110. Prerequisite for Courses 110 and 111 are Courses 4, 5, 6. Required of students specializing in chemistry and of four-year Home Economics students.

**112. Food Chemistry**—Three hours. Spring Quarter. Fee, \$4.00.  
Two lectures and one laboratory period. A study of foods, detection of adulterants, metabolism and dietary lists. Recommended as a general cultural course. Prerequisite for 112 is 1, 2, 108 and 109.

**113. Food Chemistry**—Four hours. Spring Quarter. Fee, \$4.00.  
A more comprehensive course than 112. Required of students specializing in chemistry and of four year Home Economics students. Prerequisites 4, 5, 6, 110, 111.

**114 and 114B. Quantitative Analysis**—Four or eight hours. Any Quarter. Fee, \$4.00.  
Gravimetric and volumetric analysis. A laboratory and consultation course. Eight or sixteen hours attendance. Prerequisites, Courses 4, 5, 6, 7.

**115 and 115B. Industrial Chemistry**—Four or eight hours. Any Quarter. Fee, \$4.00.  
In this course the student may enter upon a study of any one or more of the following chemical industries: Steel, oil, coal, water, gas, fertilizers, cement, dyes, etc. A laboratory and consultation course. Prerequisites, Courses 4, 5, 6, 7, 114. Required of students specializing in chemistry.

**116. Agricultural Chemistry**—Four hours. Any Quarter. Fee \$4.00.  
An application of the principles of chemistry to soils, fertilizers, etc. Prerequisites, 1, 2, 3 and 7, or 4, 5, 6, and 7.

**117. Teaching of Chemistry**—Three hours. Any Quarter. Fee, \$4.00.  
Discussion and reports on the teaching of high school chemistry, and practice in setting up demonstration apparatus. Required of chemistry students specializing to teach the subject.

**118. Radioactivity**—Three hours. Any Quarter. Fee, \$4.00.  
A text-book and laboratory study of radioactive substances and the disintegration products of radium.

## Education

THOMAS C. MCCrackEN, Ph.D.

FRANK LEE WRIGHT, A.M.

JOHN C. MUERMAN, A.M.

MARK SWEANY, A.M.

SAMUEL MILO HADDEN, A.M.

BELLA BRUCE SIBLEY, A.M.

HULDA A. DILLING, B.E.

FREDA A. ROHR, A.B.

CLARA M. WHEELER, B.S.

LELA AULTMAN, Pd.M.

GRACE WILSON, A.B.

The aim of the Department of Education is to acquaint the student with the principles which underlie the science and art of education. Even though the courses must necessarily deal largely with the fundamental theories underlying educative processes, every course is so planned that the student should be able to make the application of these theories to actual practice in the school room. Several of the courses are offered for the purpose of meeting particular needs of teachers of practical experience.

## MAJORS IN EDUCATION

The outlines for the work of Majors in Education include the courses required of students who intend to become superintendents, high school teachers or principals, elementary school teachers or principals, kindergarten teachers or supervisors.

## COURSE OF STUDY FOR SUPERINTENDENTS, HIGH SCHOOL PRINCIPALS AND TEACHERS

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 8	3 hrs	Biol.	3 hrs	Soc. 3	3 hrs
Ed. 32	3 hrs	Ed. 33	3 hrs	Ethics 1	1 hr
Libr. Sci.	1 hr	Eng. 4	3 hrs	Psych. 3	4 hrs
Ed. 12	3 hrs	Electives	7 hrs	Electives	8 hrs
Electives	6 hrs				

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 10	3 hrs	Ed. 2	4 hrs	Ed. 2	4 hrs
Ed. 1	3 hrs	Electives	9 hrs	Ed. 15	2 hrs
Electives	7 hrs			Electives	7 hrs

Physical Education must be taken every quarter of the first and second year, with or without credit.

## COURSE OF STUDY FOR KINDERGARTEN TEACHERS AND SUPERVISORS

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Music 2a	3 hrs	Art 2	4 hrs	Ed. 1	3 hrs
Libr. Sci.	1 hr	Gen. Sci. 4a	2 hrs	Ethics 1	1 hr
Ind. Arts 1	2 hrs	Ed. 53	3 hrs	Ed. 51	3 hrs
Ed. 52	4 hrs	Eng. 4	3 hrs	Nat. Study 1	4 hrs
Electives	3 hrs	Electives	1 hr	Electives	2 hrs

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 2	4 hrs	Ed. 2	4 hrs	Ed. 10	3 hrs
Ed. 57	4 hrs	Electives	9 hrs	Electives	10 hrs
Electives	5 hrs				

Students may graduate and receive a diploma and Life Certificate at the end of the two-year course as outlined above. For outline of third and fourth years' work, see later page.

1. Ability to play simple music on the piano is required of every kindergarten major before graduation.

## COURSE OF STUDY FOR PRIMARY TEACHERS AND SUPERVISORS

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Eng. 4	3 hrs	Lib. Sci. 1	1 hr	Ed. 51	3 hrs
Nat. Study. 1	4 hrs	Eng. 15	3 hrs	Ed. 1	3 hrs
Ind. Arts 1	2 hrs	Art 2	4 hrs	Ethics 1	1 hr
Music 2a	3 hrs	Gen. Sci. 4a	2 hrs	Electives	6 hrs
Electives	1 hr	Electives	3 hrs		

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Pol. Sci. 30	3 hrs	Ed. 10	3 hrs
Ed. 2	4 hrs	Psych. 2b	3 hrs	Electives	13 hrs
Art. 13	4 hrs	Ed. 2	4 hrs		
Electives	5 hrs	Electives	6 hrs		

In the first and second years, Physical Education must be taken every quarter.

Students may graduate and receive a diploma and Life Certificate at the end of the two-year course as outlined above. For outline of third and fourth years' work, see later page.

### COURSE OF STUDY FOR INTERMEDIATE TEACHERS AND SUPERVISORS

#### First Year

Fall Quarter	Winter Quarter	Spring Quarter
Ed. 8	3 hrs Biol. 2	3 hrs Art. 14
Eng. 1	3 hrs Eng. 15	3 hrs Soc. 3
Nat. Stdy. 1	4 hrs Eng. 4	3 hrs Eng. 13
Gen. Sci. 4b	2 hrs Ed. 1	3 hrs Ed. 4
Ind. Arts 1	2 hrs Music 2b	3 hrs Ethics 1
Electives	2 hrs Lib. Sci. 1	1 hr Electives
		1 hr

#### Second Year

Fall Quarter	Winter Quarter	Spring Quarter
Pol. Sci. 30	3 hrs Psych. 2a	3 hrs Psych. 2b
Ed. 2	4 hrs Ed. 2	4 hrs Ed. 10
Electives	9 hrs Ed. 33	3 hrs Electives
	Electives	6 hrs
		10 hrs

In the first and second years, Physical Education must be taken every quarter.

Students may graduate and receive a diploma and Life Certificate at the end of the two-year course as outlined above. For outline of third and fourth years' work, see later page.

### COURSE OF STUDY FOR JUNIOR HIGH SCHOOL TEACHERS AND PRINCIPALS

#### First Year

Fall Quarter	Winter Quarter	Spring Quarter
Soc. 3	3 hrs Ed. 8	3 hrs Biol. 2
Lib. Sci. 1	1 hr Eng. 4	3 hrs Music 2c
Eng. 15	2 hrs Ethics 1	1 hr Eng. 1
Nat. Stdy. 1	4 hrs Method Courses	4 hrs Gen. Sci. 4c
Electives	6 hrs Electives	5 hrs Electives
		5 hrs

#### Second Year

Fall Quarter	Winter Quarter	Spring Quarter
Ed. 1	3 hrs Psych. 2a	3 hrs Psych. 2b
Method Courses	4 hrs Ed. 10	3 hrs Ed. 15
Ed. 2	4 hrs Ed. 2	4 hrs Pol. Sci. 30
Electives	5 hrs Electives	6 hrs Electives
		8 hrs

In the first and second years, Physical Education must be taken every quarter.

Students may graduate and receive a diploma and Life Certificate at the end of the two-year course as outlined above. For outline of third and fourth year's work, see below.

### COURSE OF STUDY FOR COUNTY, CONSOLIDATED, AND VILLAGE SCHOOL TEACHERS AND SUPERVISORS

#### First Year

Fall Quarter	Winter Quarter	Spring Quarter
Soc. 3	3 hrs Ed. 8	3 hrs Biol. 2
Agri. 2	4 hrs Ed. 21	3 hrs Ethics 1
Ed. 26a	3 hrs Eng. 15	3 hrs Nature Study 1
Libr. Sci. 1	1 hr Art 2	4 hrs Ed. 1
Eng. 4	3 hrs Music 2b	3 hrs Eng. 13
		Electives
		2 hrs

Fall Quarter	Second Year		Spring Quarter
	Winter Quarter		
Ed. 10	3 hrs Psych. 2a	3 hrs Psych. 2b	3 hrs
Ed. 2	4 hrs Ed. 2	4 hrs Ed. 26b	3 hrs
Ed. 25	3 hrs Pol. Sci. 30	3 hrs Ed. 15	2 hrs
Electives	6 hrs Electives	6 hrs Soc. 18	4 hrs
		Electives	4 hrs

In the first and second years, Physical Education must be taken every quarter.

Students may graduate and receive a diploma and Life Certificate at the end of the two-year course as outlined above. For outline of third and fourth years' work, see below.

### COURSE OF STUDY FOR THIRD AND FOURTH YEAR STUDENTS IN EDUCATION

Third Year			
Fall Quarter	Winter Quarter	Spring Quarter	
Soc. 105	4 hrs Psych. 104 or 105	4 hrs Ed. 103*	4 hrs
Ed. 142	4 hrs Ed. 105*	4 hrs Ed. 135	4 hrs
Psych. 107	4 hrs Ed. 2†	4 hrs Electives	4 hrs
Electives	4 hrs Ed. 108	4 hrs	

Fourth Year			
Fall Quarter	Winter Quarter	Spring Quarter	
Biol. 102	3 hrs Ed. 116*	4 hrs Psych. 108	4 hrs
Electives	13 hrs Biol. 3	1 hr Ed. 111	4 hrs
	Electives	11 hrs Ed. 229	4 hrs
		Electives	4 hrs

1. **Introduction to Teaching**—Three hours. Required in the third or fourth Quarter of the student's college work. Students should take this course during the quarter preceding their practice teaching.

This course consists of a study of the Training School; its building, equipment, teachers, pupils, and the philosophy underlying its work.

2. **Student Teaching in the Elementary Training School**—Hours according to schedule. Required of all Junior College students. Second year.

This course will include conferences, observation, and teaching.

3. **Primary Grade Methods**—Four hours. Fall and Winter Quarters. This course should be taken previous to student teaching.

In this course the needs of the child entering school for the first time will receive special attention. The latest and most scientific articles on primary methods will be read and discussed, and a resume of methods and materials for all primary work will be included. Observation of classes.

4. **Intermediate Grade Methods**—Four hours. Fall and Winter Quarters. This course should be taken previous to student teaching.

This course will deal with problems of instruction in intermediate grades. The best material and devices for the teaching of Arithmetic, Geography, History, Writing, Reading, Composition, and Spelling will be considered. Recent books and magazine articles will be discussed in class. Demonstration classes.

7. **Practical Projects in Primary Grades**—Three hours. Three days a week. Spring Quarter.

This course will deal with practical projects in the work of the primary grades.

8. **Educational Values**—Three hours. Every Quarter. Required of all students, first year.

The purpose of this course is to give the student a critical attitude toward the material presented in the various school subjects. Each subject of the elementary school will be considered as to the reason it has for a place in the curriculum today; how it has been justified in the past; and how it may be presented now so as to be more fully justified. Recent magazine

\*Required only of those in training for secondary school teaching.

†Required only of those in training for elementary school teaching who do not hold the two-year diploma.

articles and text-books will be studied with a view of developing the attitude of looking for the material which is of greatest educational value of the child.

**10. The Elementary School Curriculum**—Three hours. Three times a week. Every Quarter. Required of all students, second year.

This course will deal with the aims, materials, and methods of the elementary school. The course should make the student intelligently critical of programs of study in the elementary school.

**12. Current Movements in Social Education**—Three hours. Fall Quarter.

The purpose of this course is to acquaint the student with some of the recent movements in the field of education. This course will include a discussion of such subjects as the following: The school as a social center; open-air schools; school credit for industrial work in the home; and other subjects of current interest.

**15. Vocational Guidance**—Two hours. Spring Quarter.

This course will deal with the place of vocational guidance in public school systems. Among other subjects it will treat of the need and value of the study of occupations, vocational analysis, opportunities for vocational education, opportunities for employment, the work of placement and vocational bureaus and various guidance agencies in this and other countries.

**16. Girls' Camp Fire Work**—One hour. Every Quarter.

This course is intended for those who wish to become Camp Fire Guardians. Groups will be organized into regular camp fires and do the work usually required of girls in such groups.

**17. Boy Scout Work**—One hour. Every Quarter.

This course is intended for those who wish to become Boy Scout Masters.

**21. County School Problems**—Three hours. Winter Quarter.

This course considers the problem of the county school, the teacher, the child, the school board and the community.

**22. Student Teaching in County Demonstration Schools**—Four hours. Every quarter.

Four county schools, at a convenient distance from the College are being used for the special training of teachers. The Demonstration Schools are taught by successful, well trained and expert teachers. Senior students who desire special preparation for country schools may teach their first term in the Training School or teach one month in the Demonstration Schools as an assistant or helper to the regular teacher. All of these schools have teachers' cottages on the school grounds where the regular teacher and the student helpers live. The course of study being pursued at the College can be done in non-residence, during the month spent in observation and practice teaching in the Demonstration Schools. The same credit will be given this work as is given practice teaching in the Training School at the College. One month in the Demonstration Schools and one quarter in the Training School are required of students who may anticipate teaching in rural and village schools.

**25. Administration of Consolidated and Village Schools**—Three hours. Fall Quarter.

This course is a study of the history of county school organization, consolidation and administration. It aims to meet the needs of county superintendents, rural supervisors, teachers, principals of consolidated schools and others interested in special problems of country life. It will include studies and special researches in the redirection of village and community life, and a discussion of forward movements in legislation as they affect the education of children outside of large cities.

**26. (a and b) The County School Curriculum and the Community**—Three hours. Fall and Spring Quarters.

This course will present the problems of the teacher who desires to instruct country children in terms of their environment. Methods and materials for such instruction will be outlined and discussed. Special attention will be given to ways and means for vitalizing the subjects in the course of study.

**32. History of Education in Ancient and Medieval and Renaissance Times**—Three hours. Fall Quarter. Every other year. (Not offered in 1920-21.)

This course will consist of a brief study of primitive Hebrew, Greek, Roman, and early Christian Education, showing the trend of educational

thought, the types of schools which grew up, and the relation of Christian thought and Christian schools to pagan learning. The Renaissance will be studied with special reference to the fundamental changes that took place in educational ideals and aims and in religious thought; the effect of these upon the curriculum and upon educational institutions, and the problems which the Renaissance movement created for modern education.

**33. History of Modern Education—Three hours. Winter Quarter.**

This course will be introduced by a brief review of the Education of the Renaissance to furnish the setting for the study of the trend of modern education. The main part of the course will be devoted to such subjects as the development of the vernacular schools, the early religious basis of elementary and secondary schools, and the transition to a secular basis, together with the educational philosophy of such men as Comenius, Locke, Rousseau, Pestalozzi, Herbart and Froebel.

**38. Vocations for Women—Two hours. Winter Quarter. Every other year. (Offered in 1920-21.)**

This course is designed for the study of vocations open to women, with the idea of preparing the teacher to guide her students in the choice of their life work. The course consists of lectures, discussions, readings and reports.

**51. Literature and Story-Telling in the Kindergarten and Primary Grades—Three hours. Spring Quarter.**

A study and classification of the different types of stories according to their fitness for various ages and purposes; a study of the educational values of stories for children and of the possibilities of creative work by children; adaptation and selection of a graded list of stories.

**52. Use of Materials in the Kindergarten and Primary Grades—Four hours. Fall Quarter.**

A study of the use of materials to meet the various instinctive needs of the young child.

**53. Plays and Games for Kindergarten and Primary Children—Three hours. Winter Quarter.**

A study of the development of games from the spontaneous activities of children thru the rhythmic and dramatic games, into the formal games, and the dance; an application of child psychology in the selection and presentation of games for different ages.

**57. The Kindergarten Curriculum—Four hours. Fall Quarter.**

A study of the educational possibilities of the natural activities of childhood.

**103. Student Teaching in the Secondary Training School.—Four hours. Every Quarter.**

In this course the student-teacher is permitted to observe an expert teach the particular subject in which she desires to specialize. During this period of observation she is expected to prepare two model lesson plans each week, one of which is to be presented before the training teacher in the form of a model lesson. She is expected, also, to know thoroly each lesson that is assigned to the class by the teacher in charge and to be ready to answer questions and discuss topics at any time. The amount of student teaching is gradually increased.

**105. Principles of High School Teaching—Four hours. Winter Quarter.**

This is a course in methodology as the subject relates itself to the curriculum of secondary schools. It is taught by the Principal of the High School, but each Department Head assists in the course and every phase of work that is being done in the high school is discussed in the light of the more recent experiments and developments in secondary education.

The course in methodology is an integral part of the plan for training high school teachers and, therefore, is required of all who expect to enter this field. Course 105 is a continuation of 103 and takes the place of a term of practice teaching.

**107. Advanced Course in High School Practice Teaching—Four hours. On demand.**

Persons who have completed in a satisfactory manner Course 103 and Course 105 may be selected by the Principal of the High School and given entire charge of a class (the training teacher being present in the capacity of a critic teacher).

This course is intended for individuals who have shown exceptional talent in practice teaching and in mastering the "principles of High School Teach-

ing" and who want the opportunity to demonstrate their fitness for the better positions in the field of secondary education.

**108. Educational Supervision—Four hours. Winter Quarter.**

This course will deal with problems of supervision in school systems. It will be of especial value to those who expect to become superintendents or supervisors.

**109. High School Supervision—Hours to be arranged. On demand.**

Persons who have shown an unusually high degree of efficiency in high school teaching may be allowed to assist in the supervision of the high school work. This training will afford them a more comprehensive view of the work and practice in the supervision of the training of younger teachers. This experience is intended primarily for those who are preparing themselves for principals and superintendents or to fill other positions of responsibility in public school work.

**110. Supervised Study—Two hours. Twice a week. (Not offered in 1920-21.)**

This course will deal with the entire field of supervised study.

**111. Philosophy of Education—Four hours. Spring Quarter. Senior College required.**

This course is designed to set forth the underlying principles of educational theory. It treats of the theory of instruction and training with the child as the concrete basis; the aim and meaning of education; educational values; the theory of management and control; and the technic of practice. Some of these are discussed very briefly as they form the basis of other courses. Practical applications of theory are constantly made.

**112. School House Construction—Two hours. Twice a week. (Not offered in 1920-21.)**

This course will deal with practical problems in the planning and building of school houses.

**113. Organization and Administration of the Junior High School—Three hours. Fall Quarter.**

In this course the following points will be considered: Organization; standards for judging junior high schools; historical development; the program of studies; the daily schedule of classes; courses of study for the various subjects; the qualification of teachers, etc. After many representative junior high schools of the United States have been considered from the above mentioned standpoints, each student will arrange a program of studies, and a course in one subject for a junior high school in some designated community.

**114. Primary Supervision—Two hours. (Not offered in 1920-21.)**

This course is intended to meet the needs of kindergarten and primary supervisors.

**116. The High School Curriculum—Four hours. Winter Quarter. Required fourth year.**

In this course a practical study of the curricula of various small high schools and junior high schools of this and other states will be made. Educational values and the needs of the community will be considered in the course. A detailed course of study for both the junior and the senior high school will be outlined by each student.

**120. High School Administration—Four hours. Spring Quarter. Every other year. (Not offered in 1920-21.)**

This course will deal with the organization, management and administration of the high school, a critical examination of one or more typical high schools, emphasizing courses, programs of study, daily schedule of classes, records and reports, equipment, the work of the teachers, and other similar matters of high school administration.

**125. Education for the Physically Handicapped—Two hours. Spring Quarter. Every other year. (Not offered in 1920-21.)**

A study of the instruction and methods involved in the education of the physically handicapped, especially the deaf, dumb, blind, and crippled.

**130. County School Supervision—Three hours. Winter Quarter.**

A course intended primarily to give a comprehensive grasp of American rural history, and a brief study of the rural educational systems of this and other countries. After the problem is considered in its historical and sociological aspects resulting from a long national evolution, the present as well

as the best type of rural school will be studied as a factor in preparing for an efficient citizenship. The fundamental needs in rural education, the recent rural life movement, the redirection of the school, its legitimate functions and revitalizing agencies will be correlated with existing conditions in Colorado and the West and with the social and historical development of the country.

**135. Educational Classics—Four hours. Spring Quarter.**

Such classics as Plato's "Republic," Rousseau's "Emile," Pestalozzi's "Leonard and Gertrude," and Spencer's "Education" will be considered (a) as interpretations of educational practices of the various periods of history represented and (b) as representations of theory related to present day education.

**142. Educational Administration—Four hours. Fall Quarter.**

This course is designed primarily for students preparing themselves as principals, superintendents and supervisors. After making a survey of the field of educational administration, the student may select the line of administration in which he is most interested for study and research.

**143. The Federal Government in Education—Four hours. Winter Quarter. Every other year. (Not offered in 1920-21.)**

This course treats of the efforts of the Federal Government to aid the states in education.

**147. Educational Surveys—Three hours. Fall Quarter.**

In this course an opportunity will be given to study the technique of conducting surveys, the surveys which have been made, and the application of these surveys to educational thought and practice.

**152. Principles Underlying the Education of Children in the Kindergarten and Primary Grades—Three hours. Spring Quarter.**

This course is intended to be of help to kindergarten and primary teachers and supervisors.

**153. Kindergarten Materials. (A continuation of Ed. 52.)—Four hours. On demand.**

A study of the instincts and interests of children and how to meet and use these instincts and interests in the Kindergarten and Primary Grades.

**154. Kindergarten Seminar.—On demand.**

A study by each student of some one activity in the Kindergarten.

**217. Vocational Education—Three hours. Winter Quarter.**

A discussion of the main factors essential in vocational education.

(a) Demands and needs interpreted in the social life of people.

(b) The ability of the public school to meet these demands by means of public school education.

(c) Local attempts being made to meet these demands.

**223. Research in Education—Hours dependent upon amount of work done. Fall and Winter Quarters.**

This course is intended for advanced students capable of doing research in educational problems. Each student may choose the problem of greatest interest to him, provided sufficient opportunity is at hand for original investigation. The results of such research are to be embodied in a thesis. Conference course at hours convenient to instructor and student.

**228. Comparative School Systems—Four hours. Winter Quarter. Every other year. (Offered, 1920-21.)**

This course will include a study of European systems of education, particularly the German, French and English, for the sake of a comparative basis and the suggestions that they furnish for the solution of current problems in American educational administration.

**229. Current Educational Thought—Four hours. Spring Quarter.**

This course will consist of reviews and discussions of recent books in the various fields of education.

**246. Educational Problems—Four hours. Fall Quarter. Every other year. (Offered, 1920-21.)**

This course is intended for advanced students who wish to study in detail, such subjects as the following: The school as an institution; learning



by doing; flexibility of promotion; the place of method in the school room; the school as a unit of supervision; practical correlation of school and community work.

## Education—County Schools

J. C. MUERMAN, A.M., *Director*

The County Schools department aims to develop educational leadership for rural and village communities. It aims to give special preparation for the purpose of meeting rural problems, re-directing the school curriculum and reshaping rural community life. To accomplish this, a thorough study and knowledge of modern County school organization, administration, and present day needs is necessary. The department is especially interested in every movement for the betterment of community life, whether it be in the open country or in the small village.

The schools must at all times be an important factor in community development. The lessons taught by the great war have shown the value of close cooperation and the advantage of consolidating the weak, poorly supported rural schools into strong consolidated districts. To prepare principals and teachers for these consolidated schools is one of the aims of this department. After war conditions should be studied in the light of the causes that are producing the great changes in the rural life of our nation. How our County schools can meet and direct during this period of adjustment, the educational welfare of one-half of all children of school age, is a problem for teachers especially trained for this work.

## Education—Secondary

STATE HIGH SCHOOL OF INDUSTRIAL ARTS

MARK SWEANY,, A.M., *Principal*

The college maintains a high school for the main purpose of providing facilities for the training of high school teachers and of giving an opportunity to high school students of Colorado to take all or a part of their course in connection with the Teachers College. The school is especially suited to the needs of students who desire to become teachers.

In addition to its excellent teaching force, the school has the use of the equipment of Colorado State Teachers College. The library, the museums, the collection of fine arts and the laboratories are all available to high school students. The courses are vital and practical and are intended to meet the needs of boys and girls of the present age.

### THE UNGRADED SCHOOL FOR ADULTS

It often happens that for economic reasons boys and girls are compelled to leave school in the grades or in the early years of high school. Upon reaching maturity they realize the value of an education and are anxious to obtain one, but are unwilling to enter classes with children. The purpose of the Ungraded School for Adults is to open the door of opportunity to such students. The work will be evaluated according to the strength shown, and the individual will be classified, after sufficient time has elapsed, in accordance with the power demonstrated without the necessity of completing each omitted step.

The Ungraded School for Adults provides a special school for adult students. It appreciates the value, in terms of character and intelligence, of the services rendered by the individual to the community and gives a

reasonable amount of credit for the same. And, most significant of all, it substitutes the power-unit for the time-unit. No one can enter the Ungraded School for Adults who has not reached the age of twenty years.

### Fees for High School and Ungraded School

Fall, Winter and Spring Quarters, \$4.00 each.

Summer Quarter as follows:

- One subject, full quarter, \$6.00.
- One subject, half quarter, \$3.00.
- Two subjects, full quarter, \$12.00.
- Two subjects, half quarter, \$6.00.
- Three or more subjects, full quarter, \$18.00.
- Three or more subjects, half quarter, \$9.00.

## Educational Psychology

JACOB D. HELLMAN, Ph.D.

The courses of this department have been arranged with the general purpose of making the student familiar with the important contributions which psychology has made to such phases of education as school organization and administration, the aims of education, and the best means and methods of realizing these aims. The whole public school system is viewed from the standpoint of the nature and needs of the child. An attempt is made to point out what the schools should be in order to preserve the child's physical and mental health, respect his native capacities and tendencies, secure his normal development, utilize his most natural modes of learning, and promote and check up the efficiency of his responses. More specific statements of the purposes of the department are given below in the descriptions of the courses.

The department offers two curricula, the one in Psychology and the other in Special Schools and Classes. The first prepares the student to teach psychology in normal schools and high schools and to fill such positions in clinical psychology as are developing in connection with public school systems. The second prepares the student to take charge of special schools and classes, especially such as are designed for backward and feebleminded children. Students who elect either of these curricula are advised to take at least six courses of the curriculum of some other department.

### CURRICULUM IN PSYCHOLOGY

Students who find it impossible to remain at school four years will be permitted to elect advanced courses should they desire to do so.

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 1	4 hrs	Biol. 2	3 hrs	Soc. 3	3 hrs
Eng. 4	3 hrs	Ed. 8	3 hrs	Psych. 110	4 hrs
Other Dept.	4 hrs	Other Dept.	4 hrs	Ethics 1	1 hr
Free Electives	5 hrs	Free Electives	6 hrs	Free Electives	8 hrs

**Physical Education is required each quarter of the first and second year, with or without credit.**

**Second Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Psych 3	4 hrs
Pol. Sci. 30	3 hrs	Ed. 2	4 hrs	Ed. 2	4 hrs
Ed. 1	3 hrs	Other Dept.	4 hrs	Other Dept.	3 hrs
Ed. 10	3 hrs	Free Electives	5 hrs	Free Electives	5 hrs
Free Electives	4 hrs				

Students may graduate and receive the Junior College Diploma and Life Certificate at the end of the two-year course as outlined above.

**Third Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 107	4 hrs	*Psych 105	4 hrs	*Ed. 103	4 hrs
Soc. 105	4 hrs	†Psych. 104	4 hrs	Psy. 109	2-4 hrs
Free Electives	8 hrs	Psych. 106	4 hrs	Free Electives	4-8 hrs
		Free Electives	4 hrs		
		Ed. 105	4 hrs		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 213	8 hrs	*Ed. 116	4 hrs	Ed. 111	4 hrs
Free Electives	8 hrs	Other Dept.	4 hrs	Psych. 212	4 hrs
		Free Electives	8 hrs	Psych. 108	4 hrs
				Free Electives	4 hrs

### CURRICULUM FOR TEACHERS OF SPECIAL SCHOOLS AND CLASSES

The courses for the first and second years of this curriculum are the same as those for the curriculum in psychology.

**Third Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 104	4 hrs	Psych. 112	2 hrs
Psych. 107	4 hrs	Psych. 106	4 hrs	Construc. Work	4 hrs
Teaching (backward children)	4 hrs	Biol. 103	3 hrs	Psych. 109	2-4 hrs
Free Electives	4 hrs	Construc. Work	4 hrs	Free Electives	4 hrs
		Free Electives	1 hr		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 2 (backward and feebleminded children)	4 hrs	Psych 111	2 hrs	Ed. 111	4 hrs
Free Electives	12 hrs	Ed. 116	4 hrs	Psych. 108	4 hrs
		Soc. 124	4 hrs	Ed. 2 (backward and feebleminded children)	4 hrs
		Free Electives	6 hrs	Free Electives	4 hrs

#### 1. Child Hygiene—First year. Four hours. Fall Quarter.

The main purposes of this course are (a) to point out how the child's school progress and mental and physical development are arrested, and how his health and behavior are impaired by the physical defects which are very prevalent among school children; (b) to discuss the causes of defects, the methods of preventing and detecting them, and the measures which are required for an effective amelioration or cure.

The following topics will be treated: educational and economic values of health; the need of health conservation; deformities and faulty postures; air requirements; malnutrition and school feeding; hygiene of the mouth; enlarged adenoids and diseased tonsils; defective hearing; defective vision.

#### 2. Educational Psychology—

a. Three hours credit, four hours recitation. Required of all students. Second year. Every Quarter.

The purposes of this course are: (a) to make the student familiar with the child's capacities, tendencies and native responses and to show him how they, and the nature and order of their development, are involved in the

†Not required of students preparing to teach in the High School.

\*Not required of students preparing to work in the Grades and the Junior High School.

process of educating the child; (b) to discuss such conditions of the school-room and school activities as will avoid fatigue and promote work.

The following topics will be treated: The child's native equipment; mental work and fatigue.

b. Three hours credit, four hours recitation. Required of all students. Second year. Every Quarter.

Purposes of the course: (a) to acquaint the student with the various modes of learning and the conditions which facilitate learning; (b) to discuss the nature of individual differences and point out their significance for instruction and the arrangement of school work.

General topics: The psychology of learning; individual differences.

**3. Child Development—Second year. Four hours. Spring Quarter.**

The purposes of this course are: (a) to point out the child's requirements during the different stages of his physical development; (b) to describe the nature of the child's mental development and discuss the kind of school work which is adapted to him in any stage of development.

The following topics will be treated: Purposes and methods; anthropometrical measurements and growth; the development of attention and sense-perception; instruction in observation; the development of memory, imagination and thinking; the psychology of lying; the growth of feelings and ideals; volition, suggestion and interest.

**104. Psychology of Elementary School Subjects—Third year. Four hours. Required. Winter Quarter.**

The purposes of this course are: (a) to make an analysis of the school subjects with the object of determining what mental processes, and modes and conditions of learning are involved in studying them; (b) to review the results of experimental studies on the methods of teaching and learning the school subjects; (c) to discuss the necessity of varying the methods of teaching, and learning the school subjects with the progress made and with individual differences in children; (d) to criticize methods of instruction in the light of individual requirements, the results of experimental studies, and the mental processes involved in a given subject.

Topics treated: The elementary school subjects.

**105. Psychology of the High School Subjects—Third year. Four hours. Required of students preparing to teach in the high school in lieu of Course 104. Winter Quarter.**

The purposes of the course are: (a) the same as those enumerated in Course 104; (b) to familiarize the student with educational tests which are designed to measure the level of the child's performance in the high school subjects.

Topics treated: The high school subjects.

**106. Clinical Psychology—Four hours. Winter Quarter.**

The purposes of the course are: (a) to teach the student how to determine the mental status of a child thru first-hand observations, tests, and experiments and thru the collection of hereditary, developmental, and environmental data pertaining to the child; (b) to show how we may learn about the child's mental status from the effects of a prescribed course of treatment; (c) to show the social, racial, and educational significance of varying degrees of mentality.

The following topics are treated: Methods and purposes of clinical psychology; mental classification of children; pathological classification of the feeble-minded; the treatment of special classes of children; social, racial, and educational aspects of feeble-mindedness; mental characteristics of the feeble-minded.

**107. Mental Tests—Four hours. Fall Quarter.**

The purposes of the course are: (a) to make the student familiar with the means and methods which are employed to determine the child's general intelligence and the efficiency of his individual mental processes; (b) to point out the social, educational, psychological, and vocational significance of tests.

Topics treated: Various forms of individual tests, such as the Binet series and its modifications; various forms of group tests, such as the Army, Otis, National, and Pressey tests; tests of perception, memory, imagination, thinking, attention, psycho-motor control, and various combinations of mental processes.

**108. Educational Tests and Measurements—Four hours. Fourth year. Required. Spring Quarter.**

Chief purposes of the course: (a) to give the student a working knowledge of the best instruments for measuring the child's school progress and his performance level in the school subjects; (b) to discuss the methods of

using the educational tests and tabulating the results; (c) to point out their educational significance in all of its phases.

Topics treated: Tests and standards of reading, writing, spelling, arithmetic, geography, and all the other elementary school subjects.

**109. Psycho-clinical Practice**—Two or more hours. Fall and Spring Quarter.

The purpose of this course is to give the student practice in determining the mental and physical status of children by means of tests, examinations, and the collection of other data. In this course an opportunity is given to put into practice much of the knowledge obtained in Courses 1, 106 and 107.

**110. General Psychology**—Four hours. Any Quarter.

Purposes of the course: (a) to make the student acquainted with psychological theories and concepts; (b) to discuss the nature of mental processes; (c) to show what relations they bear to each other, to the nervous system, to the stimuli of the external world, and to the various forms of mental and physical behavior.

Topics: Those which are listed in the text books on general psychology, such as the nervous system and its functions, sensations and images, attention, perception, memory, reasoning, instinct, feeling, emotion, and volition.

**111. Speech Defects**—Two hours. Winter Quarter.

Purposes: (a) to make the student acquainted with such speech defects as aphasia, stuttering, and lispings; (b) to show how these defects handicap the child in school and in life; (c) to discuss and demonstrate the methods of remedial and curative treatment.

**112. History of Auxiliary Education**—Two hours.

Purposes: To make the student familiar with the nature, origin, causes, and development of the schools for backward and feebleminded children.

**113. Vocational Psychology**—Four hours. Spring Quarter.

The purpose of this course is to make the student acquainted with employment psychology, personal work in industry and the application of psychology to industry and the vocations in general.

**212. Psychological and Statistical Methods Applied to Education**—Four hours. Spring Quarter.

Purposes: (a) to give school officials the technique necessary for the solution of educational problems involving the accurate measurement of mental processes; (b) to present the statistical methods employed in the treatment of educational data.

**213. Conference, Seminar, and Laboratory Courses**—Hours depending upon the amount of work.

Purposes: To make possible more intensive and exhaustive work by the student on problems of special interest to him.

Topics: Formal discipline; sex hygiene; retardation; mental tests; learning; retinal sensations; space perception, etc.

## Ethics

HELEN GILPIN-BROWN, A.B., *Dean of Women*

In the courses given below, it is hoped that two great essentials in the training of a teacher—health and personality—may be fostered and improved. The young woman who starts out upon her teaching career with a good physical foundation, and the advantage of a character developed thru right ideals of conduct, has two assets which are invaluable.

**1. Ethics—Personal Talks on Right Living**—Two periods. One hour credit. Every Quarter.

In this course it is the aim of the Dean of Women to get in touch with the personal side of each student. Living conditions will be taken up, and all matters which pertain to conduct, will be open to friendly discussion.

**2. Ethics—Ethical Culture**—Two hours. Every Quarter.

A course designed for instruction in the etiquette of everyday life, and a general appreciation of culture, and its necessity in the training of a teacher. Lectures, book, and magazine reviews and reports.

# Geology, Physiography and Geography

GEORGE A. BARKER, B.S., M.S.

The courses listed in this department are not review courses covering merely the material taught in the common schools. Such review courses are listed in the high school department for which no credit is given toward graduation from the college. Geography is not just a group of facts about different parts of the world. It is a definite science in which, in the underlying climatic and geologic causes, the superstructure of commercial and human factors is built. It is from this point of view that the work of this department is given.

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Eng. 4	3 hrs	Ethics	1 hr	Nat. Study	4 hrs
Geog. 8	4 hrs	Geog. 7	4 hrs	Free Electives	9 hrs
Free Electives	6 hrs	Free Electives	6 hrs		

**Physical Education required each quarter of the first and second years, with or without credit.**

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Geog. 4	4 hrs	Pol. Sci. 30	3 hrs	Ed. 10	3 hrs
Hist. 10	4 hrs	Geog. 5	4 hrs	Ed. 2	4 hrs
Ed. 1	3 hrs	Geog. 12	2 hrs	Geog. 52	4 hrs
Free Elec.	5 hrs	Ed. 2	3 hrs	Free Electives	1 hr
		Free Electives	4 hrs		

**Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.**

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Geog. 100	4 hrs	Psych.	4 hrs	Geog. 103	4 hrs
Soc. 105	4 hrs	Geog. 120	3 hrs	Geog. 122	4 hrs
Ed. 103	4 hrs	Free Electives	5 hrs	Biot. 101	4 hrs
Free Electives	4 hrs	Ed. 105	4 hrs	Free Electives	4 hrs

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Geog. 113	3 hrs	Psych. 105	3 hrs	Geog. 144	2 hrs
Geog. 130	1 hr	Ed. 116	4 hrs	Geog. 150	2 hrs
Free Electives	12 hrs	Free Electives	9 hrs	Ed. 111	4 hrs
				Psych. 108	4 hrs
				Free Electives	4 hrs

### 2. Physical Geography—Four hours. Winter Quarter.

A course designed for those who have not had physical geography in the high school. Work in the laboratory will consist of studies of type, topographic and geologic maps, as well as the observation of meteorological instruments. Field trips will be taken, and, in so far as it is possible to do so, out-of-door examples will be used to illustrate the various physiographic types. A field collection of the commoner rocks of the vicinity will be made.

### 4. Geography of North America—Four hours. Fall Quarter.

A lecture course with extensive library reading. The continent will be treated from the foundation of its geologic and climatic controls, and upon these will be built the economic side of the subject.

### 5. Geography of Europe—Four hours. Winter Quarter.

It is recommended that this course follow Course 4, as it is based upon the material presented in that course. We endeavor to understand Europe in climatic and geologic terms of our own continent.

### 7. Commercial Geography—Four hours. Winter Quarter.

A study of commerce, largely based on museum products, field trips and railroad and steamship maps.

**8. Human Geography—Four hours. Fall Quarter.**

The relation of man to his environment and the various type environmental realms, as, for instance, the desert, tropical forest, mountains, etc., will be taken up. Required in the Intermediate, Sociology and History Courses.

**12. Geography Method—Two hours. Winter Quarter.**

A course in which the history of geography teaching is taken up, followed by a discussion of the relative values of various methods of presentation. The materials suitable for each grade will be discussed.

**52. Geography of South America—Four hours. Spring Quarter.**

A lecture course on the racial, economic and political aspects of South American geography.

**100. College Geology—Four hours. Fall Quarter.**

It is suggested that this course be taken only by those who have had Course 2.

**103. Climatology—Four hours. Spring Quarter.**

This is a thoro study of the climatological basis of the science of geography designed for those who desire to know more in detail the climatological aspect of geography. The observational side of the subject will be stressed. Advantage will be taken of our meteorological apparatus to compile weather data. The sources of meteorologic and climatic statistics will be noted in the lectures and the students will be encouraged to write themselves and build up a library of statistical material for use in their schools later.

**113. Mathematical Geography—Three hours. Fall Quarter.**

A recitation course designed to cover such problems as proofs of earth's rotation and revolution, the tides, international date line, time belts, calendars, solar and siderial time, etc. Required of students in the Mathematical Course.

**120. Geography of Polar Lands—Two hours. Winter Quarter.**

This course refers to a part of the earth usually neglected in the study of the continents. A discussion of climatic factors in the Arctic and Antarctic regions will be taken up. The influence of these factors on life on land and sea will be considered. The great resources of sea food yet untouched in the Polar seas and the possible mineral resources upon the land will be discussed.

**122. Biogeography—Four hours. Spring Quarter.**

The distribution of plants and animals, emphasizing the main climatic and geologic controls in such distribution. It is recommended that the student should have already taken Botany and Zoology before entering this course.

**130. The Islands of the Sea—One hour. Fall Quarter.**

A study of the various ways islands are formed as well as their relation to the continents in a geologic, biologic and social sense. The average geography course does not study the outlying islands because it is too busy with the continents. This course is designed to fill this gap in the pupil's geographic knowledge—a gap that needs to be filled because of the strategic and historic importance of many island groups.

**144. Geography and Geology of Mountains—Two hours. Spring Quarter.**

A course which is planned especially with reference to the mountains of Colorado. Geologic folios and climatic and botanical data will be considered and the student will be referred to this material in the library. It is suggested that the student have Courses 100, 103 and 122 before taking this course.

**150. Geography of Colorado—Two hours. Spring Quarter.**

A lecture course on Colorado geography touching the physiographic features of the state, the influence of the geologic past upon these features, weather phases and climate of Colorado, the main geographic controls in animals and plant distribution, man past and present, and his distribution, the industries of the state and the geographic controls of industry.

# History and Political Science

EDWIN B. SMITH, B.S., A.M.

This department offers courses in the two fields, History and Political Science, of such nature that they meet the needs of teachers in the elementary school and the high school. The courses are arranged to cover the materials and the methods which are most helpful in presenting the subjects of History and Civics in the schools.

In nearly every phase of school work the teacher utilizes the subject matter of history, either directly in teaching the subjects or as supplementary material. History furnishes the background for an appreciation of the varied interests of the school; it is the basis of much of our thinking; and more and more it is assuming a prominent place in our daily experiences.

The increasing interest in civics and citizenship is marked. All phases of governmental activity are growing in importance. These features of our experience are reflected in the school programs. The courses offered in this field are of practical value to public school teachers.

## THE COURSE OF STUDY

### Two Years or Four Years

For Elementary School Teachers, High School Teachers, and Super-  
visors in Normal Schools, Junior High Schools, and Elementary Schools.

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Sociology 3	3 hrs	Biology 2	3 hrs	Education 8	3 hrs
History 10	4 hrs	English 4	3 hrs	Pol. Sci. 12	4 hrs
History 27	3 hrs	Geography 8	4 hrs	History 13	3 hrs
Lib. Sci. 1	1 hr	History 11	4 hrs	Pol. Sci. 26	2 hrs
Ethics (Women)	1 hr	Free Electives	2 hrs	Free Electives	4 hrs
Free Electives	4 hrs				

Physical Education is required each quarter of the first and second years, with or without credit.

#### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs	Psychology 2a	3 hrs	Psychology 2b	3 hrs
History 5	3 hrs	History 6	4 hrs	Pol. Sci. 25	4 hrs
Ed. 1	3 hrs	Education 10	3 hrs	History Elec.	4 hrs
Ed. 2	4 hrs	Ed. 2	4 hrs	Free Electives	5 hrs
Free Electives	2 hrs	Free Electives	2 hrs		

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

#### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
History Elec.	8 hrs	Ed. 105	4 hrs	*Education 103	4 hrs
Free Electives	4 hrs	†Psych. 104	4 hrs	History Elec.	8 hrs
Soc. 105	4 hrs	*Psych. 105	4 hrs	Free Electives	4 hrs
		History Elec.	8 hrs		
		Free Electives	4 hrs		

#### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 108	4 hrs	*Ed. 116	4 hrs	Ed. 111	4 hrs
History Electives	4 hrs	History Electives	4 hrs	History Electives	4 hrs
Free Electives	8 hrs	Free Electives	8 hrs	Free Electives	8 hrs

\*Not required of student preparing to teach in the elementary school.

†Not required of students preparing to teach in the high school.



**5. Early Modern Europe—Four hours.**

The earlier development of the medieval period particularly affecting the people of Modern Europe will be considered. The course will conclude with the French Revolution and Napoleon. Interest will center around the social and industrial phases of the people's experiences.

**6. Recent European History—Four hours.**

This is a continuation of Course 5. The period since Napoleon will be traced thru the political, social, and industrial developments. The experience of the people of Europe since 1870 will furnish the basis for understanding the more recent events. The relation of the people of the United States to European conditions will receive attention.

**10. Social and Industrial History of the United States—Four hours.**

The current social and industrial conditions within the United States will be traced from their beginnings; the European conditions which furnish traceable influences will be considered. Some other topics are suggested, as follows: The natural resources; the influence of cheap land; the effect of invention, machinery and science; the development of agriculture and manufacture; the rise of great industries, capitalism, business combination, and labor organization; the efforts of labor to better conditions.

**11. Commercial History of the United States—Four hours.**

A survey of commerce in early times will be followed by a discussion of the colonial commerce and its consequences. The several periods of American commerce, domestic and foreign, will give opportunity for considering the coast trade, government aid, the consular service, the relations of general commerce to business development of the country, the changes of the twentieth century, the growth of modern business, and government supervision.

**12. State and Local Government—Four hours.**

The relationship between the individual citizen and the community will be emphasized. The organization and administration of the government of the city, the county, and the state will furnish the basis of the course. The government of these several communities in Colorado will be considered as types.

**13. The Teaching of History in the Elementary School—Three hours.**

The history of history instruction in schools; the aims and values of history teaching; the courses of study, past, present, and projected for the future, covering both elementary and high schools; methods and materials for the elementary grades; testing results; and school problems related to history, such as, the place of history in the curriculum, and the relation of history to other subjects.

**25. Comparative Government—Four hours.**

The government in other countries compared with that in our own; England the cabinet type, France the constitutional cabinet type, Germany the cabinet type in transition, and Switzerland the most perfect type of democracy; the smaller European states and the South American Republics; the growth of internationalism and democracy.

**26. The Teaching of Civics in the Elementary School—Two hours.**

The development of civics instruction from the study of the Constitution to the present community civics; the value of civics in education for citizenship; the purposes of instruction in government; courses of study for the elementary school; methods and materials for the various grades of instruction.

**27. Contemporary History—Three hours.**

The course is concerned with current movements in this and other countries, their growth and interpretation. It includes the reading of periodicals and recent publications, and class discussion.

**28. Ancient Social History—Four hours.**

This is a survey of the development of society among the early peoples, with the emphasis on the social and economic phases. The main purpose is to give teachers a new point of view with respect to the teaching of Ancient History.

**30. Political Adjustment—Three hours.**

The course attempts to establish relationships between the individual and the political groups which serve him. Consideration is given to democratic ideals and values as opposed to autocratic, to the opportunities and obligations connected with citizenship, to the place which public opinion holds in a republican government, and to creating American spirit. A definite effort is made to show the relations between the individual, education, and the forms and processes of community organization.

**107. Modern England and the British Empire—Four hours.**

A course dealing with the political, social, and institutional history of the English people since 1660.

**117. The Teaching of History and Civics in the High School—Three hours.**

The development of instruction in these subjects in the high school; their place in the high school program; aims and values of instruction; problems connected with the teaching of the subjects; the relation between history and civics teaching.

**104. Western American History—Three hours.**

The westward movement as an historical process; the migration from the Atlantic to the Mississippi Valley; the Trans-Mississippi West; the history of Colorado as a part of this movement; the Pacific Coast and the dependencies.

**116. Spanish American History—Two hours.**

A course designed to furnish the background for appreciation of the growing relations between the United States and the republics to the south. In tracing the experience of the Spanish American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to the Panama and the purchase of the Danish West Indies, and to the new Pan-Americanism.

**118. Financial History of the United States—Four hours.**

The origin and growth of the currency, banking, and revenue systems of the United States, with special emphasis on the tariff policy and the currency system; the recent achievements in the financial system as expressed in the federal reserve banking system, the farm loan law, and the financing of the war.

**123. International Relations—Four hours.**

A study of the basic principles of international relations, traced historically; the development and application of these principles in recent European relations; American international ideals, including the Monroe Doctrine, Pan-Americanism, and the League of Nations.

**124. History of the Far East—Four hours.**

This is a study of the modern history of India, China, Japan, and the adjacent islands, with reference to their relations with Europe and the United States.

**212. American Constitutional Development—Four Hours.**

Origin of the Constitution; relation to the state constitutions; the Articles of Confederation; the Constitution in the process of making; the interpretation of the document by the makers; the period of misunderstanding; the new interpretation of the principles of government; the service of the law courts; and the great cases which have grown out of the interpretation of the document.

**213. The Literature of American History—Four hours.**

A survey of American History with reference to the materials and problems for use in schools.

**214. Methods in Historical Research—Two hours.**

This course is a study of the methods of historical investigation, the nature and use of the historical document, and historical writing.

**215. Research in History.**

Students doing graduate work in History and Political Science may arrange work as desired. The course is intended for advanced students who wish to investigate problems in either field, which arise in teaching the subjects of History and Civics.

# Home Economics

MARGARET ROUDEBUSH, *Director*

ELIZABETH CLASBEY, A.B.

EDITH GALE WEIBKING, A.B.

HESTER ANN ALLYN, B.S.

The course in Home Economics is planned to train teachers of Home Economics, to stimulate an interest in the home and to give a knowledge of the general principles of the subject are part of a liberal education. The courses offered are fundamental to teaching administration and business practice of home making. Regular work is supplemented by courses offered in other departments.

It is advisable to take a four-year course because, as the high schools thruout the United States conform to the Smith-Hughes law of 1917, they will employ only teachers with four-years of college training.

## SMITH-HUGHES COURSE\*

### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Chem. 1	3 hrs	Chem. 2	3 hrs	Chem. 3	3 hrs
Eng. 4	3 hrs	Soc. 3	3 hrs	H. A. 3	4 hrs
H. A. 1	4 hrs	H. A. 2	4 hrs	H. S. 3	4 hrs
H. S. 1	4 hrs	H. S. 2	4 hrs	Eng. 3 or 5	3 hrs
Art 4	2 hrs	Art 12	2 hrs	Elective	2 hrs

Physical Education is required each quarter of the first and second years, with or without credit.

### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Ind. Arts 5	4 hrs	Ed. 8	3 hrs
Eng. 15	3 hrs	Eng. 16	3 hrs	Ethics 1	1 hr
H. A. 4	4 hrs	H. A. 5	4 hrs	Chem. 112	3 hrs
Chem. 108	3 hrs	Chem. 109	3 hrs	H. A. 6	4 hrs
Elective	3 hrs	Elective	2 hrs	Elective	5 hrs

### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Household Chemistry	3 hrs	Bact. 1	4 hrs	Pol. Sci. 30	3 hrs
Psych 2a	3 hrs	Psych. 2b	3 hrs	or	
H. A. 107	4 hrs	H. A. 108	4 hrs	Soc. 105	4 hrs
Elective	6 hrs	H. S. 103	4 hrs	H. A. 109	4 hrs
				Ed. 111	4 hrs
				Elective	4 hrs

### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
H. A. 110	4 hrs	H. A. 112	4 hrs	H. A. 113	4 hrs
Physics 12	4 hrs	Teaching	4 hrs	Teaching	4 hrs
H. S. 106	4 hrs	H. S. 107	4 hrs	H. S. 108	4 hrs
Elective	4 hrs	Elective	4 hrs	Ed. 105	4 hrs

\*Students in this course may receive the Life Certificate to teach in Colorado at the end of the second year of the above course by electing eight to eleven hours of observation and teaching in the second year and by transferring Psych. 2a, Psych. 2b, and Pol. Sc. 30, to the first or second year instead of certain other subjects scheduled for those years. The student should understand, however, that she does not meet the requirements for a position in a Smith-Hughes high school until she has completed the full curriculum of four years.

## HOUSEHOLD ARTS

1. **Textiles**—Four hours. Fall Quarter.

This course includes the history and development of textiles, the study of fibers, the identification and economic use of fabrics.

2. **Design**—Four hours. Winter Quarter.

This is a fundamental course in theory and practice of design, the study of elements and principles of design.

3. **Garment Making**—Four hours. Spring Quarter.

This course teaches the fundamentals of plain, hand, and machine sewing as applied to simple garments for adults and children; the use of commercial patterns and the operation and care of machines.

4. **Advanced Textiles**—Four hours. Fall Quarter.

This course deals with the chemical properties of textiles; the methods of cleansing fabrics; the study of dyes and the dyeing of different types of fibers.

5. **Drafting and Pattern Making**—Four hours. Winter Quarter.

This course teaches the making of patterns by drafting, modeling and designing. All foundation patterns are drafted to measurements of individual and fitted. From these, other patterns are made to be used in H. A. 6.

6. **Elementary Dressmaking**—Four hours. Spring Quarter.

Patterns designed and made in H. A. 5 are used for garments made in this course. This course establishes the fundamental principles in dressmaking and gives practice in the selection and purchase of appropriate materials and the application of principles of design.

107. **Costume Design**—Four hours. Fall Quarter.

A course offering opportunity for solution of a great variety of problems in dress design; as design for various elements of dress, for different types of personality, for formal and informal occasions, for hats and accessories, etc.

108. **Costume Design 2**—Four hours. Winter Quarter.

A continuation of Costume Design 107. Designs draped in paper, cheese-cloth, cambric and various effective materials.

109. **Advanced Dressmaking**—Four hours. Spring Quarter.

This course includes work in tailoring as applied to women's and children's garments; the making of an afternoon and an evening gown. Draped designs made in Costume Design 108 used as patterns in this course.

110. **Millinery**—Four hours. Fall Quarter.

This course includes a discussion of practical and artistic principles of millinery; designing and modeling hats of various types in paper and crinoline; making wire and buckram frames and the use of velvet, silk and straw.

111. **Home Economics**—Four hours. Fall Quarter.

A lecture course on the history and growth of Home Economics; the relation of Home Economics subjects to education; the place these subjects should hold in the curriculum and the methods employed in teaching them.

112. **House Plans**—Four hours. Winter Quarter.

This course is a non-technical course in the construction of the house but includes a study of plans, specifications, building materials; the planning of a house for a family which actually exists.

113. **Interior Decoration**—Four hours. Spring Quarter.

A professional course aiming to give the student thorough knowledge of theory and practice of the application of principles of design and color to interior decorations. House planned in H. A. 112, decorated in this course.

## HOUSEHOLD SCIENCE

1. **Food and Cookery**—Four hours. Fall Quarter. Fee \$3.00.

A general survey of principles of cookery and study of foods.

2. **Foods and Cookery**—Four hours. Winter Quarter. Fee, \$3.00.

Continuation and completion of H. S. 1.

**3. Cookery and Table Service—Four hours. Spring Quarter.**

Planning, preparation, and serving of various types of meals. Special attention is given to care of dining room and table service

**103. Dietetics—Four hours. Winter Quarter. Fee, \$3.00.**

Study of food values, cost and adaptation to individuals and families.

**104. Catering—Planning and Serving Functions.**

**105. Child Care—Four hours. Spring Quarter. Prenatal care, child hygiene, care and feeding.**

**106. Home Nursing—Four hours. Fall Quarter.**

Care of sickroom, care of patient in the home, first aid.

**107. Home Management—Four hours. Winter Quarter.**

Sanitation and care of house. Living in practice cottage.

**108. Home Management—Four hours. Spring Quarter.**

Care of family, family budget, relation of home to school, church and state.

## Hygiene and Physical Education

ROYCE R. LONG, A.B., *Director*

HELEN GILPIN-BROWN, A.B., *Dean of Women*

MARGARET JOY KEYES, A.B., *Assistant Professor of Physical Education*

WILLIAM E. SEARCH, *Assistant Professor of Physical Education*

HELEN PEARL LIPP, M.D., *Medical Advisor of Women*

EDWIN W. KNOWLES, M.D., *Medical Advisor of Men*

EARL I. VARVEL, D.D.S., *Dental Examiner*

### FUNCTIONS OF THE DEPARTMENT

An immediate, and also an ultimate end of Education is vigorous, aggressive health. This Department's function in the institution is to assist in the realization of this aim through:

(a) Physical examinations of all students and specific instruction in hygiene based on results of examination for each individual case.

(b) Personal health conferences with Medical Advisors.

(c) Promotion of health through directed physical activity, and through class instruction in Individual, General, Group, and Intergroup Hygiene.

(d) Sanitary supervision of the environment of the student group.

In addition to the above, the Department outlines a major course for those preparing for positions as teachers, or as supervisors of physical education in the public schools, or as playground directors. As more than one-fourth of all the states have recently passed compulsory physical education laws, requiring a definite program of physical education for all school children, the demand for trained teachers in this field far exceeds the present supply.

### EQUIPMENT

The Department is equipped with the necessary examination and class rooms, instructional apparatus, gymnasias, athletic fields and playgrounds to accomplish the functions outlined above. The United States interdepartmental Social Hygiene Board makes a substantial appropria-

tion to this Department for the purpose of strengthening its work, and to assist it in working out better educational methods in Hygiene. This is one of twenty-six educational institutions in the country and the only one in Colorado assisted by this Federal Board.

### REQUIRED WORK

All first and second year students are required to take one active (exercise) course each quarter. Senior College and Graduate students are exempt from this requirement but may elect any of the courses offered and receive credit toward graduation. Where physical disability makes it inadvisable for a student to participate in regular class activities, work in a corrective class, or special work in Hygiene is assigned.

### GYMNASIUM DRESS

An approved gymnasium uniform, consisting of bloomers, "middle" and suitable shoes for women, and a track suit and tennis shoes for men, is required. Suits may be purchased in Greeley.

### PHYSICAL EXAMINATIONS

A thorough physical examination is required of each student as soon as practicable after registration. Matriculation is not completed until this examination has been made and recorded. The Medical Advisors keep regular hours for free consultation with students concerning any health problem. These examinations and conferences have for their object the prevention of illness and the promotion of health.

## A TWO AND A FOUR YEAR COURSE OF STUDY

For

### TEACHERS AND SUPERVISORS OF PHYSICAL EDUCATION (Women)

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 3	3 hrs	Ed. 8	3 hrs	Biol. 2	3 hrs
Hyg. & P. E. 2	4 hrs	Eng. 4	3 hrs	Hyg. & P. E. 1	4 hrs
Hyg. & P. E. 4	3 hrs	Hyg. & P. E. 5	2 hrs	Hyg. & P. E. 8	2 hrs
Hyg. & P. E. 103	4 hrs	Hyg. & P. E. 7	3 hrs	Ed. Psych. 1	4 hrs
Electives	2 hrs	Hyg. & P. E. 103a	4 hrs	Hyg. & P. E. 114	3 hrs
		Ethics	1 hr		

#### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Polit. Sci. 30	3 hrs
Ed. 10	3 hrs	Ed. 2	4 hrs	Ed. 2	4 hrs
Hyg. & P. E. 3	4 hrs	Hyg. & P. E. 108	3 hrs	Hyg. & P. E. 107	3 hrs
Hyg. & P. E. 106	3 hrs	Hyg. & P. E. 112	2 hrs	Hyg. & P. E. 111	2 hrs
Electives	3 hrs	Elem. Ed. 31	3 hrs	Hyg. & P. E. 11	3 hrs
		Electives	1 hr	Elective	1 hr

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

#### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Eng. 6	2 hrs	Ed. Psych. 104 or		Geog. 103	4 hrs
Hyg. & P. E. 104	3 hrs	105	4 hrs	Eng. 10	4 hrs
History 123	4 hrs	Ed. 105	4 hrs	History 123	4 hrs
Hyg. & P. E. 10	2 hrs	Ed. 111	4 hrs	Hyg. & P. E. 113	3 hrs
Soc. 105	4 hrs	Hyg. & P. E. 109	3 hrs	Electives	1 hr
Elective	1 hr	Elective	1 hr		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 12	3 hrs	Ed. 116	4 hrs	Hyg. & P. E. 117	3 hrs
Hyg. & P. E. 117	3 hrs	Phys. Ed. 6	4 hrs	Hyg. & P. E. 11	3 hrs
Psych. 107	4 hrs	Ed. 33	3 hrs	Botany 4	2 hrs
Electives	6 hrs	Hyg. and P. E. 110	3 hrs	Electives	4 hrs
		Ed. Psych. 108	4 hrs		
		Electives	2 hrs		

**(Men)****First Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 3	3 hrs	Ed. 8	3 hrs	Biology 2	3 hrs
Hyg. & P. E. 103	4 hrs	Hyg. & P. E. 12	2 hrs	Hyg. & P. E. 116	2 hrs
Hyg. & P. E. 4	3 hrs	Hyg. & P. E. 103	4 hrs	Hyg. & P. E. 1	4 hrs
Hyg. & P. E. 116	2 hrs	Hyg. & P. E. 116	2 hrs	Eng. 4	3 hrs
Hyg. & P. E. 2	4 hrs	Hyg. & P. E. 5	2 hrs	Ed. Psych. 1	4 hrs
		Elective	3 hrs		

**Second Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 10	3 hrs	Ed. 2	4 hrs	Ed. 2	4 hrs
Hyg. & P. E. 3	4 hrs	Hyg. & P. E. 112	2 hrs	Hyg. & P. E. 11	3 hrs
Hyg. & P. E. 105	2 hrs	Hyg. & P. E. 105	2 hrs	Hyg. & P. E. 111	2 hrs
Electives	4 hrs	Hyg. & P. E. 7	3 hrs	History 123	4 hrs
		Elective	2 hrs		

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

**Third Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Eng. 6	2 hrs	Ed. 105	4 hrs	Geog. 103	4 hrs
Hyg. & P. E. 105a	2 hrs	Ed. Psych. 104 or	4 hrs	Soc. 105	4 hrs
Hyg. & P. E. 10	2 hrs	105	4 hrs	H. S. 103	4 hrs
Ed. 142	4 hrs	Hyg. & P. E. 105a	2 hrs	Hyg. & P. E. 113	3 hrs
Electives	6 hrs	Psych. 108	4 hrs	Elective	1 hr
		Electives	2 hrs		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 107	4 hrs	Ed. 116	4 hrs	Eng. 10	4 hrs
Chem. 4	4 hrs	Hyg. & P. E. 6	4 hrs	Botany 4	2 hrs
Hyg. & P. E. 117	3 hrs	Ed. 103	4 hrs	Hyg. & P. E. 117	3 hrs
Ed. 12	3 hrs	Hyg. & P. E. 117	3 hrs	Ed. 111	4 hrs
Electives	2 hrs	Electives	1 hr	Electives	3 hrs

The courses offered by the department are divided into two classes as follows:

- I. Informational courses.
- II. Practical courses.

To comply with the college physical education requirement, the general student should select courses in the second class. Courses in the first group are intended primarily for major students.

**I INFORMATIONAL COURSES**

1. **Physiology and Hygiene of Exercise**—Spring Quarter. First year. Four periods. Four hours.

Lectures, demonstrations, recitations. A course for major students, but open to all.

2. **Anatomy and Kinesiology**—Fall Quarter. Four periods. Four hours.

Lectures, demonstrations, recitations. Use is made of skeleton, mannikin, charts and anatomical atlases in connection with text-book assignments.

Required of Physical Education majors during first year.

**3. Anthropometry and Physical Examinations—Fall Quarter. Four periods. Four hours.**

A lecture, recitation, practice course. Principles, and methods of making physical measurements; the determination of norms for different age groups; applications of principles to physical education problems; the detection and correction of common physical defects. Required of Physical Education majors the second year. Open to others who have had biology.

**4. Play in Education—Fall Quarter. Three periods. Three hours.**

A discussion, reference recitation course. Theories and applications of play in modern education; the place of play in the daily school program; play and athletics as training for citizenship; the practical administration of play and athletics from an educational standpoint are some of the topics considered. A first year major course.

**5. History of Physical Training—Winter Quarter. Two periods. Two hours.**

The place given to Physical Education in the life of different nations. Beginnings of modern physical education; rise of play and recreation movement; effect of World War on development of physical education in the U. S. and other countries, are some of the topics considered.

**6. Research in Physical Education—(See Education 223 and 241).**

Qualified Senior College and Graduate students may select a subject for research in Physical Education. Fourth year majors are required to write thesis on a selected subject. The following subjects are suggested, but other suitable subjects may be chosen:

1. The status of physical education in the schools of Colorado, with a proposed plan for improvement.
2. The playground and recreation movement; its rise, growth and present tendencies.
3. A recreational survey of a selected community with a suggested plan for improvement.
4. Analytical study of the educational values of certain plays and group games.
5. Educational Athletics: Plan for a county or city school system.
6. Effects of the world War on the status of physical training in different countries.
7. Physical Education in the reconstruction program. By arrangement. Three or more hours, depending on the amount and quality of work accomplished.

**7. General Hygiene—Fall and Winter Quarter. Three periods. Three hours. Open to all.**

A lecture, discussion course on general hygiene. Many lectures are illustrated. Consideration given to: (a) mortality statistics as a basis for effective hygiene; (b) agents injurious to health; (c) carriers of disease; (d) causes of poor health; (e) defenses of health; (f) producers of health.

**8. Individual Hygiene—Fall and Spring Quarters. Three periods. Two hours. Open to all.**

An informational course on the essentials of individual health conservation and improvement.

**9. Group Hygiene—Four periods. Four hours.**

A course in Child and Educational Hygiene. (See education psychology I.)

**10. Group Hygiene—Fall Quarter. Two periods. Two hours.**

A course dealing with Industrial and Occupational Hygiene. Has informational and practical value to the teacher who desires to be informed on health subjects.

**11. Intergroup Hygiene—Spring Quarter. Three periods. Three hours.**

This course deals with school, community, state, national and international health problems. An informational course of importance to all teachers.

**12. First Aid—Winter Quarter. Two periods. Two hours.**

A course covering the usual subject matter with some material on home nursing.



## II. PRACTICAL OR EXERCISE COURSES

101. **Light Gymnastics**—(Women) Winter Quarter. Three periods. Two hours.
- 102—**Gymnastics**—(Men) Winter Quarter. Three periods. Two hours.
103. **Gymnastics**—Fall Quarter. Four periods. Four hours.  
A major course for first year.
- 103a. **Gymnastics**—Winter Quarter. Four periods. Four hours.  
A continuation of No. 103.
104. **Apparatus, Fencing, Archery**—(Women) Winter Quarter. Three periods. Three hours. Third year.
105. **Personal Combat Games, Heavy Apparatus and Tumbling**—(Men) Fall and Winter Quarter. Three periods. Two hours.  
A major course, second year. Boxing, fencing and wrestling. Tumbling and Elementary apparatus work.
- 105a. **Personal Combat Games, Heavy Apparatus and Tumbling**—(Men) Three periods. Two hours.  
A continuation of No. 105 for third year. Advanced work.
106. **Singing, Games and Elementary Folk Dances**—Winter Quarter. Three periods. Two hours.  
A course giving material for the Elementary grades.
- 107—**Folk and National Dances**—Winter and Spring Quarters. Three periods. Two hours.  
A selected list of folk and national dances suitable for school and playground use. This course is intended to give material for the upper grade and high school groups.
108. **Esthetic Dancing**—Fall and Winter Quarters. Three periods. Two or three hours. Open to all.  
Technic of the dance, and the development of bodily coordination are the aims of the course.
109. **Classical Dancing**—Winter Quarter. Three periods. Two or three hours.  
Advanced technic and classical dances. Prerequisite Course 108.
110. **Interpretative Dancing**—Spring Quarter. Three periods. Two or three hours.  
A continuation of No. 109.
111. **School Gymnastics**—Spring Quarter. Three periods. Two hours.  
Daily programs for different grades. Principles of selection and arrangement. Class conduct.
112. **Plays and Games**—Winter Quarter. Three periods. Two hours.  
A selected list of plays and games for the intermediate grades.
113. **Playground Organization and Supervision**—Spring Quarter. Three periods. Three hours.  
Third year major course but open to all. A practical course. One lecture and practice periods on playground in contact with actual playground problems.
114. **Athletics for Women**—(Old Course No. 9) Every Quarter. Three periods. One or two hours.  
A course in group and team games. Material suitable for upper grades and high school is presented.
115. **Recreation Course**—Summer Quarter. Four periods. One and one half hours.

116. **Athletic Games—(Men)** Each Quarter. Four periods. Two or three hours.

Football, basketball, baseball and track athletics depending on season. Open to all.

117. **Athletic Coaching—**Four periods. Three hours. Third Year.

A major course for those preparing for the Physical Education field. Advanced students will be assigned a group to coach one or more athletic games under supervision. By arrangement, this course may be repeated.

## The Library

ALBERT F. CARTER, A.B., M.S., *Librarian*

WILLIAM B. PAGE, M.D.

EDITH STEPHENS, A.B.

EDITH CREAMEANS

The main library of the College contains about fifty thousand volumes, with several thousand pamphlets, a large picture collection, stereopticon slides and other equipment. The building is centrally located on the campus, constructed and equipped in the most approved style. It is well lighted with ceiling and table lamps, and with its architectural and other artistic features is well suited to provide a comfortable and attractive environment for readers. The library shelves are open to all, and no restrictions are placed upon the use of the books, except such as are necessary to give all readers an equal opportunity and to provide for a reasonable and proper care of the books and equipment. All the principal standard works of reference are to be found here, with the many indexes and aids for the efficient and ready use of the library.

There are also many rare and valuable works, such as Audubon's "Birds of America," including the large plates; Audubon's "Quadrupeds of North America"; Sargent's "Sylva of North America;" Gould's "Humming Birds"; the works of Buffon, Nuttall and Michaux, Linnaeus, Cuvier, Jardine, Brehm, Kirby and Spence and many other equally noted writers.

In addition to the main library there is a children's branch in the Training School consisting of about 2,500 well selected books for the use of the Training School pupils.

1. **Library Science—**One hour. Fall, Winter and Spring Quarters.

An introductory course intended to familiarize the student with the arrangement of the books and general classification scheme of the library. A brief study is made of the catalog and various indexes; also the various standard books of reference, dictionaries, encyclopedias, etc., the purpose being to acquaint the student with the most ready means of using the library and of making it of the most value in the college course.

## Literature and English

ETHAN ALLEN CROSS, A.M.

FRANCES TOBEY, B.S., A.B.

RAE E. BLANCHARD, A.M.

A teachers' college is a vocational school devoted to the task of preparing teachers. The English courses in such a college should be complete and sufficient for all the needs of public school teachers. Students who expect to become high school teachers of English will find in Colorado Teachers College all the courses they need in the field of English.

English courses found in university catalogs which have no function in a high school English teacher's training, such as Anglo-Saxon and courses in philology, are omitted

Courses in composition, oral and written, in oral English and public speaking and dramatic literature, in the teaching of English in the elementary school, in grammar and the teaching of grammar, in etymology, and in the cultural phases of literature, are offered as electives for students who expect to become grade teachers or who are pursuing some other group course than English and wish to elect these from the English Department.

**Required English**—The College wishes to assure itself that all students who go out as graduates to teach children and all who teach in its training school will not misuse the English language in the presence of school children. It realizes that students who have all their lives spoken incorrect English cannot altogether change their habits in three or six months. The best thing it can do, then, seems to be to require all students to take a course in grammar and oral and written composition. The head of the English department may excuse from taking this course any student who speaks and writes English exceptionally well. A student who does not succeed in a single quarter in overcoming bad habits in speech and writing will be required to continue the course until the English department is satisfied. In unusual cases this may mean two, three, or more quarters. Only three hours' credit will be given, however, for this practice in correct speech and writing. The College will positively refuse to graduate a student who cannot write and speak the English language with a fair degree of accuracy and ease. It will also qualify its recommendation of a student to a superintendent or school board if the student's English is only passable.

**Co-operation of Other Departments with the English Department**—All the departments in the College are invited to co-operate with the English Department to secure a reasonable degree of correctness in spoken and written English. Teachers are invited to call the attention of the English department to any student whose English is poor.

Any instructor may require any student in his department who shows a deficiency in oral or written English to report to the English department for further instruction, even tho the student has already met the catalog requirement in English.

## COURSE OF STUDY IN ENGLISH

### Two Years or Four Years

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Eng. 8	4 hrs	Eng. 9	4 hrs	Eng. 10	4 hrs
Eng. 3	3 hrs	Eng. 4	3 hrs	Eng. 11	4 hrs
Lib. Sci. 1	1 hr	Ethics 1	1 hr	Music 10	2 hrs
Free Electives	5 hrs	Art 6	1 hr	Free Electives	3 hrs
		Free Electives	3 hrs		

**Physical Education is required each quarter of the first and second years, with or without credit.**

#### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 1	3 hrs	Ed. 10	3 hrs	Ed. 2	3 hrs
Eng. 6	4 hrs	Eng. 1	4 hrs	Eng. 2	4 hrs
Free Electives	3 hrs	Ed. 2	3 hrs	Eng. (elective)	3 hrs
		Free Electives	3 hrs	Free Electives	3 hrs

**Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.**

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 104 or 105	4 hrs	Eng. (elective)	5 hrs
Eng. (elective)	4 hrs	Eng. (elective)	6 hrs	Eng. 106	3 hrs
Free Electives	4 hrs	Free Electives	4 hrs	Free Electives	8 hrs
Eng. 105	2 hrs	Ed. 105	4 hrs		

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 103	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Eng. (elective)	4 hrs	Eng. (elective)	4 hrs	Eng. (elective)	4 hrs
Free Electives	8 hrs	Free Electives	4 hrs	Psych 108	4 hrs
		Ed. 105	4 hrs	Free Electives	4 hrs

## COURSES IN LITERATURE AND ENGLISH FOR THE DEGREE OF MASTER OF ARTS

Any of the courses numbered from 104 upward which have not already been taken as a part of the course leading to the degree of Bachelor of Arts may be elected to apply upon the degree of Master of Arts.

## 1. Material and Methods in Reading and Literature—Four hours.

A study of motivation in the field of reading, oral and silent, for children; the consideration of principles governing the choice of literature in the grades; practice in the organization and presentation type units, including dramatization and other vitalizing exercises. A somewhat flexible course, affording opportunity for intensive work within the scope of any grade or grades, according to the individual need or preference.

## 2. The Teaching of Written English—Four hours.

This course takes up the problems of teaching formal English, both spoken and written, in the intermediate grades, and the junior high school. The functional teaching of grammar is included.

## 3. Public Speaking and Oral Composition—Three hours.

The endeavor of this course is to establish the student in habits of accurate speech, and to encourage fluency, vigor and logical marshalling of his thought in discourse of varied types, including exposition, description, narrative, oratory, argumentation, free dramatization.

4. Speaking and Writing English—Required of all students unless excused by the head of the English department. Three hours. Every Quarter.

Grammar, and oral and written English, from the point of view of their function in guiding the student in the correct use of English in speaking and writing. Practice in sentence making, sentence analysis, recognition of speech faults, and the means of correcting them; and practice in both oral and written composition.

5. Speaking and Writing English (continued)—Three hours. Every Quarter.

Oral and written composition. A course planned to give additional practice to those students who do not get sufficient work in English 4 to enable them to use correct English with ease and directness.

## 6. American Literature—Four hours. Spring Quarter.

A course in American literature following the plan of Courses 8, 9, and 10 in English literature.

## 7. The Epic—Four hours. Fall Quarter.

This course consists of a study of the two great Greek epics, The Iliad and The Odyssey, in English translations, and outlines of study covering other national epics. The purpose of the course is to furnish teachers in the elementary schools with the materials for story-telling and literary studies embracing the hero tales from Greek and other literature.

## 8. The History of English Literature—Four hours. Fall Quarter.

A reading course following the development of our literature from 670 to 1625.

## 9. The History of English Literature—Four hours. Winter Quarter.

A reading course following the development of our literature from 1625 to 1798.

**10. The History of English Literature—Four hours. Spring Quarter.**

A reading course following the development of our literature from 1798 to 1900.

**11. A Study of English Words—Four hours.**

No greater help in speaking and writing can be offered a student than a course in English etymologies, word origins, connotations, etc. The study of Latin formerly offered this information to students. Now that only a few study Latin, the English department recommends this course to all students who wish to use exact meanings of words with assurance and accuracy.

**12. Voice Culture—Four hours. Spring Quarter.**

Technical drill for freedom, flexibility and expressiveness of voice. Exercises for clear-cut, accurate articulation. Interpretation of units of literature adapted, by their range of thought and feeling, to develop modulation, color and variety of vocal response.

None of this drill is mechanical; even the technical exercise is controlled by a variety of concepts embodying the qualities sought.

**13. The Art of Story Telling—Three hours. Winter and Spring Quarters.**

A study of the main types of narrative, with emphasis upon the diction and manner suitable for each. Practice in the art of story telling.

**14. Dramatic Art—Four hours. Winter Quarter.**

The technic of the drama. The analysis and group interpretation of plays. The content of the course varies from year to year. Open only to students who have taken Course 3.

**15. Types of Literature—Three hours.**

A reading course looking toward an appreciation of literature and covering all the types of literature that can be made **interesting** to young people and to contribute to the formation of good taste in reading. This would include English, American, and Foreign literature which has become classic. But no matter how "classic" it is, it still must be attractive. The types covered will be lyric, narrative, and epic poetry, drama, essay, story, novel, letters, and biography.

**16. Contemporary Literature—Three hours.**

A second appreciation course similar to Course 15, but dealing with the literature of not more than ten years back. Most teachers of literature leave the impression that literature must age like fiddles and wine before it is fit for human consumption. Such is not the case. Much good literature is being produced every year. After students leave school it is just this current literature that they will be reading if they read at all. We want to help them form a discriminating taste for reading, and to acquire a liking for reading so that they will be alive to what the world is thinking, feeling, doing, and saying after they leave the school.

**17. Comedy: A Literary Type—Five hours. Summer Quarter.**

The consideration of comedy as a type of drama, with the intensive and comparative study of a Shakespearean comedy. The group interpretation of a Shakespearean comedy on the campus. Sometimes, when the class is large, other programs of standard plays are also given.

**22. Greek and Roman and Norse Myths—Four hours.**

A study of classical myths of Greece and Rome and the myths of northern lands, with comparisons with the myths of other peoples. Also the influence of myths upon modern life, literature, and art.

**31. The Short Story—Four hours. Fall Quarter.**

A study of fifty typical modern short stories to observe the technical methods of modern story writers and the themes they have embodied in the magazine fiction of the present. The course is based upon Mr. Cross' book, "The Short Story," supplemented by O'Brien's "The Best Short Stories of 1915 and 1916," and other recent volumes on the Short Story. Current magazine stories are also used.

**100. Advanced English Composition—Three hours. Fall Quarter.**

A course in composition, primarily Senior College, planned for English students and others who desire more practice in writing than they have had in Eng 4. Students not majoring in English who want to be able to write for print in the school paper, or later for professional magazines, should take this course.

**101. Journalistic Writing—Three hours. Winter Quarter.**

A continuation of Eng. 100. A course in advanced English composition based upon newspaper and magazine work. Every type of composition used in practical news and journalistic writing is used in the course.

**102. Journalistic Writing—Three hours. Spring Quarter.**

A continuation of Eng. 101.

**104. Advanced English Grammar—Four hours.**

Many students, especially those who expect to become high school teachers of English, want an extensive course in advanced English grammar. This course is planned to meet their needs. Besides including a careful and detailed study of modern practice in the use of the language, it gives considerable attention to the evolution of modern usage thru historical grammar.

**105. Oral English in the High School—Two hours. Winter Quarter.**

The discussion of practical problems concerning the direction of Oral English in the secondary school: oral composition, literary society and debating activities, festivals, dramatics.

**106. The Teaching of English in the High School—Three hours. Spring Quarter.**

Principles for the selection of literature for Senior high school pupils considered critically; illustrative studies in the treatment of selected pieces; study of types of composition work for high schools, with illustrative practice in writing.

**107. General Literature—Greek and Latin.**

The course concerns itself chiefly with Greek drama, but touches upon Latin literature at the close. Courses 107, 108, and 109 are all readings of English translations of the classic pieces in other literatures. These courses are given in collaboration with the Department of Foreign Languages.

**108. General Literature—Italian, Spanish, and French—Five hours. Winter Quarter.**

Readings in English translation of the classic pieces—Italian, Spanish and French literature.

**109. General Literature—German, Scandinavian, and Russian—Five hours. Spring Quarter.**

Readings in the classics of German, Scandinavian and Russian literature similar to those given in Courses 107 and 108.

**116. The Festival—Three hours. Spring Quarter.**

A study of the historical or racial festival, its origin, forms and various elements. Research and original work in outlining unified festival plans for schools or communities, reflecting some significant event or idea, or some phase of civilization.

**120. Lyric Poetry—Four hours. Fall Quarter.**

A preliminary study of the technic of poetry, an examination of a number of typical poems to determine form and theme, and finally the application of the knowledge of technic to the reading of English lyric poetry from the cavalier poets thru Dryden and Burns to Wordsworth.

**121. Nineteenth Century Poetry—Four hours. Winter Quarter.**

A study of English poetry from Wordsworth to Tennyson, including Coleridge, Byron, Shelly, Keats, and the lesser writers from 1798 to 1832.

**122. Victorian Poetry—Four hours. Spring Quarter.**

Tennyson and Browning, and the general choir of English poets from 1832 to 1900.

**123. Contemporary Lyric Verse—Three hours. Winter Quarter.**

An attempt to estimate the significance of current tendencies in poetry, English and American; supplemented by sufficient reference to current verse of other literatures to afford comparison or analogy.

**125. Nineteenth Century Prose—Four hours. Fall Quarter.**

**126. The Familiar Essay—Four hours. Spring Quarter.**

A study of the familiar essay for the purpose of determining the nature and form of this delightful phase of literary composition. The method in this course is similar to that pursued in the short story course; namely, a reading of a number of typical essays as laboratory material for a study of technic and theme.

**127. Selected Plays of Shakespeare—Four hours. Autumn Quarter.**

The life of Shakespeare and a literary study of the plays which are appropriate for high school use, with a proper amount of attention to the method of teaching Shakespeare in high schools. Some account of the theatre in Shakespeare's time.

**128. Shakespeare's Plays—Four hours. Winter Quarter.**

Thirteen more plays of Shakespeare. The three courses running thru an entire year take up the whole of Shakespeare's work. It is imperative that students expecting to become high school teachers should have Course 127, and desirable that they should have all three.

**129. Shakespeare's Plays—Four hours. Spring Quarter.**

The remaining twelve plays and the poems. This course completes the series of Shakespearean studies.

**130. Elizabethan Drama Exclusive of Shakespeare—Four hours. Spring Quarter.**

A knowledge of the dramatic literature of the early seventeenth century is incomplete without an acquaintance with the contemporaries and successors of Shakespeare from about 1585 to the closing of the theatres in 1642. The chief of these dramatists, with one or more of the typical plays of each, are studied in this course.

**132. The Development of the Novel—Four hours. Winter Quarter.**

The development, technic and significance of the novel.

**133. The Recent Novel—Four hours. Spring Quarter.**

The reading of ten typical novels of the past five years for the purpose of observing the trend of serious fiction and to study the social, educational, and life problems with which the novelists are dealing.

**134. Modern Plays—Four hours. Winter Quarter.**

Reading and class discussion of thirty plays that best represent the characteristics, thought-currents, and the dramatic structure of our time.

## Mathematics

GEORGE WILLIAM FINLEY, B.S., M.S.

All courses in this department are given with a keen realization of the modern demand for vitalization of school work. The instructors and students alike are constantly on the alert for points of contact between their courses and real life. This is especially true of those branches which the student is preparing to teach after graduation.

### COURSES OF STUDY FOR MAJORS IN MATHEMATICS

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 3	3 hrs	Ed. 8	3 hrs	Biol. 2	3 hrs
Lib. Sci. 1	1 hr	Ethics 1	1 hr	Eng. 4	3 hrs
Math. 2	4 hrs	Math. 8	2 hrs	Math. (elective)	4 hrs
Free Electives	8 hrs	Free Electives	10 hrs	Free Electives	6 hrs

Physical Education is required each quarter of the first and second years, with or without credit.

**Second Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs.	Psych. 2a	3 hrs	Psych. 2b	3 hrs
Math. 7	4 hrs.	Ed. 2	4 hrs	Ed. 2	4 hrs
Ed. 10	3 hrs	Math. 5	4 hrs	Math. 6	4 hrs
Free Electives	6 hrs	Free Electives	5 hrs	Free Electives	5 hrs

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

**Third Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 105	4 hrs	Math. 102	4 hrs
Geog. 113	3 hrs	Math. 101	4 hrs	Free Electives	12 hrs
Free Electives	5 hrs	Free Electives	4 hrs		
		Educ. 105	4 hrs		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Math. 100	2 hrs	Educ. 103	4 hrs	Ed. 111	4 hrs
Free Electives	14 hrs	Ed. 116	4 hrs	Math. (elective)	4 hrs
		Free Electives	8 hrs	Free Electives	4 hrs
				Psych. 108	4 hrs

**1. Solid Geometry—Four hours. Summer Quarter.**

The ordinary propositions and exercises of this subject are given. Special attention is given to practical applications.

**2. Plane Trigonometry—Four hours. Fall and Summer Quarters.**

The solution of the right triangle with numerous practical applications secured by the use of surveyors' instruments in the field; the development of the formulas leading up to the solution of the oblique triangle.

**4. Surveying—Four hours. Spring Quarter.**

In this course the student becomes familiar with the ordinary instruments of the surveyor; the transit, the compass, the level, etc. He takes up such practical problems as running a line of levels for an irrigation ditch, establishing a sidewalk grade and measuring land.

**5. College Algebra—Four hours. Winter Quarter.**

This course opens with a thoro review of Elementary Algebra with a view to giving a clear knowledge of the principles of the subject. It continues with logarithms, the progressions, and the function and its graph.

**6. College Algebra—Four hours. Spring Quarter.**

A continuation of Course 5 dealing with permutation and combinations, probability, variables and limits, theory of equations, and infinite series. Thruout the needs of the prospective teacher are constantly kept in view.

**7. Analytic Geometry—Five hours. Fall and Summer Quarters.**

This course opens up to the student, in a small way, the great field of higher mathematics. It also connects closely with the subject of graphs in Algebra and forms the basis for the work in the Calculus.

**8. The Teaching of Arithmetic—Two hours. Fall, Spring and Summer Quarters.**

This course deals primarily with the modern movements and methods in the teaching of Arithmetic. A brief history of the development of the subject and of methods used in the past is given. The real problems of the classroom are taken up and discussed with a view to giving the student something definite that she can use when she gets into a school of her own.

**9. The Teaching of Arithmetic—Four hours. Winter Quarter.**

This course will follow the same lines as Course 8 but in greater detail. It will also give more attention to the development of the principles of the Arithmetic itself.

**100. The Teaching of Secondary Mathematics—Two hours. Spring and Summer Quarters.**

This course is designed to place before the prospective teacher the best educational thought of the day relating to High School Algebra, Geometry and Trigonometry. Consideration is given to the educational value of these



subjects, to the recent improvements in teaching them and to all problems arising in the work of the modern teacher of secondary mathematics.

**101. Differential Calculus—Four hours. Winter Quarter.**

An introduction to the powerful subject of the Calculus. While care is taken to see that the formal side of the subject is mastered, many problems of a practical nature are introduced from the realms of Geometry, Physics, and Mechanics.

**102. Integral Calculus—Four hours. Spring Quarter.**

This course takes up the ordinary formulas for integration and the commoner applications of the Integral Calculus.

**104. Descriptive Geometry—Two hours. On demand.**

This course is designed especially for those interested in mechanical and architectural work. It takes up the problems arising from the study of the projection of points, lines, planes and solids.

**106. Descriptive Astronomy—Four hours. Winter and Summer quarters.**

This course gives an introduction to the fascinating study of Astronomy. It gives an idea of the principles, methods, and results of the science; shows the steps by which the remarkable achievements in it have been attained; and covers the recent investigations respecting the origin and development of the solar system.

**200. Advanced Differential Calculus—Four hours. Fall Quarter.**

A continuation of the preceding course given over largely to applications of the Calculus.

**201. Differential Equations—Four hours. On demand.**

A discussion of problems which lead to differential equations and of the standard methods for their solution.

**202. Advanced Integral Calculus—Four hours. On demand.**

In this course the work of the preceding course in integral calculus is rounded out and extended.

## Music

JOHN CLARK KENDEL, A.B., *Director*

M. EVA WRIGHT, *Piano, Pipe Organ*

HAZEL KENNEDY, A.B., *Piano*

LUCY B. DELBRIDGE, Pd.M., *Violin*

RAYMOND H. HUNT, *Clarinet*

The courses offered by the department are of two kinds: (a) Courses which are elementary and methodical in their nature and are meant to provide comprehensive training for teachers who teach vocal music in the public schools.

(b) Courses which treat of the professional, historical, literary, and esthetic side of music, or for those who wish to become supervisors or professional teachers of vocal and instrumental music.

Courses for grade teacher and general student: Music 1, 2, 3, and 4.

Courses for supervisors and professional teachers of music: Music 2, 5, 7, 8, 9, 10, 12, 13, 14, 17, 100, 101, 102, 105, 106, 119, 120, and 121.

Courses which are cultural in their nature and meant for the general or special student: Music 7, 10, 12, 13, 14, 17, 119, and 120.

### Private Instruction

The Conservatory offers instruction in Voice, Piano, Violin, Orchestral, and Band Instruments. Send for special Music Bulletin.

In the Conservatory Department monthly student recitals are given, which provide the students an opportunity to appear in public recital.

Two operas are produced annually by the students under the direction of the director of the department.

The Philharmonic Orchestra is a Symphony Orchestra of forty members, composed of talent from the school and community, which gives bi-monthly concerts. The standard symphonic and concert compositions are studied and played. Advanced students capable of playing the music used by the organization are eligible to join upon invitation of the director.

The college orchestra and band offers excellent training for those interested.

The annual May Music Festival gives the students opportunity to hear one of the world's greatest orchestras and study one of the standard oratorios presented at that time.

The Teachers College Choral Union presents programs during the year, their closing program being the Oratorio given during the Spring Music Festival. All pupils registered in the Conservatory of Music are eligible to the Chorus.

A Two year or Four-year Curriculum for Teachers of Public School Music, Supervisors of Music in Public Schools, and Directors of Music in Normal Schools and Colleges.

<b>First Year</b>					
Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Music 2a	3 hrs	Music 2b	3 hrs	Music 2c	3 hrs
Music 8a	3 hrs	Music 8b	3 hrs	Music 8c	3 hrs
Music 7	2 hrs	Music 10	2 hrs	Music 17	2 hrs
Ethics 1	1 hr	Eng. 4	3 hrs	Free Electives	5 hrs
Free Electives	4 hrs	Free Electives	2 hrs		

**Physical Education is required each quarter of the first and second years, with or without credit.**

<b>Second Year</b>					
Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 2	4 hrs	Ed. 2	4 hrs	Teaching	4 hrs
Music 9	3 hrs	Music 100	3 hrs	Music 5	3 hrs
Music 119	2 hrs	Music 120	2 hrs	Music 101	2 hrs
Free Electives	4 hrs	Ed. 10	3 hrs	Free Electives	4 hrs
		Free Electives	1 hr		

**Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.**

<b>Third Year</b>					
Fall Quarter		Winter Quarter		Spring Quarter	
Music (elective)	4 hrs	Psych. 105, or 104	4 hrs	Music (elective)	8 hrs
Ed. 103	4 hrs	Music (elective)	4 hrs	Free Electives	4 hrs
Free Electives	4 hrs	Teaching	4 hrs	Psych. 108	4 hrs
Soc. 105	4 hrs	Free Electives	4 hrs		

<b>Fourth Year</b>					
Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 108	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Music (elective)	4 hrs	Music (elective)	4 hrs	Music (elective)	4 hrs
Free Electives	4 hrs	Free Electives	4 hrs	Free Electives	8 hrs
		Ed. 105	4 hrs		

### 1. Sight Reading—Required of Majors in Music. Three hours.

Notation, theory, sight reading. Designed especially for teachers desiring to make sure their knowledge of the rudiments of music so that they may be able to teach music in the public schools more efficiently.

### 2. Methods for the First Eight Grades—Four hours.

A very practical course for teachers, in which the material used in the public schools is studied and sung, with suggestions as to the best ways to present all phases of the work. Prerequisite for this class, Music 1 or its equivalent.

**Music 2a—Required of Majors in Music. Three hours.**

Methods for the Primary Grades. The teaching of Rote Songs. How to help Monotones. The development and care of the child voice. A delightful repertoire of Rote Songs are acquired. The work of the first three grades is studied intensively. The First steps in technique.

**Music 2b—Required of Majors in Music. Three hours.**

Methods for the Intermediate Grades. An intensive study of the problems of the teacher of these grades. Sight Reading, Interval Drill, Signature of keys (major and minor), Care of the Voice. All problems of these grades considered and practical solutions offered.

**Music 2c—Required of Majors in Music. Three hours.**

Methods for Junior High School. Material and methods for the crucial period in the musical career of the child. The changing boy voice. Intensive study of part singing. Musical appreciation for these grades. A practical course to meet the needs of the teacher.

**3. Kindergarten and Primary Music—Two hours.**

Designed especially for kindergarten and primary teachers. Songs and music adapted to children of these departments will be studied and sung. The care and development of the child voice; the teacher's voice; methods of instruction; practice singing and rhythm exercises will be presented.

**5. Methods for Special Students—Three hours.**

A review in methods for special music students who are looking forward to a major. Conducting, suggestions for assigning work to pupil and teacher in the public schools. A preliminary for the Supervisors' Course.

**6. Chorus Singing—One hour.**

Worth-while music and standard choruses are studied and prepared to present in concert.

**7. History of Ancient and Medieval Music—Required of Majors in Music. Two hours.**

A literary course which does not require technical skill. Open to all students who wish to study music from a cultural standpoint. From earliest music to Bach.

**8a. Harmony—Required of Majors in Music. Three hours.**

Beginning harmony. The work consists of written exercises on basses (both figured and unfigured) and the harmonization of melodies in four voices. These are corrected and subsequently discussed with the students individually. Work completed to the harmonization of dominant discords and their inversions.

**8b and 8c—Required of Majors in Music. Six hours.**

Harmonization of all discords. The circle of chords completed, modulation, etc. The harmony courses continue thruout the year, and the work is planned to meet the individual needs of the class.

**9. Advanced Harmony—Three hours.**

A continuation of Courses 8a, 8b, and 8c.

**10. Methods in Appreciation—Required of Majors in Music. Two hours.**

This course is planned to prepare teachers to present more intelligently the work in Appreciation of Music, for which there is such a growing demand in all our schools. A carefully graded course suitable for each grade is given. The lives and compositions of the composers from Bach to Wagner are studied.

**12. Individual Vocal Lessons—Required of Majors in Music.**

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers. To make arrangements for this work, consult the director of the department.

**13. Individual Piano Lessons—Required of Majors in Music.**

Piano work is arranged to suit the needs and ability of the individual. From beginning work to artistic solo performance. To arrange work, consult the director.

**14. Individual Violin Lessons.**

The work will be outlined according to the ability of the student. To arrange work, consult the director.

**17. Modern Composers—Required of Majors in Music. Two hours.**

The lives of musicians from Wagner to the present day are studied. Programs of their music are given by members of the class, the talking machines and player piano. The work is planned to show the modern trend of music and to make the students familiar with the compositions of modern writers.

**100. Advanced Harmony and Counterpoint—Three hours.**

A continuation of Course 9.

**101. Composition and Analysis—Three hours.**

Primary forms, including the minuet, scherzo, march, etc. Simple and elaborate accompaniments. Analysis of compositions of primary forms principally from Mendelssohn and Beethoven.

**102. Orchestration—Three hours.**

The instruments of the orchestra. Practical arranging for various combinations and full orchestra.

**103. Advanced Orchestration—Four hours.**

A continuation of Course 102.

**105. Supervisors' Course—Four hours.**

The material used in the grades and high school is taken up and studied from a supervisor's standpoint. Actual practice in conducting works of a standard nature will be offered those interested in this course.

**106. Choral and Orchestra Conducting—Four hours.**

Methods of conducting chorus and orchestra. Practical experience conducting both the choral society and orchestra.

**112. Advanced Vocal Individual Instruction—**

The individual work in voice may be carried thru the entire four-year course for those wishing to prepare as specialists in that field.

**113. Advanced Piano Individual Instruction—**

Individual work in piano may be carried thru the entire four-year course for those wishing to prepare as specialists in that field.

**116. School Entertainments—Four hours.**

Practical programs for all occasions. Thanksgiving, Christmas and Arbor Day. Patriotic programs. Programs of songs of all nations. The term concludes with some opera suitable for use in the grades.

**119. Interpretation and Study of Standard Operas—Two hours.**

Operas of the classical and modern schools are studied, thru the use of the talking machine, and their structure and music made familiar to the class.

**120. Interpretation and Study of Standard Oratorios and Symphonies—Two hours.**

The standard oratorios are studied. The best known solos and choruses are presented by members of the class or talking machines. The content of the work is studied with the hope of catching the spirit of the composer. The symphonies of Haydn, Mozart, Beethoven, Schumann, Schubert and other writers of the classical and modern schools are presented to the class.

**121. Research—Four hours.**

A comparative study of the work done in the public schools in cities of different classes. A similar study is made of the work done in the normal schools and teachers' colleges of the various states.

**VOCAL COURSES****Elementary Course**

In the Vocal Department the aim is to give the student correct vocal habits from the beginning of the course. Proper conception of good tone, the blending of the speaking and singing voice, firm breath support and resonance. No set group of studies is used, but exercises to fit the needs of each individual student are assigned. Songs suitable to the requirements and musicianship of the student are studied with the emphasis laid upon correct phrasing, refined diction, and intelligent singing.

### Intermediate Course

The Intermediate Course grows logically out of the elementary. As the student grows in power and musicianship, exercises and studies to fit the needs are assigned. Songs of a more advanced type are studied, always with the clear object of producing intelligent singers. Students are expected to appear upon recital programs.

### Advanced Course

The emphasis is laid upon repertoire. Songs of Schumann, Schubert, Brahms, Mendelssohn, and other standard classical composers are studied. Operatic and Oratorio Arias, Folk songs and a full concert repertoire are acquired. Each student to complete this part of the course is required to present a full recital program assisted by some member of the instrumental department.

## PIANO COURSES

### Elementary and Primary Foundation Studies

Special care given to hand culture, finger exercises, scales, playing movements, mental control, notation and sight-reading.

Sonatas and pieces: Kuhlau, Kullak, Clementi, Bach, Twelve Little Preludes, and pieces suited to the individual student.

### Intermediate Course

All forms of technical exercises, trills, chords, arpeggios, double thirds, octaves. Care being given to tone production, phrasing, rudiments of harmony, use of pedal, sight-playing, studies by Czerny, Clementi and others suitable to special purposes.

### Advanced Course

Technical work continued with increased velocity, Accent and Accent Scales, Double Thirds and Sixths. Attention is given to good muscular and nerve control when playing with the weight of the arm. History of Music, Harmony, Studies by Clementi, Chopin, and Liszt. Pieces by Bach, Chopin, Schumann, Schubert, Greig, MacDowell, Debussy, etc., including Concertos by Mozart, Hummel, Mendelssohn, Saint-Saens and Tchaikowsky.

Sight-Playing, Ensemble Class, Accompanying.

## ORGAN COURSES

It is necessary in taking up the subject of the organ to have some knowledge of the piano, sight-reading, rhythm, scales, arpeggios, etc. It is also advisable to have had some instruction in harmony. Attention is called to registration, facility in the use of the pedals and in handling two or more manuals. So without some preparatory work in piano the difficulty is obvious.

### Preparatory Course

The student is required to become accustomed in the use of manuals and pedals, beginning pedal technic, scales, arpeggios and organ touch. Stainers' Beginning Book.

Bach Smaller Preludes and Fugues.

### Intermediate Course

Pedal technic continued, registration, Clemens' Organ Studies, More difficult Preludes and Fugues of Bach. Pieces of modern composers—French, English, Russian and American schools.

## Advanced Course

Bach Fantasie and Fugue G. Min., Toccata and Fugue (Dorian Mode).

The well known St. Ann's Fugue, Mendelssohn, Widor, Guilmont and Rheinberger Sonatas, Handel Concertos. Pieces by French, English, Russian and American composers. Great choral works of Bach and Handel.

## VIOLIN COURSES

## Elementary Course

## Part One

Wichtl  
 Wohlfahrt Op. 45  
 Wohlfahrt Op. 54  
 Wohlfahrt Op. 74  
 Kayser Bk. I  
 Fifth Easy Pieces—Kelly  
 Zephyrs from Melodyland—Krogram  
 Twenty-five Pieces in First Position—Lehman  
 Harvest of Flowers—Weiss  
 Pleyel Duets

## Part Two

Wohlfahrt Op. 45 Bk. II  
 Wohlfahrt Op. 74 Bk. II  
 Sevcik Op. I—Part I  
 Kayser Bk. II  
 Dancla—School of Mechanism  
 Schradieck—Technical Violin School  
 Casorti  
 Easy Solos in the Third Position

## Intermediate Course

Kayser Bk. III  
 Mazas Bks. I and II  
 Schradieck—Chord Studies  
 Sevcik Op. I, Part II  
 Don't Studies  
 Sevcik Op. 8—Shifting Positions  
 Wilhelmj—Studies in Thirds  
 Mozart Sonatas  
 De Beriot Airs  
 Mazas Duets  
 Selected Solos

## Advanced Course

Kreutzer  
 Dancla Op. 73  
 Mazas Bk. III  
 Sevcik Bk. 4—Op. I  
 Rode  
 Gavinies  
 Campagnoli  
 Bach Sonatas  
 Beethoven Sonatas  
 Greig Sonatas  
 Mozart Concertos  
 De Beriot Concertos  
 Concertos of Mendelssohn and Bruch  
 Selected Solos and Sonatas

# Physics

FRANCIS LORENZO ABBOTT, B.S., A.M.

It is the purpose of this department to make the work in physics as valuable as possible to ALL students who are to teach in the public schools. The importance of knowing the fundamental principles of physics, and the application of these principles to those things which make for our comfort and well-being is becoming more manifest and urgent every year; but the importance of knowing the fundamental principles of physics when one is going to teach geography, physiology, agriculture, and the like is seldom appreciated by the public school teacher. Every course here offered has been carefully planned so that it may be of the greatest helpfulness in illuminating and vitalizing public school work, especially the work of the elementary school. Much pains has been taken to work out interesting methods, whereby essential but difficult subjects may be presented to young people in the light of their many common and relevant experiences so as to make the difficult subjects understandable.

A new science course, combining Zoology, Botany, Chemistry and Physics, is offered to the students as a four-year course. The combination is made to train students for the teaching of sciences in high schools; as most of the science work is or should be taught by the teachers trained in general science lines. These sciences work well together, so it is desirable for prospective teachers to train themselves in related subjects. As will be seen from the catalog, students may major in one of the four subjects with the most closely related as a minor, i. e., Zoology—Botany, Physics—Chemistry. In any case, work must be taken in the other sciences.

## SCIENCE COURSE—Major in Physics

### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 3	3 hrs	Eng. 4	3 hrs	Physics 3	4 hrs
Physics 1	4 hrs	Physics 2	4 hrs	Physics 16	4 hrs
Physics 6	4 hrs	Free Electives	5 hrs	Nature Study 1	4 hrs
Free Electives	5 hrs	Ed. 8	3 hrs	Free Electives	4 hrs
		Ethics 1	1 hr		

Physical Education is required each quarter of the first and second years, with or without credit.

### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs	Ed. 10	3 hrs	Psych. 26	3 hrs
Physics 7	3 hrs	Physics 4	4 hrs	Chem. 3	3 hrs
Chem. 1	3 hrs	Chem. 2	3 hrs	Bot. 2	4 hrs
Free Electives	4 hrs	Free Electives	3 hrs	Free Electives	3 hrs
Ed. 1	3 hrs	Ed. 2	3 hrs	Ed. 2	3 hrs

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 105	4 hrs	Psych. 108	4 hrs
Physics 109	4 hrs	Physics 108	4 hrs	Physics 106	4 hrs
Chem. 108	3 hrs	Chem. 109	3 hrs	Bot. 3	3 hrs
Zool. 1 or Bot. 3	4 hrs	Zool. 2 or Bact. 1	4 hrs	Free Electives	5 hrs
Free Electives	1 hr	Free Electives	1 hr		

### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 103	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Physics 104	4 hrs	Physics 110	4 hrs	Physics 106	4 hrs
Physics (elective)	4 hrs	Physics (elective)	4 hrs	Physics (elective)	4 hrs
Free Electives	4 hrs	Ed. 105	4 hrs	Free Electives	4 hrs

**1. General Physics—Four hours. Fall Quarter.**

The work of this term covers the following subjects: Properties of matter, units of force and work, mechanics, hydrostatics, etc., and heat. Text-book; Kimball's College Physics.

**2. General Physics—Four hours.**

A course in sound and light. Text-book: Kimball's College Physics.

**3. General Physics—Four hours. Spring Quarter.**

A course in magnetism and electricity. Text-book: Kimball's College Physics.

Courses 1, 2, and 3 in Physics not only treat of the general principles of physics, but emphasize strongly the application of these principles as applied to machinery. The recitation work is fully illustrated by experiments.

**4. General Science for the Kindergarten and the First Eight Grades.**

**4a. Kindergarten Science—Two hours. Winter Quarter.**

A series of simple experiments with easily collected materials presenting plays with water, sun, wind, light, sound and other phenomena within the immediate environment of the kindergarten child. The course is based upon the scientific curiosity and love of the children of the kindergarten age.

**4b. Directed Play with Structural Toy Building Materials—Two hours. Fall Quarter.**

The work consists of actually building any machine, or mechanical structure, with such building sets as the Mecanno, Erector or Tinker Toy, etc.

As stated in the title of the course, the building must be so directed as to call attention to the physics in the construction; yet the spontaneity of the child must not be suppressed. The course also attempts to show the historical development of the machine or structure. We are supplied with the material at present for a class of only five.

**4c. Science for Intermediate Grades—Two hours. Spring Quarter.**

The work of this course is almost entirely experimental and touches the most elementary phenomena of electricity, magnetism, light, sound, mechanics. Always trying to keep in mind those experiments which are most closely related to our common experiences.

**5. Applied Elementary Household Physics—Two hours. On demand.**

A course devoted to the study of the principles involved in home appliances, such as heating plants, refrigeration, ventilation systems, electrical apparatus, artificial illumination, conductivity of various kinds of cooking utensils, their economical use, etc. This course is planned especially for students of the Home Economics Course.

**6. Theory and Practice of the Automobile—Four hours. Fall, Spring and Summer Quarters.**

Lack of knowledge as to the proper care, construction and operation of an automobile is responsible for much of the trouble, expense and short life of a car.

The purpose of the course is at least two-fold: (1) To give such instruction in the theory of the construction and operation of a car that the repair expenses may be materially reduced, the life of the car much lengthened, and the driving more of a pleasure.

(2) That teachers taking the course may be well enough informed in the subject to disseminate a correct knowledge of the automobile, thereby increasing a scientific education in the community.

Connected with the department is a large garage and repair shop which is well equipped with tools, parts of cars and a demonstrating car.

**10. Household Physics—Three hours. On demand.**

This is a first, or elementary, course in Physics planned wholly from the point of view of the practical bearings of physics. It is not restricted to the household, but fully uses the materials of the immediate surroundings of the home, school and neighborhood. It is planned to meet the needs of several groups of people: (1) Students and teachers of Domestic Science and Household Economy; (2) Teachers in small high schools; (3) Rural school and grade teachers.

The course deals with matters so fundamental that it should be of large use to the elementary school teacher in explaining many pieces of geography, agriculture, physiology and hygiene.

The work of this quarter covers the subjects of mechanical appliances in the home, liquid gases, pumps, vacuum cleaners, etc., and heat. First ten chapters in Household Physics, Lynde.



**11. Household Physics—Three hours. On demand.**

For general statement, see Course 10. The study of this quarter deals are: Evaporation, dew point, boiling, etc. Electricity in the home, electrical appliances, etc. Chapters XI to XX, inclusive, Lynde's Household Physics.

**12. Household Physics—Three hours. On demand.**

For general statement, see Course 10. The study of this quarter deals with electric machinery, sound and light. Chapters XXI to XXX, inclusive.

**100. The New Physics—Four hours. Spring Quarter.**

This course is devoted to the study of electrons, cathode rays, X-rays, alpha rays, beta rays, gamma rays, and radium and its disintegration products. We are well equipped to illustrate this course.

**101. Historical Physics—Four hours. Spring Quarter.**

Probably the historical aspects of the school subjects offer the easiest insight into their relations to human life and problems. Physics, from the modern point of view and practice, is more than a set of laboratory experiences to be memorized. It is a history of men facing baffling problems and step by step finding a way to solve them. It is possible that this may be the best point of view from which to teach Physics to any group of students.

This course, however, is planned primarily for those teachers of physics who have a scholarly interest in the evolution of various aspects of their subject. Probably its chief service lies in its bringing together many classical experiments and indicating their influence on the development of physics, which is a matter of considerable difficulty, since there is no book written from this standpoint.

Beyond this, for the sake of humanizing physics, the course exhibits the circumstances and conditions under which various men first performed the classic experiments.

It is our belief that the teaching of high school physics may profit considerably from such a background study.

**102. Radiographic Physics—Four hours. On demand.**

This is a **practical** course in radio telegraphy and telephony with sufficient technical instruction to make possible the intelligent operation of a station and use of instruments connected with a wireless station. The course will be largely laboratory work and actual code work.

The department is well equipped for this course. There are several small sets and a large one as well as an automatic transmitter for code practice which will be at the disposal of the students.

**103. Alternating Current Simplified—Four hours. On demand.**

Practically all of the commercial electrical current is an alternating current and our high school text-books give practically nothing of the subject of alternating currents. The aim of this course is to give a student or a teacher of physics such a clear understanding of the action of an **alternating current** as to form a safe and sure foundation for his work. The course is not a mere description of alternating machinery, but an explanation of **principles** in language so simple and clear that anyone with a very elementary knowledge of physics will have no difficulty in comprehending the course.

**104. Methods of Teaching Physics—Four hours. Summer Quarter.**

A study of the history of the teaching of physics, and a detailed course presenting a method which will make the subject of physics more interesting and of greater value to the student.

**200. Theory of Relativity—Twelve hours.**

This course requires a comprehensive review of the hypothesis of the ether and the structure of matter, which study shows the necessity for the Theory of Relativity.

# Practical and Industrial Arts

SAMUEL MILO HADDEN, A.M., *Dean*

RALPH T. BISHOP

CHARLES M. FOULK, Pd.M.

OTTO W. SCHAEFER

The Practical Arts Division includes industrial arts, fine and applied arts, and commercial arts. The courses are varied and are organized especially along lines dealing with the technical phases of practical arts education, opportunity being given for study along historical, practical and theoretical lines. An excellent training department, housed in the Training School Building, gives full opportunity to put into practice in a teaching way the ideas presented in the various courses. This gives an opportunity for the individual students not only to become acquainted with the underlying principles in the work, but also the added advantage of teaching these branches in the Training School under expert supervision.

## WOODWORKING, DRAFTING, PRINTING AND BOOKBINDING

The Woodworking, Drafting, Printing and Bookbinding Departments of the State Teachers College are the most modern departments to be found in the Middle West. The departments occupy the first and second floors of the Guggenheim Hall of Industrial Arts. The rooms are large, well ventilated and well lighted. The students in these departments are never crowded for room or hindered in their work from lack of equipment. All equipment is of the latest and best type and is always kept in first-class working condition. It is the aim of the departments to employ methods in woodworking, drafting, printing and bookbinding as thorough and practical as are to be found in the regular commercial shops.

### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 3	3 hrs	Biol. 2	3 hrs	Ed. 8	3 hrs
Ind. Arts 1	4 hrs	Ind. Arts 3	4 hrs	Ind. Arts 2	4 hrs
Ind. Arts 8	4 hrs	Ind. Arts 10	4 hrs	Ind. Arts 12	4 hrs
Eng. 4	3 hrs	Free Electives	5 hrs	Ethics 1 (for Women only)	1 hr
Free Electives	2 hrs			Free Electives	4 hrs

Physical education is required each quarter in the first and second years, with or without credit.

### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Ed. 10	3 hrs
Ind. Arts 14	4 hrs	Ind. Arts 19	4 hrs	Ed. 2	4 hrs
Ind. Arts 5	3 hrs	Pol. Sci. 30	3 hrs	Ind. Arts 11 or	
Ed. 2	4 hrs	Free Electives	6 hrs	Ind. Arts 13	4 hrs
Free Electives	2 hrs			Free Electives	5 hrs

Students may graduate and receive the Junior College Diploma and Life Certificate at the end of the two-year course as outlined above.

### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych 104, or 105	4 hrs	Ind. Arts 104	2 hrs
Ind. Arts 48	4 hrs	Ind. Arts 121	4 hrs	Bkbgd. 1 or	
Ind. Arts 109	4 hrs	Art 1 or Art 2	4 hrs	Printing 1	4 hrs
Art 11	1 hr	Free Electives	2 hrs	Ind. Arts 120	4 hrs
Free Electives	3 hrs	Ed. 105	4 hrs	Free Electives	6 hrs

### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ind. Arts 115	4 hrs	Ed. 116	4 hrs	Psych. 108	4 hrs
Printing or		Ind. Arts 104	2 hrs	Ind. Arts (elec.)	4 hrs
Bookbinding	4 hrs	Ind. Arts 116	1 hr	Free Electives	4 hrs
Free Electives	4 hrs	Free Electives	5 hrs	Ed. 111	4 hrs
		Ed. 103	4 hrs		

## COURSES IN INDUSTRIAL ARTS FOR THE DEGREE OF MASTER OF ARTS

Any of the courses numbered from 100 upwards which have not already been taken as a part of the course leading to the degree of Bachelor of Arts may be elected to apply upon the degree of Master of Arts.

**5. Vocational Education**—Required of all Majors in Industrial Arts Commercial Arts, Fine and Applied Arts, and Home Economics. Four hours.

The course deals with the historical development and the fundamentals of teaching practical arts subjects in their relations to other subjects of the school curriculum and their application in future activities that the child will enter.

**1. Elementary Woodwork**—Required of Industrial Arts Majors. Four hours. Fee, \$2.00. Every Quarter.

This course is arranged for those who have had no experience in wood-working and is designed to give the student a starting knowledge of the different woodworking tools, their care and use. The construction of simple pieces of furniture is made the basis of this course.

**2. Intermediate Woodwork**—Required of Industrial Arts Majors. Four hours. Fee, \$2.00. Every Quarter.

This course is a continuation of Course 1 and is designed for those who wish to continue the work, and deals with more advanced phases of wood-working.

**3. Woodworking for Elementary Schools**—Required of all Industrial Arts Majors. Four hours. Fall and Spring Quarters.

This is a methods course and deals with such topics as equipment, materials used, where and what to buy, kinds of work to be undertaken in the different grades, the preparation and presentation of projects, the making of suitable drawings, and the proper mathematics to be used in woodworking.

**4. Toy Construction**—Four hours.

The purpose of this course is to train the teacher in the construction of toys, bird houses, etc. The making of original designs will be emphasized. This course should appeal to those taking kindergarten and grade work.

**6. Repair and Equipment Construction**—Required of Industrial Arts Majors. Four hours.

This course has for its base the building of various types of equipment and the use of power machines in working out of these problems. This is an especially valuable course for those who wish to emphasize the large phases of vocational education.

**8. Elementary Art Medal**—Required of Industrial Arts Majors. Four hours. Fee, \$1.00. Every Quarter.

(a) This course has in mind the designing and creation of simple, artistic forms in copper, brass and German silver.

(b) Also simple, artistic jewelry, including monograms and the setting of semi-precious stones.

**10. Elementary Mechanical Drawing**—Required of Industrial Arts Majors. Four hours. Fall Quarter.

This course is designed to give a knowledge of the use of drawing equipment and materials. Problems presented include geometrical drawing, elements of projection, development of surface, isometric and oblique projections, simple working drawings and lettering.

**11. Projections**—Four hours.

The purpose of this course is to give a student a working knowledge of the fundamentals of orthographic projection as applied to points, lines, planes, solids, and the shadow that a body makes upon another.

**12. Elementary Architectural Drawing**—Required of all Industrial Arts Majors. Four hours.

This course includes the making of complete designs of simple one-story cottages, together with details and specification of same.

**13. Intermediate Architectural Drawing—Four hours.**

This course is a continuation of Course 12 and deals with the drawing of plans of cement, brick and stone structures, culminating in complete plans and specifications for resident and public buildings.

**14. Care and Management—Required of Industrial Arts Majors. Three hours.**

This course is designed to train students to care for, repair and adjust hand and power tools of the woodworking department.

**19. Wood Turning—Required of all Industrial Arts Majors. Four hours. Fee, \$2.00. Winter Quarter.**

The aim of this course is to give the student a fair knowledge of the woodworking lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

**104. Pre-vocational Education—Two hours. Spring Quarter.**

The course is divided into two definite sections: First, the fundamental basis for pre-vocational work, the movement from the standpoint of special governmental and state schools, rural schools, state movements and vocational clubs, with suggestions for furthering the movement from state and community standpoints; second, the course of study and special plans for organization of pre-vocational work in public education.

**105. Advanced Architectural Drawing—Four hours. Spring Quarter.**

This course is designed to give the student a simple working knowledge of the great historic material such as columns, capitals, pediments, etc., in their application to modern buildings, such as churches, schools, and other public buildings.

Each student will be expected to design a public or semi-public building as a part of this course.

**109. Advanced Art Metal—Four hours. Fee, \$1.00. Winter and Summer Quarters.**

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals; also simple artistic jewelry, with all the steps that are fundamental in stone setting and finishing.

**116. Historic Furniture—One hour. Spring Quarter.**

Lectures illustrated by lantern slides and pictures, showing the development of and characteristics fundamental in the Netherlands, English and American periods.

**117. Elementary Machine Design—Four hours. Fall Quarter.**

This course includes sketches, drawings and tracings of simple parts, such as collars, face plates, screw center, clamps, brackets, couplings, simple bearings and pulleys. Standardized proportions are used in all drawings.

**118. Advanced Machine Design—Four hours. Winter and Spring Quarters.**

A study is made of the transmission of motion by belts, pulleys, gears and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motors and gas or steam engines.

**120. Pattern Making—Four hours.**

The topics emphasized in this course will include woods best suited for various work, glue, varnish, shellac, dowels, draft, shrinkage and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

**121. Advanced Cabinet Making—Four hours.**

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing and key joining. These technical processes will be worked out on individual projects.

**124. Machine Work—Four hours.**

This course is designed to give the student a general knowledge of the care and operation of woodworking machinery. The setting of cutters and their manipulation embraces the general basis of this course.

**201. Seminar—Four hours.**

Individual research work in the field of practical arts. Problems to be selected upon consultation.

This is a conference course. Conference hours will be arranged to meet the demands of students in the course.

For other courses in Industrial Education, see the Department of Education, Senior and Graduate College.

## PRINTING

### 1. Elementary Printing—Four hours. Every Quarter.

The aim of this course is to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type-composition. He will carry simple jobs thru the various stages from composition to making ready and printing on the press.

#### 1b. Elementary Printing—Four hours.

A continuation of Printing 1a.

#### 1c. Elementary Printing—Four hours.

A continuation of Printing 1b.

### 2. Intermediate Printing—Four hours. Every Quarter.

A continuation of elementary printing with a view to making the student more proficient in fundamentals of the art. The principles of typographic designs will be studied in the designing and composing of letter-heads, tickets, programs, etc. Color study in selection of papers and inks.

#### 2b. Intermediate Printing—Four hours.

A continuation of Printing 2a.

#### 2c. Intermediate Printing—Four hours.

A continuation of Printing 2b.

### 3. Advanced Printing—Four hours. Every Quarter.

A continuation of the study of typographic design in the laying out and composition of menus, title and cover pages, advertisements, etc. Imposition of four and eight-page forms, advanced presswork and a study of plate and paper making will be given.

#### 3b. Advanced Printing—Four hours.

A continuation of Printing 3a.

#### 3c. Advanced Printing—Four hours.

A continuation of Printing 3b.

### 4. Practical Newspaper Work—Four hours.

The various processes incident to the printing of a newspaper will be performed by the student in this course.

#### 4b. Practical Newspaper Work—Four hours.

A continuation of Printing 4a.

#### 4c. Practical Newspaper Work—Four hours.

A continuation of Printing 4b.

### 5. Shop Management—Four hours.

Organization of the various forces of the shop to maintain production with efficiency. Planning for the mechanical processes of printed product. Planning and selection of equipment. Maintenance of equipment.

#### 6. Shop Accounting—Four hours.

Keeping of shop records and accounts. Purchase of printing materials.

#### 7. Cost Accounting—Four hours.

Advanced work growing out of shop accounting, dealing with estimating production records and the costs of printing.

## BOOKBINDING

### 1a. Elementary Bookbinding—Four hours.

This course includes the following: tools, machines, materials and their uses, colating and preparing their sheets for sewing, sewing on tape and cord, preparing of end sheets, trimming, glueing, rounding and backing, head-

binding, banding and preparing backs for covers, selecting cover materials, planning and making of covers and all steps necessary for the binding of full cloth, buckram, and paper bindings, having spring or loose backs; also, the binding of one-quarter loose and tight back leather bindings with plain and fancy edges. The making of small boxes, writing pads, memoranda books, leather cases, cloth portfolios and kodak albums.

**1b. Elementary Bookbinding—Four hours.**

A continuation of Bookbinding 1a.

**1c. Elementary Bookbinding—Four hours.**

A continuation of Bookbinding 1b.

**2a. Intermediate Bookbinding—Four hours.**

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers; also the planning and making of full leather travelers' writing cases, music cases, and art leather work.

**2b. Intermediate Bookbinding—Four hours.**

A continuation of Bookbinding 2a.

**2c. Intermediate Bookbinding—Four hours.**

A continuation of Bookbinding 2b.

**3a. Advanced Bookbinding—Four hours.**

This course is a review of both of the other courses in higher grade work and construction. Full leather bindings with raised panels is given in this course. Gilt edging, fancy edges including starch and agate edges.

Finishing in antique and gold, hand lettering in all its phases, tooling in gold and antique, stamping on stamping machines, of cloth, leather, and other materials in blind, gold and other metals and foils.

**3b. Advanced Bookbinding—Four hours.**

A continuation of Bookbinding 3a.

**3c. Advanced Bookbinding—Four hours.**

A continuation of Bookbinding 3b.

**4. Shop Management—Four hours.**

The organization of the various forces of the shop to maintain production and efficiency in the work. Planning of the mechanical work of binding. Laying out and selection of materials and methods of equipment.

**5. Shop Accounting—Four hours.**

Keeping of shop records and accounts. Purchasing and selection of materials such as tapes, papers, buckram, leathers, etc.

**6. Cost Accounting—Four Hours.**

Advanced work growing out of shop management, shop accounting and equipment, dealing with the factors that enter into the estimating of production costs, such as materials and general shop expenses, etc.

## FINE AND APPLIED ARTS

GRACE M. BAKER

EDWARD B. KAMINSKI

FLORENCE LOWE

SAMUEL M. HADDEN, A.M.

The Department of Fine and Applied Arts aims to prepare teachers to meet all the demands made upon regular grade teachers in public and private schools from the kindergarten up thru the high school in all branches of art, and to train special students to act as departmental teachers and supervisors. The courses are open as electives to all students of the College.

The department is well equipped. In addition to the regular equipment there is a large museum of ceramics, original paintings, reproductions, and copies of masterpieces, bronzes, marbles, and tapestries. The Museum of Ceramics is a rare collection of pottery, containing ancient and modern specimens from different countries, including Japan, Austria, Holland, France, England, and America.

## COURSE OF STUDY

## Two Years or Four Years.

For Teachers and Supervisors of Art in High Schools and Elementary Schools

## First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Ed. 8	3 hrs	Soc. 3	3 hrs
Art 3	4 hrs	Art. 16	4 hrs	Art 2	4 hrs
Art 4	4 hrs	Art 1	4 hrs	Art 14	4 hrs
Ind. Arts 10	2 hrs	Ethics 1	1 hr	Eng. 4	3 hrs

Physical Education is required each quarter in the first and second year, with or without credit.

## Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 10	3 hrs	Psych. 2a	3 hrs	Psych. 2b	3 hrs
Art 13	4 hrs	Art 9	2 hrs	Pol Sci. 30	3 hrs
Art 5	3 hrs	Art 7	4 hrs	Art 11	1 hr
Ed. 2	2 hrs	Ed. 2	2 hrs	Art 12	4 hr
		Art 6	1 hr	Ind. Arts 5	3 hrs
				Ed. 2	4 hrs

Students may graduate and receive the Junior College Diploma and Life Certificate at the end of the two-year course as outlined above.

## Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Art 102	4 hrs	Psych. 104 or 105	3 hrs	Art 101	4 hrs
Art 104	4 hrs	Art 8	4 hrs	Art 100	3 hrs
Ed. 103	2 hrs	Art (elective)	4 hrs		
Soc. 105	3 hrs	Ed. 103	2 hrs		

## Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Art 200	4 hrs	Ed. 116	3 hrs	Psych. 108	3 hrs
Art (elective)	2 hrs	Art 201	4 hrs	Ed. 111	3 hrs
Teaching	4 hrs	Ed. 105	4 hrs	Art 202	4 hrs
				Art (elective)	6 hrs
				Teaching	2 hrs

## 1. Public School Methods—Four Hours. Fall Quarter.

Freehand drawing, perspective, color, composition and design adapted to the needs of intermediate and grammar grades. Mediums: pencil, charcoal, water color, colored chalk.

Principles of teaching in connection with each unit of work.

## 2. Primary Grade Methods—Four hours. Fall Quarter.

Freehand drawing, perspective, color, composition and design, adapted to Principles of teaching in connection with each unit of work.

## 3. Freehand Drawing—Four hours. Each Quarter.

Drawing in charcoal, pencil and colored chalk from nature and from still life.

## 4. Applied Design—Three hours.

Creative design with relation and application to useful articles. Principles of design.

## 5. Water Color Painting—Three hours.

Still life, flowers, landscapes, and birds suggest the subject-matter of this course. Color harmony, composition.

## 6. Art Application—One hour. Winter Quarter.

The main principles of esthetics underlying the fine arts are taken up in illustrated lectures. The course is planned with a view to increasing the student's power to select and enjoy good examples of fine art.

## 7. Constructive Design—Four hours. Winter Quarter.

Design as a factor in construction; reed and raffia work; construction of mats, bags, purses, book covers, etc., in leather, with tooled or colored designs.

**8. Pottery—Four hours. Fee, \$2.00. Each Quarter.**

Vases, bowls, decorative tiles, etc., are made. The department is equipped with a modern kiln, and the work of students is fired and glazed. A variety of glazes with the different colors is used. Modern shapes and decorations.

**9. History of Art—Two hours. Winter Quarter.**

The evolution of art from the beginning of history; the growth of the great schools and their influences; the study of the important masters, their personalities as related to their art and their work as an index to the time in which they lived; illustrated by a large collection of photographs and lantern slides. Lectures with related reading.

**11. History of Architecture—One hour. Spring Quarter.**

Illustrated lectures on the development of architecture; interpretations of famous buildings.

**12. Household Art Design—Four hours. Spring Quarter.**

The execution of designs for interior decorations and costumes.

**13. Applied Art for Primary Grades—Four hours. Winter Quarter.**

This course includes paper construction, cutting, design, stick-printing, weaving, modeling, and toy making.

Relation of art to other subjects.

**14. Applied Art for Intermediate and Grammar Grades—Winter Quarter.**

Application of design and color to paper construction, basketry, book-binding, block print, toys. Relation of art to other subjects of the curriculum.

**15. Pottery—Two hours. Fee, \$2.00. Winter Quarter.**

A course which stresses the decoration and glazing of pottery.

**16. Antique—Four hours. Winter and Spring Quarters.**

Charcoal drawing from antique casts in outline and in light and shade. An intensive course requiring accurate drawing and close study of values.

**100. Methods in Art Supervision—Three hours. Spring Quarter.**

The supervision of art education in city systems; the planning of a course of study; methods of teaching.

**101. Drawing from Life—Four hours. Winter Quarter.**

Study from the costumed model. The student is allowed to choose the medium to be used.

**102. Commercial Design—Four hours. Winter Quarter.**

Design considered in its relation to advertising art. Posters, cover designs and various advertising problems are executed.

**104. Design and Composition—Four hours. Winter Quarter.**

The theory of space filling and color harmony; conventionalized plant motifs; lettering.

**200. Oil Painting—Four hours. Each Quarter.**

This work may be done outside of regular classes, to suit the convenience of the student. Regular criticisms will be given by the instructor in charge. The student must submit satisfactory evidence of having had sufficient preparation for this course.

**201. Color Composition—Four hours. Each Quarter.**

An advanced study of color composition in oil or water color. Arrangements of form and color for decorative effect. Advanced poster design.

**COMMERCIAL ARTS**

AMBROSE OWEN COLVIN, B.C.S.

FLORA E. ELDER, A.B.

There is a constantly growing demand for well trained Commercial Teachers. This demand comes from the vocational and technical schools, high schools, normal schools and colleges. It is the purpose of the Commercial Department to meet this demand by offering first-class instruction in practical up-to-date courses that will prepare teachers for this line of teaching. The general outline of the course has been planned for



teachers, but much of the work offered is suitable for practical office work and students not desiring to teach may elect a complete course suitable to their needs.

A four-year course carrying with it the A.B. degree is outlined below. This course may be taken in units of two, three or four years. The usual two-year teacher's certificate will be issued upon completion of one of the two-year courses outlined below. Students who have had previous commercial training either in school or in offices will be allowed to enter advanced classes. Advanced credit will be allowed for work done in creditable schools.

**FOUR-YEAR COMBINED COMMERCIAL COURSE**

**First Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Eng. 4	3 hrs	Biology 2	3 hrs	Soc. 3	3 hrs
Ed. 8	3 hrs	Ethics 1	1 hr	Phys. Ed.	.....
Phys. Ed.	.....	Phys. Ed.	.....	Com'l Arts 52	4 hrs
Com'l Arts 50	4 hrs	Com'l Arts 51	4 hrs	Com'l Arts 53	4 hrs
Com'l Arts 56	4 hrs	Ind. Arts 5	4 hrs	Free Electives	5 hrs
Free Electives	2 hrs	Free Electives	4 hrs		

Physical Education is required each quarter of the first and second years, with or without credits.

**Second Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs	Psych. 2a	3 hrs	Psych. 2b	3 hrs
Ed. 2	4 hrs	Phys. Ed.	.....	Ed. 2	4 hrs
Phys. Ed.	.....	Com'l Arts 150	4 hrs	Phys. Ed.	.....
Com'l Arts 58	4 hrs	Geog. 7	4 hrs	Com'l Arts 54	3 hrs
Free Electives	5 hrs	Free Electives	5 hrs	Com'l Arts 6	2 hrs
				Free Electives	3 hrs

Students may graduate and receive the Junior College Diploma and Life Certificate at the end of the two-year course as outlined above or upon the completion of any one of the two-year Junior College outlines given below.

**Third Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Com'l Arts 11	4 hrs	Ed. 105	4 hrs	Psych. 108	3 hrs
*Com'l Arts 40	4 hrs	Com'l Arts 1	4 hrs	Com'l Arts 2	4 hrs
Free Electives	8 hrs	Com'l Arts 12	4 hrs	Com'l Arts 13	3 hrs
		*Eng. 5	4 hrs	Free Electives	6 hrs
		Free Electives	4 hrs		

**Fourth Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 105	4 hrs	Ed. 111	4 hrs
Ed. 103 (Teaching)	4 hrs	Ed. 116	4 hrs	Com'l Arts 17	12 hrs
Com'l Arts 3	4 hrs	Com'l Arts 4	4 hrs		
Free Electives	4 hrs	Free Electives	4 hrs		

**TWO-YEAR ACCOUNTING COURSE**

**First Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Eng. 4	3 hrs	Biol. 2	3 hrs	Soc. 3	3 hrs
Ed. 8	3 hrs	Ethics 1	1 hr	Phys. Ed.	.....
Phys. Ed.	.....	Phys. Ed.	.....	Com'l Arts 52	4 hrs
Com'l Arts 50	4 hrs	Com'l Arts 51	4 hrs	Com'l Arts 53	4 hrs
Com'l Arts 56	4 hrs	Ind. Arts 5	4 hrs	Free Electives	5 hrs
Free Electives	2 hrs	Free Electives	4 hrs		

Physical Education is required each quarter of the first and second years, with or without credits.

**Second Year**

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs	Psych. 2a	3 hrs	Psych. 2b	3 hrs
Ed. 2	4 hrs	Phys. Ed.	.....	Ed. 2	4 hrs
Phys. Ed.	.....	Com'l Arts 150	4 hrs	Phys. Ed.	.....
Com'l Arts 58	4 hrs	Geog. 7	4 hrs	Com'l Arts 54	3 hrs
Free Electives	5 hrs	Free Electives	5 hrs	Com'l Arts 6	2 hrs
				Free Electives	4 hrs

Students may graduate and receive a Diploma and Life Certificate at the end of the two-year course as outlined above.

\*Electives. One is required.

TWO-YEAR STENOGRAPHIC COURSE

First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Eng. 4	3 hrs	Biol. 2	3 hrs	Soc. 3	3 hrs
Ed. 8	3 hrs	Ethics 1	1 hr	Phys. Ed.	.....
Phys. Ed.	.....	Phys. Ed.	.....	Com'l Arts 2	4 hrs
Com'l Arts 11	4 hrs	Com'l Arts 1	4 hrs	Com'l Arts 13	3 hrs
*Com'l Arts 40	4 hrs	Com'l Arts 12	4 hrs	Free Electives	6 hrs
Free Electives	2 hrs	*Eng. 5	4 hrs		
		Free Electives	4 hrs		

Physical Education is required each quarter of the first and second years, with or without credits.

Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Pol. Sci. 30	3 hrs	Psych. 2a	3 hrs	Psych. 2b	3 hrs
Ed. 2	4 hrs	Phys. Ed.	.....	Phys. Ed.	.....
Phys. Ed.	.....	Ed. 2	4 hrs	Com'l Arts 17	12 hrs
Com'l Arts 3	4 hrs	Com'l Arts 4	4 hrs	Com'l Arts 6	1 hr
Free Electives	5 hrs	Free Electives	5 hrs		

Students may graduate and receive a Diploma and Life Certificate at the end of the two-year course as outlined above.

DESCRIPTION OF COURSES

1. Principles of Shorthand—Required of Majors in Commercial Arts. Four hours. Winter Quarter.

A study of the first ten lessons in Gregg Shorthand with supplementary exercises.

2. Principles of Shorthand—Required of Majors in Commercial Arts. Four hours. Spring Quarter.

A study of the last ten lessons of Gregg Shorthand with supplementary exercises. This course completes the study of the principles of shorthand.

3. Dictation—Required of Majors in Commercial Arts. Four hours. Fall Quarter.

A brief review of word signs, phrasing and the vocabulary of the Gregg Manual, after which dictation will be given of both familiar and unfamiliar matter. Enough work will be given in this course to make one proficient in taking accurately ordinary dictated correspondence.

4. Speed Dictation—Required of Majors in Commercial Arts. Four hours. Winter Quarter.

In this course more stress will be placed upon speed in shorthand, with the idea in mind that a student finishing this course should be able to take any dictated matter. The use of the Dictaphone will be given in this course.

6. Methods in Commercial Education—Required of Majors in Commercial Arts. Three hours. Spring Quarter.

The entire commercial field will be included in this study; equipment; the course of study; special methods; equipment of teacher; relation of business school to the community.

11. Elementary Typewriting—Required of Majors in Commercial Arts. Four hours. Every Quarter.

Beginning work in touch typewriting, covering position at machine, memorizing of keyboard, proper touch and correct fingering, with instruction in care of machine.

12. Typewriting. Business Letter Writing—Required of Majors in Commercial Arts. Four hours. Every Quarter.

Study of approved forms and circular letters, addressing envelopes, manfolding and tabulating.

13. Advanced Typewriting—Required of Majors in Commercial Arts. Three hours. Spring Quarter.

14. Business and Legal Forms and Documents—Elective.

A careful systematic study of various business forms, such as Deeds, Mortgages, Liens, Abstracts, Wills, Bills of Sale, Formal Notices, Negotiable

\*Electives. One is required.

Instruments, Warehouse Receipts, Bills of Lading, and many Mercantile Forms. This course will include the filling in of blank forms and a discussion and interpretation of the phraseology. This is a very desirable course for both grade and high school teachers of arithmetic, as well as for Commercial Majors.

**17. Office Practice**—Required of Majors in Commercial Arts. Twelve hours. Every Quarter.

This course consists of intensive practice in a "Model Office." Students are required to do five hours of continuous work daily, five days per week, taking dictation and transcribing. This course also includes the operation and use of modern office appliances such as the mimeograph, mimeoscope, dictaphone, adding machines, filing systems, etc. This work is very carefully systematized and consists of actual correspondence. This comes from the president's office, the deans, and heads of departments. Outside work from churches and charitable institutions is solicited also.

**40. Business English**—Four hours. Fall Quarter.

The elementary principles involved in writing correct English. The sentence, the paragraph, grammatical correctness, effectiveness, clearness, and punctuation.

**41. Business Correspondence**—Elective. Two hours. Winter Quarter.

Business letter writing in all of its phases will be studied in this course. The latest and most improved methods in advertising, selling and collecting by mail.

**50. Elementary Accounting**—Required of Commercial Majors. Four hours. Fall Quarter.

A general introduction, giving the historic background of the subject and a brief statement of the profession. The foundation of double entry book-keeping. Assets, liabilities, proprietorship, the balance sheet, income, expenses, profit and loss statement. The entire class period is given to discussion and an average of one hour daily is required for laboratory work.

**51. Intermediate Accounting**—Required of Commercial Majors. Four hours. Winter Quarter.

Partnerships, introduction to corporation accounting, and many miscellaneous accounting and business methods. Two complete sets of books are written up in this course, one illustrating a partnership and another some features of corporation accounting.

**52. Advanced Accounting**—Required of Commercial Majors. Four hours. Spring Quarter.

This course includes more advanced principles of accounting, treating special corporation accounts and introducing accounting problems. The work involves both class discussion and laboratory work.

**53. Commercial Arithmetic**—Required of Commercial Majors. Four hours. Winter Quarter.

A thoro treatment of arithmetic from the modern commercial point of view.

**54. Commercial Law**—Required of Commercial Majors. Three hours. Spring Quarter.

A treatment of the general principles of common law as applied to business, together with a study of the Colorado statutes and decisions bearing on commercial interests.

**56. Penmanship**—Required of Majors in Commercial Arts. Four hours. Fall Quarter.

Drill in rapid, arm-movement, business writing. The Palmer system will be used.

**57. Penmanship**—Elective. Winter Quarter.

Continuation of Course 56.

**58. Advanced Corporation Accounting**—Required of Commercial Majors. Four hours. Fall Quarter.

This course covers the field of Corporation Accounting quite completely and introduces some special accounting principles in regard to ownership, bankruptcies, joint accounts, etc. The work consists of regular class discussion supplemented by laboratory practice.

**142. Advertising—Elective.**

The origin and development of the art of advertising. Special attention is given to the psychology involved in modern advertising and a careful study of the technic of good and bad advertisements.

**150. Bank Accounting—Required of Majors in Commercial Arts. Four hours. Winter Quarter.**

This includes a study of state and national banking laws, loans, discounts, commercial paper, methods and principles of banking and saving accounts. A set of books illustrating several days of business will be written.

**151. Cost Accounting—Elective.**

A study of material cost, labor cost, overhead expense, distribution of expense, and managing expense. A set of books on manufacturing costs will be written.

**153. Salesmanship and Business Efficiency—Elective.**

A study of the underlying principles of salesmanship; the psychology of the making of a sale. Demonstration sales will be given from time to time by experts. An effort will be made to get some practical experience for the students of this course in the stores of Greeley.

**207. Corporation Finance—Elective.**

This course covers the organization and operation of a corporation, a study of stocks and bonds, the corporation charter, corporation laws of various states, and is intended to make the theory of corporation accounts clearer for the student.

**208. Systems of Accounts—Elective.**

A study of the various systems of accounts used in department stores, factories, insurance and brokerage companies, banks, etc.

**209. Auditing—Elective.**

The outline of an ordinary business audit, the duties and liability of the auditor, and a study and analysis of various statements and accounts.

**210. Accounting Problems—Elective.**

Practice problems in accounting to be solved by the students. Many of these problems will be taken from state examinations for Certified Public Accountants.

**211. Business Administration—Elective.**

The principles of industrial management and the organization of the modern office. Various types of organization, the labor force, payment of the worker, records of raw material and unfinished goods, etc.

**220. Seminar—Any Quarter.**

An opportunity will be given for research work on problems in the commercial field. Problems to be selected in conference with the head of the department. This course is planned as a conference course.

# Romance Languages and Latin

EDWIN STANTON DU PONCET, Ph.D.

THOMAS F. KENNY, *Assistant in French*

*Instructor in Latin and Spanish*

A major in Romance languages requires four years in French, or in Spanish, and at least two years in Spanish or French. The student will be expected to speak the major language with fluency.

A Latin-Romance major will require four years of Latin and three years in either French or Spanish.

For the master's degree in Romance languages six years' work in the major language and three years in the minor and one year in Italian will be required. The thesis must be written in the language chosen as a major and defended in that language.

## ROMANCE LANGUAGES

### Two Years or Four Years

For high school teachers of French and Spanish, junior high schools and elementary schools teachers of French and Spanish.

**Note:** Students may specialize wholly in French or in Spanish.

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
French 1 or 5	4 hrs	French 2 or 6	4 hrs	French 3 or 7	4 hrs
Spanish 1 or 5	4 hrs	Spanish 2 or 6	4 hrs	Spanish 3 or 7	4 hrs
Elective	5 hrs	Ethics 1	1 hr	English 4	3 hrs
		Electives	4 hrs	Electives	2 hrs

**Physical Education is required each quarter of the first and second years, with or without credit.**

#### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 2	4 hrs	Ed. 10	3 hrs	French 10 or 15	4 hrs
French 5 or 8	4 hrs	French 6 or 9	4 hrs	Spanish 10 or 15	4 hrs
Spanish 5 or 8	4 hrs	Spanish 6 or 9	4 hrs	Ed. 2	4 hrs
Elective	1 hr	Elective	2 hrs	Elective	1 hr

**Students may receive the Life Certificate on the completion of the above course.**

#### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 104 or 105	4 hrs	Ed. 105	4 hrs
French 16	3 hrs	French 17	4 hrs	French 19	4 hrs
Spanish 16	3 hrs	Spanish 17	4 hrs	Spanish 19	4 hrs
French 105	2 hrs	Ed. 105	4 hrs	Electives	4 hrs

#### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 108	4 hrs	Ed. 116	4 hrs	French 212	3 hrs
French 106 or		Spanish 108	4 hrs	Spanish 212	3 hrs
Spanish 106	4 hrs	Electives	9 hrs	Electives	6 hrs
Electives	8 hrs			Ed. 111	4 hrs

## LATIN

For a Latin major, substitute all courses above listed in French and Spanish for the first two years for the following courses in Latin: Latin 1, Latin 5, Latin 9 for the first year and Latin 101, Latin 105, Latin 107 for the second year. Provision will be made for students to continue the study of Latin for the remaining two years after the completion of Latin 107.

## FRENCH

**1. First Year French—Four hours. Fall Quarter.**

Le Premier Livre en Francais par Meras will be used as the basis of Grammar for this course.

**2. First Year French—Four hours. Winter Quarter.**

Le Second Livre pas Meras begun and completed.

**3. First Year French—Four hours. Spring Quarter.**

Reading and critical study of *La Mare Au Diable*, by Sand, and *La Tulipe Noire*, by Dumas. Systematic Review of French Grammar.

**5. Intermediate French—Four hours. Winter Quarter.**

The entire year's work for the second year will be devoted to Prosper Merimee as an introduction to the short and long story in French Literature. First term devoted to four short stories: *Tamango*, *Mateo*, *Falcone*, *La Chambre Bleue* and *la Partie de Trictrac*.

**6. Intermediate French—Four hours. Fall Quarter.**

Three of the longer novels by Merimee will be read: *Les Ames du Purgatoire*, *Une Femme est Un Diable* and *Ines Mendoc*.

**7. Intermediate French—Four hours. Spring Quarter.**

The reading and careful study of *Las Venus d'Ille* and *Colomba* as a complete appreciation of Merimee's prose and perfection as a novelist. Original compositions based on the text of *Colomba* will be required weekly.

**16. Advanced French—Four hours. Fall Quarter.**

Devoted to Victor Hugo. *Ruy Blas* and *Hernani* with special attention to the origin and development of the romantic drama at the beginning of the nineteenth century. Conducted in French.

**17. Advanced French—Four hours. Winter Quarter.**

A continuation of Victor Hugo. Reading of *Bug Jargal* and *Les Miserables*. A compilation of the greater part of Hugo's epigrams as used in all of his works to be read during the year will be made by the class and classified according to importance and length.

**19. Advanced French—Four hours. Spring quarter.**

An extensive study of Victor Hugo as a lyric poet. Reading of "Odes et Ballades," *Les Meditations* and *La Legende des Siecles*.

**106. Advanced French—Four hours. Fall Quarter.**

Devoted to a selected number of short stories by Guy de Maupassant and Alfred de Vigny.

**108. Advanced French—Four hours. Winter Quarter.**

A bi-lingual course. Reading of *Le Crime de Sylvestre Bonnard*. All translation being done into Spanish and Spanish being used as the language of the class room. Prerequisite: two or more years in French and Spanish.

**212. Advanced French Course—Four hours. Spring Quarter.**

Devoted to Honore de Balzac and *Les Cinq Scenes de la Comedie Humaine*. An attempt will be made to arrange a list of all the various types of characters originated by Balzac, the greatest creator of characters in all literature, and these will be arranged alphabetically.

214, 216 and 220 are Graduate courses devoted to Montaigne's *Essays*, Voltaire's selected dramas and *Malherbe* and *Rabelais*, and will vary depending on the needs of those taking the work.

## SPANISH

**1. Elementary Spanish—Four hours. Fall Quarter.**

Wilkin's Spanish Course and the reading of easy texts.

**2. Elementary Spanish—Four hours. Winter Quarter.**

Grammar completed, Pittaro's Spanish Reader begun.

**3. Elementary Spanish—Four hours. Spring Quarter.**

Pittaro's Spanish Reader completed and Henry's *Easy Spanish Plays* read and played by members of the class.

**5. Intermediate Spanish—Four hours. Fall Quarter.**

Devoted to Pedro de Alarcon's shorter stories. Much conversation and composition required.

**6. Intermediate Spanish—Four hours. Winter Quarter.**

The reading of several of the longer novels of Alarcon: *El Final de Norma*, and *El Sombrero de Tres Picos*. Original essays on chosen topics.

**7. Intermediate Spanish—Four hours. Spring Quarter.**

Devoted to the Literature of Mexico and Spanish America. *Bardan's Leyendas Mejicanas*, *Isaac's Maria* and *El Ultimo de Su Raza* (Du Poncet).

**106. Advanced Spanish—Four hours. Fall Quarter.**

Devoted to Jacinto Benevente as the leading living Spanish dramatist: *La Ciudad Alegre y Confada* and *Los Intereses Creados*.

**108. Advanced Spanish—Four hours. Winter Quarter.**

A bi-lingual course. Reading of *Pepita Jimenez* by Valera in French, making French the language of the class room. Original compositions in Spanish on selected subjects.

**212. Advanced Spanish—Four hours. Spring Quarter.**

Devoted to Tamayo y Baus, using *Un Drama Nuevo* as the standard of all his dramatic works. In this course special attention will be given in the adaptation and translation of dramatic works from all foreign languages into English.

**214, 216, 220.**

214, 216 and 220 are graduate courses dealing with the Golden Age of Spanish Literature, and will vary according to the preparation of the class.

**Note:** Classes in beginning Italian will be given on demand, provided that at least eight students enroll for same. Any Quarter.

**LATIN.****Freshman Latin—Four hours. Fall Quarter.**

**Latin 1.** Livy, Books XXI and XXII, Latin prose composition.

**Latin 5. Freshman College Latin—Four hours. Winter Quarter.**

Devoted to Cicero's Philosophical Works. Advanced Latin Prose composition. The translation from English into Latin of some easy English prose work will be required.

**Latin 9. Freshman College Latin—Four hours. Spring Quarter.**

The Odes and Epodes of Horace. A study of Latin Manuscripts and a brief introduction to Releography.

**Latin 101. Advanced Latin—Three hours. Fall Quarter.**

The *Agricola* and *Germania* of Tacitus. The continued translation of some easy English prose work into Latin.

**Latin 105. Advanced Latin—Three hours. Winter Quarter.**

The Satires of Juvenal and some study of Historical Latin Grammar and Vulgar Latin.

**Latin 105. Advanced Latin—Three hours. Spring Quarter.**

The comedies of Plautus and Terence, with special attention made of the development of the theme of mistaken identity in the leading comedies of all nations.

## Social Science

GURDON RANSOM MILLER, Ph.D.

EDGAR D. RANDOLPH, A.M.

This department offers a series of courses which it desires shall appeal to both the needs and ambitions of many students. The courses are liberal and varied in scope. Many of them will meet the immediate practical needs of teachers. Some of them are technical, and are intended for teachers and students of special subjects. Still others are advanced courses in social theory, or are practical studies in applied sociology.

Social Science deals with the knowledge on which true theory in Education must be based. It is equally essential in the training of high school and elementary teachers.

The major four-year course offered by this department is a superior opportunity for high school teachers, superintendents, principals, supervisors, and all students desiring liberal training in Modern Social thought and its inevitable effects on Education and human progress.

### GROUP COURSE OF STUDY

#### Two Years or Four Years

For Teachers of Sociology, Economics, and History; Superintendents, Principals, Supervisors, and Students of Social Science

#### First Year

Fall Quarter		Winter Quarter		Spring Quarter	
Biol. 2	3 hrs	Soc. 3	3 hrs	Ed. 8	3 hrs
Soc. 1	4 hrs	Soc. 23	4 hrs	Geog. 8	4 hrs
Hist. 10	4 hrs	Hist. 11	4 hrs	Soc. 12	4 hrs
Lib. Sci. 1	1 hr	Eng. 4	3 hrs	Free Electives	4 hrs
Free Electives	4 hrs	Free Electives	2 hrs	Ethics 1	1 hr

Physical Education is required each quarter of the first and second years, with or without credit.

#### Second Year

Fall Quarter		Winter Quarter		Spring Quarter	
Psych. 2a	3 hrs	Psych. 2b	3 hrs	Pol. Sci. 30	3 hrs
Ed. 2	4 hrs	Ed. 10	3 hrs	Ed. 2	4 hrs
Soc. 18	3 hrs	Soc. 19	3 hrs	Soc. 24	3 hrs
Soc. 16	3 hrs	Pol. Sci. 12	4 hrs	Soc. 20	3 hrs
Free Electives	3 hrs	Free Electives	3 hrs	Free Electives	3 hrs

Students may graduate and receive the Life Certificate at the end of the two-year course as outlined above.

#### Third Year

Fall Quarter		Winter Quarter		Spring Quarter	
Soc. 105	4 hrs	Psych. 105 or 104	4 hrs	Psych. 108	4 hrs
Soc. 104	4 hrs	Soc. 106	4 hrs	Soc. 107	4 hrs
Economics 110	4 hrs	Soc. (elective)	4 hrs	Economics 111	4 hrs
Free Electives	4 hrs	Ed. 105	4 hrs	Soc. (elective)	4 hrs

#### Fourth Year

Fall Quarter		Winter Quarter		Spring Quarter	
Ed. 103	4 hrs	Ed. 116	4 hrs	Ed. 111	4 hrs
Soc. 108	4 hrs	Soc. 221	4 hrs	Soc. 230	4 hrs
Free Electives	4 hrs	Soc. 210	4 hrs	Soc. 300	4 hrs
		Free Electives	4 hrs	Free Electives	4 hrs

The above course of study is suggestive only.

#### 1. Anthropology—Four hours. Fall Quarter.

The evolution of social ideas and institutions, the family, religion, government, law, art, and industry.



**3. Educational Sociology—Three hours. Every Quarter. Required in first year.**

A course giving (1) a background of information concerning origins and interrelations of present social problems; (2) a brief formulation of the methods of social progress; and making (3) a definite attempt to show the relation of education to the problems of control and progress.

**12. Social Readjustment—Four hours. Spring Quarter.**

This course offers an elementary study of how the processes of reconstruction may be applied to a considerable number of practical social problems. It isolates certain situations from the larger field and by a brief analysis of the factors in these attempts to stimulate the habit of thinking in terms of social cause and effect. This course should be useful to the elementary school teacher of history and civics.

**16. Society and the Church—Four hours.**

The social evolution of the church, and its changing relations to Society; new concepts in religious education.

**18. Rural Sociology—Four hours.**

A constructive study of country life, economic activities, social organizations, schools, clubs, churches, social centers, and modern efforts and successes in rural progress; intended primarily for rural teachers, but is of value to all students of rural social conditions and needs.

**19. Urban Sociology—Four hours. Winter Quarter.**

The modern city and its social problems.

**20. The Distribution of Wealth—Four hours.**

Changing modes of distribution, the varying proportion, tendencies in legislation, changing modes of taxation, effect of Social insurance.

**23. Immigration and American Problems—Four hours. Winter Quarter.**

A study of the changes in the population of the United States during the 19th century, and our resultant alien problems.

**24. Child Welfare—Four hours. Winter Quarter.**

This is a course in the growth and tendencies of the modern movement for the conservation of children. It begins by giving a view of the status of children in the past; passes to a consideration of the evolution of the child protection agencies in the United States; and deals finally with the present problems and tendencies in child welfare programs.

**32. The Family—Four hours.**

A very profitable study of the family from the standpoint of education, industry, ethics, and as a social unit. Desirable for teachers, but of great value to all students of either theoretical or practical Sociology. Closely related to Courses 22 and 24.

**37. Labor and Society—Four hours.**

A study of the laboring classes, development, places, privileges, and rights in society; and relation of workers to systems of industrial administration. Specially commended to teachers of industrial education, and students of economics. It correlates well with Courses 12, 107, 108, 19, and 27.

**104. Social Theory—Two hours. Fall Quarter.**

A brief history of Sociologic theory; a comparative study of modern social theory, and its relation to modern biologic science.

**105. Social Institutions and Social Maladjustments—Four hours. Spring Quarter. Required in third year.**

The relation of Sociology to Psychology; the evolution of mind as a Social progress, the Social emotional basis of mind and its development as a directive agent.

**106. Principles of Social Progress—Two hours. Spring Quarter.**

A study of the basic principles of social evolution and social progress, consideration of present social tendencies; and speculation as to future social control.

**107. Privilege and Democracy—Four hours. Fall Quarter.**

A study of special privilege in America in its relation to land and natural resources; monopolies in their relation to land holding; and a discussion of the single tax in comparison with other methods of control.

**108. Social Insurance—Four hours. Winter Quarter.**

Studies in the operation of social insurance in European countries, Australia, New Zealand, and the growth of the idea in America since 1912. It comprises social compensation for accidents, sickness, invalidity, unemployment, and old age.

**110. Economics—Three hours. Fall Quarter.**

A general course, touching all common phases of the Science of Economics.

**111. Advanced Economics—Three hours. Spring Quarter**

An intensive study of labor problems and economic organization; labor unions and legislation; corporation and public ownership, socialism; and modern changes-in taxation.

**117. Women and Social Evolution—Four hours.**

A study of the woman movement; its history; its economic and psychological significance; its possible effects on social progress; its relation to education, and its specific relation to the education of women.

**127. Social Legislation—Four hours.**

The term social legislation is intended to suggest a very recent development of purpose in legislative remedies. If it be true that in the past legislation has not only not anticipated bad conditions but has, rather, characteristically waited until evils reached dramatic proportions before being applied, the meaning of the course title will be perfectly clear. The course is to deal with the more purposive application of legislative remedies to existing social maladjustments—such as, for example, labor difficulties, housing and health problems, the liquor traffic, prostitution, city planning, and the like.

**131. Modern Civilization and Its Social Tendencies—Three hours. Fall Quarter, alternate.**

Hypernationalism; social negatives; the survival of pagan ideals; the need of economic, spiritual, ethical and religious revolutions.

**132. Social Revolutions—Three hours. Spring Quarter, alternate.**

A program of possible reconstruction of social values, and the development of social leadership thru some change of emphasis in Education.

**200. Psychological Sociology—Four hours.**

A study of the psychology of social relations, social organization, social changes, and impediments to social progress.

**210. Methods of Social Research—Four hours.**

A seminar for research study, including intensive work in social surveys.

**211. Morals and Culture—Four hours.**

A study of the evolution of morals, the development of ideas of culture, and the relation of these to modern theories of Education.

**220. The Consumption of Wealth—Four hours.**

An advanced course in Social Economics, a constructive analysis of the modern tendency to subject the consumption of wealth to scientific treatment, emphasizing the human costs of production versus the human utility of scientific consumption; a human valuation.

**221. Social Economy—Four hours.**

A course which shows the nature and extent of past social failures and the slow evolution from blind reaction to distress to more or less rational methods of control; and deals with the extensions of social concern to the fields of need felt most keenly.

**229. Criminology—Four hours.**

This course is a study of the relationship of the criminal to society—to social institutions and social organizations. Incidentally it will show the changing attitude of society toward the criminal, and the more important factors behind the change. The course is, however, mainly concerned with the present relations of the criminal in society and his treatment at the hands of society. The course intends to present the best modern thought in the various aspects of this field.

**230. High School Course in Sociology and Economics—Four hours.**

A course in materials and methods in elementary Sociology and Economics for high school teachers.

**CATALOG OF STUDENTS**  
**SCHOOL YEAR 1919-1920**  
**Colorado State Teachers College**  
**Fall, Winter and Spring Quarters**

Acuff, Helen.....	Pueblo, Colo.
Akey, Nellie L.....	Windsor, Colo.
Alexander, Calvin.....	Greeley, Colo.
Alexander, Russel.....	Greeley, Colo.
Allan, Helen.....	Lafayette, Colo.
Allan, Frances L.....	Lafayette, Colo.
Allen, Lyla.....	New Raymer, Colo.
Allyn, Hester Ann.....	Fergus, Mont.
Alistott, Thos. J.....	Federal, Wyo.
Ammerman, Marie.....	Denver, Colo.
Anderson, Dagman.....	Greeley, Colo.
Anderson, Edith.....	Eaton, Colo.
Anderson, Eleanor.....	Eaton, Colo.
Anderson, Flora.....	Colorado Springs, Colo.
Anderson, Gladys.....	Greeley, Colo.
Anderson, Grace.....	Greeley, Colo.
Anderson, Henry M.....	Greeley, Colo.
Anderson, Rachel.....	Peyton, Colo.
Anderson, Ruth.....	Aspen, Colo.
Arfsten, Innle.....	Denver, Colo.
Arthur, Grace.....	Canon City, Colo.
Auger, Margaret.....	Central City, Colo.
Autrey, Jessie M.....	Greeley, Colo.
Ayres, Edith.....	Sterling, Colo.
Bacon, Dorothy.....	Boulder, Colo.
Bacon, Edmund O.....	Greeley, Colo.
Baker, Georgena.....	Greeley, Colo.
Barney, Elizabeth Chloe.....	Colorado Springs, Colo.
Barrett, Ethel.....	Colorado Springs, Colo.
Barrett, Helen.....	Denver, Colo.
Barrett, Lena.....	Colorado Springs, Colo.
Barrett, Maude.....	Colorado Springs, Colo.
Bast, Louise.....	Delta, Colo.
Bastow, Claude.....	Nunn, Colo.
Bates, Helen.....	Greeley, Colo.
Batschelet, Olive.....	Panora, Iowa
Baxter, Alfred.....	Greeley, Colo.
Beall Imogene A.....	Carpenter, Wyo.
Beattie, Mary.....	La Salle, Colo.
Becker, Bertha.....	Apache, Colo.
Beebe, Morna W.....	Ft. Collins, Colo.
Beggs, Leila.....	Greeley, Colo.
Bell, Florence.....	Nevada, Iowa
Bell, Jane.....	Nevada, Iowa
Bell, Maude H.....	Greeley, Colo.
Bellwood, Tom O.....	Greeley, Colo.
Benjamin, Rev. H. C.....	Ft. Lupton, Colo.
Benway, Dorothy M.....	Greeley, Colo.
Billing, Elizabeth.....	Lisbon, N. Dak.
Blair, Florence.....	Greeley, Colo.
Blanchard, Neal.....	Milton, Iowa
Bliss, Alice.....	Greeley, Colo.
Bonell, Hanna E.....	Greeley, Colo.
Boone, Esther.....	Greeley, Colo.
Bowden, Mary.....	Pagosa Springs, Colo.
Boyle, Carmen.....	Victor, Colo.
Bracewell, Helen.....	Hill City, Colo.
Bracewell, W. H.....	Greeley, Colo.
Brake, Lepha.....	Greeley, Colo.
Bressler, Evelyn V.....	Sterling, Colo.
Briggs, Agnes.....	Haswell, Colo.
Broda, Wilma.....	Greeley, Colo.
Brohl, Julia.....	Ashland, Kans.
Brown, Emily M.....	Central City, Colo.
Brown, Mrs. G. E.....	Falcon, Colo.
Brush, M. Frances.....	Greeley, Colo.
Brusha, Opal.....	Salida, Colo.
	Pierce, Colo.

Bryden, Helen	Carbondale, Illinois
Buck, Emily	Greeley, Colo.
Bulger, Lillian	Golden, Colo.
Bullock, Annie	Dallas, Texas
Bunker, Ada	Greeley, Colo.
Burbank, Fern	Longmont, Colo.
Burlien, Dorothy	Denver, Colo.
Burnison, Fay	Greeley, Colo.
Butler, Elizabeth	Craig, Colo.
Cage, Mary L.	Greeley, Colo.
Calvert, Alice	Des Moines, Iowa
Cameron, Margaret	Barr Lake, Colo.
Cameron, Stella	Colorado Springs, Colo.
Campbell, Agnes B.	Greeley, Colo.
Campbell, Vera	Greeley, Colo.
Carey, Lucy	Forbes, Colo.
Carney, Elizabeth	Greeley, Colo.
Carson, Cora Mae	Lamar, Colo.
Carter, Albert S.	Greeley, Colo.
Carter, Mildred	Colorado Springs, Colo.
Casey, Kathryn	Denver, Colo.
Challgren, Marguerite	Greeley, Colo.
Chesebro, Delta	Boulder, Colo.
Christensen, Grace	Kiowa, Colo.
Christopher, Ruth	Holly, Colo.
Churchill, India	Denver, Colo.
Clark, Edna	Rico, Colo.
Clark, Inez	Longmont, Colo.
Clark, Margaret	Englewood, Colo.
Clark, Myra L.	Scott City, Kans.
Clasbey, Elizabeth	Savannah, Mo.
Clauson, Walborg	Negaunee, Mich.
Cline, Evelyn	Brighton, Colo.
Clymer, Ethel	Mead, Colo.
Clyncke, Mary	Boulder, Colo.
Coffel, Mabel	Ft. Collins, Colo.
Cockerill, Ethel	Greeley, Colo.
Cohn, Ida	Trinidad, Colo.
Coler, Edith	Ft. Collins, Colo.
Collins, Ruth	Greeley, Colo.
Connellee, Gladys	Wheatridge, Colo.
Conway, Marie	Denver, Colo.
Cooke, Elbertine	Ft. Collins, Colo.
Coonrad, Mildred	Briggsdale, Colo.
Coontz, Helen	Goodrich, Colo.
Cooper, Elizabeth	Colorado Springs, Colo.
Cooper, Margaret	Colorado Springs, Colo.
Coppinger, Mayme	Mancos, Colo.
Corliss, Grace	Guffey, Colo.
Cornwell, Hope	Monte Vista, Colo.
Cox, Marian	Cedar Falls, Iowa
Craig, Mary	Greeley, Colo.
Cramer, Caryl	Loveland, Colo.
Crawford, Ethel	Greeley, Colo.
Crawford, Lila	Greeley, Colo.
Cribbs, Alda	Greeley, Colo.
Cribbs, Frances	Greeley, Colo.
Crie, Robert R.	Rock Springs, Wyo.
Crissey, Gladys	Colorado Springs, Colo.
Croft, Geraldine	Greeley, Colo.
Culp, Margaret	Alton, Oregon
Culver, Gladys	Montrose, Colo.
Cunningham, Isabel	Denver, Colo.
Curry, Ruth	Cripple Creek, Colo.
Daggett, Lillian	Loveland, Colo.
Dahl, Pearl	Lafayette, Colo.
Davenport, Exine	Greeley, Colo.
Davidson, Mabel	Douglas, Wyo.
Davis, Ethel G.	Boulder, Colo.
Davis, Grace	Colorado Springs, Colo.
Davis, Ida N.	Greeley, Colo.
Davis, Robert Y.	Greeley, Colo.
Day, Louise	Denver, Colo.
Dean, Marian	La Salle, Colo.
Dedrick, Helene	Greeley, Colo.
De Ford, Daley	Greeley, Colo.
Deibert, Genevieve	Florence, Colo.
Delbridge, Lucy B.	Greeley, Colo.
Dickey, Fern	Greeley, Colo.
Dickson, Dorothea	Brighton, Colo.
Diggs, Carrie Mae	Childress, Texas

Dillon, Mamie.....	Sioux City, Iowa
Dinsmore, Naomi L.....	Pueblo, Colo.
Dixon, Venice.....	Greeley, Colo.
Donelson, Hazel.....	Walden, Colo.
Doud, Mary.....	Longs' Peak, Colo.
Drake, Leurada.....	Greeley, Colo.
Drummond, Anna.....	Kersey, Colo.
Duling, Hazel D.....	Trinidad, Colo.
Duling, Julia.....	Trinidad, Colo.
Dunn, Irene.....	Greeley, Colo.
Dunn, M. Pearl.....	Stratton, Colo.
Durkin, Marjorie.....	Delta, Colo.
Dyde, Marjorie.....	Greeley, Colo.
Dyer, Helen.....	Pueblo, Colo.
Eagleton, W. H.....	Denver, Colo.
Eaton, Alice B.....	Greeley, Colo.
Elliott, Louise.....	New York City
Elam, Fern.....	Greeley, Colo.
Elam, Velma.....	Greeley, Colo.
Engel, Anna.....	Rico, Colo.
Ensign, Elizabeth.....	Greeley, Colo.
Ethelds, Carl.....	Greeley, Colo.
Eyler, Mrs. Shirley.....	Denver, Colo.
Farrell, Victor.....	Greeley, Colo.
Fenton, Mrs. Ada.....	Denver, Colo.
Fenton, Helen.....	Denver, Colo.
Ferguson, Bessie I.....	Brighton, Colo.
Fetz, Edith.....	Hotchkiss, Colo.
Fisher, G. N.....	Greeley, Colo.
Fitzmorris, A. E.....	Greeley, Colo.
Fitzmorris, Geo. D.....	Greeley, Colo.
Fitzmorris, Myra.....	Greeley, Colo.
Fleming, Mrs. Zella.....	Greeley, Colo.
Fletcher, Kate.....	Loveland, Colo.
Flitner, Anna.....	Greeley, Colo.
Flitner, Geraldine.....	Greybull, Wyo.
Flitner, Howard.....	Greybull, Wyo.
Flood, Helen.....	Greeley, Colo.
Ford, Mollie.....	Las Animas, Colo.
Forsythe, Winifred.....	Denver, Colo.
Fortune, Ruby.....	Keota, Colo.
Forward, Grace.....	Greeley, Colo.
Forward, Shelby D.....	Greeley, Colo.
Foster, Hazel.....	Montrose, Colo.
Francia, Theresa.....	Louisville, Colo.
Friedman, Julia.....	Denver, Colo.
Frink, Edith.....	Hayden, Colo.
Frink, Margaret.....	Denver, Colo.
Fuller, Mary A.....	Denver, Colo.
Gale, Jessie.....	Greeley, Colo.
Gannon, Mary K.....	Buhl, Idaho
Gard, Wilhelmenia.....	Loveland, Colo.
Gardner, Eleanor.....	Greeley, Colo.
Gardner, Martha.....	Denver, Colo.
Gates, Virginia.....	Denver, Colo.
Gibson, Berna.....	Greeley, Colo.
Gilbert, Jeanette.....	Colorado Springs, Colo.
Gill, Helen.....	Ft. Morgan, Colo.
Gill, Lucille.....	Ft. Morgan, Colo.
Gilpin-Brown, Frances.....	Greeley, Colo.
Gish, Orletha.....	Eads, Colo.
Ginsburg, Rose.....	Greeley, Colo.
Glafcke, Catherine.....	Greeley, Colo.
Gordon, Grace.....	Pueblo, Colo.
Goselin, Nellie M.....	Greeley, Colo.
Goulette, Mrs. J. D.....	Greeley, Colo.
Grant, Arthur.....	Evans, Colo.
Graves, J. Earl.....	Greeley, Colo.
Greenamyre, Katherine.....	Greeley, Colo.
Greene, Lucy E.....	Greeley, Colo.
Greer, Lois.....	Greeley, Colo.
Gregg, Neva.....	Longmont, Colo.
Gregory, Grace.....	Harlan, Iowa
Gregory, Ruth.....	Harlan, Iowa
Guiles, Mildred.....	Greeley, Colo.
Gustafson, Eleanor.....	Red Oak, Iowa
Haefel, Bertha.....	Freeport, Illinois
Halt, Stena.....	Greeley, Colo.
Hall, Ila.....	Greeley, Colo.
Hamlin, Helen.....	Otis, Colo.

Hamilton, Catherine.....	Denver,	Colo.
Hamilton, Vera.....	La Salle,	Colo.
Hammond, Dolores.....	Paonia,	Colo.
Handy, Gladys.....	Greeley,	Colo.
Hanson, Margaret.....	Kutch,	Colo.
Harper, C. Roy.....	Greeley,	Colo.
Harrington, Abbie.....	La Salle,	Colo.
Hart, Ida Mae.....	Golden,	Colo.
Hause, Alice M.....	Ft. Lupton,	Colo.
Harvey, Abigail.....	Flagler,	Colo.
Hawkins, Ina.....	Florence,	Colo.
Hayes, Nellie D.....	Greeley,	Colo.
Hays, Helen.....	Greeley,	Colo.
Haywood, Ada E.....	Denver,	Colo.
Healey, Mrs. Ruth M.....	Denver,	Colo.
Hebb, Marie.....	Roswell,	N. M.
Heffron, Marie.....	Victor,	Colo.
Hemlepp, Emma.....	Greeley,	Colo.
Hereford, Anita.....	Ft. Lupton,	Colo.
Herefurth, Alma.....	Freemont,	Nebr.
Herrington, Carolyn.....	Pierce,	Colo.
Hewes, Geo. V.....	Greeley,	Colo.
Hewitt, Elsie.....	Greeley,	Colo.
Hiatt, Irene.....	Canon City,	Colo.
Hill, Hazel G.....	Greeley,	Colo.
Hinds, Archie.....	Sedgwick,	Colo.
Hobbs, Anna.....	Erie,	Colo.
Holmes, Leona.....	Hurdland,	Mo.
Holmes, Mossie.....	Muskogee,	Okla.
Horner, Marian.....	Eaton,	Colo.
Howard, Ala.....	Greeley,	Colo.
Howard, Edith.....	Breckenridge,	Colo.
Howard, Frances.....	Ft. Collins,	Colo.
Howarth, Marion.....	Greeley,	Colo.
Howarth, Ralph.....	Greeley,	Colo.
Howlett, Virginia.....	Delta,	Colo.
Hubbard, Velma.....	Calcite,	Colo.
Hunt, Harry E.....	Greeley,	Colo.
Hunt, Raymon H.....	Greeley,	Colo.
Hurford, Laura.....	Pueblo,	Colo.
Hurianek, Vlasta.....	Jarosa,	Colo.
Ingle, Erle B.....	Greeley,	Colo.
Irish, Mrs. Esther W.....	Fon du lac,	Wis.
Irvin, George A.....	Sanford,	Colo.
Irwin, Viva.....	Canon City,	Colo.
James, Leota.....	Greeley,	Colo.
Jamieson, Elsie.....	Cheyenne,	Wyo.
Jansson, Mrs. Helen.....	Greeley,	Colo.
Johnson, Dorothy.....	Greeley,	Colo.
Johnson, Ella.....	Canon City,	Colo.
Johnson, Elva E.....	Penrose,	Colo.
Johnson, Faye.....	Greeley,	Colo.
Johnson, Gladys.....	Greeley,	Colo.
Johnson, Helen E.....	Georgetown,	Colo.
Johnson, Maude.....	Colorado Springs,	Colo.
Jones, Mrs. H. M.....	Greeley,	Colo.
Jones, Helen.....	Greeley,	Colo.
Jones, James R.....	Evans,	Colo.
Jones, Mrs. Mollie.....	Evans,	Colo.
Joyce, Jennie E.....	Central City,	Nebr.
Kearns, Ellen.....	Boulder,	Colo.
Kelley, Bernice.....	Greeley,	Colo.
Kelly, Floyd.....	Nunn,	Colo.
Kelly, J. Blanche.....	Greeley,	Colo.
Kendel, Josephine.....	Greeley,	Colo.
Kennedy, Hazel.....	Greeley,	Colo.
Kennedy, Pearl.....	Greeley,	Colo.
Kenny, Thomas F.....	Greeley,	Colo.
Kerin, Susie.....	Denver,	Colo.
Key, Verdabelle.....	Sopris,	Colo.
Keyes, Margaret Joy.....	Greeley,	Colo.
Keys, Edwin.....	Greeley,	Colo.
Kidd, Mamie.....	La Salle,	Colo.
Killian, Katherine.....	Dacona,	Colo.
Kimball, Hattie.....	Greeley,	Colo.
Kimball, Miriam.....	Boulder,	Colo.
Kincaid, Laura.....	Le Veta,	Colo.
Kinder, Esther.....	Ft. Lupton,	Colo.
Kirby, Marjorie.....	Georgetown,	Colo.
Kirk, John.....	Greeley,	Colo.

Klein, Everett	Greeley, Colo.
Knies, W. L.	Flagler, Colo.
Knoll, Julia	Delta, Colo.
Knoll, Julia	Rico, Colo.
Koencke, Lora	Ft. Morgan, Colo.
Landgraf, Emily	Denver, Colo.
Larson, Mildred	Grover, Colo.
Lawrence, Carl	Greeley, Colo.
Leaver, Irma	Aspen, Colo.
Leazer, Florence	Havelock, Colo.
Leigh, Frances	Jerseyville, Illinois
Lepel, Charlotte	Vilas, Colo.
Letey, Yvonne	Basalt, Colo.
Lewis, Ione	La Junta, Colo.
Lewis, Jane	Florence, Colo.
Lilly, Cleola	Casper, Wyo.
Link, Isa	Glenwood Springs, Colo.
List, Wilma L.	Denver, Colo.
Lobdell, Gertrude	Greeley, Colo.
Lovern, Ruth	Pueblo, Colo.
Lowell, Mrs. Florence	Farmington, Maine
Lyden, Katherine	Butte, Mont.
Lynch, Agnes	Denver, Colo.
Lyon, Florence	Carbondale, Colo.
McAllister, Nell	Greeley, Colo.
McAloon, Anna	Akron, Colo.
McCarty, Edna	Washington, Iowa
McChesney, Bessie	Allison, Colo.
McCollum, Edith	Evans, Colo.
McConnell, W. J. Mrs.	Denton, Texas
McCorkle, Dee	Greeley, Colo.
McCutcheon, Marjorie	Greeley, Colo.
McDaniel, Martha	Florence, Colo.
McDaniel, Oralee	Fruita, Colo.
McDonald, Minnie	Canon City, Colo.
MacFarlane, Anna Mae	Coalmont, Colo.
McGuirk, Mary	Glenwood Springs, Colo.
McKinstry, Mildred	Greeley, Colo.
McLeod, Lida	Central City, Colo.
McNew, Elsie	Hugo, Colo.
McMurdo, Mrs. W. F.	Greeley, Colo.
McQuiston, Pauline W.	Rinichmond, Ind.
McVey, J. P.	Adena, Colo.
McWhorter, Fanny	Masonville, Colo.
McWhorter, Irene	Arvada, Colo.
Mack, Lois	Greeley, Colo.
Madarasz, Irma	Denver, Colo.
Malicky, Tillie	Oketo, Kans.
Marker, N. D.	La Veta, Colo.
Mars, Elsie	Denver, Colo.
Martin, Alice	Greeley, Colo.
Martin, Bula	Des Moines, Iowa
Martin, Esther	Monte Vista, Colo.
Mason, Florence	Greeley, Colo.
Matchett, Edward	Trempealeau, Wis.
Mathias, Harvey D.	Greeley, Colo.
Mauzey, Esther	Greeley, Colo.
Maxey, Imogene	Greeley, Colo.
Mayhew, Ida	Colorado Springs, Colo.
Mayor, Mary	Broomfield, Colo.
Meacham, Rena	Salida, Colo.
Michell, Florence	Denver, Colo.
Meller, Melba	Durango, Colo.
Meltzer, Ada	Ames, Iowa
Meyers, Velma	Greeley, Colo.
Miller, Geneva	Ft. Collins, Colo.
Miller, Marie	La Junta, Colo.
Miller, Wilma	Colorado Springs, Colo.
Mills, Rae	Ignacio, Colo.
Miner, Zada E.	Jackson, Mich.
Mitchell, Helen	Jackson, Colo.
Monell, Mabel	Montrose, Colo.
Monroe, Myrtle	Denver, Colo.
Monsch, Hester	Pueblo, Colo.
Moon, Addie	Golden, Colo.
Moore, Rhoda	Greeley, Colo.
Moorehouse, Essie	Canon City, Colo.
Morgason, Mildred	San Miguel, Colo.
Morris, Dorothy	Greeley, Colo.
Morris, Helen	Greeley, Colo.
Morris, Marguerite	Greeley, Colo.

Morrison, Bessie.....	Colorado Springs, Colo.
Morrison, Mrs. W. F.....	Greeley, Colo.
Moss, Susannah.....	Greeley, Colo.
Mraz, Dorothy.....	Colorado Springs, Colo.
Muerman, Ethel.....	Greeley, Colo.
Muldoon, Margaret.....	Corley, Iowa
Munger, Mrs. Jessie.....	Greeley, Colo.
Myers, Mada B.....	Mankato, Kansas
Myers, Plesy.....	Hoehne, Colo.
Nelson, Lee C.....	Maywood, Nebr.
Nesbit, Ora.....	Colorado Springs, Colo.
Nickels, Winnona.....	Denver, Colo.
Nickles, Frances.....	Hays, Kans.
Nickolson, Inez.....	Arvada, Colo.
Nims, Val.....	Greeley, Colo.
Nance, Dorothy.....	Durango, Colo.
Nitzsche, Augusta.....	Montrose, Colo.
Norman, Ruby.....	Canon City, Colo.
Noris, Lena.....	Denver, Colo.
Norton, Mabel.....	Rocky Ford, Colo.
Nunemaker, Addie.....	Brighton, Colo.
Nussbaum, Agnes.....	Greeley, Colo.
Olinger, Ethel.....	Greeley, Colo.
Olson, Nettie.....	Red Oak, Iowa
Ordonez, David E.....	Phillipine Islands
Organ, Ellen.....	Rico, Colo.
Orndorff, Bernice.....	Indianapolis, Ind.
O'Toole, Clare E.....	Denver, Colo.
Otten, Gertrude.....	Brandon, Colo.
Overton, Ruth.....	Colorado Springs, Colo.
Oviatt, Eleanor.....	Loveland, Colo.
Paine, Ella.....	Byers, Colo.
Parker, Julia.....	Grover, Colo.
Parson, Gail.....	Denver, Colo.
Patton, Ethel.....	Buena Vista, Colo.
Patton, Jessie.....	Buena Vista, Colo.
Perkins, Maurie.....	Greeley, Colo.
Peterson, Mrs. Elmore.....	Greeley, Colo.
Peterson, Grace A.....	Greeley, Colo.
Peterson, Mabel.....	Hotchkiss, Colo.
Petit, Obera.....	Greeley, Colo.
Phelps, Chester.....	Greeley, Colo.
Phenix, Florence.....	Greeley, Colo.
Phillips, Bess.....	Cripple Creek, Colo.
Phippeny, Lucille.....	Greeley, Colo.
Phippeny, Mary.....	Greeley, Colo.
Phippeny, Walter.....	Greeley, Colo.
Pickard, Ernest L.....	Greeley, Colo.
Pickett, Mrs.....	Greeley, Colo.
Pierce, Lulu.....	Greeley, Colo.
Poole, Gladys.....	Greeley, Colo.
Potter, Clarice.....	Arvada, Colo.
Potter, E. C.....	Denver, Colo.
Pragst, Augusta.....	New Orleans, La.
Pratt, Alda.....	Grand Valley, Colo.
Prescott, Blake D.....	Bethel, Conn.
Preston, Harold.....	Greeley, Colo.
Prewitt, Hattie O.....	Ft. Worth, Texas
Price, S. Wesley.....	Greeley, Colo.
Priddy, Ina.....	Pierce, Colo.
Priddy, Mildred.....	Pierce, Colo.
Proctor, Addie.....	Loveland, Colo.
Proctor, Herbert.....	Greeley, Colo.
Prunty, Iona E.....	Greeley, Colo.
Prunty, Lloyd.....	Greeley, Colo.
Pryor, Gladys.....	Aspen, Colo.
Pumphrey, Grace.....	Pickham, Colo.
Queary, Sarah.....	Greeley, Colo.
Queen, Mary.....	Denver, Colo.
Quinby, Grace.....	Ft. Collins, Colo.
Raichart, Leona.....	Delta, Colo.
Raines, Ina.....	Greeley, Colo.
Ramey, Lydia.....	Brighton, Colo.
Rardin, Maybelle.....	Colorado Springs, Colo.
Ream, Mary.....	Greeley, Colo.
Reese, Ruth.....	Longmont, Colo.
Rehn, Edna.....	Denver, Colo.
Rehn, Violet.....	Denver, Colo.



Reid, Beneta.....	Dearbourn, Mo.
Reuler, Harriet.....	Greeley, Colo.
Reynolds, Frances.....	Greeley, Colo.
Rhinehart, Josephine.....	Fountain, Colo.
Rice, Gladys P.....	Denver, Colo.
Rienks, Maude.....	Greeley, Colo.
Rightmire, Thelma.....	Pickham, Colo.
Roark, May.....	Denver, Colo.
Roberts, Loise.....	Greeley, Colo.
Robson, Eloise.....	Byers, Colorado
Roman, Selma.....	Aspen, Colo.
Root, Elizabeth.....	Longmont, Colo.
Rose, Lila Mae.....	Greeley, Colo.
Rossiter, Agnes.....	Butte, Mont.
Routh, Jewell.....	Wiley, Colo.
Rudel, Helen.....	Fleming, Colo.
Russell, Floreta.....	Greeley, Colo.
Ruth, Lela.....	Greeley, Colo.
Salle, Lorene.....	Tiffany, Colo.
Sanstead, Floyd.....	Willard, Colo.
Sargent, Mary.....	Roggen, Colo.
Saunders, Lee.....	Boulder, Colo.
Schaefer, Mildred.....	Greeley, Colo.
Schlessman, Lola.....	Colorado Springs, Colo.
Schoonmaker, Gertrude.....	Greeley, Colo.
Seacat, Dona.....	Ashland, Kans.
Search, Paul M.....	Kingston, Penn.
Seaton, Vida.....	Dumont, Colo.
Seem, Adele.....	Bangor, Penn.
Senter, Faith.....	Denver, Colo.
Serafini, Elvira.....	Denver, Colo.
Shanley, Theresa.....	Pinedale, Wyo.
Shattuck, Lucille.....	Greeley, Colo.
Shea, Cecelia.....	Yuma, Colo.
Sheridan, Margaret.....	Denver, Colo.
Sherman, Carolyn.....	Sedgwick, Colo.
Shipman, Manilla.....	Colorado Springs, Colo.
Shultis, Alice.....	Greeley, Colo.
Shultis, Esther.....	Greeley, Colo.
Sickels, Cora.....	Hillrose, Colo.
Silver, Marie.....	Lamar, Colo.
Slockett, Florence.....	Greeley, Colo.
Smille, Dorothy.....	Greeley, Colo.
Smith, Anna.....	Lamar, Colo.
Smith, Eric A. C.....	Greeley, Colo.
Smith, Lucy C.....	Colorado Springs, Colo.
Smith, Mary G.....	Loveland, Colo.
Smith, Ralph.....	Greeley, Colo.
Smith, Winifred.....	Denver, Colo.
Snook, Mern.....	Greeley, Colo.
Staley, Hazel.....	Colorado Springs, Colo.
Stanley, Gertrude.....	Greeley, Colo.
Stansfield, Laura.....	Denver, Colo.
Steidley, Mildred.....	Ft. Collins, Colo.
Stepp, Ruth.....	Chillicothe, Mo.
Sterling, Avis.....	Hugo, Colo.
Stevenson, Jessica.....	Simla, Colo.
Stimson, Helen.....	Greeley, Colo.
Stone, Geneva.....	Eaton, Colo.
Stough, Viola.....	Canon City, Colo.
Straley, Fae.....	La Salle, Colo.
Strayer, Bertha E.....	Salida, Colo.
Strock, Eileen.....	Portland, Colo.
Stutheit, Marie.....	Lafayette, Colo.
Summer, Ruth.....	Greeley, Colo.
Svedman, Hattie Mae.....	Windsor, Colo.
Swallow, Grace M.....	Greeley, Colo.
Sweeny, Mrs. Hattie.....	Greeley, Colo.
Syp, Louise.....	Lamar, Colo.
Taggart, Winifred.....	Eaton, Colo.
Talbot, Ruth.....	Longmont, Colo.
Taylor, Abbie L.....	Bayfield, Colo.
Taylor, Mattie.....	Valdez, Colo.
Tenny, Jos. L.....	Pueblo, Colo.
Theys, Henrietta.....	Denver, Colo.
Thomas, Mae.....	Colorado Springs, Colo.
Thompson, Howard.....	Greeley, Colo.
Thompson, Marion.....	Greeley, Colo.
Thompson, Petra.....	Kiowa, Colo.
Thorene, Selma.....	Sharon Springs, Colo.
Tobey, Martha M.....	Stoughton, Mass.

Todd, Katherine.....	Greeley, Colo.
Toffler, Mrs. Grace.....	Greeley, Colo.
Topping, R. C.....	Greeley, Colo.
Torgas, Ida N.....	Aurora, Colo.
Townsend, Willa.....	Byers, Colo.
Travis, Raymond.....	Colorado Springs, Colo.
Tregoning, Joe.....	Greeley, Colo.
Tuffin, Emma H.....	Delta, Colo.
Turner, Willie.....	Ignacio, Colo.
Tyler, Ruth.....	Casper, Wyo.
Udick, Phyllis.....	Victor, Colo.
Van Devender, Neva.....	Greeley, Colo.
Van Why, Susie.....	Dover, Colo.
Van Wyke, Nellie.....	Greeley, Colo.
Vezzetti, Antoinette.....	Rock Vale, Colo.
Wadsworth, Syrena.....	Greeley, Colo.
Wagner, Evelyn.....	Greeley, Colo.
Waldhouser, Dorothy.....	Greeley, Colo.
Waldhouser, Esther E.....	Greeley, Colo.
Waldron, Mary G.....	Leadville, Colo.
Walker, Bonny.....	Ordway, Colo.
Walsh, Mabel.....	Greeley, Colo.
Walsh, Nellie.....	Pueblo, Colo.
Warberg, Celia.....	Loveland, Colo.
Warren, Mary.....	Gill, Colo.
Watts, Ema.....	Monument, Colo.
Webb, Florence.....	Milliken, Colo.
Weedon, Lillian.....	Greeley, Colo.
Weichhand, Ada.....	Penrose, Colo.
Wells, Mabel.....	Greeley, Colo.
Welsh, Edna F.....	Greeley, Colo.
Weseman, Ada.....	Greeley, Colo.
Whatley, C. A.....	Dallas, Texas
Wheatley, Lois.....	Grand Valley, Colo.
Wheaton, Anna.....	Greeley, Colo.
Wheaton, Esther.....	Greeley, Colo.
Whetsel, Mildred.....	Pueblo, Colo.
White, Mary.....	Colorado Springs, Colo.
Willey, Helen.....	Sheridan, Colo.
Williams, Arta.....	Greeley, Colo.
Williams, Edythe Jo.....	Sciotoville, Ohio
Williams, Horace.....	Greeley, Colo.
Williams, Mrs. H. M.....	Greeley, Colo.
Williams, Lois.....	Greeley, Colo.
Williams, Mildred.....	Victor, Colo.
Williams, Stella.....	Greeley, Colo.
Williams, Urias.....	Greeley, Colo.
Willison, Carrie.....	Roswell, N. M.
Wills, Maude.....	Greeley, Colo.
Willson, Ruth.....	Rock Springs, Wyo.
Wilson, Frances.....	Folsom, N. M.
Wilson, Gertrude.....	Denver, Colo.
Wilson, Ivy.....	Greeley, Colo.
Wilson, Olive.....	Delta, Colo.
Wilson, Reita.....	Rothville, Mo.
Winn, Eleanor M.....	Dallas, Tex.
Wisecarver, Zaida.....	Fairfield, Iowa
Wogan, Margaret.....	Cripple Creek, Colo.
Wolf, Florence.....	Grand Junction, Colo.
Wolfer, Margaret.....	Ft. Collins, Colo.
Wonder, Genevieve.....	Montrose, Colo.
Wood, Frances.....	Montrose, Colo.
Wood, R. F.....	Dayton, Pa.
Worley, R. J.....	Colorado Springs, Colo.
Worley, Ruby.....	Colorado Springs, Colo.
Wright, Edna F.....	Greeley, Colo.
Wylde-Brown, Gladys.....	Friend, Nebr.
Yancey, Mildred.....	Colorado Springs, Colo.
Yates, E. O.....	Greeley, Colo.
Yingst, Ina L.....	Hugo, Colo.
Youberg, Grace.....	Denver, Colo.
Young, Mary.....	Arickare, Colo.
Zigler, Margaret.....	Wiley, Colo.

## SUMMER QUARTER

1920

Adams, Doris.....	Eastlake, Colo.
Adams, Mary L.....	215 E. 11th Ave., Denver, Colo.
Adolph, Jacob.....	Greeley, Colo.
Agerton, Mollie.....	Fort Worth, Texas
Alexander, Calvin.....	Greeley, Colo., R. 1
Alexander, Elizabeth.....	317 Broadway, Pueblo, Colo.
Alexander, Zadie.....	Box 211, Miami, Ariz.
Alford, Etta.....	Hico, Texas
Aiken, Georgia.....	2896 Erie, Cincinnati, O.
Aikman, Parlee.....	Marion, Illinois
Allen, Lyla.....	New Raymer, Colo.
Allen, Henry V.....	Otis, Colo.
Allison, Grace E.....	684 S. Smiola, Denver, Colo.
Allman, Richard.....	3232 York, Denver, Colo.
Allman, William.....	3232 York, Denver, Colo.
Allison, Esther.....	Walsenburg, Colo.
Allstott, Thos. J.....	Federal, Wyo.
Alt, Pearl.....	Brighton, Colo.
Amick, Irene.....	Meeker, Colo.
Ammerman, Marie.....	1852 Logan, Denver, Colo.
Anderson, Alfred P.....	Kendrick, Colo.
Anderson, Flora A.....	110 Cheyenne Blvd., Colorado Springs, Colo.
Anderson, Hazel.....	Aspen, Colo.
Anderson, Marcelene.....	Montrose, Colo.
Anderson, Minta.....	Burgs, Wyo.
Anderson, Sallie.....	Oklahoma City, Okla.
Angell, Mary.....	Ault, Colo.
Ankeny, Florence.....	1858 12th Ave., Greeley, Colo.
Arfsten, Innle.....	3705 Wolff, Denver, Colo.
Arkwright, Charlotte.....	Colorado Springs, Colo.
Arkwright, Evelyn.....	Colorado Springs, Colo.
Arnett, Irene.....	Carbinville, Illinois
Arozna, Frances.....	1201 N. El Paso, El Paso Texas
Ash, Joy.....	Savery, Wyo.
Ashby, Carrie M.....	Greeley, Colo., 920 10 th St.
Ashbrook, Bella.....	1008 Lincoln, St. Joseph, Mo.
Askins, Lila.....	1943 8th Ave., Greeley, Colo.
Ausman, Gladys M.....	Eau Claire, Wis., 706 Babcock St.
Alberts, Margaret.....	Shaw, Colo.
Babbitt, Alice H.....	Denver, Colo.
Baker, Rachel J.....	Morrison, Colo.
Bachman, Rosa E.....	Akron, Colo.
Baier, Bertha Catherine.....	Ainsworth, Nebr.
Ball, Katherine.....	3045 W. Clyde, Denver, Colo.
Bailey, Enola.....	Bay Village, Ohio
Baker, W. E.....	Telluride, Colo.
Baker, Zula J.....	Eads, Colo.
Baldwin, F. H.....	1409 7th Ave., Greeley, Colo.
Bappert, Aneita.....	Telluride, Colo.
Bardwell, Mrs. Belle.....	Anaheim, Calif.
Barger, Ted.....	Wray, Colo.
Barkhausen, Frances.....	3917 Inca, Denver, Colo.
Barber, Jannie.....	2290 Cherry, Denver, Colo.
Barbour, Lillian.....	Wheatridge, Colo.
Barnard, Floy.....	Johnstown, Colo.
Barnett, Myrtle.....	2002 Ave. A., Council Bluffs, Iowa
Barnhardt, Ethel Ellen.....	Erie, Colo.
Barrick, Helen.....	615 N. 23rd, St., St. Joseph, Mo.
Barry, Helen Ann.....	Horton, Kans.
Bartley, Daisy.....	Council Bluffs, Iowa
Bashford, Fannie.....	Haigler, Nebr.
Bashor, Esta M.....	Lyons, Colo.
Basquin, Viola.....	Laird, Colo.
Bass, Vesper.....	Greeley, Colo.
Bate, Helen L.....	642 Grant, Denver, Colo.
Batschelet, Ethel.....	Greeley, Colo.
Batschelet, Olive.....	Panora, Iowa
Baxter, Elizabeth.....	Trinidad, Colo.
Baxter, Isabella.....	Trinidad, Colo.
Beals, Mildred.....	1408 S. Acoma, Denver, Colo.
Beamer, Clara.....	Hurley, Idaho
Beattie, Annie.....	3906 Holland, Dallas, Texas

Beattie, J. F.	724 N. 4th, Montrose,	Colo.
Beattie, Alva	Atchison,	Kans.
Bechtolt, Nora	Nunn,	Colo.
Becker, Elizabeth	Eaton,	Colo.
Becker, Lillie C.	956 Santa Fe, Denver,	Colo.
Been, Ruth	1117 11th Ave., Greeley,	Colo.
Been, Mattie T.	Brandon,	Colo.
Beer, Luella	Arlington,	Colo.
Behm, Mrs. Ethel	Creede,	Colo.
Bejach, Maurice D.	Colorado Springs,	Colo.
Bejach, Mrs. Maurice D.	Colorado Springs,	Colo.
Bell, Erie	Topeka,	Kans.
Bell, Florence	Nevada,	Iowa
Bell, Jane	Nevada,	Iowa
Bell, Gannet	Strong,	Colo.
Bell, Ruby	Walsenburg,	Colo.
Bell, Vela	San Marcos,	Texas
Bench, Ruth	1339 Cartaret, Pueblo,	Colo.
Bent, Laura	Berwind,	Colo.
Bennett, Leo H.	Clinton,	Okla.
Bennett, T. Ralph	Dolores,	Colo.
Benson, Philomene	Greeley,	Colo.
Bentley, Iva	Republic,	Kans.
Bentley, Stella M.	428 W. Orman, Pueblo,	Colo.
Bentert, Alma	Leadville,	Colo.
Berg, Geortia A.	Ordway,	Colo.
Berkovitz, Rose	1214 Pine, Pueblo,	Colo.
Bekerner, W. C.	Yuma,	Colo.
Berninger, Marie E.	Delta,	Colo.
Berry, Georgia Mrs.	Vinita,	Okla.
Biebush, Beatrice	Greeley,	Colo.
Biebush, F. Calvin	Greeley,	Colo.
Bishop, Bernice	Golden,	Colo.
Bishop, Ida Flo	Greeley,	Colo.
Bruce, Hilna B.	Clear Creek,	Colo.
Blackler, Ronald C.	1045 Lincoln, Denver,	Colo.
Blair, Florence	R. 2, Greeley,	Colo.
Blair, Mary E.	Cripple Creek,	Colo.
Blair, Mildred E.	Greeley,	Colo.
Blair, Pauline	Eads,	Colo.
Bliss, Lillian	Greeley,	Colo.
Bloomberg, Jennie	Leadville,	Colo.
Bloomberg, Helen	Leadville,	Colo.
Bond, May	Sherman,	Texas
Boge, Mabel E.	Denver,	Colo.
Bond, Myrtle	Edgewater,	Colo.
Booco, Irene	Steamboat Springs,	Colo.
Booth, Eva L.	Wallingford,	Conn.
Bovee, Mabel	Sugar City,	Colo.
Boone, Esther	Pagosa Springs,	Colo.
Boone, Mrs. S. H.	Pagosa Springs,	Colo.
Bosley, Bertha M.	Colorado Springs,	Colo.
Bourk, Ellen	Victor,	Colo.
Bowden, Helen	Grenola, Kansas	
Bowles, Bess J.	Rawlins, Wyo.	
Boyd, Evelyn	Eads,	Colo.
Boyd, Lucy	Ft. Worth, Texas	
Boyle, Carmen	1945 9th Ave., Greeley,	Colo.
Boyle, Frances A.	Trinidad,	Colo.
Boyer, Ruth	Greeley,	Colo.
Boyle, Helen T.	Trinidad,	Colo.
Boyer, Ruth	Greeley,	Colo.
Bradford, Scott M.	Woodrow, Wash.	
Brady, Mayme E.	Fort Lupton,	Colo.
Brandon, Elizabeth	Otis,	Colo.
Bramkamp, Ethel	3440 Madison, Denver,	Colo.
Brannan, Mertice	Central City,	Colo.
Branson, Daisy	Oak Creek,	Colo.
Brawley, Nelle	Ft. Morgan,	Colo.
Brehm, Dorothea	Wichita, Kansas	
Brehm, Matilda	Wichita, Kansas	
Briggs, Agnes	Greeley,	Colo.
Briggs, Elsie	Antioch, Calif.	
Briggs, Georgia	Wray,	Colo.
Brown, Ethel	Colorado Springs,	Colo.
Broadbent, Bettie L.	Burley, Idaho	
Broege, Orpha	Colorado Springs,	Colo.
Brown, Florence	New Raymer,	Colo.
Brown, Crosby L.	Colorado Springs,	Colo.
Brown, Julia M.	1829 Franklin, Denver,	Colo.
Brown, Nora	Inland, Nebr.	
Bruce, Helen	Paonia,	Colo.
Brown, Mrs. T. S.	Kearney, Mo.	

Brubaker, Evelyn A.	Denver, Colo.
Bruckner, Grace	1419 7th Ave., Greeley, Colo.
Brunstein, John C.	R. 2, Greeley, Colo.
Bryant, Marguerite	Chocteau, Okla.
Brunelle, Valentine	Walsenburg, Colo.
Bryden, Helen	Carbondale, Illinois
Bryson, Elizabeth	Louisiana, Mo.
Buck, Emily	1221 18th, Greeley, Colo.
Bugler, Anne M.	Baxter Springs, Kans.
Buchanan, Bernice	Simla, Colo.
Buchanan, Sue W.	Fort Worth, Texas
Beechel, Edith E.	Wayne, Nebr.
Bulger, Katherine	Baxter Springs, Kans.
Bulger, Lillian	Baxter Springs, Kans.
Bullock, Annie	Dallas, Texas
Bunker, Minnie E.	Wild Horse, Colo.
Bunning, Emma	Leadville, Colo.
Burnham, Bessie	Redmesa, Colo.
Burchsted, Laura	Ft. Morgan, Colo.
Burton, Ada	Canon City, Colo.
Burton, Thelma	Wellfleet, Nebr.
Burgener, John C.	2303 Bluff St., Boulder, Colo.
Burke, Alice	Rocky Ford, Colo.
Burns, Edith	Flat River, Colo.
Burbridge, Edgar H.	Milliken, Colo.
Bushey, Clifford A.	Manzanola, Colo.
Cage, Mary L.	Greeley, Colo.
Caldwell, Ruth	1321 E. 9th, Pueblo, Colo.
Callison, Eldora	Denver, Colo.
Callarman, Eva	Stillwater, Okla.
Callaway, A. B.	Dodge City, Kans.
Calvin, Phoebe R.	Rock, Kans.
Calvin, Shirley	Winfield, Kans.
Camden, Cynthia	Platteville, Colo.
Campbell, Agnes	1531 9th Ave., Greeley, Colo.
Campbell, Clare	Sterling, Colo.
Campbell, Bertha	Rico, Colo.
Campbell, D. C.	Ft. Logan, Colo.
Campbell, Helen	R. 1, Pueblo, Colo.
Campbell, Marie	Marion, Illinois
Campbell, Martha	4408 23rd St., Omaha, Nebr.
Canfield, Mary	769 Lincoln, Denver, Colo.
Cannell, Mona	Colorado Springs, Colo.
Cannon, Brenda W.	1049 Corona, Denver, Colo.
Carnahan, Gladys	Las Animas, Colo.
Carney, Elizabeth	1845 11th Ave., Greeley, Colo.
Carr, Etta M.	Fowler, Colo.
Carrington, Myrtle	La Junta, Colo.
Carrington, Dimple	1153 Ogden, Denver, Colo.
Carson, Henrietta	Canon City, Colo.
Carter, Pearl	Goldfield, Colo.
Case, Bertha	Silverton, Colo.
Casey, Margaret L.	Osage, Iowa
Castleberry, Marie	2859 Champa, Denver, Colo.
Chambers, Elna	St. Joseph, Mo.
Chamberlin, Frances	Bisbee, Ariz.
Champlain, Laura	Greeley, Colo.
Champlain, Lucie V.	Greeley, Colo.
Chapman, Klyda	Buhl, Idaho
Charlesworth, Harry W.	Erie, Colo.
Chase, Mrs. Octavia	Denver, Colo.
Chatfield, Minnie	Clifton, Colo.
Chestnut, Rose	Clay Center, Kans.
Chesebro, Delta	658 Marine St., Boulder, Colo.
Christopher, Ruth	Holly, Colo.
Clark, Margaret	Englewood, Colo.
Clark, Jessie M.	Newton, Kan.
Clark, Myra L.	Greeley, Colo.
Clauson, Walborg	1925 10th Ave., Greeley, Colo.
Clay, Millie A.	Cheyenne, Wyo.
Cleverdon, Elsie L.	Rocky Rover, Ohio
Clouse, Grace	3605 Dickason, Dallas, Texas.
Coates, Mrs. Susie M.	2936 E. Elati, Denver, Colo.
Cotney, Grace	712 W. 11th, Pueblo, Colo.
Cochran, Ethel	Cincinnati, Ohio
Cochran, Mabel	1515 11th, Greeley, Colo.
Cochran, L. Grace	1515 11th, Greeley, Colo.
Coffel, Mabel	Fort Collins, Colo.
Coffman, Anna	Trotwood, Ohio.
Coffman, Martha A.	Trotwood, Ohio.
Coffman, Margaret	Idaho Springs, Colo.
Cohen, Lillian	Guffey, Colo.

Cohn, Ida.....	2210 Court Place, Denver, Colo.
Coleman, Jessie H.....	Oskaaloosa, Iowa.
Coler, Edith.....	Fort Collins, Colo.
Coleman, Mrs. Rose F.....	2345 N. 60th Ave., Omaha, Neb.
Coleman, Vi Belle.....	Dallas, Texas.
Collins, Gretta.....	Belleville, Kansas.
Collins, Nannie.....	Vinita, Okla.
Cologne, Rose.....	Rockvale, Colo.
Comin, Mary.....	1608 11th Ave., Greeley, Colo.
Connallay, Margaret.....	Greeley, Colo.
Conway, Agnes.....	Wichita, Kan.
Consuy, Hero L.....	1630 Jackson, Denver, Colo.
Connell, Mary V.....	R. F. D. Box 146, Aurora, Colo.
Converse, Carrie.....	Mitchell, Neb.
Cook, Mary Frances.....	Maranna, Ark.
Cooper, Betty.....	14 S. Weber, Colorado Springs, Colo.
Cooper, Margaret.....	14 S. Weber, Colorado Springs, Colo.
Cooper, Martha.....	Sumner, Ill.
Cordell, Thyra.....	409 Broadway, Van Buren, Ark.
Cornett, Winifred D.....	Tioga, Colo.
Cornwall, Lillian.....	Aspen, Colo.
Cornwell, W. F.....	Monte Vista, Colo.
Cornwell, Hope.....	Monte Vista, Colo.
Corliss, Grace.....	St. James, Minn.
Coulson, Clara G.....	1811 Walnut, Boulder, Colo.
Coulson, Paul E.....	1811 Walnut, Boulder, Colo.
Coney, Edna.....	624 Tillotson, Trinidad, Colo.
Courtwright, Elvessa.....	Colorado Springs, Colo.
Courtwright, Gertrude.....	Colorado Springs, Colo.
Cowles, Verena.....	Chivington, Colo.
Cox, Cora E.....	Foley, Mo.
Cox, Ora.....	Bushnell, Ill.
Cox, Susan.....	Rocky Ford, Colo.
Crangle, Beulah.....	Sedalia, Colo.
Craig, Lulu S.....	Manzanola, Colo.
Cribbs, Agnes.....	Clear Creek, Colo.
Croft, Geraldine.....	Greeley, Colo.
Cramer, Caryl.....	Loveland, Colo.
Craig, Dorothy.....	Elwood, Neb.
Crangle, Agnes.....	Butte, Mont.
Crawford, Pearl.....	Choteau, Okla.
Cresto, Louise.....	Rockvale, Colo.
Cribbis, Marie.....	Clear Creek, Colo.
Crocomb, Aimee.....	Leadville, Colo.
Croft, Blanche Trix.....	Eads, Colo.
Croft, Bernice.....	506 11th Ave., Greeley, Colo.
Cronin, Sister Sebastian.....	Canon City, Colo.
Culp, Margaret.....	Alton, Mo.
Cummings, Catherine.....	Pueblo, Colo.
Currence, Bertha Edith.....	Marion, Kan.
Curtis, Bessie.....	2230 Grand, Pueblo, Colo.
Davis, Charlotte.....	Wiley, Colo.
Dake, Sadie.....	Greeley, Colo.
Daigh, Winnie A.....	Oklahoma City, Okla.
Dail, Edna.....	Cherokee, Okla.
Dailley, Grace.....	1123 Sherman, Denver, Colo.
Dalbey, Hazel.....	Jewell, Iowa.
Dalby, Muriel.....	Ordway, Colo.
Dalin, Judith H.....	Rockford, Ill.
Damm, Nettie.....	Fort Morgan, Colo.
Daniel, T. L.....	Camden, Ark.
Daniel, Mrs. T. L.....	Stephens, Ark.
Darville, Allene.....	Hiawatha, Kan.
Davis, Elizabeth.....	Greeley, Colo.
Davis, Alice F.....	Hiawatha, Kan.
Davis, Anna.....	Dawson, N. M.
Davis, Ila.....	Nowats, Okla.
Davis, Mrs. Lulu E.....	Rockford, Ill.
Davis, Verna B.....	Alamosa, Colo.
Davis, Willie M.....	La Junta, Colo.
Davis, Wilma C.....	526 W. 1st, Chanute, Kan.
Dawson, Cordye.....	Box 67, Windom, Texas.
Dedman, Claude V.....	El Paso, Texas.
DeLay, Anna.....	Grand Junction, Colo.
Delahanty, Katherin.....	Lawton, Okla.
Delehanty, Mary.....	Lawton, Okla.
Dempewolf, Mary.....	Greeley, Colo.
Danning, Jessie.....	Manzanola, Colo.
Devine, Isabelle.....	Divide, Colo.
DeVeyra, Fortunato.....	Alavgalang, Leyte, Philippines.
Dewey, Helen Antionette.....	Grand Junction, Colo.
Dickason, Stella.....	Greeley, Colo.

Dickerson, Ethel	Bald Mountain, Colo.
Diggs, Carrie Mae	Childress, Texas.
Dillon, Sara	Greeley, Colo.
Dickerson, Elizabeth	Evans, Colo.
Diggs, Charles A.	Ainsworth, Neb.
Diggs, Donald	Childress, Texas
Dinsmore, Naomi	Pueblo, Colo.
Ditcher, Laura B.	Indianola, Neb.
Divillriss, Edith	Farmer City, Ill.
Doane, Florence E.	Osborne, Kan.
Doane, Vera V.	Osborne, Kan.
Dodson, Katherine	Montrose, Colo.
Doerr, Lulu	Marion, Ill.
Dolph, Alta H.	Greeley, Colo.
Dorsey, Nelly L.	404 N. Market, Wichita, Kan.
Dougherty, Lennie	Sapulpa, Okla.
Douglass, Sherman	Hillrose, Colo.
Doull, Frances	4154 Umatilla St., Denver, Colo.
Drummond, Anna	Kersey, Colo.
Doyle, Eva	Eads, Colo.
Diff, Gersie	Winfield, Kan.
Duff, Lula	Oklahoma City, Okla.
Duke, Annie	Fort Worth, Texas.
Duke, Katherine	Fort Worth, Texas.
Dugan, Ethel	Louviers, Colo.
Dumas, Violet	Gilman, Colo.
Dunham, Ruth	La Junta, Colo.
Durkin, Marjorie	Leazer, Colo.
Dyer, Eunice	Smith Center, Kan.
Eagin, Ellen	Oklahoma City, Okla.
Eaton, Alice B.	1020 10th, Greeley, Colo.
East, Mrs. Margaret	Junction, Okla.
Easton, Gertrude	Tecumseh, Nebr.
Edwards, Hazel B.	Grover, Colo.
Eichenberger, Ruth	Pomona, Kans.
Eklund, Martha M.	Wray, Colo.
Elder, Ada	1884 S. Clarkson, Denver, Colo.
Ellenberger, Edith Claire	Bazine, Kans.
Ellenberger, Flora Lucile	Bazine, Kans.
Elkins, DyVena	Bon Carbo, Colo.
Elam, Mary	Greeley, Colo.
Elam, Ruth	Greeley, Colo.
Elam, Velma	Gables Apts., Greeley, Colo.
Elam, Mary	Akron, Colo.
Elliott, Eula	Alma, Nebr.
Elliott, Nellie	Lynnville, Iowa
Ely, Clara	Wagner, S. Dak.
Epler, Howard B.	Greeley, Colo.
Epplenly, Lulu	Tallula, Ill.
Epperson, Marie	Burr Oak, Kans.
Erickson, Agnes E.	St. Cloud, Minn.
Eubank, T. A.	Coats, Kans.
Evans, Mosella G.	Independence, Kans.
Evans, Myril Anne	Independence, Kans.
Evans, Pearl	Loveland, Colo.
Everett, Mary L.	Colorado Springs, Colo.
Eversman, Alice	Julesburg, Colo.
Eversman, Olga L.	Julesburg, Colo.
Ewing, Louise	St. Paul, Minn.
Ewers, Nellie A.	Raven, Colo.
Fairchild, Ethel M.	Claremore, Okla.
Faith, Elsie	578 S. Wash. Denver, Colo.
Fallon, Mrs. Florence	Cincinnati, Ohio
Farabee, Louise	Collierville, Tenn.
Farquhar, Carrie	615 18th, Greeley, Colo.
Farr, Lloyd Albert	913 11th Ave., Greeley, Colo.
Farr, Ruth	Greeley, Colo.
Fenton, Helen	940 Newport, Denver, Colo.
Fenton, Mrs. S. W.	940 Newport, Denver, Colo.
Ferguson, Mabel	Bened, Illinois
Ferguson, Mrs. Lillian H	Trinidad, Colo.
Fezer, Marion	Greeley, Colo.
Finch, Carolina A.	505 E. Boulder, Colorado Springs, Colo.
Finch, Ethel	505 E. Boulder, Colorado Springs, Colo.
Finley, Grace W.	Greeley, Colo.
Finn, Nora C.	4039 Vallejo St., Denver, Colo.
Finn, Jennie B.	Albuquerque, N. M.
Finney, Fern	Greeley, Colo.
Fisher, Bess M. Mrs.	Greeley, Colo.
Fisher, G. N.	1313 8th Ave., Greeley, Colo.
Fite, A. Grace	Benedict, Kans.

Fitch, Louise	Avon, Ohio
Fitzgibbon, Marguerite	1324 4th Ave., Oswego, Kans.
Fitzmorris, R. S.	LaPorte, Colo.
Fleming, Gertrude	Florence, Colo.
Fleming, Nelle	Florence, Colo.
Floyd, M. R.	Vinita, Okla.
Flynn, Ellen	Trinidad, Colo.
Flynn, Emma	Trinidad, Colo.
Foley, Mercedes	Durango, Colo.
Forbes, S. Earle	Cotopaxi, Colo.
Foresman, Grace R.	Canon City, Colo.
Forgette, Mary	Spalding, Nebr.
Forsyth, Winifred	1638 Ogden, Denver, Colo.
Force, Anna Laure	216 Sherman, Denver, Colo.
Fortner, Bertha Cora	Windsor, Illinois
Foster, Mrs. A. H.	Warrensburg, Mo.
Fraley, Ethel	Hereford, Colo.
Franchs, Amelia	Trinidad, Colo.
Fraser, Mildred	Central City, Colo.
Frazy, Irma	Walsenburg, Colo.
Friedman, Julia	1577 Fed. Blvd, Denver, Colo.
Frisbey, Helen	Trinidad, Colo.
Frisbey, Mabel	Trinidad, Colo.
Frederickson, Otto F.	Allen, Kans.
Freeborn, H. J.	926 Beech, Wahoo, Nebr.
Fritz, Lulu	Whiting, Kans.
Frye, Elizabeth	Miltonvale, Kans.
Fryklund, Verne C.	1531 9th Ave., Greeley, Colo.
Fuller, Mary A.	191 S. Logan, Denver, Colo.
Fugate, Mrs. Emma	R. 2. Greeley, Colo.
Fuller, Mrs. Hattie	Mead, Colo.
Fuller, Hazel	3073 W. 38th Ave., Denver, Colo.
Fuller, Genevieve	820 Raton, La Junta, Colo.
Gabriel, Maude	Loveland, Colo.
Gammill, Mrs. F. L.	Mead, Colo.
Gammill, F. L.	Mead, Colo.
Garber, Verna B.	1331 Colo. Ave., Colorado Springs, Colo.
Garnett, Ora W.	Akron, Colo.
Garrison, Lulu	Boone, Iowa
Garrity, Margaret	Box 192, Lafayette, Colo.
Gentry, Ora	Lawton, Oklahoma
Gibson, Mary	Olney Springs, Colo.
Gill, Vivian G.	Atwood, Colo.
Gillespie, Hazel	Aroya, Colo.
Gillespie, Lillie	St. Francis, Kans.
Gillett, Gloy J.	Padroni, Colo.
Gilliam, Ellen	E. 10th St., Chandler, Okla.
Gillis, May E.	1266 Logan, Denver, Colo.
Gilmer, Juliette	1106 W. 14th, Oklahoma City, Okla.
Gilmore, Gladys	201 S. Lincoln, Denver, Colo.
Gish, Orletha	Eads, Colo.
Gieseking, Ruth	Fleming, Colo.
Glafcke, Catherine	1544 9th Ave., Greeley, Colo.
Glase, Glase	La Junta, Colo.
Gleason, Belle	1630 8th Ave., Greeley, Colo.
Gleason, May	2905 Holmes, Dallas, Texas
Glenn, Mary	Spalding, Nebr.
Glover, Nancy	R. 4. Greeley, Colo.
Gongoll, Ida	Lamberton, Minn.
Goodpasture, Lola	Trinidad, Colo.
Good, Clairra Anne	Wray, Colo.
Goodrow, Emeline	825 Mich. Ave., Evanston, Ill.
Gorman, Norton V.	Golden, Colo.
Gordon, Grace	130 W. Abriendo Ave., Pueblo, Colo.
Goss, Bernice, A.	910 11th, Greeley, Colo.
Gothard, Zina	Fountain, Colo.
Graham, Glenes	York, Nebr.
Graham, Alpha	Vinita, Okla.
Graham, Edna	Loveland, Colo.
Graham, Lulu	Pueblo, Colo.
Graban, Herbert A.	Boone, Iowa
Green, Dorothy	Crowley, Colo.
Gray, Mrs. Ethel H.	Twin Falls, Idaho
Green, Mary G. H.	2881 Ogden, Denver, Colo.
Green, Lucile	1933 8th Ave., Greeley, Colo.
Green, Pauline	1933 8th Ave., Greeley, Colo.
Green, Wm. M.	Ft. Worth, Texas
Greenamyre, Kathryn	1129 11th, Greeley, Colo.
Greer, Mrs. Anna	1015 17th, Greeley, Colo.
Gregory, Lola A.	Longmont, Colo.
Griffin, Helen	Carr, Colo.
Griffing, S. Elizabeth	Fort Morgan, Colo.



Griffith, Luey.....	Arvada, Colo.
Groves, Edna G.....	Ft. Morgan, Colo.
Guanella, Clementine.....	Council Bluffs, Iowa
Guenze, Josephine.....	Sterling, Colo.
Guenzi, Julia.....	Sterling, Colo.
Gump, Edith.....	Garden City, Kans.
Hall, Grace E.....	Pender, Nebr.
Hall, Luella A.....	Colorado Springs, Colo.
Hamblen, Maude.....	Manassa, Colo.
Hamilton, Catherine.....	2309 Ash, Denver, Colo.
Hamilton, Gertrude.....	2089 S. Pearl, Denver, Colo.
Hammock, Katherine C.....	Oklahoma City, Okla.
Hammond, Ella.....	Ft. Morgan, Colo.
Hand, Effie M.....	Clay Center, Kans.
Haney, Mary Reva.....	Flat River, Mo.
Hanna, Winifred.....	515 N. Center, Mankato, Kans.
Hanigan, Bess.....	Dunlap, Iowa
Handy, Gladys.....	1629 12th Ave., Greeley, Colo.
Hannigan, Jennette.....	Dunlap, Iowa
Hans, Nellie.....	Great Bend, Kans.
Hansen, Bessie.....	Bunceton, Mo.
Hanson, Capitola.....	Momence, Illinois
Hanson, Viola.....	Arvada, Colo.
Harbottle, Mrs. Florence E.....	1029 5th, Greeley, Colo.
Harrington, Abbie.....	La Salle, Colo.
Harrington, Marjorie.....	Butte, Mont.
Harrison, Clara A.....	Checotah, Okla.
Harris, Beth.....	Carbondale, Colo.
Hart, Ida M.....	Golden, Colo.
Hardy, Grace L.....	Tioga, Texas
Hardy, Joe E.....	Tioga, Texas
Hargrove, Louise.....	3036 W. 22, Denver, Colo.
Harman, Claude N.....	3540 College Ave., Kansas City, Mo.
Harmer, Mrs. Blanche.....	1408 9th St., Greeley, Colo.
Haslett, Grace.....	Paonia, Colo.
Haverty, Dorothy.....	814 W. 11th, Pueblo, Colo.
Haverty, Stell.....	814 W. 11th, Pueblo, Colo.
Hawes, Mabel O.....	Cheyenne, Wyo.
Hawkins, Olive.....	Box 789, Butte, Mont.
Hawthorne, Bessie Melville.....	378 Broadway, Denver, Colo.
Hayes, Florence.....	Santa Anna, Texas
Hay, Geo. A. F.....	Junction City, Kans.
Hay, Mary L.....	Junction City, Kans.
Hayes, Dorothy Mildred.....	Windsor, Colo.
Hayes, John I.....	Kansas City, Mo.
Haynes, Kate Miss.....	Wichita Falls, Texas
Haworth, Nelle.....	1219 Berkeley, Pueblo, Colo.
Hazlet, Ida.....	Hudson, Colo.
Hazlet, Mary.....	Hudson, Colo.
Herfurth, Alma.....	1146 N. Main, Fremont, Nebr.
Head, Pearl.....	Trinidad, Colo.
Heilman, Clara.....	Ault, Colo.
Heglund, Agnes.....	Lindsborg, Kans.
Heist, Rosa C.....	Sterling, Colo.
Hemphill, F. C.....	1118 10th St., Greeley, Colo.
Henderson, M. Ruth.....	Ordway, Colo.
Herndon, Marie.....	Maxey, Colo.
Herzog, Josephine.....	Fort Morgan, Colo.
Hetherington, Lucile.....	Beatrice, Nebr.
Hiatt, A. S.....	Chandler, Okla.
Hiatt, Irene.....	Lamar, Colo.
Higbee, Esther.....	Simla, Colo.
Higginbottom, Minnie B.....	Ordway, Colo.
Hill, Vera.....	Timnath, Colo.
Hininger, Blanche.....	Blythedale, Mo.
Hitt, Eva B.....	928 15th, Greeley, Colo.
Hickerson, Stella.....	Bunceton, Mo.
Hoag, Ruth.....	Lamar, Colo.
Hobbs, Anna.....	Frederick, Colo.
Hogue, Juanita S.....	Box 225, Paris, Texas
Hogue, Myrtle.....	Kansas City, Mo.
Holahan, Josephine.....	Colorado Springs, Colo.
Holcomb, Beulan.....	Rosewell, N. M.
Hollister, Evaline.....	Leadville, Colo.
Holmes, Ethel E.....	2610 S. Sherman, Denver, Colo.
Holson, Helen Harriet.....	Swallows, Colo.
Holmes, Clara.....	Miles City, Mont.
Holmes, Madge.....	Fleming, Colo.
Holmes, Mossie.....	1138 Clarkson, Denver, Colo.
Holton, Alice.....	Helena, Okla.
Hood, Mary Ethel.....	Dallas, Texas
Horn, Cora.....	Akron, Colo.

Holtzendorff, Katherine.....	Oklahoma City, Okla.
Hopper, Helen.....	Carbondale, Colo.
Hornberger, E. H.....	Clinton, Colo.
Howard, Edna E.....	Ft. Collins, Colo.
Howard, Edith H.....	Breckenridge, Colo.
Howarth, Marian.....	1536 8th Ave., Greeley, Colo.
Howarth, Ralph.....	1536 8th Ave., Greeley, Colo.
Huck, Kathryn.....	Littleton, Colo.
Hukill, Edna Eula.....	Valley Falls, Kans.
Hulbert, Marion.....	Otis, Colo.
Hueser, Okga.....	Oskaloosa, Iowa
Hughston, Carrie.....	Plano, Texas
Huiatt, Rose.....	Las Animas, Colo.
Hunt, Raymon H.....	911 10th Ave., Greeley, Colo.
Hunt, Ella Adeline.....	411 North St., Boulder, Colo.
Hurd, Mrs. Oakie.....	Canon City, Colo.
Huffman, Alta.....	Wyoming, Iowa
Inman, Katherine.....	2323 Marion, Denver, Colo.
Irwin, Beulah.....	Rosebud, Texas
Iubatti, Minnie.....	Canon City, Colo.
Ives, Blanche.....	Tilden, Nebr.
Jackson, Bertha.....	Fort Worth, Texas
Jacobs, Gertrude.....	Trinidad, Colo.
James, Lena W.....	McLeansboro, Illinois
Jameson, Mrs. Dora C.....	1547 S. Sherman, Denver, Colo.
Jandos, Chas.....	Kanopolis, Kans.
Jennings, Winifred.....	Lincoln, Kans.
Jensen, Flora.....	Flagstaff, Ariz.
Jansson, Helen.....	15 Camfield Ct., Greeley, Colo.
Job, Celia.....	Rockvale, Colo.
John, Helma.....	Florence, Colo.
Johnson, Everet.....	Checotah, Okla.
Johnson, Bevie T.....	Greeley, Colo.
Joiner, Elizabeth.....	Sterling, Illinois
Johnson, Frances.....	Meeker, Colo.
Johnson, Irene.....	Loveland, Colo.
Johnson, Julia.....	Richland, Iowa
Johnson, Dorothy.....	1315 12th St., Greeley, Colo.
Johnson, Addie.....	Durango, Colo.
Johnson, Faye.....	1607 8th Ave., Greeley, Colo.
Johnson, Ruth B.....	Fort Morgan, Colo.
Johnson, Anna M.....	3340 Hayward, Denver, Colo.
Johnston, Blanche.....	Flagler, Colo.
Johnston, Laura.....	Alliance, Nebr.
Johnston, Maude Chapman.....	367 S. Ogden, Denver, Colo.
Johnston, Anna B.....	Meade, Kans.
Jones, Bea.....	Goldfield, Colo.
Jones, Bessie E.....	Delta, Colo.
Jones, Carl M.....	1222 7th Ave., Greeley, Colo.
Jones, Cora Belle.....	Emporia, Kans.
Jones, Carrie F.....	Stillwater, Okla.
Jones, Edna.....	Colorado Springs, Colo.
Jones, James R.....	Evans, Colo.
Jones, Mrs. Mollie.....	Evans, Colo.
Jones, Mildred.....	Idaho Springs, Colo.
Jones, Ruby.....	Ferron, Utah
Judd, Effa E.....	Manzanola, Colo.
Judy, Stella Mabel.....	Summer, Illinois
Joy, Violette.....	Meeker, Colo.
Jones, Esther E.....	925 13th St., Denver, Colo.
Johnson, Anna.....	1310 Welton, Denver, Colo.
Kane, Claude A.....	Glade, Kans.
Kane, Ellen H.....	3649 Lafayette, Denver, Colo.
Kaser, Olive M.....	Britton, Okla.
Kavich, Ruby.....	Fremont, Nebr.
Kenna, E. E.....	Hugo, Colo.
Kelley, Agnes D.....	O'Neill, Nebr.
Kellerman, Violet.....	Delta, Colo.
Kendrick, Edith.....	Florence, Colo.
Kennedy, Clara.....	Trenton, Mo.
Kennedy, Florence M.....	Des Moines, Iowa
Kennedy, Pearl.....	Greeley, Colo.
Kenny, Thomas F.....	Greeley, Colo.
Kenton, Lois.....	La Jara, Colo.
Kessler, F. C.....	Knob Lick, Mo.
Keyes, Margaret J.....	Greeley, Colo.
Keyser, Edna.....	Wilson, Kans.
Keyser, Helen.....	Wilson, Kans.
Kimbrel, Pearl L.....	1011 10th Ave., Greeley, Colo.
Kiker, Stella.....	Raton, N. M.

Kincaid, Laure	La Veta	Colo.
Kincaid, Frances	Lyons	Colo.
Kindred, Mrs. L. B.	Chivington	Colo.
Kinny, Jennie	Roswell	N. M.
Kinsey, Dorothy	Portsmouth	Ohio
Kirby, Hildred E.	2312 E. 37th Ave.	Denver, Colo.
Kirkley, Bertha	Huntsville	Texas
Klein, Carolyn	1127 Lipan	Denver, Colo.
Klein, Katherine	La Junta	Colo.
Kleinknecht, Elsie	Hartzel	Colo.
Kleinknecht, Emily	Hartzel	Colo.
Knecht, Amanda	3403 Raleigh	Denver, Colo.
Knies, W. L.	Flagler	Colo.
Knight, E. J.	Girard	Kans.
Knoll, Julia	Delta	Colo.
Knowles, Robert R.	Sterling	Colo.
Koogle, Rose Mae	2243 Lafayette	Denver, Colo.
Kruh, Sara	Collbran	Colo.
Kuceve, Emilia B.	R. 4, Shawnee	Okla.
Kresdy, Hattie	Minneapolis	Kans.
Kullgren, Hazel	3435 Shoshone	Denver, Colo.
Kussart, Jeanette	1229 12th St.	Greeley, Colo.
Kyle, Johns E.	Evans	Colo.
Kyle, Margaret	Tarkio	Mo.
Kyle, Veda	Evans	Colo.
Kyler, Lela	1544 10th Ave.	Greeley, Colo.
Kyner, Marguerite	Georgetown	Colo.
Lago, Louise	Fort Collins	Colo.
Lamb, Grace	Larkspur	Colo.
Lamb, Josephine	Livermore	Colo.
Lappin, Georgia	Pueblo	Colo.
Larson, Agnes Caroline	Starkville	Colo.
Larson, Mildred M.	Grover	Colo.
Latta, Kathryn	Washington	Iowa
Lauck, Gertrude	Box 55, Hudson	Colo.
Lauer, Mabel D.	Buckingham	Colo.
Lambright, Julette	Nowata	Okla.
Lawlor, Margaret	2447 W. 43rd St.	Denver, Colo.
Lawrence, Carl E.	Greeley	Colo.
Lawson, Faith M.	La Junta	Colo.
Leavenworth, Helen	Kansas City	Mo.
Leeling, Ida M.	311 Inca	Denver, Colo.
Leise, May	122 Curtis	Brush, Colo.
Lemley, Iva G.	Simla	Colo.
Lepel, Charlotte	Vilas	Colo.
Lettey, Yvonne	Basalt	Colo.
Lewis, Anna E.	Hiawatha	Kans.
Lewis, Jane	Florence	Colo.
Lewis, Gertrude E.	Box 321, Ryan	Okla.
Lewis, Mrs. Ivy V.	1124 8th St.	Greeley, Colo.
Lillihidge, Cynghia	Elk City	Kans.
Lind, Jennie	Stromsburg	Nebr.
Link, Isa	Glenwood Springs	Colo.
Lloyd, Marie	Box 14 Hugo	Colo.
Lipprant, Josie	Liberal	Kans.
Lipschitz, Gertrude	Leshara	Nebr.
Lisemby, Frankie	Kansas City	Kans.
Lisenby, Ruby H.	Colorado Springs	Colo.
Litch, Clara R.	Sterling	Colo.
Litchquid, Frances	Telluride	Colo.
Lobdell, Mrs. G. F.	Greeley	Colo.
Lockard, Ethel	St. Frances	Kans.
Logan, Helen	Canon City	Kans.
Longan, Anna	1820 Lafayette	Denver, Colo.
Looney, Ethel	Vinita	Okla.
Longheed, Grace	La Veta	Colo.
Longheed, Lila	a La Veta	Colo.
Love, Mrs. R. H.	Mead	Colo.
Love, Jessie Geraldine	Raton	N. M.
Lowell, Josephine M.	Sedalia	Colo.
Lucke, Esther	Haxtun	Colo.
Lulow, Roy V.	Stambaugh	Mich.
Lynn, Louise	Checotah	Okla.
Lyon, Fern	Grinola	Kans.
Lyon, Mabel	Canon City	Colo.
Lyons, Mildred	Greeley	Colo.
Lyden, Katherine	211 N. Idaho	Butte, Mont.
Lakin, Irene	Pueblo	Colo.
Mair, Eve Joyce	Antonito	Colo.
Maes, Alice	Trinidad	Colo.
Mack, Lois	Greeley	Colo.

Madarasz, Irma	701 Marion, Denver, Colo.
Maes, Alice	Trinidad, Colo.
Mahuron, I. D.	Trinidad, Colo.
Malins, Edith S.	1467 Fillmore, Denver, Colo.
Manlove, Esther	Canon City, Colo.
Marker, Dewey N.	La Veta, Colo.
Marshall, Harding	Wallingford, Kentucky
Martin, Alice	1414 11th Ave. Greeley, Colo.
Martin, Bula	Greeley, Colo.
Martin, Celeste May	Allison, Colo.
Martin, Emma	Monte Vista, Colo.
Martin, James Taylor	Weatherford, Okla.
Martin, Nellie	1414 11th Ave., Greeley, Colo.
Martin, Mrs. Jessie	Hollenberg, Kans.
Martz, Mrs. A. J.	3112 Marion, Denver, Colo.
Martz, A. J.	Byers, Colo.
Mason, Blanche	Greeley, Colo.
Matheny, Willa	Chandler, Okla.
Matthews, Mary	2705 Tennyson, Denver, Colo.
Matthews, Ruth	R. 3 La Junta, Colo.
Matkin, Patricia Ann	Flat River, Mo.
Matson, Irene A.	315 13th Ave., Greeley, Colo.
Matson, Edna A.	315 13th Ave. Greeley, Colo.
Mattson, Hulda	R. 2 Inman, Kans.
Mayberry, Marie	Henderson, Colo.
Mayer, Lena	1530 10th Ave., Greeley, Colo.
Meacham, Rena G.	Salida, Colo.
Meacham, Ruth	Salida, Colo.
Means, Anna A.	Bennett, Colo.
Menciman, Lida M.	Golden, Colo.
Meneely, Emma	Oklahoma City, Colo.
Meng, Marla	Keensburg, Colo.
Mercer, Nellie	Marion, Illinois
Maramara, Jaunita	Cebyceby, Philippines
Marshall, Luzena	Liberty, Kans.
Mayer, Lena	Greeley, Colo.
Merchant, Mallot Pauline	Delta, Colo.
Merry, Lucy J.	Manitou, Colo.
Meyera, Fawn E.	Durango, Colo.
Metz, Margaret	Larimer, Colo.
Miars, Mabel	Forsyth, Mont.
Miner, Zada E.	Jackson, Mich.
Mickelson, Hilga	Omaha, Nebr.
Mitchell, Helen E.	Wellington, Colo.
Miller, Clara	Sanford, Colo.
Miller, Gladys	Sterling, Colo.
Miller, J. Wesley	Haxtun, Colo.
Miller, Katharine	Box 287 La Junta, Colo.
Milley, Harriet M.	Junction City, Kans.
Mills, Emma Gard	Hydro, Okla.
Milligan, Bertha	1354 W. Cedar, Denver Colo.
Mitchell, Suirilla	Idaho Springs, Colo.
Monaghan, Alice	Box 34, Rifle, Colo.
Montgomery, Minnie	Elwood, Nebr.
Montgomery, Olive	Clifton, Ariz.
Moon, Addie E.	Golden, Colo.
Moore, Hazel	Boonville, Mo.
Moore, Jean	391 Stuart, Denver, Colo.
Moore, Lorena F.	Curtis, Nebr.
Moore, Milton H.	1015 Jennings, Ft. Worth, Texas
Moorman, Ruth A.	Smith Center, Kans.
Moreland, Zelma	Simla, Colo.
Morgan, Ida	Monticello, Kentucky
Morse, Bernice	Greeley, Colo.
Morrish, Mary	Oberlin, Kans.
Morrow, Margaret	Colorado Springs, Colo.
Moseley, Nancy	4903 Bryan, Dallas, Texas
Moser, Ruth	Hiawatha, Kans.
Mott, Hope	Ottawa, Kans.
Mount, Leila	La Jara, Colo.
Morris, Herbert	1213 14th, Greeley, Colo.
Money, Mrs. C. E.	La Junta, Colo.
Murphy, Eva	447 S. Orange, Havana, Illinois
Murphy, Maude Louise	Callaway, Nebr.
Murphy, Hazel	Horton, Kans.
Muerman, Ethel A.	1620 9th Ave., Greeley, Colo.
Mulligan, Mary	3739 Lafayette, Denver, Colo.
Musser, Marie	1401 10th, Greeley, Colo.
Myers, Mada B.	Mankato, Kans.
Myers, Mrs. Marye N.	1629 7th Ave., Greeley, Colo.
Macfarlane, Anna May	Coalmont, Colo.
McBeen, Katherine	Minturn, Colo.
McCleany, Ruth	Mesita, Colo.

McCarty, Edna M.	Washington,	Iowa
McCarty, Anna	1744 8th Ave.,	Greeley, Colo.
McCarty, Margaret	Hannibal,	Mo.
McClelland, A. J.	1211 15th St.,	Greeley, Colo.
McClelland, Ralph	1121 15th St.,	Greeley, Colo.
McClure, Helen	Fowler,	Colo.
McClure, Ruth	Fowler,	Colo.
McCollum, Edith	Evans,	Colo.
McConnell, Mrs. Clara	Greeley,	Colo.
McConnell, Elvis R.	Stratton,	Colo.
McCorkle, Dee	Greeley,	Colo.
McCoy, Mae	Yuma,	Colo.
McCullough, Jack	St. Francis,	Ark.
McCullough, Jay W.	Atlanta,	Georgia
McCutchan, Ella B.	Tulsa,	Okla.
McCutchan, Mary	1106 S. Main,	Tulsa, Okla.
McDermott, Irene	Central City,	Nebr.
McDermott, Rose A.	3749 Lafayette,	Denver, Colo.
McFadden, Tena	1049 Corona,	Denver, Colo.
McGuirk, Mary	Glenwood Springs,	Colo.
McGinnis, Roxie E.	Kearney,	Mo.
McGovern, Margaret	530 E. 19th Ave.,	Denver, Colo.
McGovern, Mary	1535 Penn.	Denver, Colo.
McIlvaney, May	Canon City,	Colo.
McIntyre, Georgia	Magnolia,	Ark.
McKee, Daisy E.	Horton,	Kans.
McMahon, Ina	Basalt,	Colo.
McKnight, Elizabeth	Quincy,	Illinois
McLane, Lucy	Greeley,	Colo.
McLaughlin, Maude	1015 E. Central,	Wichita, Kans.
McLean, Syble	Pierce,	Colo.
McMilan, Marion	Durango,	Colo.
McNair, Madge	Boulder,	Colo.
McNutt, Katie	Hobart,	Okla.
McNutt, Sarah A.	Mayher Apt. 1,	Greeley, Colo.
McPhillips, Myrtle	Longmont,	Colo.
McNair, Madge	2033 11th.,	Boulder, Colo.
McNew, Dorothy	1203 11th,	Greeley, Colo.
McQuillan, Kathryn	Lincoln,	Kans.
McVey, Alpha	Hill City,	Kans.
McVey, Mrs. Nina	Fort Lupton,	Colo.
McVey, J. P.	Adena,	Colo.
McVey, P. L.	Fort Lupton,	Colo.
Naffziger, Ruby B.	1008 9th Ave.,	Greeley, Colo.
Nash, Mary	Trinidad,	Colo.
Nation, Ivy B.	Fremont,	Nebr.
Neal, Goldie S.	Chivington,	Colo.
Neal Paul	Chivington,	Colo.
Neal, D. Bryan	Sheridan Lake,	Colo.
Nelson, Nell	Howardsville,	Colo.
Nelson, Alma	Lawrence,	Kans.
Nelson, Lucy	Berthoud,	Colo.
Nelson, Rose	Greeley,	Colo.
Nesbit, Ora	Colorado Springs,	Colo.
Nitzehe, Augusta	Nucla,	Colo.
Newell, Vera B.	Ft. Madison,	Iowa
Newman, Stella	Haxtun,	Colo.
Newlon, Dasiy B.	Colony,	Kans.
Newson, Ada C.	Douglas,	Wyo.
Newton, Pearl E.	Garden City,	Kans.
Newton, Nelle	Garden City,	Kans.
Nichols, Irene	1055 Lincoln,	Denver, Colo.
Nichols, Mannie	Florence,	Colo.
Nichols, Pearl	Victor,	Colo.
Nicholson, Paul H.	Frederick,	Colo.
Nickers, Bessie	Garland,	Texas
Nieman, E. Lana	Nortonville,	Kans.
Nisley, F. N.	Grand Junction,	Colo.
Nix, Lily L.	Brush,	Colo.
Nordberg, Anges	Leadville,	Colo.
Norman, Mrs. Otto	Luther,	Okla.
Norris, Lena	1123 Sherman,	Denver, Colo.
Norris, L. G.	2790 W. 33rd Ave.,	Denver, Colo.
Nowles, Belle	Green City,	Mo.
Nowles, Mae	Green City,	Mo.
Nowles, Ethel	Green City,	Mo.
Nowlin, E. W.	Webster Grove,	Mo.
Neimeyer, Florence	3731 Alcott,	Denver, Colo.
Noble, Myrtle	Checotah,	Okla.
Norton, Effie	Salida,	Colo.

Odd, Gertrude.....	Sugar City, Colo.
Odell, Letitia R.....	2790 W. 33rd Ave., Denver, Colo.
O'Dell, Ida.....	Dallas, Texas
Oglesby, Bertha.....	Meeker, Colo.
Oglesby, Mary.....	Meeker, Colo.
Oliver, Vera.....	Raton, N. M.
Ohlson, Ilah B.....	Nelson, Nebr.
Omer, Margaret Mrs.....	Burr Oak, Kans.
O'Neal, Helen.....	Tarkio, Mo.
Orndorff, Marguerite.....	Indianapolis, Ind.
Orndorff, Bernice.....	Greeley, Colo.
Ostberg, Nina.....	Boyer, Colo.
O'Toole, Clara E.....	Denver, Colo.
Otterness, Ida C.....	Brookings, S. Dak.
Overfield, Dennies.....	Henderson, Ky.
Oversen, Leisa.....	1117 12th Ave., Greeley, Colo.
Owen, Vernice.....	Miami, Okla.
Owen, Jaunita.....	Merino, Colo.
Owens, Anna Mrs.....	Walsenburg, Colo.
Owens, Minnie Grace.....	Walsenburg, Colo.
Ordonez, David E.....	Greeley, Colo.
Pacheco, Josephine.....	San Luis, Colo.
Paine, Nemesia.....	650 Arapahoe, Boulder, Colo.
Palmquist, Amy.....	Lindsborg, Kans.
Parker, Augusta.....	Hutchens, Kans.
Parker, Virginia.....	Oak Creek, Colo.
Parks, Clara E.....	Plainview, Nebr.
Parr, Elizabeth.....	Dallas, Texas
Patterson, Lilla Bell.....	Steamboat Springs, Colo.
Parks, Grace.....	Greeley, Colo.
Payne, Sibyl.....	Longmont, Colo.
Peacock, Ella L.....	408 Broadway, Ft. Worth, Texas
Peak, Grace.....	Avon Lake, Ohio
Pearson, Godlie.....	Hugo, Colo.
Perkins, Josie.....	Newton, Kans.
Perkins, Catherine.....	801 E 1st. Newton, Kans.
Permenter, Addie.....	Antlers, Okla.
Permenter, Rhoda.....	Palmer, Texas
Perry, Abby.....	Salida, Colo.
Perry, Charles R.....	Model, Colo.
Peterson, Ruth.....	Leadville, Colo.
Pfeifer, Harriet.....	Chillicothe, Ohio
Pfost, Dempsey.....	Kit Carson, Colo.
Pfost, Grace Moreland.....	Kit Carson, Colo.
Phelps, Ruth M.....	Colorado Springs, Colo.
Philp, Selma.....	Grover, Colo.
Phippeny, Walter W.....	1517 10th Ave., Greeley, Colo.
Phippeny, Lucile.....	1517 10th Ave., Greeley, Colo.
Phippeny, G. O.....	1517 10th Ave., Greeley, Colo.
Platt, Ruth L.....	Box 64, Wellington, Colo.
Pickering, Ruth.....	Platte, Wyo.
Pierce, Jessie.....	Fort Collins, Colo.
Pilant, Cora Mae.....	Lester, Colo.
Pickett, Sylvia Jane.....	Platteville, Colo.
Piercy, Norma.....	Mt. Vernon, Illinois
Piner, Eula.....	300 W. Hickory, Denton, Texas
Pitman, Gladys.....	Box 184, Guyman, Okla.
Pitts, Mrs. Harry.....	Loveland, Colo.
Pitcher, Anna.....	580 Bender Ave., Spencer, Iowa
Plachard, Lellie.....	Ashtabula, Ohio
Pollock, Grace.....	Fowler, Colo.
Pollock, Rosater.....	Oklahoma City, Okla.
Poole, Gladys.....	Greeley, Colo.
Poole, Alice L.....	1232 Jefferson, Wichita, Kans.
Foole, Mabel E.....	Central City, Colo.
Porter, Mrs. Grace Park.....	Grover, Colo.
Porter, Ralph M.....	Grover, Colo.
Poser, Anna Mae.....	Cleveland, Ohio
Poston, Ella M.....	Edgewater, Colo.
Potochneick, Tracy.....	Victor, Colo.
Potts, Frances.....	Council Bluffs, Iowa
Pragst, Augusta.....	1841 6th Ave., Greeley, Colo.
Priddy, Mildred.....	Pierce, Colo.
Priest, Anna.....	Clifton, Ariz.
Fruehs, Clare.....	Greeley, Colo.
Puchett, Maude.....	Partridge, Kans.
Priffer, Roberta.....	Columbia, Maine
Pyle, Ola.....	Julesburg, Colo.
Pulford, Rosepha C.....	Durango, Colo.
Queen, Mary Pearl.....	1410 Grant, Denver, Colo.
Quinby, Grace E.....	Greeley, Colo.

Quinn, Ora Grace.....	Marysville, Mo.
Quinn, Mabelle.....	Cheyenne Wells, Colo.
Raeth, G. A.....	1409 15th Ave., Greeley, Colo.
Raichart, Leona.....	Delta, Colo.
Ralston, Elizabeth.....	Trinidad, Colo.
Rardin, Maybelle.....	Colorado Springs, Colo.
Ray, Nellie.....	Wiley, Colo.
Ray, Mrs. Bella.....	Manitou, Colo.
Ream, Mary L.....	Greeley, Colo.
Reed, Mattie.....	Fort Lupton, Colo.
Reed, Mrs. Pauline.....	Oklahoma City, Okla.
Reeves, Alberta.....	Garden City, Kans.
Reick, Ida, Mrs.....	Julesburg, Colo.
Reeves, Edith.....	Mancos, Colo.
Reid, Dorothy.....	Longmont, Colo.
Reid, Beneta.....	Dearborn, Mo.
Reigelsberger, Bertha.....	Brunswick, Mo.
Reimers, Rosabelle.....	Omaha, Nebr.
Reiter, Evelyn.....	Alfalfa, Okla.
Reiter, Hattie B.....	Alfalfa, Okla.
Rhea, Alda.....	Colorado Springs, Colo.
Rhiner, Ethelyne.....	1523 1st Ave., Greeley, Colo.
Rhoades, Aileen.....	Smith Center, Kans.
Rice, Harriett Weed.....	501 E. Colfax, Denver, Colo.
Rice, Mary A.....	Jerome, Idaho
Rogan, Mary.....	Fort Worth, Texas
Richart, Lillian M.....	Longmont, Colo.
Richards, Luella.....	Central City, Colo.
Richner, Margery.....	Mancos, Colo.
Ridenhour, Faye.....	617 W. 23rd St., Pueblo, Colo.
Riddle, Mrs. Emma.....	Sherman, Texas
Rienks, Maude.....	1530 13th Ave., Greeley, Colo.
Riley, Pauline.....	Lawton, Okla.
Rischel, Rhesa Mrs.....	1022 13th St., Greeley, Colo.
Roach, Helen.....	Wheatland, Wyo.
Roach, Myrtle.....	Wheatland, Wyo.
Robb, J. Gilbert.....	Flagler, Colo.
Robb, Ruth Mrs.....	Flagler, Colo.
Robbins, Dora.....	Fort Collins, Colo.
Roberts, James W.....	1025 Bellview, La Junta, Colo.
Roberts, Lena.....	Rocky Ford, Colo.
Robertson, Alverna.....	Trinidad, Colo.
Robson, Eloise.....	Byers, Colo.
Roe, Myrtle A. Mrs.....	116 Phelps, Sterling, Colo.
Roebuck, Etta.....	Asperwont, Texas
Rogers, Ethelyn.....	Denver, Colo.
Rose, Florence.....	1717 10th Ave., Greeley, Colo.
Rose, Lila May.....	1717 10th Ave., Greeley, Colo.
Ross, Clara P.....	Muskogee, Okla.
Rossiter, Agnes.....	721 W. Broadway, Butte, Mont.
Rosenthal, Helen.....	Jamesport, Mo.
Rucker, M. A.....	Amstod, N. M.
Rucker, Mary.....	Amstod, N. M.
Rule, Emma.....	Central City, Colo.
Rule, Elizabeth.....	Central City, Colo.
Rusk, Ethelda.....	Ravenna, Nebr.
Sadler, Frances.....	Rocky Ford, Colo.
Sample, Ivan.....	Greeley, Colo.
Sandstrom, Hilma.....	Aspen, Colo.
Sawyer, Emma J.....	Newman Grove, Nebr.
Schano, Julian.....	Colorado Springs, Colo.
Schlitt, Lydia.....	Fort Collins, Colo.
Schmidt, M. Ellen.....	Omaha, Nebr.
Schmidt, Marie L.....	Omaha, Nebr.
Schmohl, Helen.....	La Porte, Colo.
Schnebly, Ellsworth M.....	Boyero, Colo.
Schofield, Sarah V.....	Manassa, Colo.
Schorber, Paul E.....	Pauley, Colo.
Schroeder, Agnes.....	Greeley, Colo.
Schroter, Mrs. Minnie.....	Creede, Colo.
Schwab, Gertrude.....	San Acacia, Colo.
Scott, C. E.....	Timnath, Colo.
Scott, Cuptal, M.....	Medicine Bow, Wyo.
Scott, Lettey.....	Plainview, Nebr.
Scott, Marion A.....	Rudyard, Mich.
Scott, Reba.....	845 Hazel Ct., Denver, Colo.
Secat, Dona.....	Ashland, Kans.
Searcy, Creola.....	McKinney, Texas
Sears, Doris.....	Ordway, Colo.
Seeburg, Florence.....	932 Marine, Boulder, Colo.
Seibert, Harriet.....	Jacksonville, Illinois

Selberg, Edith	Box 83, Greeley, Colo.
Senter, Faith	2717 Race, Denver, Colo.
Sharpe, Mabel L.	Garden City, Kans.
Sharp, Mabel	Fountain, Colo.
Shane, Lillie	Akron, Colo.
Shea, Ina	2532 Capitol, Omaha, Nebr.
Shea, Cecelia F.	Yuma, Colo.
Sheldon, Vera G.	Rockford, Illinois
Shellabarger, Gertrude	Castle Rock, Colo.
Shelton, Minnie C.	1418 8th Ave., Greeley, Colo.
Shelton, Byrd	Joplin, Mo.
Sheppard, Naomi	Eaton, Colo.
Sherwood, Stella	Carbondale, Colo.
Shore, Belle	Hugo, Colo.
Shriver, Mary J.	Wellington, Kans.
Shrock, Mildred	Fort Morgan, Colo.
Silver, Marie	Lamar, Colo.
Singleton, Dora	Delta, Colo.
Simpson, Elizabeth	1744 Broadway, Denver, Colo.
Simon, Dela	438 S. Main, Piqua, Ohio
Skinner, Edna Ferne	Atlanta, Illinois
Skold, Esther	Windsor, Colo.
Slaughter, Elizabeth A.	Colorado Springs, Colo.
Slingee, Agnes	Longmont, Colo.
Small, Georgia E.	1115 11th Ave., Greeley, Colo.
Smothers, Elizabeth B.	Stanberry, Mo.
Snider, Mary E.	Rocky Ford, Colo.
Snodgrass, Milton D.	Jerome, Idaho
Smith, Anna	Lamar, Colo.
Smith, Ethel	Colorado Springs, Colo.
Smith, Leva H.	Western, Nebr.
Smith, Mrs. Lula S.	3773 Meade, Denver, Colo.
Smith, Lulu B.	Hutchinson, Kans.
Smith, Penelope	Omaha, Nebr.
Smith, Wells	Greeley, Colo.
Smith, Nellie	La Porte, Colo.
Smith, Viva R.	3773 Meade, Denver, Colo.
Smith, Mrs. Wells	Berthoud, Colo.
Smith, Viola	Arena, Colo.
Spangler, Mary	1717 10th Ave., Greeley, Colo.
Sprinkle, Helen	Canon City, Colo.
Sobbe, Katherine	Indianapolis, Ind.
Spalding, Helen	898 S. Clarkson, Denver, Colo.
Spealman, Gladys	Arriba, Colo.
Spence, A. Marie	Rocky Rover, Ohio
Stanforth, Della	38 W. Tennessee, Denver, Colo.
Staples, Addie B.	Montrose, Colo.
Staub, Isabelle	4247 Umatilla, Denver, Colo.
Stautz, Ona	1608 13th Ave., Greeley, Colo.
Stansfield, Laura	967 Downing, Denver, Colo.
Stone, Geneva	Eaton, Colo.
Stauffer, Mrs. Myrtle	Rifle, Colo.
Steele, Vera M.	Otis, Colo.
Steel, Carrie L.	Grand Junction, Colo.
Steffan, Eliza K.	844 S. Washington, Denver, Colo.
Stewart, Mrs. C. E.	Akron, Colo.
Stewart, C. E.	Akron, Colo.
Stewart, Lulu	DeBeque, Colo.
Stockwell, Ivy	Berthoud, Colo.
Strang, Jean	Colorado Springs, Colo.
Stice, Bessie	Guymon, Okla.
Stice, Velma	Guymon, Okla.
Stidham, Oleta	Checotah, Okla.
Stork, Sister Geraldine	Canon City, Colo.
Stoelzing, Katrina	Colorado Springs, Colo.
Stover, Majorie	Manzanola, Colo.
Strickland, Eloise	Ordway, Colo.
Strother, Alta	Bunton, Mo.
Stubbs, Elda	714 Carson, La Junta, Colo.
Studle, Nellie Mae	Buena Vista, Colo.
Sturgeon, Kate	Boyero, Colo.
Sullivan, Vera	524 9th Ave., Greeley, Colo.
Summons, Barbara	La Junta, Colo.
Suitor, Florence	Alma, Nebr.
Sullivan, Mary S.	524 9th Ave., Greeley, Colo.
Surber, Loretta	Cripple Creek, Colo.
Sutherland, Maree	915 E. Main, Marion, Ill.
Sutherland, Gladys	915 E. Main, Marion, Ill.
Swanson, Anna T.	Fruita, Colo.
Swanson, Ella	R. 2., Brookings, S. Dak.
Swain, Lottie	Brighton, Colo.
Swanson, Mabel J.	Colorado Springs, Colo.
Sweeny, Mrs. Hattie	1108 Cranford, Greeley, Colo.



Sweeny, Margaret	Silt, Colo.
Syp, Louise	Lamar, Colo.
Taggart, Rosalie	Elk City, Kans.
Talbot, Ruth	Longmont, Colo.
Talhelm, Ruth	Rocky Ford, Colo.
Tanner, Blanche	Greeley, Colo.
Taylor, Dorothy	Shaw, Colo.
Taylor, Nettie	Monte Vista, Colo.
Taylor, Paula R.	1559 Williams, Denver, Colo.
Tecklenburg, Olive	965 S. Corona, Denver, Colo.
Tecklenburg, Elvira	965 S. Corona, Denver, Colo.
Templeman, Alma	Berthoud, Colo.
Terry, Clara	Norfolk, Nebr.
Thomas, Lois	Havana, Illinois
Thompson, Anna	Horton, Kans.
Thompson, Marion	1011 4th, Greeley, Colo.
Thompson, Alma	Carbondale, Colo.
Thompson, Gertrude	Howard, Kans.
Thompson, Josephine	Carbondale, Colo.
Thompson, Juae E.	Grand Junction, Colo.
Thompson, Ruby	Bowling Green, Mo.
Tiddall, Elizabeth	Goldfield, Colo.
Tilford, Lela Ann	Iriton, Iowa
Tillon, Sarah A.	Orchard Park, New York
Tilyou, Mabel	Greeley, Colo.
Tineblind, Nell	Atchison, Kans.
Tomkinson, Edith E.	Council Bluffs, Iowa
Tomkinson, Mary	Council Bluffs, Iowa
Tobin, Lucile	Globe, Ariz.
Tornell, Edna A.	Idaho Springs, Colo.
Toraans, Mable	Checotah, Okla.
Tobey, Martha M.	Stoughton, Mass.
Torgason, Ida M.	Aurora, Colo.
Travis, R. C.	1223 10th Ave., Greeley, Colo.
Tubbs, Ruth H.	3334 Yuma, Denver, Colo.
Tucker, Eula	Codell, Kans.
Tufts, Gladys	Abilene, Kans.
Tuggle, Verne	Hillsdale, Ind.
Turner, Annis	Collbran, Colo.
Turner, Clara	Greeley, oClo.
Turner, Lynne	Woodson, Texas
Turner, Edna	Ault, Colo.
Turcell, Anna B.	Severance, Colo.
Tweedale, Hannah	Trinidad, Colo.
Tyler, Edna	Arriba, Colo.
Unfug, Mary H.	Walsenburg, Colo.
Unger, John C.	Hugo, Colo.
Vallandingham, Beryl	Rose Hill, Iowa
Vallat, Genevieve	Gowanda, Colo.
Vandevort, C. Erna	Wapello, Iowa
Vandiver, Maude	Montrose, Colo.
Van Eps, Ethel	1814 5th Ave., Ft. Dodge, Iowa
Vigil, Edna Marie	San Luis, Colo.
Vincent, Mrs. H. H.	3346 Bryant, Denver, Colo.
Wadsworth, Syrena	Greeley, Colo.
Wachtel, Aura D.	Wiggins, Colo.
Wade, Edith	Elwood, Nebr.
Wagner, Joseph	Gowanda, Colo.
Waldo, Ada C.	Rockford, Illinois
Waldo, Jennie E.	Rockford, Illinois
Walker, Dexter B.	3857 Xavier, Denver, Colo.
Wall, John F.	1011 11th St., Greeley, Colo.
Wallace, M. M.	Denver, Colo.
Waller, May M.	Longmont, Colo.
Wallingford, Iva	Horton, Kans.
Walsh, Nellie Erin	Pueblo, Colo.
Walsh, Genevieve B.	Cedaradge, Colo.
Walker, Sevalya	Dallas, Texas
Walter, Nellie	714 14th, Greeley, Colo.
Walters, Mary	Arriba, Colo.
Ward, Burma	Canon City, Colo.
Ward, Vern	Longmont, Colo.
Ward, Olive	Eaton, Colo.
Ward, Gertrude	Canon City, Colo.
Ward, Burma	Canon City, Colo.
Warner, E. J.	Findlay, Ohio
Warren, Edith	Creede, Colo.
Wassaw, Esther	Cripple Creek, Colo.
Watts, Lillie E.	2246 Eudora, Denver, Colo.

Watts, Zela.....	Meridian, Idaho
Watson, Alice M.....	1003 Lincoln, Denver, Colo.
Weatherman, Winifred.....	Loveland, Colo.
Weathers, Nellie.....	Walters, Okla.
Webb, Elba M.....	Greeley, Colo.
Webb, John.....	Greeley, Colo.
Webster, Mabel C.....	Rose Hill, Kans.
Webster, Margaret.....	Paris, Texas
Webster, Mary E.....	3613 Live Oak, Dallas, Texas
Weedin, Della.....	Tarkio, Mo.
Weeks, Ednamay.....	Cherokee, Okla.
Wells, Laura.....	Plevna, Kans.
Welsh, Edna F.....	Greeley, Colo.
Weller, Walter W.....	Elizabeth, Colo.
Werkheiser, Ruth.....	Greeley, Colo.
Weseman, Ada.....	1815 10th Ave., Greeley, Colo.
Wesner, Pauline.....	Sterling, Colo.
Wetzell, Gertrude.....	Checotah, Okla.
Weymouth, Edith.....	West Hotel, Denver, Colo.
Wheaton, Anna.....	1118 8th Ave., Greeley, Colo.
Whetsel, Mildred.....	108 Rice St., Pueblo, Colo.
Wills, Maude.....	1024 9th St., Greeley, Colo.
Wilder, Leone.....	Casper, Wyo.
Wiley, Lula.....	Colorado Springs, Colo.
Williams, Gladys.....	St. Francis, Kans.
Williams, Mrs. H. M.....	Greeley, Colo.
Wilson, Frances.....	Folsom, N. M.
Wheaton, Esther.....	Greeley, Colo.
Whisennand, Eithel.....	Silden, Kans.
White, Audrey.....	Longmont, Colo.
White, Burk.....	Vinita, Okla.
White, Julia M.....	3207 Vine, Denver, Colo.
White, H. Lou, Mrs.....	Cripple Creek, Colo.
White, Mabel A.....	Colorado Springs, Colo.
White, Mildred A.....	Winfield, Kans.
Whiteman, Dielma.....	Cimarron, N. M.
Whiteman, Eunice.....	Cimarron, N. M.
White, Ramona.....	Cripple Creek, Colo.
Whyte, Beatrice.....	Britton, Oklahoma
Wilson, Isabel.....	Trinidad, Colo.
Winkler, Mrs. W. L.....	Pierce, Colo.
Winn, Eleanor M.....	Dallas, Texas
Winter, Mrs. Elizabeth.....	Gainesville, Texas
Winter, May L.....	El Moro, Colo.
Wilber, Earlanne.....	Lindsborg, Kans.
Wilcox, Esther.....	Center Junction, Iowa
Wilcox, Gertrude.....	Kline, Colo.
Wildhack, Katherine.....	Meeker, Colo.
Wildhack, Leona.....	Meeker, Colo.
Wilder, Leone.....	Casper, Wyo.
Wilkinson, R. A.....	La Grande, Oregon
Williams, Ella M.....	1123 Elizabeth, Denver, Colo.
Williams, Frances.....	Trinidad, Colo.
Williams, Frances.....	1610 11th Ave., Greeley, Colo.
Williams, Dolly.....	Cheyenne Wells, Colo.
Williams, Olive.....	944 E. 19th Ave. Denver, Colo.
Williams, Mae.....	Wiley, Colo.
Williams, Sarah.....	Sterling, Colo.
Williams, Yvetta.....	Chama, N. M.
Wilson, Evalyn.....	McClave, Colo.
Wilson, Grace.....	1118 9th, Greeley, Colo.
Wilson, Gertrude.....	1010 E. 17th, Denver, Colo.
Wilson, Estelle Ross.....	2533 Gilpin, Denver, Colo.
Wilson, Mabel.....	Eaton, Colorado
Wilson, Helen.....	Greeley, Colo.
Wilson, John W.....	Hazelton, Idaho
Wilson, Nellie.....	Eaton, Colo.
Wisehart, Aletha J.....	Sheldon, Mo.
Wisroth, Minnie.....	Fort Morgan, Colo.
Williams, Mabel.....	Trinidad, Colo.
Wolf, Florence.....	Colorado Springs, Colo.
Wolfer, Margaret.....	Fort Collins, Colo.
Womelsdorf, Bertha M.....	Quincy, Illinois
Woodward, Gretta.....	Trinidad, Colo.
Wood, Robert F.....	1526 9th Ave. Greeley, Colo.
Wood, Anna.....	Great Bend, Ind.
Wood, Veronica D.....	1562 S. Acoma, Denver, Colo.
Woodard, Mary.....	Oklahoma City, Okla.
Woodberg, Agnes.....	Greeley, Colo.
Woodburn, Elizabeth.....	Topeka, Kans.
Woodley, Ruth.....	Marion, Illinois
Woodward, Pearl.....	Archer, Nebr.
Woodward, Ruth.....	1521 9th Ave., Greeley, Colo.

Workman, Louise.....	945 Gladstone, Sheridan, Wyo.
Wormser, L. Nora.....	Park Hotel, Dallas, Texas
Workman, Nellie.....	Sheridan, Wyo.
Worley, R. J.....	Colorado Springs, Colo.
Worrall, Laverne B.....	Simla, Colo.
Wright, Edna F.....	1841 6th Ave., Greeley, Colo.
Wright, Floy L.....	Quincy, Illinois
Wright, Louise.....	Ft. Smith, Ark.
Wyde-Brown, Gladys.....	Friend, Nebr.
Yates, E. O.....	Greeley, Colo.
Yockey, Laurena.....	Buena Vista, Colo.
Young, Marguerite.....	Wellington, Colo.
Young, Matie.....	Denver, Colo.
Young, Geo. P.....	Evans, Colo.
York, Verlie.....	Craig, Okla.
Zimmerman, Ruth.....	Vroman, Colo.
Zollars, Beulah G.....	Kansas City, Mo.
Zook, Marvel Mae.....	Erie, Colo.
Zapf, Frieda B.....	1012 5th Ave., Greeley, Colo.

# School of Adults

FALL, WINTER AND SPRING QUARTERS  
1919-20

Adolphson, Elsie.....	Cheyenne, Wyo.
Calvin, Leonard.....	Greeley, Colo.
Cameron, Margaret.....	Greeley, Colo.
Davidson, Mabel.....	Douglas, Wyo.
Dillon, Mamie.....	Sioux City, Iowa
Hammond, Dolores.....	Kersey, Colo.
Hood, Blanche.....	Rolla, Mo.
Hooper, Frances.....	Denver, Colo.
Koeneke, Hilda.....	Fort Morgan, Colo.
Seeley, Mary.....	Greeley, Colo.
Shelton, Maurine.....	Briggsdale, Colo.
Steck, Mabel.....	Southerland, Nebr.
Wells, Mabel.....	Greeley, Colo.
Williams, Mrs. W. M.....	Greeley, Colo.
Young, Mary M. ....	Arickaree, Colo.

## SUMMER QUARTER

1920

Allen, Ara Mae.....	Wayland, Iowa
Allen, Mrs. Rose.....	623 13th St., Greeley, Colo.
Ambrose, Amanta.....	Fort Morgan, Colo.
Applegit, Nettie.....	Cook, Nebr.
Austin, Blanche.....	Silt, Colo.
Barber, Sara.....	Grover, Colo.
Barbour, Flora.....	Edgewater, Colo.
Bekemeyer, W. C.....	1405 7th Ave., Greeley, Colo.
Bell, Ruby.....	Walsenburg, Colo.
Brandon, Elizabeth.....	Otis, Colo.
Branson, Grace.....	R. R. 2., Loveland, Colo.
Bratton, Georgia.....	Westplaines, Colo.
Bratzman, Ira.....	Fairdale, Penn.
Brown, Martha Mrs. ....	S. L. W. Ranch, Greeley, Colo.
Bullard, Vada.....	Hudson, Colo.
Burks, Winifred.....	Towner, Colo.
Burton, Thelma.....	Wellfleet, Nebr.
Cole, Frances.....	Eckley, Colo.
Campbell, Mrs. M. E.....	Beecher City, Illinois
Cannon, Martha.....	Glenvil, Nebr.
Ditto, Vesta.....	Cushing, Okla.
Draper, Gladys.....	1817 7th Ave., Greeley, Colo.
Dunkley, Edith.....	Dunkley, Colo.
Eckard, Bessie.....	Pawnee City, Nebr.
Emerson, Jessie.....	Oregon, Illinois
Flagesli, Mrs. F.....	Walsenburg, Colo.
Flood, Helen.....	1744 8th Ave., Greeley, Colo.
Fleming, Nelle.....	Evergreen, Colo.
Fillman, Emma.....	Samai, Colo.
Fogg, Ella.....	Cordell, Okla.
Gaiser, Ida.....	Solomon, Kans.
Gillette, Gloy J.....	Padroni, Colo.
Hays, Leon.....	Manitou, Okla.
Hays, Effie.....	Manitou, Okla.
Hartway, Irene.....	Westplaines, Colo.
Johnston, Blanche.....	Flagler, Colo.
Johnson, Hazel.....	Arriba, Colo.

Kindred, S. B.	803 16th St.,	Greeley, Colo.
Kindred, Mrs. S. B.	803 16th St.,	Greeley, Colo.
King, Lenora		Solomon, Kans.
Klassen, Marie		Kirk, Colo.
Kyle, Margaret		
Louis, Anna E.		Hiawatha, Kans.
McCallum, Addie		Arriba, Colo.
McDonnall, Gladys		Holyoke, Colo.
McGovern, Mary	927 6th St.,	Greeley, Colo.
McNicholl, Grace		Elizabeth, Colo.
Petty, Barbara		Plattsmouth, Nebr.
Philps, Selma		Grover, Colo.
Porter, Novellenne	1631 10th Ave.,	Greeley, Colo.
Probasco, Selma		Siebert, Colo.
Record, Matilda		Granada, Colo.
Rice, Mary		Greeley, Colo.
Robirds, May		Padroni, Colo.
Ryan, Helen		Eldorado, Kans.
Sanbo, Helen E.	2418 Tremont Place,	Denver Colo.
Sawyer, Perl	2418 Lafayette,	Denver, Colo.
Schurman, Mary	306 E. 7th St.,	Trinidad, Colo.
Schweiger, Caroline		Lafayette, Colo.
Scott, Grace		Rudyard, Michigan
Swanson, Mabel J.	218 E. 9th St.,	Colorado Springs, Colo.
Steck, Mabel		Sutherland, Nebraska
Steidley, Lurene	1127 LaPorte Ave.,	Ft. Collins, Colo.
Vigil, Rose		San Luis, Colo.
Ware, Amy S.	1229 5th St.,	Greeley, Colo.
White, Iola		New Raymer, Colo.
Whitten, Florence		Gill, Colo.
Williams, Lulu		Silt, Colo.
Williamson, Zay		La Jara, Colo.
Zanolio, Grace		Durango, Colo.
Zapf, Freida	1012 5th Ave.,	Greeley, Colo.
Eklund, Martha		Greeley, Colo.

## Extension Group Plan

1919-20

Abbott, Carlotta.....	Denver,	Colo.
Adkinson, Mary E.....	Denver,	Colo.
Addleman, Minnie B.....	Denver,	Colo.
Allen, James.....	Ft. Collins,	Colo.
Allison, Grace.....	Denver,	Colo.
Allphine, Helen.....	Denver,	Colo.
Anderson, Edna.....	Denver,	Colo.
Anderson, Marcia.....	Montrose,	Colo.
Anderson, Pearl.....	Delta,	Colo.
Anthony, Florine.....	Denver,	Colo.
Anthony, Hazel.....	Denver,	Colo.
Armstrong, Dorothy.....	Ft. Collins,	Colo.
Austin, Muriel.....	Denver,	Colo.
Baker, Lillian.....	Fort Collins,	Colo.
Barock, Eulalia.....	Denver,	Colo.
Bartholomew, R. R.....	La Junta,	Colo.
Barton, Minnie B.....	Ft. Collins,	Colo.
Barker, Miriam B.....	Denver,	Colo.
Ball, Katherine.....	Denver,	Colo.
Balcom, Caroline.....	Denver,	Colo.
Bergstrand, Nellie.....	Denver,	Colo.
Bettes, Laura J.....	Denver,	Colo.
Bergstrand, Nellie.....	Denver,	Colo.
Beatty, Mary E.....	Denver,	Colo.
Beamer, Alice E.....	Denver,	Colo.
Beck, S. A.....	Brighton,	Colo.
Baynon, Margaret M.....	Denver,	Colo.
Berlmer, Belle.....	Pueblo,	Colo.
Beer, Winifred.....	Denver,	Colo.
Becker, Lillie.....	Denver,	Colo.
Beck, Olive.....	Denver,	Colo.
Bishop, Ruth.....	Denver,	Colo.
Bliss, Cora M.....	Denver,	Colo.
Blackler, Roland.....	Denver,	Colo.
Blackler, Mrs. Margaret.....	Denver,	Colo.
Boge, Mabel.....	Denver,	Colo.
Boggess, Estelle.....	Denver,	Colo.
Bohnam, Ruth Ann.....	Denver,	Colo.
Boyles, Sadie J.....	Denver,	Colo.
Boge, Ethel.....	Denver,	Colo.
Borst, Ella Henry.....	Denver,	Colo.
Boreing, Maude.....	Pueblo,	Colo.
Boyles, Hattie O.....	Denver,	Colo.
Bowles, Elda W.....	Denver,	Colo.
Boyd, Helen S.....	Denver,	Colo.
Boyer, Monte J.....	Denver,	Colo.
Bramkamp, Ethel.....	Denver,	Colo.
Brubaker, Evelyn.....	Denver,	Colo.
Brines, Mary.....	Denver,	Colo.
Brower, Lottie A.....	Denver,	Colo.
Brooks, Ella.....	Denver,	Colo.
Brunton, Jessie.....	Ft. Collins,	Colo.
Bryson, Elizabeth.....	Ft. Collins,	Colo.
Brandon, Elizabeth.....	Akron,	Colo.
Brines, Mary.....	Denver,	Colo.
Brown, Amy.....	Denver,	Colo.
Bradley, Ruby.....	Pueblo,	Colo.
Budd, Ruth.....	Delta,	Colo.
Bunger, Berness.....	Denver,	Colo.
Busey, Callie.....	Montrose,	Colo.
Burson, Viols.....	Pueblo,	Colo.
Cabeen, Anna.....	La Junta,	Colo.
Camfield, Mary.....	Denver,	Colo.
Camuth, Dorothy.....	Ft. Collins,	Colo.
Campbell, Stelle M.....	Denver,	Colo.
Cannon, Brenda.....	Denver,	Colo.
Carr, Olive.....	Brighton,	Colo.
Caverly, Edna.....	Ft. Collins,	Colo.
Carter, Mary.....	Denver,	Colo.
Caverly, Frances.....	Denver,	Colo.
Churchill, Lillian, Mrs.....	Denver,	Colo.

Cherrington, Mary	Pueblo, Colo.
Chapin, Eldora	Denver, Colo.
Chase, Sedalia Gass	Denver, Colo.
Charles, C. W.	Denver, Colo.
Chase, Lucile B.	Denver, Colo.
Clark, Mrs. Florence E.	Denver, Colo.
Clark, Mary E.	Denver, Colo.
Class, Sara	Brighton, Colo.
Cloud, Frankie	Delta, Colo.
Colby, Mabel A.	Denver, Colo.
Connelly, Kate M.	Denver, Colo.
Connul, Myrel	Pueblo, Colo.
Conrell, Laura	Denver, Colo.
Corey, Elizabeth	Denver, Colo.
Cornell, Laura A.	Denver, Colo.
Coyle, Dena	Pueblo, Colo.
Craig, Edna	Denver, Colo.
Crawford, Ethel Dee	Denver, Colo.
Craig, Maude L.	Denver, Colo.
Crazer, Mary	Denver, Colo.
Curran, Anna C.	Denver, Colo.
Curtis, Bessie	Pueblo, Colo.
Dailey, Grace	Denver, Colo.
Dalle, Flora I.	Denver, Colo.
Daly, Julia	Denver, Colo.
Davidson, Mary O.	Denver, Colo.
Davidson, Veda G. Mrs.	Denver, Colo.
Davis, Willie	La Junta, Colo.
Dickman, Lurtje B.	Denver, Colo.
Dresser, Agusta	Denver, Colo.
Donahue, Jessie	Pueblo, Colo.
Duffer, Martha	Denver, Colo.
Dunn, A. H.	Ft. Collins, Colo.
Duncan, Kathryn	Denver, Colo.
Duray, Minnie	Denver, Colo.
Dyer, Mrs. Anna Z.	Pueblo, Colo.
Eagleton, M. E.	Denver, Colo.
Eagleton, W. H.	Denver, Colo.
Eagleton, Mrs. W. H.	Denver, Colo.
Eaton, Ethel	Brighton, Colo.
Edmiston, Rosalie	Denver, Colo.
Elliott, Mrs. Agnes	Pueblo, Colo.
Engelton, Bonnie	Pueblo, Colo.
Erwin, Anna R.	Denver, Colo.
Evans, Margaret D.	Denver, Colo.
Fanelly, Clara	Denver, Colo.
Farrelly, Clara	Denver, Colo.
Fessler, Margaret	Ft. Collins, Colo.
Fisher, Annie C.	Denver, Colo.
Fisher, Elizabeth	Ft. Collins, Colo.
Fletcher, Mary L.	Denver, Colo.
Floyd, Catherine	Denver, Colo.
Force, Anna Laura	Denver, Colo.
Forwythe, Mrs. M. W.	Denver, Colo.
Foster, Arthur J.	Delta, Colo.
Fowler, Mrs. B. L.	Brighton, Colo.
Fowler, D. L. Dr.	Brighton, Colo.
Frees, Anna M.	Denver, Colo.
French, Nelle	Denver, Colo.
Frye, Mary D.	Denver, Colo.
Fryer, Nora G.	Denver, Colo.
Gavin, Mae F.	Denver, Colo.
Gallagher, Florence	Ft. Collins, Colo.
Gallup, Ruth	Denver, Colo.
Gardner, Willie Mrs.	Denver, Colo.
Gay, Ada E.	Denver, Colo.
Gard, Clara F.	Denver, Colo.
Gayton, Mrs. Julia H.	Pueblo, Colo.
Gallup, Mrs.	Pueblo, Colo.
Gaines, Louise	Pueblo, Colo.
Gaines, Mary	Pueblo, Colo.
Gedney, Beatrice	Denver, Colo.
Gilmore, Angela	Denver, Colo.
Gillis, Mary E.	Denver, Colo.
Gibbs, Elizabeth	La Junta, Colo.
Glenn, Ada	Denver, Colo.
Glenn, Florence	Denver, Colo.
Gordon, Mrs. Winifred	Denver, Colo.
Godsman, Charlotte	Denver, Colo.
Goebel, Jessie E.	Denver, Colo.

Graham, Mrs. Grace	Akron,	Colo.
Green, Mrs. Anna	Denver,	Colo.
Green, Mary G. H.	Denver,	Colo.
Griffin, M. H.	Brighton,	Colo.
Gust, Katherine	Denver,	Colo.
Gwynn, Cora Mae	Pueblo,	Colo.
Hall, Grace B.	Denver,	Colo.
Hall, Mrs. Grace P.	Denver,	Colo.
Hannahs, Ada B.	Denver,	Colo.
Hansen, Katherine	Denver,	Colo.
Harris, Ruth	Akron,	Colo.
Harshman, Edith Johnson	Akron,	Colo.
Hawthorne, Mrs. Bessie	Denver,	Colo.
Hamilton, Jessie	Denver,	Colo.
Hardin, Achsah	Pueblo,	Colo.
Haverty, Estelle	Pueblo,	Colo.
Haverty, Dorothy	Pueblo,	Colo.
Hamberger, Etta	Pueblo,	Colo.
Heabler, Grace	Denver,	Colo.
Hedges, Cecelia M.	Denver,	Colo.
Hemberter, Elizabeth	Denver,	Colo.
Henbler, Grace	Denver,	Colo.
Henderson, Alice	Ft. Collins,	Colo.
Henen, C. M.	La Junta,	Colo.
Herman, Blanche	Denver,	Colo.
Heinzman, Ruth	Pueblo,	Colo.
Hildebrand, Etta K.	Denver,	Colo.
Hipp, Carrie T.	Denver,	Colo.
Hoener, Esther V.	Denver,	Colo.
Hoffman, Fern Mrs.	Denver,	Colo.
Holmes, Anne H. M.	Denver,	Colo.
Holmes, Ethel E.	Denver,	Colo.
Homsher, Ruth Ann	Denver,	Colo.
Holland, Mabelle	Montrose,	Colo.
Hollander, Esther Ethel	Denver,	Colo.
Hooper, Hypatia	Denver,	Colo.
Hollander, Ethel H.	Denver,	Colo.
Hoover, Borden P.	Ft. Collins,	Colo.
Hopkins, Mary E.	Denver,	Colo.
Horton, Ada	Delta,	Colo.
Houghton, Roy	Greeley,	Colo.
Hughes, Della A.	Denver,	Colo.
Hunt, Carra	Denver,	Colo.
Hunt, Mayme S.	Denver,	Colo.
Hon, Clyde E.	Denver,	Colo.
Ingle, Erle B.	Greeley,	Colo.
Irving, Amelia	Denver,	Colo.
Isabell, Rachel	Denver,	Colo.
Isham, A. F.	Brighton,	Colo.
Isham, Mary H. Mrs.	Brighton,	Colo.
Iwing, Amelia	Denver,	Colo.
Jacobs, Clara M.	Pueblo,	Colo.
Jameson, Dora C.	Denver,	Colo.
Jones, Evelyn	Denver,	Colo.
Johnson, A. C.	Brighton,	Colo.
Johnson, Anna	Denver,	Colo.
Johnson, Anna M.	Denver,	Colo.
Johnson, Bernadine	Denver,	Colo.
Johnson, Dora C.	Denver,	Colo.
Johnson, Ella C.	Denver,	Colo.
Johnson, Elva	Brighton,	Colo.
Johnson, Hannah	Denver,	Colo.
Johnson, Lenora M.	Denver,	Colo.
Johnston, Maude Mrs.	Denver,	Colo.
Jones, Mollie A.	Pueblo,	Colo.
Kannon, Emma Mrs.	Denver,	Colo.
Keller, Elizabeth M.	Denver,	Colo.
Kelly, Julia A.	Denver,	Colo.
Kennon, Emma Mrs.	Denver,	Colo.
Ketner, Sarah P.	Denver,	Colo.
Kettering, Mary H.	Denver,	Colo.
Kimball, Martha	Denver,	Colo.
King, Estelle	Denver,	Colo.
King, Mrs. Ellen	Pueblo,	Colo.
King, Mrs. Mary	Denver,	Colo.
Kindall, Mary	Pueblo,	Colo.
Kinport, J. Katherine	Denver,	Colo.
Klein, Everett	Greeley,	Colo.
Klein, Louise	Denver,	Colo.



Kline, Anna.....	Montrose,	Colo.
Kreiner, Marie.....	Denver,	Colo.
Kromer, Helen.....	Brighton,	Colo.
Krusen, Alma.....	Denver,	Colo.
Lambie, May.....	Denver,	Colo.
Lafferty, Edith M.....	Denver,	Colo.
Lage, Mrs.....	Greeley,	Colo.
Lake, Fannie K.....	Denver,	Colo.
Lamb, Helen.....	Brighton,	Colo.
Lambie, Jean.....	Denver,	Colo.
Larimer, Leota.....	Denver,	Colo.
LaVelli, Mary.....	Denver,	Colo.
Leach, Etta.....	Brighton,	Colo.
Liberell, Cora B.....	Ft. Collins,	Colo.
Lippitt, Ruth Ann.....	Denver,	Colo.
Longan, Anna M.....	Denver,	Colo.
Lord, Stella M.....	Denver,	Colo.
Loughran, Loretta.....	Denver,	Colo.
Love, Helen.....	Ft. Collins,	Colo.
Lowe, Anne F.....	Denver,	Colo.
Lyon, Florence.....	Denver,	Colo.
McArthur, Annie Mrs.....	Denver,	Colo.
McAnelly, Mildred.....	Ft. Collins,	Colo.
McArthur, Jessie.....	Denver,	Colo.
McClintock, Alva.....	Ft. Collins,	Colo.
McCline, Adelle.....	Denver,	Colo.
McCorma, Jean.....	Brighton,	Colo.
McDaniel, Grace.....	Pueblo,	Colo.
McDaniel, Mabel.....	Pueblo,	Colo.
McDonald, Mary E.....	Denver,	Colo.
McFadden, Tena.....	Denver,	Colo.
McFarland, Hazel.....	Pueblo,	Colo.
McLain, Susan.....	Denver,	Colo.
McMeen, Geo. M.....	Denver,	Colo.
McNair, Nell.....	Denver,	Colo.
MacClaney, Mrs. W. F.....	Pueblo,	Colo.
Maclear, Florence.....	Denver,	Colo.
Maher, Catherine.....	Denver,	Colo.
Mahoney, Elizabeth.....	Denver,	Colo.
Mahuran, I. H.....	Trinidad,	Colo.
Malius, Edith S.....	Denver,	Colo.
Mallonee, Iva.....	Denver,	Colo.
Maloney, Mary E.....	Denver,	Colo.
Mason, Alice.....	Ft. Collins,	Colo.
Malins, Edith S.....	Denver,	Colo.
Meeker, Lydia G.....	Denver,	Colo.
Merrill, Grace.....	Brighton,	Colo.
Merrill, Hattiebell.....	Greeley,	Colo.
Miles, Cornelia S.....	Denver,	Colo.
Meigs, Isabella.....	Pueblo,	Colo.
Miller, Lida.....	Denver,	Colo.
Miller, Anna.....	Denver,	Colo.
Miller, Katherine.....	La Junta,	Colo.
Miller, Noble.....	Denver,	Colo.
Mills, Ethel.....	Denver,	Colo.
Mills, Ruth Esther.....	Denver,	Colo.
Moffet, Helen.....	Pueblo,	Colo.
Moore, Emily E. Mrs.....	Denver,	Colo.
Moore, Dora.....	Denver,	Colo.
Moore, Jessie R.....	Ft. Collins,	Colo.
Moore, Josephine.....	Denver,	Colo.
Moore, Pearl L.....	Ft. Collins,	Colo.
Morgan, Grace M.....	Denver,	Colo.
Morgan, Maude.....	Brighton,	Colo.
Morris, Mary E.....	Denver,	Colo.
Munn, Mrs. Jessie.....	Pueblo,	Colo.
Myers, Blanche.....	Denver,	Colo.
Nash, Margaret.....	Trinidad,	Colo.
Nash, Mary.....	Trinidad,	Colo.
Neff, Helen.....	Denver,	Colo.
Neilson, Edna M.....	Denver,	Colo.
Noce, Lillian.....	Denver,	Colo.
Norris, Lillian.....	Denver,	Colo.
Norris, Wendall.....	Greeley,	Colo.
Norris, Josephine, Mrs.....	Denver,	Colo.
O'Boyle, Georgia Mrs.....	Denver,	Colo.
O'Boyle, Lila.....	Denver,	Colo.
O'Boyle, Sila M.....	Denver,	Colo.
O'Brien.....	Denver,	Colo.

O'Toole, Clara E.	Denver,	Colo.
Oviatt, Inez	Brighton,	Colo.
Owen, Gwen P.	Denver,	Colo.
Parkyn, Esther	Denver,	Colo.
Parsons, Gail	Denver,	Colo.
Parsons, Jessalyn	Denver,	Colo.
Parsons, Richard	Denver,	Colo.
Pavella, Minnie F.	Denver,	Colo.
Paulson, Conrad	Greeley,	Colo.
Penny, Mrs. Lillian	Denver,	Colo.
Pfrimmer, Emma	Denver,	Colo.
Pfrimmer, Edmonia	Denver,	Colo.
Pfrimmer, Katherine	Denver,	Colo.
Phillips, H. L.	Denver,	Colo.
Phillips, Nellie	Brighton,	Colo.
Plunk, A. P.	La Junta,	Colo.
Poff, Rose B.	Denver,	Colo.
Porter, Mand B.	Denver,	Colo.
Prescott, Blake	Greeley,	Colo.
Price, Alberta	Denver,	Colo.
Price, Margaret A.	Denver,	Colo.
Priddy, Bessie	Ft. Collins,	Colo.
Prince, Carrie M.	Denver,	Colo.
Probst, Emma	Denver,	Colo.
Proctor, Herbert	Greeley,	Colo.
Quayle, Ella K.	Denver,	Colo.
Raichart, Eva	Delta,	Colo.
Ramey, Dorcas	Brighton,	Colo.
Randell, Mayme	Denver,	Colo.
Redwine, Mrs. Rose	Pueblo,	Colo.
Reed, Dorothy F.	Denver,	Colo.
Reid, Dorothy Mrs.	Denver,	Colo.
Reed, Florence E.	Ft. Collins,	Colo.
Reed, Minnie E.	Brighton,	Colo.
Rees, Margaret	Brighton,	Colo.
Reinchehl, Sophie	La Junta,	Colo.
Rhoads, Wm.	Greeley,	Colo.
Rice, Harriet Weed	Denver,	Colo.
Richard, Carrie A.	Denver,	Colo.
Richardson, Hattie	Denver,	Colo.
Richmond, Emma	Denver,	Colo.
Ritter, Garnett	Pueblo,	Colo.
Roberts, J. W.	La Junta,	Colo.
Roberts, Helen	Ft. Collins,	Colo.
Roberts, Paul	Denver,	Colo.
Robinette, Sara J.	Denver,	Colo.
Robinson, Agnes M.	Denver,	Colo.
Rogers, Ethelyn	Denver,	Colo.
Rolfe, Izori	Denver,	Colo.
Romick, Edna	Denver,	Colo.
Romick, Lida	Denver,	Colo.
Romick, Nell	Denver,	Colo.
Rood, Mrs. H. H.	Denver,	Colo.
Rowland, Sara	Denver,	Colo.
Royce, Alice A.	Denver,	Colo.
Rudolph, Elizabeth	Denver,	Colo.
Ruggles, Maude A.	Denver,	Colo.
Ryan, Adele	Denver,	Colo.
Ryan, Jennie J.	Denver,	Colo.
Sabin, Mary S.	Denver,	Colo.
Sansburn, Mrs. Alvin	Akron,	Colo.
Sawyer, Eldora M.	Denver,	Colo.
Scheel, Helen	Brighton,	Colo.
Scheffler, Josephine	Denver,	Colo.
Schenik, Loretta	Pueblo,	Colo.
Schisler, Pearl	Denver,	Colo.
Schumacher	Greeley,	Colo.
Schwass, Emma	Ft. Collins,	Colo.
Scitt, Mancy May	Ft. Collins,	Colo.
Scrafford, Mabelle M.	Denver,	Colo.
Sheldon, Mabel	La Junta,	Colo.
Shepherd, Bessie	Denver,	Colo.
Sheppard, Bessie	Denver,	Colo.
Shriber, Eva	Ft. Collins,	Colo.
Shomaker, Edith	Pueblo,	Colo.
Shroder, Mand	Denver,	Colo.
Sieg, Elizabeth C.	Denver,	Colo.
Simpson, Genevieve	Denver,	Colo.
Sleeper, Sara	Denver,	Colo.

Smith, E. W.	Denver, Colo.
Smith, Elwin C.	Denver, Colo.
Smith, Leffie	Pueblo, Colo.
Smith, Mary E.	Denver, Colo.
Snyder, Mary	Denver, Colo.
Snyder, Rosa E.	Ft. Collins, Colo.
Songer, Ruth	Pueblo, Colo.
Spangler, Grace	Ft. Collins, Colo.
Starr, Lelah	Denver, Colo.
Staub, Isabelle	Denver, Colo.
Stearns, R. M.	Denver, Colo.
Steffen, Eliza K. Mrs.	Denver, Colo.
Stoddard, Helen	Pueblo, Colo.
Stone, Gertrude	Pueblo, Colo.
Story, Lola Mrs.	Brighton, Colo.
Stubbs, Elda	La Junta, Colo.
Strothoff, Mary	Ft. Collins, Colo.
Smith, Mrs. Mary	Denver, Colo.
Swain, Lottie	Brighton, Colo.
Sweet, Inez E.	Denver, Colo.
Sweeney, Frances	Denver, Colo.
Swenson, Blanda	Denver, Colo.
Taube, Ida	Pueblo, Colo.
Taylor, Lillian	Brighton, Colo.
Taylor, Paula Mrs.	Denver, Colo.
Thomas, Roscoe B.	Pueblo, Colo.
Thompson, Anna P.	Ft. Collins, Colo.
Thompson, Nellie	Denver, Colo.
Tirey, Robert M.	La Junta, Colo.
Tirey, Ruth	La Junta, Colo.
Tobey, Mary R. Mrs.	Pueblo, Colo.
Tredway, Jessie M.	Denver, Colo.
Trehearne, Frances	Denver, Colo.
Tuck, Grace	Denver, Colo.
Tully, Mary C.	Denver, Colo.
Ure, Frances M.	Denver, Colo.
Van Gordon, Grace	Denver, Colo.
Vaughn, Elsie M.	Denver, Colo.
Vermillion, Eva Lynne	Denver, Colo.
Walker, Ida	Denver, Colo.
Walsh, Eva M.	Denver, Colo.
Walter, Sadie	Denver, Colo.
Walters, Jane Marie	Denver, Colo.
Watson, Agnes Mrs.	Denver, Colo.
Watson, Alice M.	Denver, Colo.
Watson, Bessie	La Junta, Colo.
Watts, Lillie	Denver, Colo.
Watts, Tillie E.	Denver, Colo.
Waxham, Faith C.	Denver, Colo.
Weeber, Callie	Denver, Colo.
Weiland, Alice	La Junta, Colo.
Welker, Ida	Denver, Colo.
Weller, W. H.	Delta, Colo.
Wheeler, Avis C.	Denver, Colo.
Whitney, Maybelle	Denver, Colo.
White, Julie M.	Denver, Colo.
Whetsel, Anna L. Mrs.	Pueblo, Colo.
Whyte, Lucille B.	Denver, Colo.
Wiegel, Caroline	Denver, Colo.
Whitehead, Josephine	Denver, Colo.
Whitehead, Sarah	Denver, Colo.
Williams, Ethel S.	Pueblo, Colo.
Williamson, Louisa	Denver, Colo.
Wilson, Edna	La Junta, Colo.
Wilson, Stella	Denver, Colo.
Wolfe, Hazel	La Junta, Colo.
Wonders, Winifred M.	Delta, Colo.
Wood, Veronica	Denver, Colo.
Woods, Hulda	Denver, Colo.
Worley, Raymond J.	Greeley, Colo.
Wren, Lena	Trinidad, Colo.
Wyatt, Geo.	Denver, Colo.
Young, Agnes	Ft. Collins, Colo.
Young, Mrs. Matie	Denver, Colo.
Zick, Herbert	Greeley, Colo.

# Individual Plan—College

1919-20

Ahrens, Dora.....	Halstead, Kans.
Anderson, Rachel.....	Peyton, Colo.
Anderson, M. Ruth.....	Genesse, Idaho
Anderson, Ruth M.....	Aspen, Colo.
Arnholt, Edith.....	St. Joseph, Mo.
Ashbrook, Belle.....	St. Joseph, Mo.
Ashurst, J. T.....	Rouse, Colo.
Baker, Zula.....	Eads, Colo.
Barlon, Georgia.....	Tulsa, Okla.
Bashor, Esta M.....	Greeley, Colo.
Barnhouse, Mary.....	Oklahoma City, Okla.
Batschelet, Ethel.....	Gage, Mont.
Batchelet, Olive.....	Rockwell City, Iowa
Becker, Lillie C.....	Denver, Colo.
Be Jack, Maurice D.....	Jenks, Okla.
Bennett, L. H.....	Clinton, Okla.
Bishop, G. P.....	Greeley, Colo.
Bivens, Belva.....	Maysville, Mo.
Blair, Mary E.....	Cripple Creek, Colo.
Boge, Mabel E.....	Denver, Colo.
Brady, Mildred E.....	Myron Stratton Home, Colo.
Brady, Mirttie.....	Avalo, Colo.
Bragg, Lottie.....	Ft. Collins, Colo.
Brankamp, Ethel.....	Denver, Colo.
Brennon, Margaret.....	Grand Valley, Colo.
Brockman, Edwin G.....	Colorado Springs, Colo.
Brooks, Anna G. Mrs.....	Greeley, Colo.
Brown, Julia.....	Denver, Colo.
Bulger, Katherine.....	Laramie, Colo.
Bullock, Annie.....	Dallas, Texas
Burns, Anna E.....	Monte Vista, Colo.
Brunstein, John.....	Greeley, Colo.
Busey, Alma B.....	Wenatchee, Wash.
Busey, Callie.....	Memphis, Mo.
Burbridge, Edgar W.....	Milliken, Colo.
Butts, Lula.....	Mond Valley, Kans.
Burbridge, Geo.....	Platteville, Colo.
Callahan, Bessie.....	Keota, Colo.
Campbell, Helen.....	Pueblo, Colo.
Campbell, Vera.....	Greeley, Colo.
Cannell, Mona.....	Cascade, Colo.
Carder, Jessie J.....	Loveland, Colo.
Chilson, E. M.....	Baroda Camp, India
Clayton, Mrs. Emily.....	St. Joseph, Mo.
Clayton, Mrs. T. C.....	Cedar Creek, Colo.
Clayton, Thomas C.....	Cedar Creek, Colo.
Clement, Matilda.....	Carpenter, Colo.
Cline, Evelyn.....	Brighton, Colo.
Cloud, Selma.....	Wichita Falls, Texas
Cogley, Sister Clotildis.....	Omaha, Nebr.
Conant, Mrs. Stanford.....	Tucson, Ariz.
Conklyn, Enid.....	Hagerman, Idaho
Cook, Mrs. Nettie.....	Milliken, Colo.
Cooper, Anna E.....	Ft. Thomas, Ky.
Cooper, Estelle.....	Topeka, Kans.
Cooper, Ida L.....	Wellington, Colo.
Corliss, Grace.....	Greeley, Colo.
Cornwall, Lillian A.....	Aspen, Colo.
Crawford, Pearl.....	Tishomingo, Okla.
Crites, Mrs. Maybelle.....	Evergreen, Colo.
Crown, Jessie.....	Hannibal, Mo.
Crown, Sister Sebastian.....	Canon City, Colo.
Crum, Lora.....	Hoxie, Kans.
Cullen, Mrs. Nellie.....	Grand Junction, Colo.
Cully, Inez.....	Trinidad, Colo.
Curtin, Ida B. Mrs.....	Durango, Colo.
Curtis, Bessie.....	Pueblo, Colo.
Cusick, Mary E.....	Ridgway, Colo.
Dailey, Grace.....	Denver, Colo.
Dalton, Ruth E.....	Nepesta, Colo.

Dardis, F. K.	Wellington,	Colo.
Davis, Ethel	Denver,	Colo.
Dean, Nell M.	Tulsa,	Okla.
Deeney, Earl C.	Springfield,	Colo.
Dickson, Dorothea	Brighton,	Colo.
Diggs, Charles A.	Ainsworth,	Nebr.
Dinsmore, Naomi	Colorado Springs,	Colo.
Donelson, Eva	Denver,	Colo.
Donley, H. H.	Frederick,	Colo.
Dougherty, Linnie	Sapulpa,	Okla.
Douglass, Sherman	Hillrose,	Colo.
Drives, Mrs. V. H.	Winston,	Ariz.
Drummond, Anna	Kersey,	Colo.
Duff, Lula	Oklahoma City,	Okla.
Duffes, Martha Mrs.	Denver,	Colo.
Dunlap, Margaret	Greeley,	Colo.
Duray, Minnie	Denver,	Colo.
Durin, Doris	Bayard,	Nebr.
Edwards, Hazel	Grover,	Colo.
Elkins, Vena	Delagua,	Colo.
Ely, Clara	Omaha,	Nebr.
Embree, Gertrude M.	Woodland Park,	Colo.
Epler, H. B.	Castle Rock,	Colo.
Erickson, Agnes	Ouray,	Colo.
Ericsson, Anna	Denver,	Colo.
Estes, Myrtle	St. Joseph,	Mo.
Fallon, Mrs. Florence	St. Alva,	Okla.
Fenner, Cecil	Meeker,	Colo.
Finch, Carolina	Ramah,	Colo.
Finley, Helen	New Castle,	Colo.
Fisher, Laura E.	Denver,	Colo.
Fitzmorris, A. E.	Greeley,	Colo.
Flaherty, Mary E. Mrs.	Melrose,	Mont.
Foresman, Grace R.	Canon City,	Colo.
Forsyth, M. W. Mrs.	Denver,	Colo.
Forward, H. J.	Greeley,	Colo.
Fowler, D. B.	Parker,	Colo.
Frink, Margaret	Denver,	Colo.
Fryklund, Verne C.	Greeley,	Colo.
Futzson, Edith	Irene,	So. Dak.
Gates, Virginia	Denver,	Colo.
Galt, Ruth A.	Tacony,	Colo.
Gammill, Mrs. F. I.	Mead,	Colo.
Gardner, Ana	Colorado Springs,	Colo.
Garnier, Theo. R.	Creede,	Colo.
Gauss, Charlotte	Greeley,	Colo.
Geiger, Nellie	Woodland,	Mich.
Gibhardt, G. L.	Silverton,	Colo.
Gilliam, Ellen	Kiefer,	Okla.
Glassey, Josephine	Ft. Morgan,	Colo.
Grace, Hazlett	Hotchkiss,	Colo.
Griffing, Elizabeth	Ft. Morgan,	Colo.
Grisier, Orville, J.	Rocky Ford,	Colo.
Grix, Mary B.	Ogden,	Utah
Gwynn, Cora May	Pueblo,	Colo.
Hall, Harriet	Water Canon,	N. M.
Hall, Iva C.	Malad,	Colo.
Hamilton, Nellie	Denver,	Colo.
Hanger, Mary	Barnum,	Wyo.
Hanway, Amelia Freedle	Mosca,	Colo.
Hardin, Achsah	Pueblo,	Colo.
Harvey, Sarah J.	Rock Springs,	Wyo.
Hathaway, Marie	Denver,	Colo.
Hayes, Dorothy	Gill,	Colo.
Heatherly, Nita	Rifle,	Colo.
Hemphill, F. C.	Burns,	Wyo.
Hiatt, Rose	Alcreek,	Colo.
Hicks, Marie L.	Ainsworth,	Nebr.
Higginbottom, Minnie	Ordway,	Colo.
Highley, Grace	Oklahoma City,	Okla.
Hinton, Elizabeth Mrs.	Grand Junction,	Colo.
Hoag, Clarice	Lamar,	Colo.
Holahan, Josephine	Colorado Springs,	Colo.
Hoon, Helen	Colorado Springs,	Kans.
Humberd, Mrs. I. A.	Rolla,	Kans.
Humberd, I. A.	Rolla,	Kans.
Jacobs, Charlotte	Greeley,	Colo.
Jacobs, Clara	Pueblo,	Colo.

Jacobs, Gertrude M.	Trinidad	Colo.
Jeanne, Sister M.	Sioux Falls,	S. D.
Jensen, Isabelle	Boulder	Colo.
Jewell, E. W.	Minturn	Colo.
Johnson, Byrde	McAlester,	Okla.
Johnson, Everet	Checotah,	Okla.
Johnston, Helen	Wilmington,	Ohio
Jones, Helen	Victor,	Colo.
Jones, Lois	Pinnacle,	Colo.
Jones, Mrs. Louise H.	Victor,	Colo.
Jones, Mollie C.	Pueblo,	Colo.
Jones, Ruth M.	McAlester,	Okla.
Joy, Pearl	Greeley,	Colo.
Katernadhl, Carl	Selma,	Calif.
Kearns, Ellen	Hot Sulphur Springs,	Colo.
Kearns, Mary	Carpenter,	Wyo.
Kellogg, Gertrude	Flagstaff,	Ariz.
Kendall, Mabel	Pueblo,	Colo.
Kennedy, Florence M.	Rockwell City	Iowa
Kennedy, Lyrra H.	Douglass,	Ariz.
Keorigh, Nellie	Cheyenne,	Wyo.
Kibby, Ira	Oakland,	Colo.
Kiker, Vesta	Raton, N. M.	
Kinsey, Dorothy	Islay,	Wyo.
Kirkley, Bertha	Huntsville,	Texas
Koencke, Laura	Ft. Morgan,	Colo.
Kreider, Helene	Bryfield,	Colo.
Krum, Mildred E.	Keota,	Colo.
Lamb, Helen	Brighton,	Colo.
Lanning, Bessie C. Mrs.	Sugar City,	Colo.
Larson, Mildred	Grover,	Colo.
Lauth, O. B.	Monument,	Colo.
Latronico, Mamie	Louisville,	Colo.
Latronico, Mary	Louisville,	Colo.
Latronico, Philoman	Louisville,	Colo.
Law, Essa	Padroni,	Colo.
Lay, Edith	Salt Lake City,	Utah
Lehmer, Ila C.	Walden,	Colo.
Lehr, R. Katherine	Arlington,	Nebr.
Letey, Yvonne	Greeley,	Colo.
Lewis, Mrs. Ivy	Greeley,	Colo.
Lobdell, Gertrude	Chin Lee,	Ariz.
Long, Margaret C.	Frederick,	Colo.
Long, P. J.	Wentworth,	Mo.
Loomis, Nellie	Bedford,	Iowa
Lord, Stella M.	Sunrise,	Wyo.
Lowell, Florence Mrs.	Greeley,	Colo.
Lynch, Agnes	Denver,	Colo.
McCarty, Anna	Briggsdale,	Colo.
McCullough, W. C.	Denver,	Colo.
McDaniel, Martha	Florence,	Colo.
McFadden, Tina	Denver,	Colo.
McHuran, I. D.	Trinidad,	Colo.
McNeel, Maybell	Loveland,	Colo.
Mackie, Kate M.	Denver,	Colo.
Mais, Alice	Trinidad,	Colo.
Mannering, Lou	Cripple Creek,	Colo.
Martiny, Iva Lora	Mineral Hot Springs,	Colo.
Martz, A. J.	Lewistown,	Mont.
Martz, Mrs. A. J.	Lewistown,	Mont.
Means, Anna Anderson	Keenesburg,	Colo.
Mildreda, Sister M.	Sioux Falls,	S. D.
Miller, Gladys M.	Sterling,	Colo.
Miller, Mabel R.	Albion,	Idaho
Moffatt, Hilda	Wheatland,	Wyo.
Monroe, Mable R.	Deming,	N. M.
Montgomery, Mrs. L. P.	Denver,	Colo.
Moore, Walker N.	Lucas,	Kans.
Moran, Sister Olivia	Omaha,	Nebr.
Morris, Helen	Denver,	Colo.
Morrow, Lavina	Boyard,	Nebr.
Mullen, Sister Patricia	Omaha,	Nebr.
Myers, Marie N.	Greeley,	Colo.
Nance, Dorothy	Durango,	Colo.
Nash, Margaret	Trinidad,	Colo.
Nash, Mary	Trinidad,	Colo.
Neal, Mrs. Goldie	Chivington,	Colo.
Neal, Paul S.	Chivington,	Colo.
Negus, Clayton	Des Moines,	N. M.

Nelland, Mary	Greeley, Colo.
Nelson, Alma	Topeka, Kans.
Newton, E. Pearl	Grover, Colo.
Newton, Verne G.	Sandwich, Ill.
Nicholson, Pearl H.	Frederick, Colo.
Nissen, Hanna	Aurora, Nebr.
Nussbaum, Agnes S.	Greeley, Colo.
O'Brien, Gladys A.	Palisade, Nebr.
Olson, Nettie	Greeley, Colo.
Osmer, Mrs. Lily	Alma, Colo.
Otter, Gertrude	Greeley, Colo.
Payne, Sibyl	Mead, Colo.
Peers, Katherine	Boulder, Colo.
Phippeny, Lael	Greeley, Colo.
Pumphrey, Grace	Peckham, Colo.
Pierce, Opal	Maysville, Mo.
Pingery, Jennie H.	Estherville, Iowa
Plunk, A. C.	La Junta, Colo.
Pool, Minnie	Greeley, Colo.
Porter, Ralph M.	Kemmerer, Wyo.
Power, Martha	McAlester, Okla.
Prewet, Hattie O.	Ft Worth, Texas
Priestley, Gertrude	St. Joseph, Mo.
Purdy, Rena A.	Greeley, Colo.
Quinby, Grace	Greeley, Colo.
Quinby, Grace E.	Sacramento, Calif.
Quinn, Mabel	Cheyenne Wells, Colo.
Raeth, G. A.	Greeley, Colo.
Rardin, Maybelle	Greeley, Colo.
Rasar, Isa F.	McAlester, Okla.
Ray, Zella	Bellingham, Utah
Redding, Emma J.	Idaho Springs, Colo.
Reid, Beneta	Dearborn, Mo.
Rhiner, Ethelyne	Greeley, Colo.
Richardson, Lora L.	Marshalltown, Iowa
Rische, Rhesa	Greeley, Colo.
Roberson, Jennie	Wichita Falls, Tex.
Roberts, Louise	Greeley, Colo.
Robson, Eloise	Hoyt, Colo.
Rosenfeld, Mrs. Selma	Las Cruces, N. M.
Rule, Beatrice A.	Colorado Springs, Colo.
Rumley, Maude	Loveland, Colo.
Rundquist, Winona	Colorado Springs, Colo.
Saunders, Lee	Boulder, Colo.
Schlessinger, Amy	Salida, Colo.
Scott, Chas. E.	Timnath, Colo.
Scott, Grace J.	Blanca, Colo.
Scott, Nellie M.	Houston, Mo.
Seeburg, Florence	Monte Vista, Colo.
Shane, Lillie	Otis, Colo.
Sharp, Mabel R.	Greeley, Colo.
Shewmaker, Lethe D.	Globe, Ariz.
Sims, Delpha	Mathison, Colo.
Smiley, Helena	Manzanola, Colo.
Smith, Ethel	Pueblo, Colo.
Smith, S. Allan	Evans, Colo.
Smith, Wells	Red Cliffe, Colo.
Smith, Mrs. Wells	Red Cliffe, Colo.
Stantz, Cora	Tyron, Neb.
Staub, Isabelle	Denver, Colo.
Stender, Ella	
Stevens, Mrs. Bertha	Wellington, Colo.
Stewart, C. E.	Akron, Colo.
Stewart, Lulu	DeBeque, Colo.
Stone, Grace	Cripple Creek, Colo.
Strain, Corinne	Lamar, Colo.
Stump, Minnie	Raton, N. M.
Sumner, Clara E.	Herrington, Kan.
Surber, Loretta	Cripple Creek, Colo.
Sweet, Maude R.	Denver, Colo.
Swanson, Esther	Seattle, Wash.
Swenson, Frances	Denver, Colo.
Tate, Anna E.	Florence, Colo.
Tate, Emma C.	Florence, Colo.
Taylor, Edna R.	Loveland, Colo.
Taylor, Mrs. Nettie	Del Norte, Colo.
Taylor, Paula	Denver, Colo.

Thorp, Luella .....	Oklahoma City, Okla.
Tidball, Elizabeth .....	Goldfield, Colo.
Todd, Christie A. ....	Tulsa, Okla.
Townsend, Willa .....	Byers, Colo.
Traver, Alice B. ....	Stillwater, Okla.
Trinbey, Helen .....	Trinidad, Colo.
Tuck, Grace .....	Denver, Colo.
Tuck, Leslie .....	Greeley, Colo.
Tuffin, Emma .....	Delta, Colo.
Turner, S. L. ....	Lewiston, Mont.
Turner, Willie .....	Pagosa Springs, Colo.
Turrell, Anna .....	Severence, Colo.
Van Devender, Verdon .....	Avalo, Colo.
Van Kensen, Helen .....	Hugo, Colo.
Varmilya, Richard .....	Savage, Colo.
Vincent, De Pearl Sister .....	Omaha, Neb.
Vincent, Mrs. H. H. ....	Denver, Colo.
Vorhies, Ruth .....	Deming, N. M.
Walker, D. B. ....	Basalt, Colo.
Wall, Prof. John F. ....	Pierce, Colo.
Wallace, Florence Rice .....	Nepesta, Colo.
Ward, Ruth .....	Holly, Colo.
Warren, Winifred .....	Fromberg, Mont.
Waterman, Verna .....	Gunnison, Colo.
Weedon, Lillian .....	Milo, Wyo.
Whateley, A. A. ....	Greeley, Colo.
Wheeler, Mary C. ....	Cheraw, Colo.
White, Mrs. H. Lou .....	Cripple Creek, Colo.
White, Ramona .....	Cripple Creek, Colo.
Wiley, Anna .....	Boone, Colo.
Wilkerson, R. A. ....	La Grande, Ore.
Williams, Ethel St. Clair .....	Pueblo, Colo.
Williams, Lona .....	Greeley, Colo.
Williams, May .....	Hanna, Wyo.
Williams, Oliver .....	Hanna, Wyo.
Willis, Mrs. Anna .....	Chandler, Okla.
Wilson, Faye .....	Carpenter, Wyo.
Winefride, Sister Mary .....	Earley, Iowa
Winn, Eleanor .....	Dallas, Texas
Withrow, Mary E. ....	Tarkio, Mo.
Witter, Nellie L. ....	Greeley, Colo.
Womelsdorf, Bertha .....	Quincy, Ill.
Womelsdorf, Henrietta F. ....	Quincy, Ill.
Worley, Raymond J. ....	Greeley, Colo.
Yates, Bonnie .....	Yuma, Colo.
Young, Louise .....	St. Joseph, Mo.



## Individual Plan—High School

1919-20

Alexander, Mrs. Laura .....	Vona, Colo.
Barbour, Flora .....	Edgewater, Colo.
Bell, Ruby .....	Walsenburg, Colo.
Brabhan, Edna .....	Briggsdale, Colo.
Brandon, Elizabeth .....	Otis, Colo.
Brethower, Doris .....	Montrose, Colo.
Burton, Thelma .....	Stoneham, Colo.
Calamber, Wilma .....	Orchard, Colo.
Carey, Lora P. ....	Eagle, Colo.
Cook, Mrs. Katherine .....	Aguilar, Colo.
Dack, Lula .....	Stratton, Colo.
Denny, Mahala .....	Seymour, Mo.
Dickey, Anna .....	LaSalle, Colo.
Doyle, Eva .....	Eads, Colo.
Ellis, Annie .....	Yazoo City, Colo.
Foss, Mrs. Lena C. ....	Fosston, Colo.
Greer, Emma L. ....	Grover, Colo.
Heabler, Grace .....	Denver, Colo.
Hulburd, Mary .....	Otis, Colo.
Isadore, Francis .....	Lamar, Colo.
Johnson, Blanche .....	Yuma, Colo.
Justice, Esther .....	Kirk, Colo.
Klasson, Marie .....	Kirk, Colo.
Landis, Amanda .....	Apache, Colo.
Larson, Mrs. Mae .....	Greeley, Colo.
Lindsey, Nora .....	Avalo, Colo.
Mackey, Mrs. Catherine.....	Greeley, Colo.
Mayer, Mildred .....	Fort Russell, Wyo.
McCall, Jessie .....	Franktown, Colo.
McConnell, Elvis .....	Stratton, Colo.
McCrea, Eliza .....	Cameron, Mo.
McDonnall .....	Hudson, Colo.
Mead, Gail .....	Schell City, Mo.
Miller, Sophris .....	Durango, Colo.
Neiman, Nellie .....	Longmont, Colo.
Patterson, Mrs. Minnie .....	Greeley, Colo.
Phillips, Anna E. ....	Forsyth, Mo.
Picheco, Josephine .....	San Luis, Colo.
Pitts, Mrs. Harry .....	Loveland, Colo.
Quinn, Mabel .....	Cheyenne Wells, Colo.
Reddish, Mrs. Mabel .....	Buckingham, Colo.
Richey, Nellie D. ....	Burlington, Colo.
Robinson, Ethel D. ....	Hudson, Colo.
Scott, Grace J. ....	Blanca, Colo.
Smith, Mabel .....	Fowler, Colo.
Sphoon, Irene .....	Fowler, Colo.
Steidley, Lurene .....	Fort Collins, Colo.
Stonebraker, Berman .....	Canon City, Colo.
Van Deventer, Viola .....	Spurgeon, Colo.
Vermillion, Mrs. G. N. ....	Denver, Colo.
Wilfley, Mrs. Ida .....	Colorado Springs, Colo.
Wiley, Ruth .....	Hayden, Colo.
Wood, Lydia L. ....	Bristol, Colo.
Zaph, Frieda .....	Greeley, Colo.

# Institute Plan

1919-20

Allison, Fern .....	Vernon, Colo.
Ashley, Mabel Norton .....	Burlington, Colo.
Atto, Louvia A. ....	Wheatridge, Colo.
Beck, Ellin .....	Lucas, Kan.
Barber, Ethel .....	Vernon, Colo.
Bastin, Marguerite .....	Colorado Springs, Colo.
Bartholomew, Beulah .....	Colorado Springs, Colo.
Baker, Zora .....	Keyser, Colo.
Balluff, Elizabeth .....	Conejos, Colo.
Barnes, Bernice .....	Trinidad, Colo.
Barrett, Mary .....	Trinidad, Colo.
Bentart, Alma .....	Leadville, Colo.
Bocco, Irene .....	Steamboat Springs, Colo.
Brown, Frances .....	Bennett, Colo.
Bradshaw, Sara E. ....	Denver, Colo.
Booker, Elizabeth .....	Bennett, Colo.
Blank, Martha .....	Denver, Colo.
Bresnahan, Marian .....	Colorado Springs, Colo.
Beady, Mildred .....	Colorado Springs, Colo.
Bond, Myrtle G. ....	Denver, Colo.
Boyd, Bertha A. ....	Farr, Colo.
Bigelow, Elma .....	Sligo, Colo.
Brady, Mirttie .....	Avalo, Colo.
Bright, Norma Bell .....	Golden, Colo.
Brush, Ruth .....	Genoa, Colo.
Burch, Eleanore .....	Genoa, Colo.
Bruckner, Isalene .....	Boulder, Colo.
Brown, Bernice .....	Las Animas, Colo.
Burrows, Elsie .....	Kiowa, Colo.
Campbell, Clare .....	Sterling, Colo.
Case, Flore B. ....	Fort Morgan, Colo.
Chambers, W. W. ....	Hasty, Colo.
Cavenah, Anna .....	Aguilar, Colo.
Campbell, Ruby .....	Trinidad, Colo.
Chambers, May .....	Silver City, Colo.
Clark, Mary C. ....	Leadville, Colo.
Clinton, Vivian .....	Las Animas, Colo.
Cobb, Jessie .....	Fowler, Colo.
Curtin, Ida B. ....	Monte Vista, Colo.
Coffey, Viola .....	Boulder, Colo.
Crutcher, C. L. ....	Bristol, Colo.
Cook, Roxy .....	Boulder, Colo.
Dillon, Vera Thomas .....	Burlington, Colo.
Drikey, Anna .....	Evans, Colo.
DeLaMater, C. F. ....	Hastings, Colo.
Delholtz, Inez .....	Trinidad, Colo.
Dean, Gladys .....	Englewood, Colo.
Davis, Vesta .....	Wiley, Colo.
Davis, Willie M. ....	La Junta, Colo.
Deming, Nola .....	Manzanola, Colo.
Donahue, Jessie .....	Pueblo, Colo.
Douglass, Mildred .....	Manitou, Colo.
Douglass, A. M. ....	Manitou, Colo.
Diedrick, Cora M. ....	Flues, Colo.
Duncan, Bertha G. ....	Caddo, Colo.
Donley, Edith .....	Pueblo, Colo.
Easton, Virginia .....	Trinidad, Colo.
Elder, Agnes .....	Bennett, Colo.
Eastland, Josephine .....	Waco, Texas
Elder, Maglin .....	St. Joseph, Mo.
Elder, Belle .....	Rocky Ford, Colo.
Ferguson, Mrs. L. ....	Trinidad, Colo.
Fisher, Ulah .....	Denver, Colo.
Frengen, Bertha .....	Kawal, Colo.
Fuller, Hazel .....	Denver, Colo.
Fruehling, Maud .....	Denver, Colo.
Friedman, Julia .....	Denver, Colo.
Foster, Gladys .....	Denver, Colo.

Fromm, Virginia	Idaho Springs, Colo.
Frazezy, Irma	Walsenburg, Colo.
Frye, Cora	Roggen, Colo.
Flynn, Emma	Trinidad, Colo.
Flynn, Josephine	Trinidad, Colo.
Glenn, Helen	Denver, Colo.
Gessler, Olive H.	Denver, Colo.
Giltner, Cora	Penalosa, Kan.
Giltner, Ada	Penalosa, Kan.
Grant, Lela	Vona, Colo.
Grey, Wilkie	Lamar, Colo.
Grutzmacher, Margaret	Black Hawk, Colo.
Hause, Alice	Fort Lupton, Colo.
Hartman, Neva	Radium, Colo.
Hermer, Bonita	Farr, Colo.
Herrick, Flora	Kit Carson, Colo.
Hopper, Helen	Carbondale, Colo.
Howitt, Rose	Alcreek, Colo.
Howard, Zola	Kiowa, Colo.
Howard, Doris	Rifle, Colo.
Horn, Mary Ann	Trinidad, Colo.
Holmes, Ella	Arvada, Colo.
Jones, Florence	Denver, Colo.
Jacobson, Margaret	Denver, Colo.
Johnson, Mae	Denver, Colo.
Johnson, Elsie	Boulder, Colo.
Johnson, Addie	Durango, Colo.
Key, Verdabelle	Sopris, Colo.
Kendricks, Edna	Kendrick, Colo.
Kearns, Ellen	Boulder, Colo.
Kling, Lucille	Denver, Colo.
Kingsley, Emma	Denver, Colo.
Kinder, Esther	Fort Lupton, Colo.
Kimball, Carolyn	Boulder, Colo.
King, Blaine	Yellow Jacket, Colo.
Kreder, Helen	Durango, Colo.
Leanard, Marie	Limon, Colo.
La Rue, Mamie	Senca, Kan.
Lamb, Josephine	Livermore, Colo.
Larson, Agnes	Trinidad, Colo.
Leonard, Helen	Aspen, Colo.
Levine, Ruth E.	Wheatridge, Colo.
Leitch, Martha D.	Rocky Ford, Colo.
Luzmoor, Elizabeth	Boulder, Colo.
Long, Mayme	Eagle, Colo.
Looney, Susoe	Kinton, Okla.
Longheed, Lila	LaVeta, Colo.
McClure, Ruth	Fowler, Colo.
McClure, Helen	Fowler, Colo.
McKenny	Lamar, Colo.
McAloon, Anna	Akron, Colo.
McBride, Grace	Akron, Colo.
McCullough, W. W.	Denver, Colo.
McDowell, Mary	Steamboat Springs, Colo.
McKenny, I.	Haswell, Colo.
Magee, Mabel	Denver, Colo.
Mahler, Julia	Sterling, Colo.
Maxelmer, Manila	Calhan, Colo.
Maes, Alice	Trinidad, Colo.
Manners, Marie	Pueblo, Colo.
Meier, Esther	Sterling, Colo.
Mickey, Mrs. Cora	Craig, Colo.
Milern, Velma	Genoa, Colo.
Milleman, Ethel	Las Animas, Colo.
Millstead, Ruth	Fowler, Colo.
Miller, Wilma	Colorado Springs, Colo.
Miller, Eva	Mindeman, Colo.
Miller, Grace	Durango, Colo.
Mier, Anna	Allison, Colo.
Murray, Hazel	Trinidad, Colo.
Norton, Mabel	Rocky Ford, Colo.
Nolan, Katheryn	Trinidad, Colo.
Neimeyer, Florence	Denver, Colo.
Noble, Sadie	Hugo, Colo.
Newman, Stella	Las Animas, Colo.

O'Reilley, Charlotte .....	Denver, Colo.
Perry, Mrs. M. B. ....	Denver, Colo.
Perry, Abby .....	Salida, Colo.
Perry, R. S. ....	Branson, Colo.
Peet, Mabel .....	Ravenwood, Colo.
Peterson, Ruth .....	Leadville, Colo.
Pollock, Grace .....	Fowler, Colo.
Pitts, Mrs. Harry .....	Loveland, Colo.
Pollock, Helen .....	Allison, Colo.
Price, Delia .....	Boulder, Colo.
Pilant, Jas. W. ....	Rouse, Colo.
Pincher, Bertha .....	Denver, Colo.
Richardson, Lora .....	Marshalltown, Iowa
Rardin, Maybelle .....	Colorado Springs, Colo.
Ring, Amy .....	Trinidad, Colo.
Ralston, Elizabeth .....	Trinidad, Colo.
Ridehour, Floy .....	Pueblo, Colo.
Reed, Calvin .....	Trinpas, Colo.
Robb, Gilbert .....	Arriba, Colo.
Russ, Mrs. M. E. ....	Denver, Colo.
Rooney, Helen E. ....	Wheatridge, Colo.
Rule, Sarah .....	Durango, Colo.
Russell, Vivila V. ....	Colorado Springs, Colo.
Scholfield, Sarah .....	Monte Vista, Colo.
Schick, Rose .....	Wiley, Colo.
Sanderson, Margaret .....	Aguilar, Colo.
Seeley, Mabel .....	Stratton, Colo.
Seaberry, Mrs. W. C. ....	Carr Crossing, Colo.
Sides, Lucille .....	Yoder, Colo.
Seravini, Elveiva .....	Denver, Colo.
Slater, Bernard .....	Trinidad, Colo.
Stalts, Elvira .....	Sterling, Colo.
Steckel, Mrs. Iva .....	Denver, Colo.
Stone, Grace E. ....	Cripple Creek, Colo.
Thompson, Josephine .....	Carbondale, Colo.
Tribbs, Ruth H. ....	Denver, Colo.
Trigg, Zelma .....	Lamar, Colo.
Toogood, Esther .....	Walsenburg, Colo.
Tracy, Obbie .....	Logan, Kan.
Tones, Frank .....	Trinidad, Colo.
Tweedale, Hannah .....	Trinidad, Colo.
VanDevender, Verdon .....	Avalo, Colo.
Vaughn, Mrs. Alma .....	Sterling, Colo.
Welsh, Donald .....	Denver, Colo.
Warner, Lucile .....	Las Animas, Colo.
Ward, Ruth .....	Lamar, Colo.
Wellington, Esther .....	Edwards, Colo.
Wetterberg, Florence .....	Boulder, Colo.
Wayt, Iva .....	Ignacio, Colo.
Wilkins, Esther .....	Fort Collins, Colo.
Wright, Sarah .....	Buena Vista, Colo.
Yeager, W. S. ....	Thatcher, Colo.
Young, Winifred G. ....	Lyons, Colo.

# State High School of Industrial Arts

FALL, WINTER AND SPRING QUARTERS  
1919-1920

## NINTH GRADE

Absher, Ruth	Kollman, Grace
Adams, John A.	Lauck, Flora
Bancroft, Clifford	Mashburn, Jack
Baker, Ruth	McCaul, Clarence
Bashor, Oma	McMullen, Lucretia
Balent, Ella	McMurray, Marie
Beesley, Stanley	McNeal, Imogene
Buchanan, Ruth	Menagh, Eldon K.
Bloom, Fannie	Mayer, Edna
Boyd, Lois E.	Meyer, Edwin
Boyer, Homer	Moss, Dixon
Carlson, Edna	Miller, Elizabeth
Carlson, Augusta	Morris, John
Cockerill, Ethel	Monroe, Florence
Cockerill, Eva	Myers, Victor
Cockerill, Thelma	Norcross, Lyle
Coon, Louisa	O'Brien, Julia
Cooperrider, Leonard	Palmer, Evelyn
Culbertson, Virginia	Peterson, Robert
Culp, Hersia	Phelps, Louis
Curry, Theodore	Potter, Ruby
Cushman, Miriam	Reilstab, Pauline
Dake, Ruth M.	Riggen, Irene
Dale, Catherine	Roman, Helen
Deaver, Sidney	Rucker, Martha
Denny, Roger	Rucker, Margaret
Dillon, Winifred	Runnels, Blanche
Dodd, Lela	Runnels, Olive
Downer, Hattie	Seastrand, Conrad
Dow, Bertha	Schlosser, Reinard
Dow, Florence	Schlosser, Walter
Dunn, Clyde	Schnoor, Beatrice
Evans, Earl	Schoonmaker, Joe
Fiedler, Mary	Scribner, Icle
Finke, Bernice	Sitzman, Lydia
Finke, Orlo	Sholdt, Margaret
Frakes, Hoy	Smith, Grace
Gallagher, Arthur	Smith, Esther
Geghrig, Teddie	Smith, Clarence
Ginsburg, Esther	Spencer, Edwin
Ginsburg, Irene	Strong, Iona
Glaister, Marguerite	Streck, Lucille
Glidden, George	Strock, Earl
Glidden, John	Stephens, Eleanor
Haffner, Birdie	Sumner, Ruth
Hale, Edna Grace	Taylor, Arthur
Hale, Mabel	Topping, Don G.
Hays, Florence	Van Wyke, Wm.
Healy, Harriet	Van Auken, Bernice
Howe, Vera M.	Van Dever, Willis
Humphrey, Carl	Warner, Bernice
Jackson, Bernice	Wahl, Clarence
Johnson, Gervais	White, Raymond
Johnson, Ernest	Waldo, Gaye
Johnson, Herbert	Williams, Dick
Jones, Henry	Warner, Bernice
Jones, Thelma	Windolph, Marie
Kaehler, Henry	Whitescarver, Leland
Kale, Kathryn	Yearant, Sidney
Jones, Hazel	Wood, Catherine

## TENTH GRADE

Alber, Vera	Clark, Lawrence
Benson, Philomene	Cooper, Ruth
Benson, Marie	Conlin, Ambrose
Bidwell, Watson	Gross, Carl
Billings, Fern	Cunningham, John
Blake, Myrtle	Dean, Helen
Bloom, Frieda	De Forde, Dale

## STATE TEACHERS COLLEGE

## TENTH GRADE—Continued

Dempewolf, Bertha	Klein, Mary
Dunn, Meyer	Lance, Lewis
Dunn, M. Pearl	Lawrence, Alice
Edgington, Neva	Long, Ted
Eldridge, Gladys	Mashburn, Charles
Engle, Charles	McCaul, Will
Elmer, Elizabeth	McGaughey, Pherman
Fink, Helen	McLucas, Solomen
Forward, Grace	Mart, Hilma
Freeburg, Philip	Menefee, Ray
Frakes, Hay	Morris, John
Glaister, Margaret	Morgan, Helen
Goerke, Robert	Nohe, Gladys
Goerke, Evelyn	Onstine, Daniel
Greer, Zylpah	Paris, Ocal
Haight, Blanche	Piper, Lester
Hall, Ila	Pretzel, Hazel
Harris, Kenneth	Price, Belle
Hatch, Bradford	Rader, Enola
Hill, Myrtle	Rathburn, Blanche
Hoffman, Eleanor	Resse, Frances
Hofschulte, Laura	Rogers, Audrey
Hofschulte, Agnes	Royer, Rowena
Howes, Lola	Smilie, Dorothy
Howes, Vera	Schlosser, Rienard
Howes, Merrill	Shields, Mildred
Jacobs, John	Smith, Hannah
Jacobson, Mabel	Taylor, David
Justice, Esther	Taylor, Frank
King, Floyd	Turner, Anna
Key, Opal	Williams, Mary
Kirkman, Mary	Windolph, Marie
Kirkman, Grace	Winegar, Edna
Klein, Myrtle	

## ELEVENTH GRADE

Anderson, Archie	McCaul, Bella
Aultman, William	McMullen, Catherine
Barry, F. A.	Martin, Earl
Beauchamp, Hazel	Maxey, Imogene
Birdsall, Georgia	Menagh, Reva
Blair, Edith	Moffatt, Hilda
Butler, Anna	Morgan, Hayden
Carl, Ethelda	Moore, Harold
Clark, Fern	Nims, Eleanor
Cunningham, Marie	Nutter, Margaret
Dack, Lulu	Ostling, Herbert
Davis, John C.	Palmer, Esther
Dickey, Ernest	Peterson, Ellen
Dillon, Joseph	Potter, Alfred
Dunlap, Esther E.	Rea, Boyd
Ewing, Cora	Reese, Bessie
Finley, Winona	Romans, Thelma
Geiser, Irene	Root, Alice
Ginther, Carrie	Runnels, Alevia
Gosselin, Margaret	Seastrand, Edna
Graves, Herman	Seastrand, Ralph
Gustafson, Alice	Smilie, Dorothy
Gustafson, Aliva	Smith, Edith
Harrington, Genevieve	Smith, Florence
Hamilton, Wilma	Stephens, Horace
Hargrove, Ralph	Tisdell, Dorothy
Henderson, Victoria	Van Wyke, Nellie
Hershiser, Joseph	Warner, Dorothy
Jones, Helen	Watkins, Louise
Kinder, Lester	Williams, Lial
Lance, Alice	Wood, Louis
Lawrence, Wray	Yearant, Chas. D.
Leibee, Edna	Young, Leonard

## TWELFTH GRADE

Balent, Albert	Brooks, Loraine
Bardwell, George	Brooks, Violet
Barnes, Mildred	Carlson, Esther
Barrett, Helen	Carter, Albert
Benway, Edgar	Christensen, Grace
Boyd, Ada V.	Cooperrider, Lola
Boyer, Edith	Dean, Marion
Broman, Ira	Dempewolf, Cecelia
Bickling, Elsie	DeCamp, Mabel

## TWELFTH GRADE—Continued

Doune, Dean	Monroe, Gertrude
Downer, Dean	Morris, Everett
Doyle, Eva	Moss, Hallie
Doyle, Vera	Morgason, Ruth
Elmer, Elizabeth	Morrison, Elizabeth
Eldridge, Fern	Nyquist, Hulda
Fielder, Hattie	Olds, Ellen
Floeth, Russel	Otten, Harry
Evans, Dave	Paine, Ella
Foley, Raymond	Paine, Milton
Fuller, Mary A.	Pierce, Myrtle
Gaines, Aletha	Pierpoint, Glen
Goerke, Evelyn	Prunty, Leuty
Graham, Hugh	Riddell, Fern
Gunnison, Louise	Rathburn, Hazel
Haight, Edith	Reese, Pauline
Hammond, Dolores	Runnels, Alvira
Hicks, Elizabeth	Salberg, Lillian
Hofshulte, Herman	Schuster, Florence
Herrington, Carolyn	Seastrand, Ruth
Jacobs, Eastman	Sickles, Bonnie
Haskins, James	Skooglund, Alvena
Hurianck, Vlasta	Stonebraker, Berman
Hurianek, Zdenke	Spencer, Verlin
James, Leota	Taylor, Dorothy
James, Thomas	Timothy, Eldred
Jones, Alice	Townsend, Willa
Jones, Mrs. Mollie	Van Devender, Verdan
Johnson, Ebba	Van Why, Susie
Johnson, Verba	Veldran, Opal
Jurgens, Carrie	Walker, Harold
Key, Verdabelle	Wherron, Hazel
Kittle, Leslie	Ware, Mabel
Lawrence, Wray	Warner, Dorothy
Lewis, Maurine	Washburn, Thelma
McWhorter, Irene	Wecas, Charles
McWhorter, Leslie	Williams, Lila
McKeever, Genevieve	Willson, Ivy
Meador, Milly	Wood, Howard
Myers, Ellen	

# Training School

Fall, Winter and Spring Quarters  
1919-20

## KINDERGARTEN

Anderson, Vera	Jones, Weldall
Armstrong, Robert E.	Kellone, Eileen
Aukerey, Dorothy	Kitson, Irvin Robert
Aukerey, Margaret	Knowles, Dorothy
Baab, Geo. William	LaFollette, Julia
Baker, R. L.	Main, May Elizabeth
Baum, Helen	Miller, Blanche
Bain, Enola	Moser, Erwin
Blue, Gerald	Ogden, Jessie
Bass, Albert Carter	Pattee, Alan
Bishop, William Donald	Phelps, Jane
Bonnell, David	Pierce, Robb
Bradbury, Alfred	Porter, Philip
Bryant, Edward	Rice, Ethel
Brush, Florence	Roberts, Lawrence
Castleman, Billie	Runnels, Capels
Clymer, Bob Perry	Sattley, Charles
Colvin, Margaret	Schuetz, Marvin
Crimeans, Charles	Sitzman, Ada Ruth
Criswell, Elizabeth Anne	Slockett, Frederick
Davis, Dorothy	Slockett, Florence
Finley, Mary Elizabeth	Struble, Paul
Force, Stephen	Smith, Ronald
Force, Billy	Sults, Marvin
Fuqua, William	Waggner, Bruce
Gelder, Royal Wm.	Welsh, Rosella
Gerald, Blue	Welsh, Arthur
Henderson, Floyd	Weller, Mayme Jessie
Hibbs, Dickey	Wheeler, Charles
Hickett, Florence	Willardson, Mason
Hollister, Mary	Willard, Wicker
Hopkins, Billy	Williams, Kathryn
Houston, Virginia	Wilson, Virginia
Humphrey, Ruth	York, Helen Eileen

## FIRST GRADE

Adams, Mildred	Krous, Janet
Adams, Hugh	Kitson, Robert
Barclay, Florence	Lee, Laura Frances
Benton, Edwin	Linden, Charles
Brown, M. Elizabeth	Linden, Herbert
Calvin, Irene	Lowe, Edgar
Calvin, Mary	Magison, Freddie Edgar
Carlson, Clarence	Meyers, Lester Alman
Clark, Eunice	Munger, Jack
Clayton, Catherine	Phelps, Jean Esther
Coon, Vivian	Phillips, Eleanor
Dale, Marjorie	Raynard, Marjorie
Dempsey, Doris	Reed, Lewis
Drear, Emery	Statley, Vincent
Dunn, Clara	Skold, Arthur
Forward, Zeo Ethelyn	Smith, Natel
Freeman, Mary Elinor	Streck, Vincent
Gilbert, Madeline	Strohl, Lester
Gooden, Eulah	Toffler, Jane Mary
Goulette, Cheshawgan	Towner, Helen
Haun, Sylvia	Turner, Zelda
Hendrickson, Marie	Waggoner, Mona
Houtchens, Everet	Walldhouser, Evelyn
Imboden, Neal	Wheeler, Charles
Jackson, Nina	Williams, Jane
Kell, Marie Lois	Williams, Henry M., Jr.

## SECOND GRADE

Alles, Victoria	Campbell, John
Brown, Newton	Castleman, Virginia
Bahn, Annabelle	Castleman, Regina
Buick, Violet	Clayton, Katherine
Burman, Elmer	Chalgren, Patsie



## SECOND GRADE—Continued

Dale, Joyce L.	Lowe, Kenneth
Deaver, Orval	Lowe, Sammie
Dunn, Thomas	Milton, Paul
Dungan, Arthur	Miller, Marshall
Freeman, Eugene	Myers, Lester
Flanagan, Arthur	Owen, Margaret
Flanagan, Robert	Parish, Robert
Gilbert, Robert M.	Phelps, Jay
Gilbert, Virginia	Rennels, Laurel
Ginther, Mary	Roberts, Irene
Gosselin, Eleanor	Salburg, Herman
Hemingway, Elliot	Samuelson, Frances
Hershiser, Virginia	Stayle, Geo.
Humphreys, Edward	Styer, Elbert
Jarvis, Evelyn	Williams, Thomas Blair
Johnson, Alice	Wagner, Mona
Imboden, Neal	Wilson, John
LaFollette, Paul	Wilson, Rendel
Linden, Siegrid	Yearant, Ruth

## THIRD GRADE

Baker, Arthur	Harrington, Delia
Bass, Louise	Hargrove, Helen
Benton, Vera	Houtchens, Bernard
Blystad, Leonard	Jackson, Irene
Breeden, Lyle	Johnson, Katherine
Buehler, Walter	Kendel, Mary
Campbell, Howard	Lawrence, Elmer
Cashner, George	Larson, Merle
Challgren, Maxine	Lehan, Pat
Coon, Billy	Linden, Carl
Culbertson, Grace	Mayer, Wilmer
Ellis, Ruth	Neill, Stewart
Elam, Winifred	Phillips, Katherine
Fleming, Alma	Petrikin, Nancy
Field, Harold	Roberts, Rowland
Baurney, Wm.	Segel, Paul
Gooden, Herbert	Styer, Mabel
Ginther, Elizabeth	Thompson, James
Green, Opal	Thotchens, Barnard
Green, George	Viehweg, Marguerite
Gibson, Dorothy Nell	Welsh, Billy
Haight, Groden	Wright, Homer Lee

## FOURTH GRADE

Ahlstrand, Charlene	Lowe, Dean
Bickel, Geo.	Lowe, Donald
Brown, Martha	Misner, Frank
Carbaugh, Millie	McDermott, Tom
Cockerill, Albert	Owen, Dorothy
Combs, Lloyd	Parish, John
Dale, Donald	Prunty, Beulah
Dempewolf, Laurence	Riddle, Marjorie
Donner, Irvin	Roberts, Vivian
Dugan, Mabel	Smith, Robert
Ecker, Douglas	Stroh, Harry
Elam, Alice	Strohl, Ruben
Freek, Louise	Strohauer, Harry
Freek, Raymond	Styer, Mabel
Harder, Katherine	Turner, Olive
Harder, Margaret	Thompson, Ruth
Harrington, Nellie	Waldhauser, Ruth
Hoffman, Raymond	Warner, John
Humphrey, Lucille	Wilson, Sara

## FIFTH GRADE

Alles, Amelia	Gaines, Alice
Baab, Clarence	Galland, Harold
Bauer, Irvin	Gates, Ruth
Bartholomew, Earl	Gosselin, Helen
Bruckner, Arle	Green, Gretchen
Benway, Ruth	Hall, Marion
Cater, Kathryn	Hollister, Merlin
Clayton, Dorothy	LaFollette, Robert
Culbertson, Ruth	LaFollette, Gene
Cushman, Esther	Lamar, Floyd
Dale, Kenneth	Lehan, Edward
Dale, Glen	Long, Jean
Ellis, Burr	Lowe, John
Finke, Florence	Myers, Dale

## STATE TEACHERS COLLEGE

## FIFTH GRADE—Continued

Monroe, Eunice	Stroh, Harry
Petterson, Harris	Smith, John
Patterson, Helen	Turner, Lester
Royer, Dean	Warner, Hanna
Seastrand, Eugene	Williams, Dorothy
Skold, Arvid	

## SIXTH GRADE

Abscher, Ruby	Houchens, Katherine
Adams, Ralph	Johnson, Thelma
Allison, Hazel	Kirk, Clarence
Baldwin, Jessie	Lanman, Floyd
Baker, Eugene	Linder, Phyllis
Barber, Mary	Mann, Claron
Bartholomew, Paul	Mathews, Gretchen
Bickel, Margaret	Meyers, Harold
Bower, John	Milton, Ruth
Brown, Eva	Morris, Rob
Carbaugh, Andy	Morse, Mabel
Combs, Florence	Mosier, Mary
Coon, Elberta	Myers, Edward
Cross, Neal	Norcross, Edna
Dillson, George	Owens, Harold
Eaton, Bourne	Pollick, Leroy C.
Ecker, Clifford	Roberts, John
Ellis, Florence	Roberts, Lucille
Ellis, Virginia	Salberg, Arthur
Ellis, Victoria	Schutz, Eunice
Flanagan, James	Soper, Ednast
Fleming, Ruth	Strohauer, Teddy
Gates, Ruth	Stephens, Pauline
Ginther, Clara	Turner, Cora
Gosselin, Walter	White, Marion
Hill, Clifford	Wywent, Gaily
Hoffman, Frederick	

## SEVENTH GRADE

Abscher, Ruth	Grayson, George
Adams, Herbert	Hadden, Margaret
Adams, Violet	Harrington, Trilba
Ahlstrand, Carol	Henderson, Madge
Bickel, Eloise	Herrington, Manuel
Brown, Ralph	Howell, James
Brown, Orville	Johnson, Marion
Brug, Pauline	Larson, Fordis
Burrous, Homer	Long, Leland
Buchanan, Gilbert	McDaniels, Lura
Carlson, Hillis	Misner, Errol
Carter, Emma	Myers, Loyal
Coleman, Thelma	Miller, Gurdon
Coulter, Roy	Neill, Margaret
Culbertson, Grant	Patterson, Morris
Davis, Blanche	Perrine, Ruth
Dempsey, Audrey	Rees, Marie
Dille, Frank	Sitzman, Mollie
Eaton, Thomas	Smith, Hazel
Ellis, Margaret	Speuth, Paul
Field, Martin	Turner, Cora
Fink, Arthur	Tressler, Goldia
Galland, Alva	Vanscoyoc, Clarence
Gooch, Jess	Walsch, Mary
Garnsey, Walter	Wood, Willis
Gosselin, Leslie	Waldhauser, Damon

## EIGHTH GRADE

Alles, Lydia	Day, George
Alles, Mary	Dempewolf, Arnold
Baird, Daniel	Dempsey, Robert
Baker, Ruth	Dille, Frank
Bruckner, Floyd	Downer, Earl
Baker, Mardelle	Draper, Paul
Burrous, Theodore	Dunn, Esther
Carlson, Noma	Galland, Arthur
Capshaw, Fay	Flanagan, Edmund
Cashner, Francis	Garwood, Bernice
Clark, Lillian	Gosselin, Marjorie
Coon, Rachel	Garwood, Charlene
Cross, James	Gehgrig, Teddy
Dale, Dorothy	Healey, Harriet
Dale, Katherine	Hoff, Jake

## EIGHTH GRADE—Continued

Hubbard, Jessie	Rhody, Paul
Humphrey, Karl	Rissman, Wilma
Humphrey, Walter	Sheman, Roy
Imboden, Helen	Smith, Clarence
Jack, Clifford	Smith, Esther
Johnson, Annie	Sitzman, Lydia
Johnson, Kenneth	Streck, Lucille
Jones, Hazel	Strohauer, John
Johnson, Lester	Timothy, Glendon
Jones, Henry	Traverse, Harold
Jones, Thelma	Van Aucken, Bernice
Kimball, Fred	Wahl, Clarence
McMullen, Lucretia	Waldo, Gay
McDaniel, Lura	Wells, Frank
Morse, Laurena	Whitescarver, Leland
Moss, Dixon	Voris, Clyde
Peterson, Robert	Wood, Katherine
Rains, Luella	White, Volney
Rellstab, Richard	Waggy, Eleanor

## Demonstration Schools

### Ashton

#### FIRST GRADE

Float, Fred	Nieberger, Nellie
Peterson, Melvin	Moshier, Ruby
Alkire, Herbert	Gustafson, Gunthild
Redmond, Alfred	Schewin, Dorothy
Brethauer, Fred	Rehmer, Mary
Rehmer, Fred	Smith, Ethel May
Mierer, Manuel	Selberg, Carl
Nieberger, Mary	

#### SECOND GRADE

Drake, Allison	Spencer, Earnest
Brethauer, David	Peterson, Evelyn
Carlson, John	Rehmer, Mary
Mossberg, Carl	Smith, Ethel May
Redmond, Roy	Schewin, Katherine
Zimmerman, Edward	Float, Rueben
Balch, Edith	

#### THIRD GRADE

Rehmer, James	Selberg, Mildred
Spencer, Cleo	Drake, Ruth

#### FOURTH GRADE

Nieberger, Crist	Mossberg, Mildred
Mincey, Dwane	Brethauer, Anna
Mieir, David	Lesser, Lydia
Mieir, Alex	Mincey, Doris
Arguello, Lille	Arguello, Eva
Nieberger, Christ	Koehler, Leona

#### FIFTH GRADE

Nieberger, Charles	Brethauer, Dorothy
Redmond, Robert	Lambert, Beulah
Hollister, Derwood	Green, Appeliene

#### SIXTH GRADE

Rehmer, Charles	Cooperrider, Katherine
Albion, Carlson	Rehmer, Alice
Johnson, Robert	Zimmerman, Henry
Nieberger, Alexander	

#### SEVENTH GRADE

Johnson, Harold	Alkire, Faye
Mossberg, Clarence	Koehler, Daniel
Balent, Ella	Koehler, Henry
Smith, Grace	Johnson, Earnest
Cooperrider, Leonard	

### Auburn

#### FIRST GRADE

Adams, Roma	Gallup, Clarence
Alles, Dan	Leaming, Taylor
Arnold, Chas.	Mitchell, Lorena
Doney, Ralph	Monroe, Chester
Eckhart, Esther	Rossman, Rachel
Engleman, Mary	Thawet, Lydia
Engleman, Millie	Todd, Cecil
Engleman, Lydia	Todd, Wanda
Gable, Helen	Walters, Johnny
Ginther, Mary	Walters, John
Hopp, Lydia	Benner, Ida
Hardung, Henry	

## SECOND GRADE

Benner, Dan	Landrum, Ruby
Arnold, Alta	Mitchell, Mabel
Bower, Pauline	Rossmann, Willemenia
Bolt, Dale	Starkey, Jerry
Hopp, Freda	Johnson, Clifford

## THIRD GRADE

Billings, Russell	Monroe, Jessie
Gable, Adam	Thawet, Amelia
Johnson, Elizabeth	Johnson, Ralph

## FOURTH GRADE

Adams, Harold	Johnson, Mary
Benner, Lella	Mitchell, Nicholas
Eckhart, Charles	Raeth, Leslie
Gage, Harold	Rhodes, Mae
Lewis, Ileta	Work, Wesley
Johnson, Eva	

## FIFTH GRADE

Arnold, Ruby	Monroe, Eunice
Landrum, Roy	Shaffer, Dorothy
Rosemond, Adam	Shaffer, John
Walters, Mollie	Wadsworth, Edna
Hopp, Edith	Zupke, Wesley

## SIXTH GRADE

Anderson, Gertrude	Work, Morice
Billings, Dorothy	Shortridge, Clark
Gabel, Mary	Raeth, Beatrice
Gedge, Irma	Walters, Mary
Ginther, Clara	Rosmond, Jake
Hopp, Henry	

## SEVENTH GRADE

Alles, Lydia	Zupke, Clara
Phen, Elmer	

## EIGHTH GRADE

Monroe, Florence	Ginther, August
Clark, Henry	Milroy, Albert
Alles, George	Billings, Virgil
Starkey, Lois	Shortridge, Virgil
Billings, Goldie	

**Bracewell**

## FIRST GRADE

Buxman, Esther	Brethauer, John
Firestone, Mary	Heffel, Dane
Heffel, Mary	Heiser, George
Heiser, Clara	Hemple, Jake
Heiser, Esther	Kaiser, Jake
Strecker, Christine	Knous, Robert
Martinez, Daria	Miller, Jake

## SECOND GRADE

Sasz, Katie	Martinez, Demecio
Weinmeister, Mollie	Knous, Emma
Martinez, Juanita	Rosh, Eva
Fireston, John	Rosh, Pauline
Eurick, Minnie	Barber, Herbert
Webber, Ben	

## THIRD GRADE

Brethauer, Emma	Buxman, Sam
Heiser, Minnie	Roth, Willie
Kaiser, Anna	Simon, Jake
Claus, Mary	Strecker, Dave
Sandstrom, Charlotte	Strecker, Henry
Sasz, Anna	Weinmeister, John
Buderus, Jacob	Cooper, Lee
Brethauer, Jake	Rosh, Dave
Barber, Richard	Lichtenwahl, Henry

## STATE TEACHERS COLLEGE

## FOURTH GRADE

Knous, Dollie	Pfalzgraf, Marvin
Hemple, John	Pfalzgraf, Asa
Hettinger, George	Sasz, Joe
Hoffman, Edward	

## FIFTH GRADE

Brethauer, Lola	Weinmeister, Alex
Hoffman, Rose	Buxman, Katie
Kerbs, Henry	Maul, Henry
Eunick, Effie	Rosh, Godfrey
Weber, Lydia	

## SIXTH GRADE

Simon, Mary	Seibel, David
Claus, John	Kaiser, Henry
Roth, Henry	Hettinger, Jake
Weber, Emanuel	Cooper, Harold
Eunick, Mary	

## EIGHTH GRADE

Claus, Marie	Buxman, Marie
Hemple, Charlotte	Roth, George
Maul, Grace	

**Hazelton**

## FIRST GRADE

Achziger, Herman	Baird, Ruth
Nagel, Manuel	Schaub, Toney
Stark, Elsie	Hergert, Esther
Nagel, Jake	Stiber, Ople
Webster, Billie	Schneider, Victor

## SECOND GRADE

Achziger, Leah	Miller, Jacob
Libsack, Herman	Peterson, Doris
Moody, Donald	Kammerzell, Lydia
Bolander, Eula	

## THIRD GRADE

Achziger, Daniel	Messer, Jake
Messer, Minnie	Moody, Floyd
Peterson, Milford	Stark, Harold
Webster, Maude	Schneider, Pauline

## FOURTH GRADE

Achziger, Esther	Humbigner, John
Libsack, Reuben	Rasmussen, Paul
Robertson, Nathan	Schaub, Dola
Stark, Selma	

## FIFTH GRADE

Bentley, Earl	Bolander, Evelyn
Bernhardt, Kate	Hergert, Amelia
Hatch, Gladys	Messer, Laura
Koehler, Leona	Schaub, Jake
Peterson, Wesley	Stiber, Mary
Stark, Henry	Kammerzell, Elsie
Steinmiller, Jake	

## SIXTH GRADE

Bolander, Clarence	Miller, Leona
Robertson, George	Bernhardt, Martha
Kammerzell, Alex	

## SEVENTH GRADE

Baird, Helen	Baird, Viola
Beetham, Scott	Carlson, Paul
Heimbigner, Lena	Koehler, Dan
Messer, Millie	Miller, Rachel
Peterson, Eleanor	Rasmussen, Harold
Steinmiller, Mollie	

## EIGHTH GRADE

Baird, Walter	Bentley, Esther
Gousha, Ruby	Whitman, Irene
Zigler, Walter	Foster, Babbie

# Attendance Summary

## COLORADO STATE TEACHERS COLLEGE

### SCHOOL YEAR—1919—1920

#### FALL, WINTER, SPRING AND SUMMER QUARTERS

I. TEACHERS COLLEGE:		
Fall, Winter and Spring Quarters (no duplicates) .....	621	
Summer Quarter (no duplicates) .....	1315	
Total .....		1936
II. SCHOOL OF ADULTS:		
Fall, Winter and Spring Quarters (no duplicates) .....	15	
Summer Quarter (no duplicates) .....	72	
Total .....		87
III. EXTENSION:		
Group Plan .....	451	
Individual Plan		
College .....	350	
High School .....	54	404
Institute Plan .....	196	
Total .....		1054
IV. STATE HIGH SCHOOL OF INDUSTRIAL ARTS:		
Fall, Winter and Spring Quarters (no duplicates) .....	364	
Summer Quarter (no duplicates) .....	138	
Total .....		502
V. TRAINING SCHOOL:		
Fall, Winter and Spring Quarters (no duplicates) .....	462	
Summer Quarter (no duplicates) .....	379	
Total .....		841
IV. DEMONSTRATION SCHOOLS:		
Ashton .....	66	
Auburn .....	83	
Bracewell .....	73	
Hazelton .....	67	
Total .....		289
Grand Total (no duplicates) .....		4709

# Contents

	Page		Page
Admission .....	13	High School Department .....	53
Advanced Standing .....	14	History and Political Science .....	60
Agriculture .....	37	History of the College .....	18
Arithmetic .....	75	Household Art .....	64
Arts—Fine and Applied .....	90	Household Science .....	63
Bateriology .....	42	Home Economics .....	63
Bible Study .....	23	Honorary Fraternities .....	25
Biological Science .....	39	Hygiene .....	65
Biotics .....	42	Kindergarten .....	45
Board and Room .....	20	Latin .....	97
Board of Trustees .....	2	Library .....	70
Bookbinding .....	89	Literature and English .....	70
Botany .....	41	Loan Fund .....	24
Buildings .....	18	Location of the College .....	13
Bureau of Recommendations.....	22	Maintenance of the College .....	21
Catalog of Students—		Mathematics .....	75
College .....	103	Modern Languages—Foreign .....	97
Training and High School .....	145	Music .....	77
Chemistry .....	43	Mythology .....	70
Child Study .....	54	Nature Study .....	42
Christian Association .....	23	Officers of the Board of Trustees .....	2
Commercial Arts .....	92	Oral English .....	70
Committees—		Organ .....	81
Faculty .....	11	Physical Education .....	65
Trustees .....	2	Physical Science .....	83
Community Co-operation .....	23	Physics .....	83
Courses of Study.....	35	Piano .....	81
Diplomas and Degrees .....	37	Practical and Industrial Arts .....	86
Discipline—Moral and Spiritual		Printing .....	89
Influence .....	21	Psychology and Child-Study .....	54
Education, Department of .....	45	Reading and Interpretation .....	70
Education—County Schools .....	53	Required Work .....	36
Education—Elementary .....	46	Romance Languages .....	97
Education—Secondary .....	53	Scholarships .....	32
English and Literature .....	70	Social Science .....	100
Ethics .....	57	Spanish .....	98
Expenses .....	20	St. John's College .....	17
Extension Department .....	26	State Examining Board .....	2
Faculty .....	3	Summary of Attendance .....	155
Faculty Committees .....	11	Summer Quarter .....	16
French .....	98	Violin .....	82
Function of the Teachers' Col- lege .....	13	Vocal .....	80
Geography .....	58	Water Supply .....	18
Geology .....	58	Y. W. C. A. .....	23
Gifts to the College .....	25	Zoology .....	41
Government of the School .....	21		
Grading System .....	15		
Graduate School .....	29		
Graduation .....	37		











# 1920

JANUARY							APRIL							JULY							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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18	19	20	21	22	23	24	18	19	20	21	22	23	24	18	19	20	21	22	23	24	17	18	19	20	21	22	23
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15	16	17	18	19	20	21	9	10	11	12	13	14	15	15	16	17	18	19	20	21	14	15	16	17	18	19	20
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# 1921

JANUARY							APRIL							JULY							OCTOBER						
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FEBRUARY							MAY							AUGUST							NOVEMBER						
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27	28	29	30	31	. . . . .		26	27	28	29	30	. . . . .		25	26	27	28	29	30	25	26	27	28	29	30	31	

## THE COLLEGE CALENDAR

**FALL QUARTER, 1920**  
 Sept. 27, Monday—Registration Day for the Fall Quarter.  
 Sept. 28, Tuesday—Classes begin.  
 Nov. 25 to 29, Thanksgiving Recess.  
 Dec. 17, Friday—The Fall Quarter closes.

**WINTER QUARTER, 1921**  
 Jan. 3, Monday—Registration Day for the Winter Quarter.  
 Jan. 4, Tuesday—Classes begin.  
 March 24, Thursday—The Winter Quarter closes.

**SPRING QUARTER, 1921**  
 March 29, Tuesday—Registration Day for the Spring Quarter.  
 March 30, Wednesday—Classes begin.  
 June 15, Wednesday—Commencement Day.

**SUMMER QUARTER, 1921**  
**First Half**  
 June 20, Monday—Registration Day for the Summer Quarter.  
 June 21, Tuesday—Classes begin.  
 July 22, Friday—The first half of the Summer Quarter closes.

**Second Half**  
 July 25, Monday—Classes begin.  
 Aug. 26, Friday—The Summer Quarter closes.

**FALL QUARTER, 1921**  
 Oct. 3, Monday—Registration Day for the Fall Quarter.



COLORADO STATE  
**Teachers College**



Preliminary  
Fall Announcements  
1920

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CALENDAR FOR THE YEAR  
1920 - 21

Fall Quarter begins Sept. 27, 1920  
Winter Quarter begins Jan. 3, 1921  
Spring Quarter begins Mar. 29, 1921  
Summer Quarter begins June 20, 1921  
Fall Quarter begins Oct. 3, 1921

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**Colorado State Teachers College**

A PROFESSIONAL COLLEGE  
FOR TEACHERS

Greeley, Colorado

COLORADO STATE  
**Teachers College**



Preliminary  
Fall Announcements  
1920

The Annual Catalog  
will be issued  
August 15, 1920



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Published monthly by State Teachers College, Greeley,  
Colorado. Entered as Second-Class Matter at the Post-  
office at Greeley, Colo., under the Act of August 24, 1912

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SERIES XX  
MAY, 1920  
NUMBER 2

# THE FORTHCOMING YEAR BOOK

The custom of Colorado State Teachers College has been to publish its year-book and catalog in the early part of May. Before the adoption of the system of dividing the year into four quarters this was the logical arrangement, for the school year ended with the Spring Quarter. A catalog of the students and faculty including all names entered in the Fall, Winter and Spring Quarters was complete for the year. But now that the year is not finished till the end of the Summer Quarter, it becomes the logical plan to withhold the publication of the year-book until such a time as will make it possible to include all who are enrolled for the four quarters of the year, making the Summer Quarter the fourth quarter of the year.

Accordingly, this bulletin is issued as a preliminary statement of the programs of the College for the coming year. It will set forth the essential details of the Courses of Study, the attractive features of the College, the regulations governing the entrance and graduation, diplomas and degrees, and all other matters which the prospective student should know early in the summer while making his or her plans for the ensuing school year.

The Annual Catalog will be issued not later than August fifteenth and will contain the names of all students who have enrolled for any of the four quarters of the scholastic year 1919-1920.

## *Location of the College*

The College is located at Greeley, fifty-two miles north of Denver, on the main line of the Union Pacific, and on the Greeley, Fort Collins and Denver line of the Colorado & Southern Railway. The city is a beautiful town of 12,000 people, lying in the valley of the Cache La Poudre River. The streets are wide and shaded. The lawns are perfect and the homes very attractive. The city lies in a very rich, irrigated, agricultural district thirty miles from the foot-hills, or fifty miles from the Rocky Mountain National Park. The College Campus is a beautiful park within the city limits and lying upon a gently sloping hillside bordering the river valley—an ideal college site and surroundings.

The altitude is 4,567 feet. The days are sunny and the summer nights cool. The water supply of the city is perfect. The water is brought forty miles from a moun-

tain cañon, through a large wooden conduit, after having been thoroughly settled and filtered.

## *History of the College*

The legislature of 1889 authorized the establishment at Greeley of a state normal school. In October, 1890, the school opened in rented rooms with five instructors and a few students. At the beginning of the second year the course of study was revised so as to admit graduates of elementary schools and give them a four-year course of preparation for teaching. In 1897 the requirements for admission were advanced to high school graduation or its equivalent. The course of study extended two years beyond the high school. The legislature of 1911 made the normal school a teachers college. The requirements for admission were made strictly high school graduation and the course of study was extended to four years, the student still having the privilege of graduating at the end of the second year and receiving at that time the Colorado Life Teacher's Certificate. The summer school was started in 1905 with a small faculty and a hundred and twenty-five students. The term was six weeks. In 1918 the school adopted the quarter system and made the summer quarter in every way the equivalent of the other three quarters. The College has had a steady and substantial growth. From a faculty of five, its teaching force has grown to sixty-eight. The enrollment of college students for the three quarters of the year has grown to seven hundred. The Summer Quarter enrolls twelve hundred. The total enrollment, including the resident college students, the high school, the elementary school, the rural demonstration schools and the extension service, exceeds four thousand.

## *The Function of the College*

The purpose of the College is to train teachers for public school service. Being supported by public taxation of all the property of the State of Colorado, the College aims first to prepare teachers for all the kinds of public schools maintained within the State of Colorado. This includes rural schools, kindergartens, primary, intermediate grade, upper grade, junior high school departments, and high schools. The College also accepts the responsibility of training supervisors for rural schools, principals,



superintendents, teachers of home economics, practical art, fine and applied arts, critic teachers, teachers of defective and atypical children, teachers for adult night schools, etc.

While the College is supported for the training of Colorado teachers, it welcomes students from any state or country and sends its teachers anywhere that they may be called. Students come to Colorado Teachers College from many states and its graduates go in large numbers into the neighboring states and in smaller numbers into distant states and countries.

The College recognizes as its plain duty and accepts as its function the training of students to become teachers in every type of school at present supported by the state, to meet actually all the demands of the best in the public school system of the present, and to forecast those improvements and reforms which the evolution of public systems of education is to bring about in the immediate future and to train teachers to be ready to serve in and direct the new schools which are in the process of being evolved.

### *A Professional School for Teachers*

The evolution of the technical school for the training of Teachers in America has been much slower than that of the professional schools of law and medicine. For a long time it was assumed that any one who knew subject matter could teach what he knew. Then the normal school came in with a course of study very much like that of the high school whose aim was to prepare for college. There was this difference, however: the normal school added to the course of study a limited amount of general psychology, a brief history of education, some instruction in the theory of teaching and some practice in teaching in a "model" or "training" school. Teachers were trained in the classical colleges and in universities in much the same way except that there was no practice teaching and that the courses were of college grade and not of high school grade.

In the main the program for teacher-training in America today is that just described. Only a few teacher-training schools, less than a dozen, have caught the idea of professional education for teachers comparable to that of lawyers, doctors and engineers; and of the few, less than half have been able to throw off the hampering normal school traditions and proceed fearlessly to educate young men and women for the profession of teaching.

Colorado State Teachers College is conscious of its

mission, and aware of the means by which its purpose is to be accomplished, and is proceeding as rapidly as public opinion will permit to realize its aim.

*Requirements for Admission*—The first essentials in training young people to be real teachers is that they shall have a good general education as a background for their professional education. While the present high school course is more or less the traditional preparation for a general college education and is not especially adapted to the needs of students who are later to take any kind of professional training, it represents a standard of achievement in mental development which serves roughly to determine whether a student may profitably undertake a higher education. Accordingly, Colorado State Teachers College requires for admission the completion of at least fifteen units in an acceptable high school.

Students having fourteen units may obtain *conditional admission*, but the fifteenth unit must be completed in the Industrial High School during the student's first year. This subject may be carried at the same time the student is carrying a college program of twelve recitation hours per week.

Occasionally the college admits as a *special student* one who is mature in years and seems to have the ability to do college work of a high grade. Others with inadequate preparation are assigned to the high school if under eighteen years of age, or to the Ungraded School for Adults if over. Students who do not expect to become teachers but who wish to do a part of their college work in Greeley before going elsewhere are allowed to enter as *unclassified* students and to select any subjects they may wish to take.

*The Faculty*—High School graduation, followed by normal school or teachers college training and extended university study, together with practical public school teaching experience, is the preparation expected of those who teach in a professional school for teachers. The heads of most of the twenty-two departments of Teachers College have had this preparation for their work. Indeed, most of the sixty-eight professors, assistant professors and instructors have had this educational experience.

*Buildings and Equipment*—The college buildings are modern, artistic, substantial and commodious. These consist of: the Administration Building, the Library, the Training School, the Practical Arts, the Home Eco-

nomics, the Gymnasium, the President's Home, the Women's Club House, the Model Cottage, the Heating Plant, the Greenhouse and other service buildings. These buildings are equipped with books, materials and laboratories, apparatus, and museums, necessary in such a college as this.

*Financial Support*—The College is supported mainly by a state tax established by law. In addition to this it has an additional income from fees, state school fund, government aid to physical education, and from other sources. Its total income for maintenance is about \$250,000 a year. In addition to this the state has provided a building fund of about \$75,000 a year for a period of ten years. This will be used to complete the group of buildings necessary to house a complete modern teachers college.

*Graduation, Diplomas, the Life Certificate, Degrees, Etc.*—Upon the completion of 96 hours, or the ordinary work of six quarters, twelve weeks each, a diploma is granted, which diploma is a life certificate to teach in any position in any public school in Colorado. A similar diploma-certificate is granted upon the completion of the three-year course. Upon the completion of the four-year course the student is granted a degree of Bachelor of Arts in Education. The degree of Master of Arts in Education is granted for a year's work beyond the bachelor's degree. Both these diplomas are also life certificates and are recognized in Colorado and most other states. A student must be in residence in Greeley at least three quarters and earn at least forty-eight hours before any degree or diploma will be granted. One additional quarter of residence is required before the three-year diploma is granted and another before the A. B. degree is granted. Work done in group courses, twelve hours or more for each quarter, conducted by the college instructors may count as one resident quarter for the first diploma, and one for the A. B. degree.

*The Grading System*—All grades in the College are recorded in figures to represent the quantity of work done and in letters to represent the quality. The letters used are AA, A, B, C, D, and F. F stands for failure. A subject graded 3C would indicate a three hour course done with less than the average success. Twenty per cent is added for work of AA quality and ten per cent for A. Ten per cent is deducted for B and twenty per cent for C. A course graded 4B carries four hours'

credit. One marked 4A carries 4.4 hours, while one marked 4C carries only 3.6 hours, etc.

*Shortening the College Course*—The Quarter Plan, the Extension Work, and the Grading System make it possible for students who are physically strong enough to stay in school with only short vacations to complete a college course in a shorter time than that usually required in the colleges. Ninety-six quarter-hours constitute the usual two-year college course, and one hundred and ninety-two hours make up the four-year course required for the A. B. degree. By carrying an average of seventeen hours a quarter and making an average of "A," a strong student can earn 18.7 hours each quarter. At this rate he could complete the course for the two-year life certificate in five quarters, from the middle of June of one year to the end of August of the next. Or, such a student could complete the course for the A. B. degree in two and a half years—ten quarters.

#### *Fees and Expenses*

The expense of attending Teachers College is as low as it can be made by careful management. A student's total expense may be estimated by taking into account the three largest items: board, room rent and college fees. Board in the College Cafeteria where food is supplied at cost to the student will vary from \$3.50 to \$4.50 per week. In private boarding houses the cost is usually a little more—from five to six dollars a week. The College as yet has no dormitories. Students room in private houses near the College. The charge for a room for two students is from twelve to sixteen dollars per month. This is six to eight dollars each. Rooms equipped for light house-keeping may be had at a cost of eight to twelve dollars a month. The college fees are eight dollars a quarter for the Fall, Winter and Spring Quarters. Moderate laboratory fees are charged for laboratory courses. The summer quarter is self-supporting and requires a fee of thirty dollars.

There is no extra fee for the regular public school music and art classes, but private lessons in these subjects are charged for at the usual rates for such lessons.

Students buy their text-books at the College Bookroom, but these books, if still in use, may be resold at a slight discount at the end of the quarter.

The necessary expenses for a quarter are about as follows:

Board, twelve weeks, at \$4.00 a week	\$48.00
Room, twelve weeks, at \$1.50 a week	18.00
College incidental fee . . . . .	8.00

To this total of \$74.00 should be added laboratory fees, railroad fare, cost of clothing, laundry and incidentals. It will be found that the cost of an education is as low as it can be made.

### *The Christian Associations*

Three Christian organizations serve the religious needs of the student community, and each of these works in useful co-operation with the churches of the city. The Young Men's and Young Women's Christian Associations are directed mainly by the Protestant interests in the College and the Newman Club by the Catholic. There is among these organizations the best feeling of fellowship and co-operation. It is mainly through these organizations that the Greeley Plan of Bible Study and the Community Co-operation Plan of outside social service are conducted.

### *Honorary Fraternities*

Two honorary fraternities have chapters in the College. These are Kappa Delta Pi, the Honorary Fraternity in Education, and Pi Kappa Delta, the national debating fraternity. Members are selected for each on account of achievement alone.

### *Financial Aid to Deserving Students*

*College Scholarships*—The College regularly issues annually two scholarships to each high school in the state. These are assigned by the superintendent and principal to the two students in each graduating class who expect to become teachers and who have shown in their high school years adaptability to the teaching profession. The student's need of financial assistance is also taken into account in determining who shall receive the scholarships. These college scholarships are accepted at the College in lieu of college fees through the four-year course in any quarter except the summer.

*Loan Funds*—Several funds are available to students in the form of loans. None of the funds is large enough to warrant loans large enough to carry a student through a whole course or even a whole year. The money from these funds is usually lent to help a student through at

the end of a quarter or a year and is issued in sums of ten to fifty dollars. The funds from which students at present may borrow are: The Colorado Federation of Women's Clubs, the William Porter Herrick Memorial Fund, the Students Relief Fund, the Y. W. C. A. Students Aid Fund, the Senior College Scholarship Fund, and the Junior College Scholarship Fund. A scholarship in education provided by Greeley business men with a stipend of \$300 a year, and one in music are available to two undergraduate students. Ask for information if interested.

*Graduate Scholarships*—In addition to the college scholarships (good for college fees only) and the Loan Funds, there are at the disposal of the College several scholarships which will pay all or a considerable part of a graduate student's college expenses. These are:

1. The Henry Strong Graduate Scholarship of \$300 a year.
2. The Presbyterian Church Graduate Scholarship of \$600 a year.
3. The Presbyterian Brotherhood Scholarship of \$150 a year.
4. The Weld County Savings Bank Scholarship of \$100 a year.
5. The Congregational Church Scholarship of \$300 a year.
6. Three Graduate Scholarships of \$450 a year provided by the College.
7. The Denver Teachers Graduate Scholarship of \$100 a year.
8. The Delta Phi Omega Graduate Scholarship of \$150 a year.

The regular college fees are waived for holders of any of these scholarships. For information concerning any of these graduate scholarships address Dean Thomas C. McCracken.

### *The Training School*

Opportunity for observing expert teaching in all grades and subjects is provided in the Training School and in the Industrial High School. Under expert supervision these two schools have become leaders in educational practice in this part of the country. The student teacher has an opportunity to do practice teaching in these schools

under expert direction and advice. The following regulations apply to practice teaching:

*Student Teaching*—Teachers who have had less than two years of college training take their practice teaching in the Elementary School. Those who have had two years of college training may choose between the Elementary School and the High School according to their own personal needs and interests. Most students are required to do two quarters of practice teaching before being granted the diploma of graduation from the Junior College. Experienced public school teachers may be excused from one quarter of this practice teaching by presenting to the superintendent of the Training School satisfactory evidence warranting such exemption.

*The State Board of Examiners*—Every student before being granted a life certificate appears before the State Board of Examiners to teach a model lesson. Only students who have had at least a quarter's practice in the Training School are admitted to this examination. A second examination is not required of those who are taking a senior or graduate college diploma, if they have already taught successfully before the State Board.

#### *The Extension Department*

The College renders a significant service to active teachers by maintaining its extension service. Through this department teachers may carry one or more college subjects while teaching. Thus a teacher by using the Extension courses and the summer quarters may graduate from the two-year or four-year course without a break in active teaching. West of the Rocky Mountains the University of Colorado, Teachers College and the State Normal School of Gunnison conduct their extension groups under a joint director. Extension credits earned anywhere in the state are accepted by any one of the three schools. Where it is possible extension groups are organized and instructed by a member of the college faculty. In distant centers the group is organized by a local leader chosen by the College. Where a group is impracticable the work is carried on by individual correspondence study directed by a member of the college faculty.

#### *The Summer Quarter*

The Summer Quarter is maintained upon the same footing as the other quarters, except that it has more of the

advanced courses. The students on the average are more mature and many have already had considerable experience as teachers. On this account advanced courses are given and the faculty is augmented by a large number of teachers and lecturers from other colleges and universities. Well known superintendents are also employed to give the teachers the results of their practical experience in the field. During the Summer Quarter of 1919 the following teachers and lecturers were employed:

Edward Howard Griggs, A.M., L.H.D., New York City.

Hon. Simeon D. Fess, LL.D., Member of Congress from Ohio.

Leon Henry Vincent, Ph.D., Boston, Massachusetts.

George D. Strayer, Ph.D., Professor of School Administration, Teachers College, Columbus University.

Lincoln Hulley, Ph.D., President of Stetson University, Deland, Florida.

Thomas H. Briggs, Ph.D., Professor of Secondary Education, Teachers College, Columbia University.

Oscar T. Corson, A.M., LL.D.

Edward Allsworth Ross, Ph.D., Professor of Sociology, the University of Wisconsin.

Edward Carey Hayes, Ph.D., Professor Sociology, the University of Illinois.

Franklin B. Dyer, LL.D., Superintendent of Schools.

Harvey S. Gruver, Ph.D., Superintendent of Schools, Worcester, Massachusetts.

William A. Wirt, Ph.D., Superintendent of Schools, Gary, Indiana.

H. W. Hill, M.D., Minnesota Department of Health.

Major Lewis F. Terman, Ph.D., Specialist in Psychology, Surgeon General's Office, U. S. Army, and Professor of Educational Psychology, Stanford University.

H. W. Foght, Ph.D., Rural School Specialist, U. S. Department of Education.

For 1920 the following persons are engaged:

Edward Howard Griggs, L.H.D., New York City.

Edward T. Devine, Ph.D., Director of the New York School of Philanthropy, New York City.

- Lincoln Hulley, Ph.D., President of Stetson University, Deland, Florida.
- Edward Rynearson, Ph.D., Director of Vocational Guidance, Pittsburgh Public Schools, Pittsburgh, Pennsylvania.
- Elwood P. Cubberley, Ph.D., Dean of the School of Education, Leland Stanford Junior University, California.
- Edward Carey Hayes, Ph.D., Professor of Sociology, University of Illinois, Urbana.
- Harvey S. Gruver, Ph.D., Superintendent of Schools, Worcester, Massachusetts.
- Harry L. Miller, A.B., Principal, the University High School of University of Wisconsin, Madison.
- Guy M. Whipple, Ph.D., University of Michigan, Professor of Experimental Education and Director of the Bureau of Mental Tests and Measurements, Ann Arbor, Michigan.
- George D. Strayer, Ph.D., Professor of Educational Administration Teachers College, Columbia University, New York City.
- Ernest Horn, Ph.D., Head of Department of Experimental Education, University of Iowa, Iowa City.
- W. G. Chambers, A.M., D.Litt., Dean of School of Education, University of Pittsburgh, Pittsburgh, Pennsylvania.
- E. B. Bryan, LL.D., L.H.D., President Colgate University, Hamilton, New York.
- A. L. Hall-Quest, A.M., College for Teachers, University of Cincinnati, Ohio.
- H. B. Wilson, Superintendent of Schools, Berkeley, California.
- J. F. Keating, Superintendent of Schools, Pueblo, Colorado.
- J. J. Cammack, Superintendent of Schools, Kansas City, Missouri.
- J. H. Beveridge, Superintendent of Schools, Omaha, Nebraska.
- W. B. Ittner, School Architect, St. Louis, Missouri.
- R. D. Burtner, Specialist in Gymnasium Construction, Narragansett Machine Company, Chicago.
- Genevieve Kirkbride, Specialist in Kindergarten and Primary Education, University of Chicago, Illinois.

- Frank B. Dyer, Former Superintendent of Boston Schools, Cincinnati, Ohio.

### *The Graduate School*

The Graduate School offers advanced instruction leading to the degree of Master of Arts in Education. The principal aim of graduate study is the development of power of independent work and the promotion of the spirit of research. The various departments of the College which offer graduate courses are willing to offer not only the courses regularly scheduled but others of research and advanced nature which the candidate wishes to pursue. Each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work.

Persons holding the degree of Bachelor of Arts, Philosophy, Science, or other four-year degree, from a reputable institution authorized by law to confer these degrees and approved by this institution may be admitted as graduate students in the Colorado State Teachers College upon presentation of official credentials, including transcript of records of undergraduate work.

### *The Courses of Study*

Colorado Teachers College is a technical school. Its business is to train teachers for all the kinds of schools maintained within the state. To do this it maintains several courses of study, each directed by the head of one of the college departments.

Two-year and four-year courses of study are maintained in each of the departments listed below except in Agriculture. In that department only the two-year course is given:

Agriculture, Biology, Chemistry, Commercial Arts, Education (including courses planned especially for kindergarten, primary, intermediate, junior high school and rural school teachers, and for principals, supervisors and superintendents), Educational Psychology, Fine and Applied Arts, Geology, Physiography and Geography, History and Political Science, Home Economics, Hygiene and Physical Education, Industrial Arts, Literature and English, Mathematics, Music, Physics, Romance Languages and Latin and Social Sciences.

Each of the courses differs somewhat from the others but each contains a group of subjects which the faculty regards as an essential core to any professional course of study for teachers. These core subjects for the first and second years are: Educational Biology (Biol. 2), Educational Values (Ed. 8), Educational Sociology (Soc. 3), Speaking and Writing (Eng. 4), Educational Psychology (Psych. 2a and 2b), the Elementary School Curriculum in the Training School (Ed. 1), two quarters of practice teaching in the Elementary School, and a course of talks to women on personal ethics. Students in these two years are required to take physical exercise each quarter.

In the third and fourth years the following subjects are required of all: Psychology (Psych. 104 or 105) of the Elementary, or the High School Subjects, Educational Tests and Measurements (Psych. 108), Social Maladjustments (Soc. 105), Principles of Education (Ed. 111), and Principles of High School Teaching and Practice Teaching in the High School (Ed. 103 and 105), and the High School Curriculum (Ed. 116) for those who expect to become high school teachers.

In addition to these required subjects each course contains a number of subjects prescribed by the department and some room for free electives. The details of each course may be found in the Year Book.

### *The Administration of the Courses*

*Advanced Standing*—Students who come to the College after having done work in another college, normal school or university will be granted advanced standing for all such work which is of college grade, provided that the college or normal school in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all the prescribed subjects in the course they select, unless these prescribed subjects or their substantial equivalents have been taken already in the normal school or college from which the students come.

*The Unit of College Credit*—All credit toward graduation is calculated in quarter-hours. The term *quarter-hour* means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the college courses call for four recitations a week. These are called four-hour courses. A student usually selects

sixteen quarter-hours, the equivalent of four courses, each meeting four times a week, as his regular work.

Forty-eight quarter-hours are a student's regular work for the usual school year of nine months, or three quarters.

*Maximum and Minimum Hours of Credit*—A student registers usually for fifteen or sixteen hours each quarter. If the work is to count as resident work, the student must carry at least twelve quarter-hours.

A student who wishes to take a larger program than sixteen hours must have been in residence at least one quarter and have shown ability to do work of "A" or "AA" quality. Applications for permission to take more than sixteen hours are made in writing to the Committee on Student's Programs. This committee will decline to grant permission to students to take more than eighteen hours, on the ground that it is better for the most brilliant student to do extended and careful work on eighteen hours, rather than to do twenty hours or more superficially.

In case a student makes more than two grades below "B" during a given quarter, he will be limited to fourteen hours the following quarter.

## THE DEPARTMENTS

The courses listed below under each department are cataloged by number and title only. The lists are complete. The descriptions of the courses may be found in the forthcoming Year Book to be issued August 15.

### *Agriculture*

William Henry Hargrove, Pd.B., B.S. Ed., B.S. Ag.

1. Animal Husbandry.
2. Farm Animals.
3. Methods in Gardening and Truck Crops.
4. Farm Crops.
5. Soil Physics and Soil Fertility.
6. Elements of Dairying.
9. Forage Crops.
- 10a. Poultry Raising.
- 10b. Poultry Raising.
11. Feeds and Feeding.
12. Farm Management.
13. Agricultural Education and Life.
14. Breeds of Livestock.
41. Beef Production.
42. Dairy Feeding.

50. Grain Judging.
60. General Pomology.

*Biological Sciences*

Leveret Allen Adams, Ph.D.

Biology

2. Bionomics
4. Biological Seminar

Zoology

1. Invertebrate Zoology
2. Invertebrate Zoology
3. Vertebrate Zoology
4. Ornithology
5. Bird Study
6. Mammals
101. Zoological Technic
107. Protozoology
108. Animal Behavior
109. Parasitology
110. Problems in Zoology
210. Comparative Vertebrate Anatomy

Botany

1. Elementary Botany
2. General Botany
3. Systematic Botany
4. Botany of Trees
101. Advanced Systematic Botany
103. Problems in Botany
104. Plant Ecology

Bacteriology

1. Bacteria, Yeasts and Molds

Nature Study

1. Nature Study
2. Nature Study
3. Nature Study

Biotics

101. Biotics
102. Biotics—Heredity
103. Biotics—Eugenics

*Chemistry*

William Gray Bowers, Ph.D.

1. General Chemistry
2. General Chemistry
3. General Chemistry
4. General Chemistry

5. General Chemistry
6. General Chemistry
7. Qualitative Analysis
103. Organic Chemistry
109. Organic Chemistry
110. Organic Chemistry
111. Organic Chemistry
112. Food Chemistry
113. Food Chemistry
- 114 and 114B. Quantitative Analysis
- 115 and 115B. Industrial Chemistry
116. Agricultural Chemistry
117. Teaching of Chemistry
118. Radioactivity

*Education*

Thomas C. McCracken, Ph.D.

Frank Lee Wright, A.M.

Lynn B. McMullen, A.M.

John C. Muerman, A.M.

Mark Sweany, A.M.

Samuel Milo Hadden, A.M.

Bella Bruce Sibley, A.M.

Hulda A. Dilling, B.E.

Freda A. Rohr, A.B.

Clara M. Wheeler, B.S.

Lela Aultman, Pd.M.

Grace Wilson, A.B.

Bess Cunningham, B.S.

1. Introduction to Teaching
2. Student Teaching in the Elementary Training School
3. Primary Grade Methods
4. Intermediate Grade Methods
7. Practical Projects in Primary Grades
8. Educational Values
10. The Elementary School Curriculum
12. Current Movements in Social Education
15. Vocational Guidance
16. Girls' Camp Fire Work
17. Boy Scout Work
21. County School Problems
22. Student Teaching in County Demonstration Schools
25. Administration of Consolidated Schools

26. (a and b) The County School Curriculum and the Community
32. History of Education in Ancient and Medieval and Renaissance Times
33. History of Modern Education
38. Vocations for Women
51. Literature and Story-Telling in the Kindergarten and Primary Grades
52. Use of Materials in the Kindergarten and Primary Grades
53. Plays and Games for Kindergarten and Primary Children.
57. The Kindergarten Curriculum
103. Student Teaching in the Secondary Training School
105. Principles of High School Teaching
107. Advanced Course in High School Practice Teaching
108. Educational Supervision
109. High School Supervision
110. Supervised Study
111. Philosophy of Education
112. School House Construction
113. Organization and Administration of the Junior High School
114. Primary Supervision
116. The High School Curriculum
120. High School Administration
125. Education for the Physically Handicapped
130. County School Supervision
135. Educational Classics
142. Educational Administration
143. The Federal Government in Education
147. Educational Surveys
152. Principles Underlying the Education of Children in the Kindergarten and Primary Grades
153. Kindergarten Materials
154. Kindergarten Seminar
217. Vocation Education
223. Research in Education
228. Comparative School Systems
229. Current Educational Thought
246. Educational Problems

*Education—County Schools*

A.M., Director

*Education—Secondary*

State High School of Industrial Arts

Mark Sweany, A.M., Principal

*Educational Psychology*

Jacob D. Heilman, Ph.D.

Marvin F. Beeson, Ph.D.

1. Child Hygiene
2. Educational Psychology
3. Child Development
104. Psychology of Elementary School Subjects
105. Psychology of the High School Subjects
106. Clinical Psychology
107. Mental Tests
108. Educational Tests and Measurements
109. Psycho-clinical Practice
110. General Psychology
111. Speech Defects
112. History of Auxiliary Education
113. Vocational Psychology
212. Psychological and Statistical Methods Applied to Education
213. Conference, Seminar, and Laboratory Courses

*Ethics*

Helen Gilpin-Brown, A.B., Dean of Women

1. Ethics—Personal Talks on Right Living
2. Ethics—Ethical Culture

*Geology, Physiography and Geography*

George A. Barker, B.S., M.S.

2. Physical Geography
4. Geography of North America
5. Geography of Europe
7. Commercial Geography
8. Human Geography
12. Geography Method
52. Geography of South America
100. College Geology
103. Climatology
113. Mathematical Geography
120. Geography of Polar Lands
122. Biogeography
130. The Islands of the Sea
144. Geography and Geology of Mountains
150. Geography of Colorado



*History and Political Science*

Edwin B. Smith, B.S., A.M.

5. Early Modern Europe
6. Recent European History
10. Social and Industrial History of the United States
11. Commercial History of the United States
12. State and Local Government
13. The Teaching of History in the Elementary School
25. Comparative Government
26. The Teaching of Civics in the Elementary School
27. Contemporary History
28. Ancient Social History
30. Political Adjustment
107. Modern England and the British Empire
117. The Teaching of History and Civics in the High School
104. Western American History
116. Spanish American History
118. Financial History of the United States
123. International Relations
124. History of the Far East
212. American Constitutional Development
213. The Literature of American History
214. Methods in Historical Research
215. Research in History

*Home Economics*

Margaret Roudebush, Director

Elizabeth Clasbey, A.B.

Edith Gale Weibking, A.B.

Hester Ann Allyn, B.S.

## Household Arts

1. Textiles
2. Design
3. Garment Making
4. Advanced Textiles
5. Drafting and Pattern Making
6. Elementary Dressmaking
107. Costume Design
108. Costume Design 2
109. Advanced Dressmaking
110. Millinery
111. Home Economics

112. House Plans

113. Interior Decoration

## Household Science

1. Food and Cookery
2. Food and Cookery
3. Cookery and Table Service
103. Dietetics
104. Catering—Planning and Serving Functions
105. Child Care
106. Home Nursing
107. Home Management
108. Home Management

*Hygiene and Physical Education*

Royce R. Long, A.B., Director

Helen Gilpin-Brown, A.B., Dean of Women

Marvin F. Beeson, Ph.D., Professor of Educational Psychology

Margaret Joy Keyes, A.B., Assistant Professor of Physical Education

William E. Search, Assistant Professor of Physical Education

Helen Pearl Lipp, M.D., Medical Adviser of Women

Edwin W. Knowles, M.D., Medical Adviser of Men

Earl I. Varvel, D.D.S., Dental Examiner

## I. Informational Courses

1. Physiology and Hygiene of Exercise
2. Anatomy and Kinesiology
3. Anthropometry and Physical Examinations
4. Play in Education
5. History of Physical Training
6. Research in Physical Education
7. General Hygiene
8. Individual Hygiene
9. Group Hygiene
10. Group Hygiene
11. Intergroup Hygiene
12. First Aid

## II. Practical or Exercise Courses

101. Light Gymnastics
102. Gymnastics
103. Gymnastics
- 103a. Gymnastics
104. Apparatus, Fencing, Archery
105. Personal Combat Games, Heavy Apparatus and Tumbling

- 105a. Personal Combat Games, Heavy Apparatus and Tumbling.
- 106. Singing, Games and Elementary Folk Dances
- 107. Folk and National Dances
- 108. Esthetic Dancing
- 109. Classical Dancing
- 110. Interpretative Dancing
- 111. School Gymnastics
- 112. Plays and Games
- 113. Playground Organization and Supervision
- 114. Athletics for Women
- 115. Recreation Course
- 116. Athletic Games
- 117. Athletic Coaching

### *The Library*

Albert F. Carter, A.B., M.S., Librarian  
 William B. Page, M.D.  
 Edith Stephens, A.B.  
 Vera Campbell, A.B.  
 1. Library Science

### *Literature and English*

Ethan Allen Cross, A.M.  
 Frances Tobey, B.S., A.B.  
 Rae E. Blanchard, A.M.

- 1. Materials and Methods in Reading and Literature
- 2. The Teaching of Written English
- 3. Public Speaking and Oral Composition
- 4. Speaking and Writing English
- 5. Speaking and Writing English
- 6. American Literature
- 7. The Epic
- 8. The History of English Literature
- 9. The History of English Literature
- 10. The History of English Literature
- 11. A Study of English Words
- 12. Voice Culture
- 13. The Art of Story Telling
- 14. Dramatic Art
- 15. Types of Literature
- 16. Contemporary Literature
- 17. Comedy: A Literary Type
- 22. Greek and Roman and Norse Myths
- 31. The Short Story

- 109. Advanced English Composition
- 101. Journalistic Writing
- 102. Journalistic Writing
- 104. Advanced English Grammar
- 105. Oral English in the High School
- 106. The Teaching of English in the High School
- 107. General Literature—Greek and Latin
- 108. General Literature—Italian, Spanish and French
- 109. General Literature—German, Scandinavian and Russian
- 116. The Festival
- 120. Lyric Poetry
- 121. Nineteenth Century Poetry
- 122. Victorian Poetry
- 123. Contemporary Lyric Verse
- 125. Nineteenth Century Prose
- 126. The Familiar Essay
- 127. Selected Plays of Shakespeare
- 128. Shakespeare's Plays
- 129. Shakespeare's Plays
- 130. Elizabethan Drama Exclusive of Shakespeare
- 132. The Development of the Novel
- 133. The Recent Novel
- 134. Modern Plays

### *Mathematics*

George William Finley, B.S., M.S.

- 1. Solid Geometry
- 2. Plane Trigonometry
- 4. Surveying
- 5. College Algebra
- 6. College Algebra
- 7. Analytic Geometry
- 8. The Teaching of Arithmetic
- 9. The Teaching of Arithmetic
- 100. The Teaching of Secondary Mathematics
- 101. Differential Calculus
- 102. Integral Calculus
- 104. Descriptive Geometry
- 106. Descriptive Astronomy
- 200. Advanced Differential Calculus
- 201. Differential Equations
- 202. Advanced Integral Calculus

*Music*

John Clark Kendel, A.B., Director

M. Eva Wright, Piano, Pipe Organ

Hazel Kennedy, A.B., Piano

Lucy B. Delbridge, Pd.M., Violin

Raymond H. Hunt, Clarinet

1. Sight Reading
2. Methods for the First Eight Grades
3. Kindergarten and Primary Music
5. Methods for Special Students
6. Chorus Singing
7. History of Ancient and Medieval Music
8. Harmony
9. Advanced Harmony
10. Methods in Appreciation
12. Individual Vocal Lessons
13. Individual Piano Lessons
14. Individual Violin Lessons
17. Modern Composers
100. Advanced Harmony and Counterpoint
101. Composition and Analysis
102. Orchestration
103. Advanced Orchestration
105. Supervisors' Course
106. Choral and Orchestral Conducting
112. Advanced Vocal, Individual Instruction
113. Advanced Piano, Individual Instruction
116. School Entertainments
119. Interpretation and Study of Standard Operas
120. Interpretation and Study of Standard Oratorios and Symphonies
121. Research

*Physics*

Francis Lorenzo Abbott, B.S., A.M.

1. General Physics
2. General Physics
3. General Physics
4. General Science for the Kindergarten and the First Eight Grades

- 4a. Kindergarten Science
- 4b. Directed Play with Structural Toy Building Materials
- 4c. Science for Intermediate Grades
5. Applied Elementary Household Physics
6. Theory and Practice of the Automobile
10. Household Physics
11. Household Physics
12. Household Physics
100. The New Physics
101. Historical Physics
102. Radiographic Physics
103. Alternating Current Simplified
104. Methods of Teaching Physics
200. Theory of Relativity

*Practical and Industrial Arts*

Samuel Milo Hadden, A.M., Dean

Ralph T. Bishop

Charles M. Foulk, Pd.M.

Otto W. Schaefer

1. Elementary Woodwork
2. Intermediate Woodwork
3. Woodworking for Elementary Schools
4. Toy Construction
5. Vocational Education
6. Repair and Equipment Construction
8. Elementary Art Metal
10. Elementary Mechanical Drawing
11. Projections
12. Elementary Architectural Drawing
13. Intermediate Architectural Drawing
14. Care and Management
19. Wood Turning
104. Pre-vocational Education
105. Advanced Architectural Drawing
109. Advanced Art Metal
116. Historic Furniture
117. Elementary Machine Design
118. Advanced Machine Design
120. Pattern Making
121. Advanced Cabinet Making
124. Machine Work
201. Seminar

*Printing*

1. Elementary Printing

- 1b. Elementary Printing
- 1c. Elementary Printing
- 2. Intermediate Printing
- 2b. Intermediate Printing
- 2c. Intermediate Printing
- 3. Advanced Printing
- 3b. Advanced Printing
- 3c. Advanced Printing
- 4. Practical Newspaper Work
- 4b. Practical Newspaper Work
- 4c. Practical Newspaper Work
- 5. Shop Management
- 6. Shop Accounting
- 7. Cost Accounting

## Bookbinding

- 1a. Elementary Bookbinding
- 1b. Elementary Bookbinding
- 1c. Elementary Bookbinding
- 2a. Intermediate Bookbinding
- 2b. Intermediate Bookbinding
- 2c. Intermediate Bookbinding
- 3a. Advanced Bookbinding
- 3b. Advanced Bookbinding
- 3c. Advanced Bookbinding
- 4. Shop Management
- 5. Shop Accounting
- 6. Cost Accounting

*Fine and Applied Arts*

Grace M. Baker  
Edward B. Kaminski  
Florence Lowe  
Samuel M. Hadden, A.M.

- 1. Public School Methods
- 2. Primary Grade Methods
- 3. Freehand Drawing
- 4. Applied Design
- 5. Water Color Painting
- 6. Art Application
- 7. Constructive Design
- 8. Pottery
- 9. History of Art
- 11. History of Architecture
- 12. Household Art Design
- 13. Applied Art for Primary Grades

- 14. Applied Art for Intermediate and Grammar Grades
- 15. Pottery
- 16. Antique
- 100. Methods in Art Supervision
- 101. Drawing from Life
- 102. Commercial Design
- 104. Design and Composition
- 200. Oil Painting
- 201. Color Composition

*Commercial Arts*

Ambrose Owen Colvin, B.S.C.

Flora E. Elder, A.B.

- 1. Principles of Shorthand
- 2. Principles of Shorthand
- 6. Methods in Commercial Education
- 11. Elementary Typewriting
- 12. Typewriting, Business Letter Writing
- 13. Advanced Typewriting
- 14. Business and Legal Forms and Documents
- 17. Office Practice
- 40. Business English
- 41. Business Correspondence
- 50. Elementary Accounting
- 51. Intermediate Accounting
- 52. Advanced Accounting
- 53. Commercial Arithmetic
- 54. Commercial Law
- 56. Penmanship
- 57. Penmanship
- 58. Advanced Corporation Accounting
- 142. Advertising
- 150. Bank Accounting
- 151. Cost Accounting
- 153. Salesmanship and Business Efficiency
- 207. Corporation Finance
- 208. Systems of Accounts
- 209. Auditing
- 210. Accounting Problems
- 211. Business Administration
- 220. Seminar

*Romance Languages and Latin*

Edwin Stanton Du Poncet, Ph.D.

Thomas F. Kenny

1. First Year French
2. First Year French
3. First Year French
5. Intermediate French
6. Intermediate French
7. Intermediate French
16. Advanced French
17. Advanced French
19. Advanced French
106. Advanced French
108. Advanced French
212. Advanced French

## Spanish

1. Elementary Spanish
2. Elementary Spanish
3. Elementary Spanish
5. Intermediate Spanish
6. Intermediate Spanish
7. Intermediate Spanish
106. Advanced Spanish
108. Advanced Spanish
212. Advanced Spanish

## Latin

5. Freshman College Latin
9. Freshman College Latin
101. Advanced Latin
105. Advanced Latin
106. Advanced Latin

*Social Science*

Gurdon Ransom Miller, Ph.D.

Edgar D. Randolph, A.M.

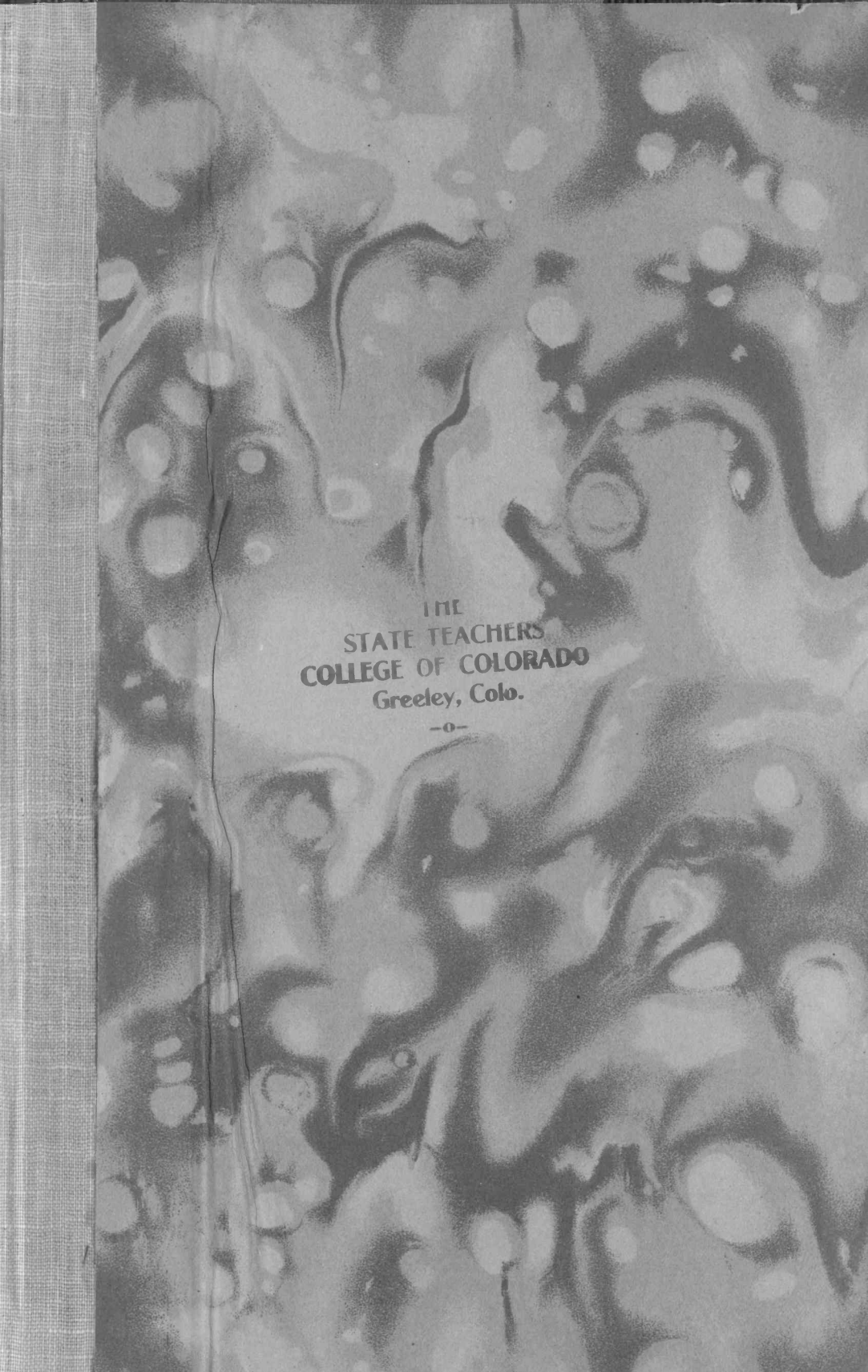
1. Anthropology
3. Educational Sociology
12. Social Readjustment
16. Society and the Church
18. Rural Sociology
19. Urban Sociology
20. The Distribution of Wealth
23. Immigration and American Problems
24. Child Welfare
32. The Family
37. Labor and Society
104. Social Theory
105. Social Institutions and Social Maladjustments

106. Principles of Social Progress
107. Privilege and Democracy
108. Social Insurance
110. Economics
111. Advanced Economics
117. Women and Social Evolution
127. Social Legislation
131. Modern Civilization and its Social Tendencies
132. Social Revolutions
200. Psychological Sociology
210. Methods of Social Research
211. Morals and Culture
220. The Consumption of Wealth
221. Social Economy
229. Criminology
230. High School Course in Sociology and Economics

*Teaching as an Attractive Vocation*

Since the completion of the national campaign for the betterment of the teaching profession, teaching is again attracting men and women of first rate ability. With the minimum of preparation prescribed in the two-year course a young man or woman can go into pleasant and useful employment at a salary equal to that usually earned by beginners in the other professions. Those who complete four years of professional training take a permanent place in an honored vocation and are in a position to earn a comfortable living while doing a worthy social service. No calling is more worth while than teaching. Once again, with a minimum salary of \$1,200 for trained teachers and liberal increases for experience, the remuneration for the teacher's service is in proportion to the service rendered and shows the appreciation of the public for such service. The number of young people who begin training for teaching in 1920 should be twice that for 1919, and Colorado State Teachers College as one of the few great teacher-training colleges of the country should double or treble its present enrollment.

The College maintains a Teachers' Bureau to assist its graduates in obtaining suitable positions after finishing their training. There is no charge for this service. The Bureau is also a branch of the U. S. Employment Service of the Department of Labor. The reputation of the College is such that there is a call for its graduates in Colorado and the neighboring states, and also in distant states and countries, so large that the demand always exceeds the supply of first-rate teachers.

The image shows the front cover of a book. The cover is decorated with a marbled paper pattern featuring swirling, organic shapes in shades of grey, black, and white. On the left side, there is a vertical strip of light-colored, textured cloth material, which is the spine of the book. The text is centered on the marbled area.

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COLLEGE OF COLORADO  
Greeley, Colo.

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