

LB
1840
G7
1909-10
c.2

30885

LB
1840
G7
1909-10
c.2

Bulletin

30885

LB1840
G7
1909-10
c.2

Colorado State Normal School
Bulletins
1909 - 10
Series 9
Table of Contents

Nineteenth Annual Catalog of the State
Normal School of Colorado, 1909-10.
Series 9, No.1.

Bulletin of Information Concerning the
Normal College Course of the Colorado
State Normal School. July, 1909.
Series 9, No.2.

High School of the Training Department
of Colorado State Normal School.
June, 1909. Series 9, No.3.

Bulletin Concerning Rural Schools and
Their Consolidation. Colorado State
Normal School. August, 1909.
Series 9, No.4.

A Bibliography of the Biological aspects
of Education. Colorado State Normal
School. November, 1909. Series 9, No.5.

State Normal School of Colorado Announce-
ment of Summer Term Courses for Rural
Teachers. (no date) Series 9, No.6.

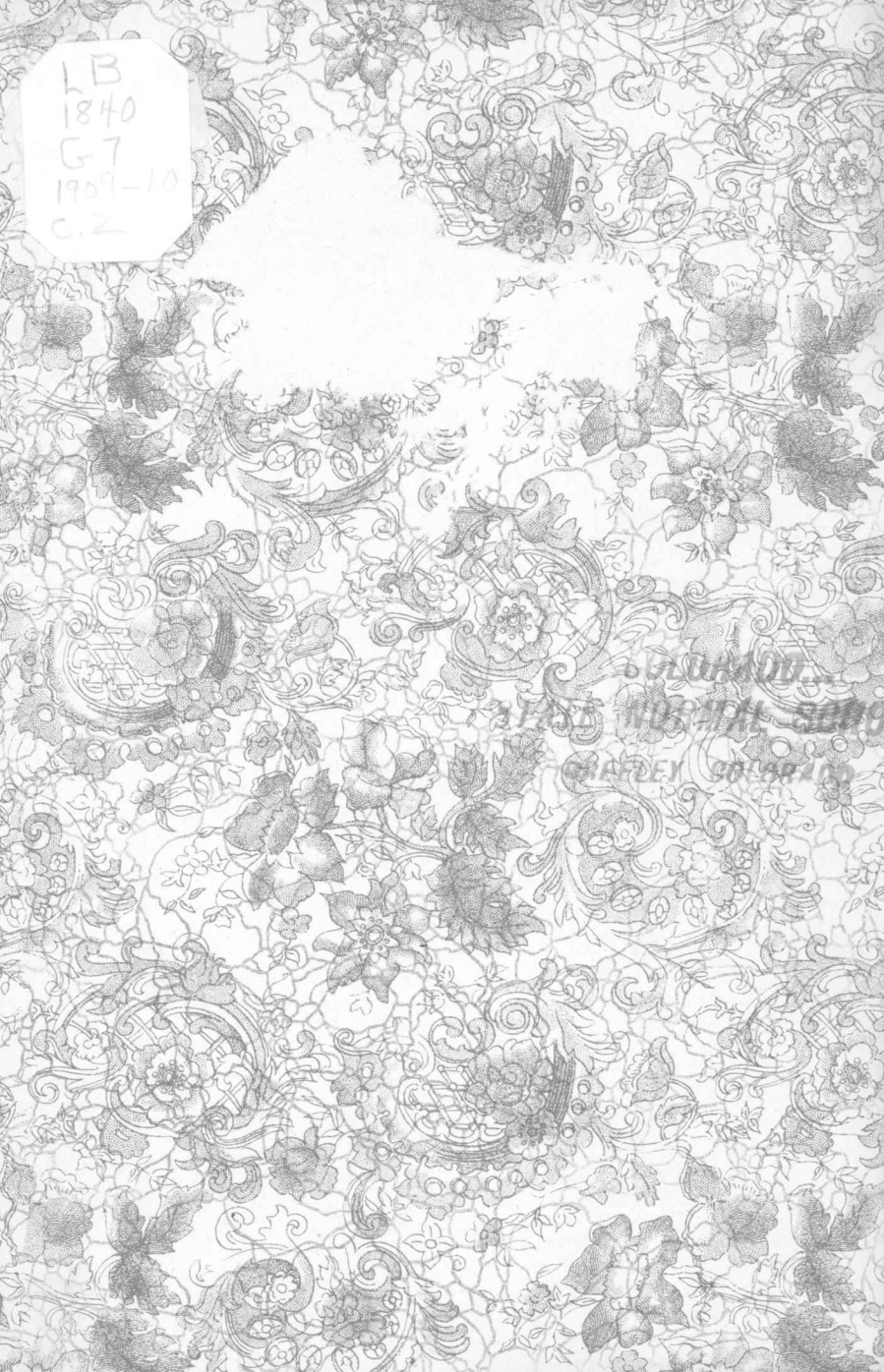
1909-10

Ninth Announcement of the Summer Term
of the State Normal School of Color-
ado, 1910. Series 9, No.7.

State Normal School of Colorado Announce-
ment of Summer Term Courses for High
School Teachers, 1910. Series 9, No.8.

State Normal School of Colorado Prelimi-
nary Announcement of the Fall Term.
(no date) Series 9, No.9.

LB
1840
G7
1909-10
C.2



W. & A. GARDNER
115 N. WASHINGTON ST.
CHICAGO, ILL.

370-788
981
1909-10

State Normal School of Colorado



JUNE
1909-1910

STATE NORMAL SCHOOL BULLETIN
SERIES IX. No. 1.

Published Quarterly by the Trustees of the State Normal School
of Colorado, Greeley, Colorado.

Entered at the Postoffice, Greeley, Colorado, as second-class matter.

578.783
581
1909-

NINETEENTH

ANNUAL CATALOG*

OF THE

State Normal School

OF COLORADO

Greeley, Colorado

1909-1910

30885-

*(In all publications of this institution is employed the spelling recommended by the Simplified Spelling Board.)

PUBLISHT BY
TRUSTEES OF STATE NORMAL SCHOOL

1909

1910

JANUARY							JULY							JANUARY							JULY																																		
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																												
--	--	--	--	--	1	2	--	--	--	--	1	2	3	--	--	--	--	--	1	2	3	4	5	6	7	8	9	--	--	--	--	--	1	2																					
3	4	5	6	7	8	9	4	5	6	7	8	9	10	2	3	4	5	6	7	8	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	--	--	--	--	--	--
FEBRUARY							AUGUST							FEBRUARY							AUGUST																																		
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																												
--	1	2	3	4	5	6	1	2	3	4	5	6	7	--	--	1	2	3	4	5	--	1	2	3	4	5	6																												
7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12	6	7	8	9	10	11	12																												
14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19	13	14	15	16	17	18	19																												
21	22	23	24	25	26	27	22	23	24	25	26	27	28	20	21	22	23	24	25	26	20	21	22	23	24	25	26																												
28	--	--	--	--	--	--	29	30	31	--	--	--	--	27	28	--	--	--	--	--	27	28	--	--	--	--	--																												
MARCH							SEPTEMBER							MARCH							SEPTEMBER																																		
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																												
--	1	2	3	4	5	6	--	--	--	1	2	3	4	--	--	1	2	3	4	5	--	--	--	--	1	2	3																												
7	8	9	10	11	12	13	5	6	7	8	9	10	11	6	7	8	9	10	11	12	4	5	6	7	8	9	10																												
14	15	16	17	18	19	20	12	13	14	15	16	17	18	13	14	15	16	17	18	19	11	12	13	14	15	16	17																												
21	22	23	24	25	26	27	19	20	21	22	23	24	25	20	21	22	23	24	25	26	18	19	20	21	22	23	24																												
28	29	30	31	--	--	--	26	27	28	29	30	--	--	27	28	29	30	31	--	--	25	26	27	28	29	30	--																												
APRIL							OCTOBER							APRIL							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																												
--	4	5	6	7	8	9	--	--	--	1	2	3	4	--	--	1	2	3	4	5	--	2	3	4	5	6	7	8																											
11	12	13	14	15	16	17	10	11	12	13	14	15	16	10	11	12	13	14	15	16	9	10	11	12	13	14	15																												
18	19	20	21	22	23	24	17	18	19	20	21	22	23	17	18	19	20	21	22	23	16	17	18	19	20	21	22																												
25	26	27	28	29	30	--	24	25	26	27	28	29	30	24	25	26	27	28	29	30	23	24	25	26	27	28	29																												
31	--	--	--	--	--	--	31	--	--	--	--	--	--	30	31	--	--	--	--	--	30	31	--	--	--	--	--																												
MAY							NOVEMBER							MAY							NOVEMBER																																		
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																												
--	2	3	4	5	6	7	8	--	1	2	3	4	5	6	1	2	3	4	5	6	7	--	--	1	2	3	4	5																											
9	10	11	12	13	14	15	7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12																												
16	17	18	19	20	21	22	14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19																												
23	24	25	26	27	28	29	21	22	23	24	25	26	27	22	23	24	25	26	27	28	20	21	22	23	24	25	26																												
30	31	--	--	--	--	--	28	29	30	--	--	--	--	29	30	31	--	--	--	--	27	28	29	30	--	--	--																												
JUNE							DECEMBER							JUNE							DECEMBER																																		
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																												
--	--	1	2	3	4	5	--	--	--	1	2	3	4	--	--	--	1	2	3	4	--	--	--	--	1	2	3																												
6	7	8	9	10	11	12	5	6	7	8	9	10	11	5	6	7	8	9	10	11	4	5	6	7	8	9	10																												
13	14	15	16	17	18	19	12	13	14	15	16	17	18	12	13	14	15	16	17	18	11	12	13	14	15	16	17																												
20	21	22	23	24	25	26	19	20	21	22	23	24	25	19	20	21	22	23	24	25	18	19	20	21	22	23	24																												
27	28	29	30	--	--	--	26	27	28	29	30	31	--	26	27	28	29	30	--	--	25	26	27	28	29	30	31																												

LB
1840
G7
1909-10
C.2

ANNOUNCEMENTS.

1909-1910.

FALL TERM.

Opens Tuesday, September 14, 1909.

Closes Monday, December 6, 1909.

WINTER TERM.

Opens Tuesday, December 7, 1909.

Closes Monday, March 21, 1910.

SPRING TERM.

Opens Tuesday, March 22, 1910.

Closes Thursday, June 9, 1910.

SUMMER TERM.

Opens Tuesday, June 21, 1910.

Closes Friday, July 29, 1910.

CHRISTMAS HOLIDAYS.

Christmas Holidays from Friday, December 17, 1909, to Monday, January 3, 1910.

SPRING VACATION.

Spring vacation from Friday, March 12, 1910, to Monday, March 21, 1910.

COMMENCEMENT WEEK.

Baccalaureate Sermon, Sunday afternoon, June 5, 1910.

Class Day Exercises, Tuesday evening, June 7, 1910.

Alumni Anniversary, Wednesday, June 8, 1910.

Commencement, Thursday, June 9, 1910.

The President's Reception to the Graduating Class, Thursday evening, June 9, 1910.

Alumni Banquet, December, 1909, Denver, Colorado.

ADMINISTRATION OF SCHOOL.

I. Board of Trustees.

HON. GEORGE M. HOUSTON.....	Greeley
Term expires 1915.	
HON. JOSEPH A. THATCHER.....	Denver
Term expires 1915.	
HON. S. J. DONLEAVY.....	Trinidad
Term expires 1913.	
HON. L. W. MARKHAM.....	Lamar
Term expires 1913.	
HON. MILTON R. WELCH.....	Delta
Term expires 1911.	
MRS. THALIA RHOADS.....	Denver
Term expires 1911.	
MRS. KATHERINE M. COOK.....	Denver
<i>State Superintendent Public Instruction.</i>	
Term expires 1911.	

II. Officers.

L. W. MARKHAM, Lamar.....	President
A. J. PARK, Greeley.....	Secretary
J. M. B. PETRIKIN, Greeley.....	Treasurer

III. Standing Committees.

Finance.

MR. WELCH, MR. HOUSTON, MR. MARKHAM.

Teachers.

MR. HOUSTON, MR. THATCHER, MR. WELCH,
MISS COOK.

Library.

MR. THATCHER, MISS COOK, MRS. RHOADS.
MR. DONLEAVY.

Kindergarten and Training Departments.

MRS. RHOADS, MR. THATCHER, MR. DONLEAVY.

Executive and Building.

MR. MARKHAM, MR. HOUSTON, MR. THATCHER.
MR. WELCH.

EDUCATIONAL MANAGEMENT.

I. Faculty.

1908-1909.

ZACHARIAH XENOPHON SNYDER, Ph. D., President,
Professor of Education.

JAMES HARVEY HAYS, A. M., Vice-President,
Dean of School and Professor of Latin.

LOUISE MORRIS HANNUM, Ph. D., *Dean of Women,*
Professor of English Literature and Language.

ARTHUR EUGENE BEARDSLEY, M. S.,
Professor of Biology and Economic Biology.

ELIZABETH HAYS KENDEL, Pd. M.,
Training Teacher—Professor of Intermediate Education.

SAMUEL MILO HADDEN, Pd. B., A. B., A. M.,
Professor of Manual Training.

DAVID DOUGLAS HUGH, A. M.,
Dean of Training School and Professor of Education.

FRANCIS LORENZO ABBOTT, B. S., A. M.,
Professor of Physical Science and Physiography.

ROYAL WESLEY BULLOCK, Ph. B.,
*Principal High School and Professor of Secondary
Education.*

BELLA BRUCE SIBLEY, Pd. M.,
Training Teacher and Professor of Primary Education.

ELIZABETH MAUD CANNELL, Director of Kindergarten,
Professor of Kindergarten Education.

ABRAM GIDEON, B. L., M. A., Ph. D.,
Professor of Modern Foren Languages.

RICHARD ERNESTI,
Professor of Drawing and Art.

WILL GRANT CHAMBERS, A. M. and M. S.,
*Dean of Professional and Research Work, and Professor
of Psychology.*

ELEANOR WILKINSON,
Professor of Domestic Sciences.

ACHSA PARKER, M. A.,
Associate Professor of English Literature and Language.

GURDON RANSOM MILLER, Ph. B., A. M.,
Professor of History and Sociology.

CHARLES WILKIN WADDLE, Ph. D.,
*Principal of Elementary School, and Professor of
Grammar Grade Education.*

GEORGE BRUCE HALSTED, A. B., Ph. D.,
Professor of Mathematics.

FRANCIS TOBEY, B. S.,
Professor of Reading and Interpretation.

STATE NORMAL SCHOOL,

ETHAN ALLEN CROSS, A. B., Ph. M.,

Associate Professor of English Literature and Language.

H. W. HOCHBAUM, B. S. A.,

*Associate Professor of Nature Study, School Gardening
and Elementary Agriculture.*

LEVERETT ALLEN ADAMS, B. A., M. A.,

*Associate Professor of Biology, and Curator of the
Zoological Museum.*

DORA LADD, Pd. M., A. B.,

Training Teacher and Professor of Intermediate Education

ALBERT FRANK CARTER, M. S., Librarian,

Professor of Bibliography.

JOHN THOMAS LISTER, A. B.,

Professor of Physiology, Director of Physical Education.

W. B. MOONEY, Pd. M.,

School Visitor, Professor of School Administration.

THEOPHILUS FITZ,

Professor of Vocal Music, Harmony, and History of Music.

J. D. HEILMAN, Ph. D.,

Associate Professor of Psychology.

MARSHALL PANCOAST, B. L.,

Assistant Training Teacher High School.

ALICE M. KRACKOWIZER, B. S., B. Ed.,

Training School Supervisor of Geography and Nature Study.

SELA BOYD, Pd. B., Ph. B.,
Assistant Librarian.

ALICE I. YARDLEY, Pd. B.,
Assistant Librarian.

JOHN CLARK KENDEL, Pd. B.,
Assistant in Music.

EDGAR D. RANDOLPH,
Assistant Training Teacher—Grammar Grades.

HENRY A. CAMPBELL, A. B.,
Assistant Training Teacher—High School.

VERNON MCKELVEY,
President's Secretary.

OFFICE, NORMAL BUILDING. OFFICE HOURS, 8 TO 12 AND 1:30 TO 5:30.

EXAMINING BOARD.

1909.

MRS. KATHERINE M. COOK,
State Superintendent of Public Instruction.

MISS MARIE V. DONAHUE,
County Superintendent,
Teller County.

DR. Z. X. SNYDER,
President, State Normal School of Colorado.

COUNCIL OF DEANS.

JAMES HARVEY HAYS.....	Dean of School
LOUISE MORRIS HANNUM.....	Dean of Women
DAVID DOUGLAS HUGH.....	Dean of Training School
WILL GRANT CHAMBERS.....	
.....	Dean of Research and Professional Work

FACULTY COMMITTEES.

1908-1909.

Executiv.

Function: Courses, Classification, Credits, Graduation
and Commencement.

PROFESSOR HAYS, PROFESSOR CHAMBERS,
PROFESSOR HUGH.

Non-Resident and Summer School.

Function: Detail Management for Non-Residents and
Summer Term Work.

PROFESSOR CHAMBERS, PROFESSOR MILLER,
PROFESSOR MOONEY.

Social Counsel.

Function: Y. W. C. A., Conduct and Interests of Girls.

MISS HANNUM, MISS TOBEY, MISS KENDEL,
MISS WILKINSON, MISS LADD.

Business.

Function: General Program, Registration, Records and Bulletins.

PROFESSOR CROSS, PROFESSOR HUGH, PROFESSOR MOONEY.

Physical Education.

Function: Gymnasium, Athletics, Playground, Sanitation, Helth.

PROFESSOR LISTER, PROFESSOR HADDEN, MISS TOBEY,
PROFESSOR BULLOCK, PROFESSOR HOCHBAUM.

Museum.

Function: Specimens, Cataloging, Inspection.

PROFESSOR MILLER, PROFESSOR HADDEN, PROFESSOR
BEARDSLEY, PROFESSOR HOCHBAUM, PROFESSOR
HUGH, PROFESSOR ADAMS.

Educational Progress.

Function: Reports—What is Going on in Educational World.

PROFESSOR WADDLE, PROFESSOR CROSS, MISS HANNUM,
PROFESSOR MOONEY, MISS CANNELL.

Alumni.

Function: Meetings, Organization, Etc.

PROFESSOR HADDEN, PROFESSOR MOONEY, MRS. SIBLEY,
MISS LADD, MISS KENDEL.

Social.

Function: Receptions, Entertainments, and Meetings in Building.

PROFESSOR ABBOTT, PROFESSOR GIDEON, MISS HANNUM,
MISS TOBEY, MISS WILKINSON, PROFESSOR CHAMBERS.

Mentor.

Function: Student's Fund and General Welfare of Students.

PROFESSOR BEARDSLEY, MISS KENDEL, PROFESSOR GIDEON

Music.

Function: Entertainments.

PROFESSOR FITZ, MISS KENDEL, PROFESSOR MILLER,
MISS CANNELL, PROFESSOR KENDEL.

Arts Crafts.

Function: Exhibits, Buildings.

PROFESSOR ERNESTI, MISS TOBEY, PROFESSOR ADAMS.

Literary Exercise.

Function: Literary Societies, Class Play and Public Exercises of Students.

MISS TOBEY, PROFESSOR GIDEON, MISS KENDEL,
PROFESSOR PANCOAST, MISS PARKER,
PROFESSOR KENDEL.

Bureau.

Function: Placing Graduates, and Press Publications.

PROFESSOR MOONEY, PROFESSOR HAYS, PROFESSOR HUGH.

Training School.

Function: Organization, Work, Management and Growth.

PROFESSOR HUGH, PROFESSOR BULLOCK, PROFESSOR
WADDLE, MISS KENDEL, MISS LADD, MRS. SIBLEY,
MISS CANNELL, PROFESSOR RANDOLPH, MISS
KRACKOWIZER, PROFESSOR MOONEY.

Grounds.

Function: Designs, Construction and Beautification.

PROFESSOR HOCHBAUM, PROFESSOR CARTER,
PROFESSOR GIDEON.

Young Men.

Function: Organizations, Conduct and Interest of Boys.

PROFESSOR WADDLE, PROFESSOR BULLOCK,
PROFESSOR LISTER.

Library.

Function: Organization, Use, Conduct, Books.

PROFESSOR CARTER, PROFESSOR CHAMBERS, PROFESSOR
WADDLE, PROFESSOR BULLOCK, MISS TOBEY.

...COLORADO...
STATE NORMAL SCHOOL
GREELEY, COLORADO





Playground.



Basket Ball.



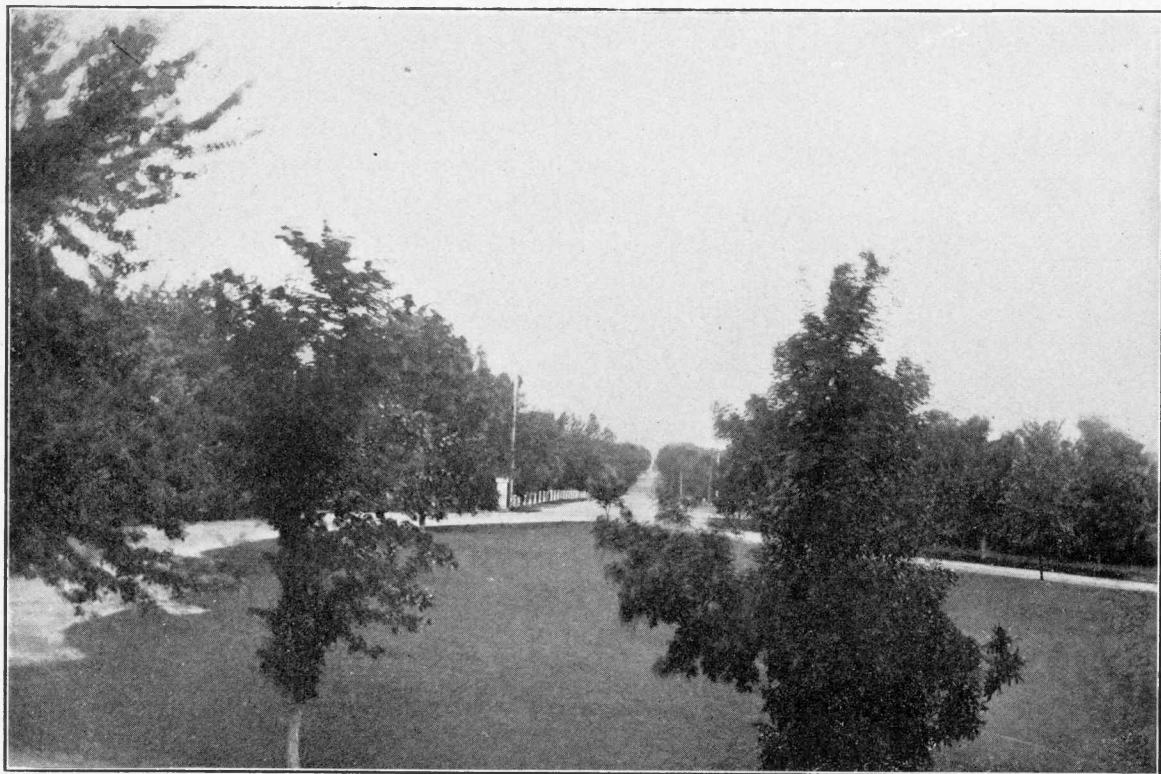
Nature Study.



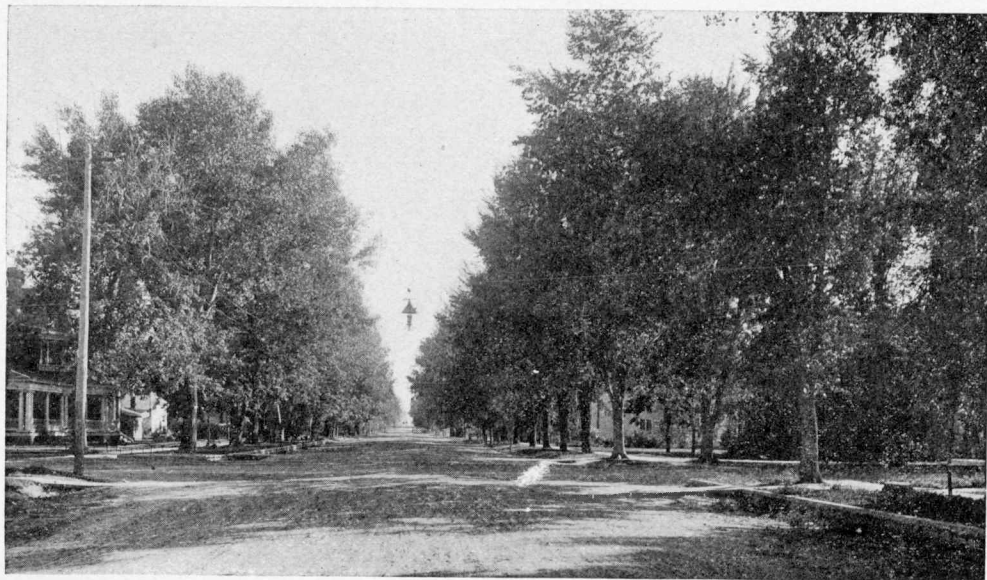
Inside of Conservatory.



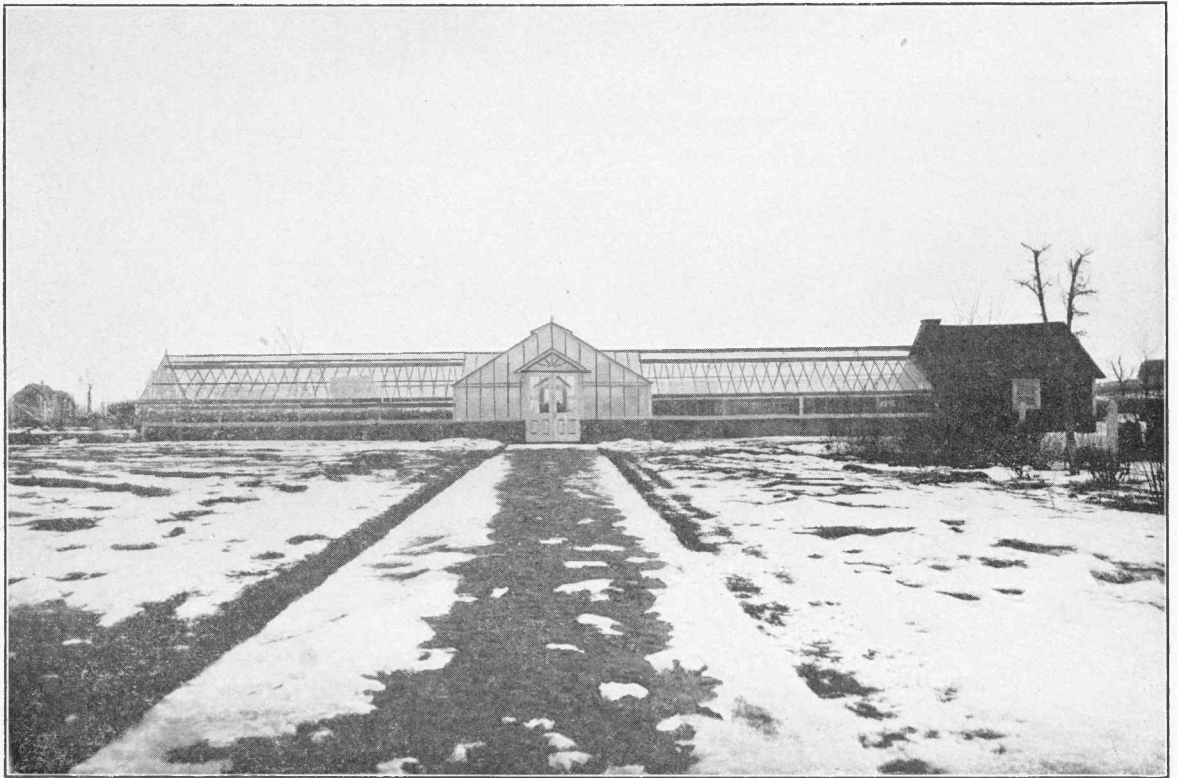
A View of the Campus from the Entrance to the Main Building.



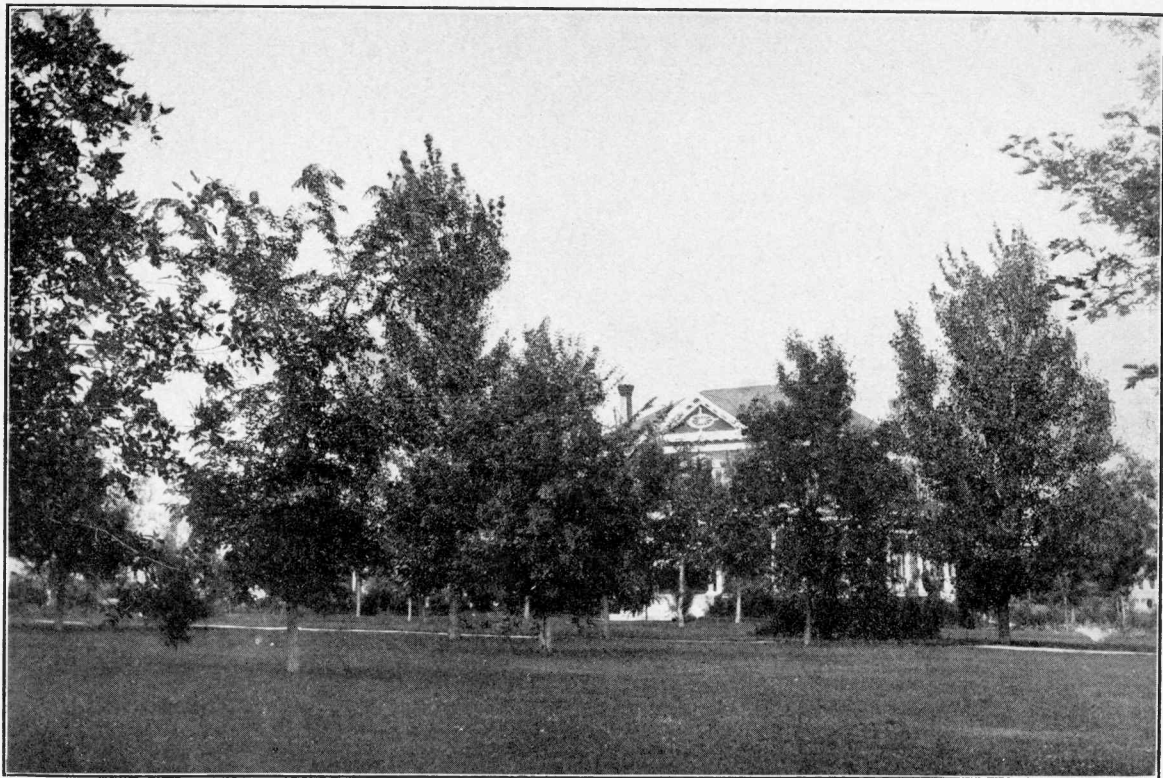
The Campus as Seen from the Main Entrance to the Library.



Tenth Avenue, Greeley, Colo.



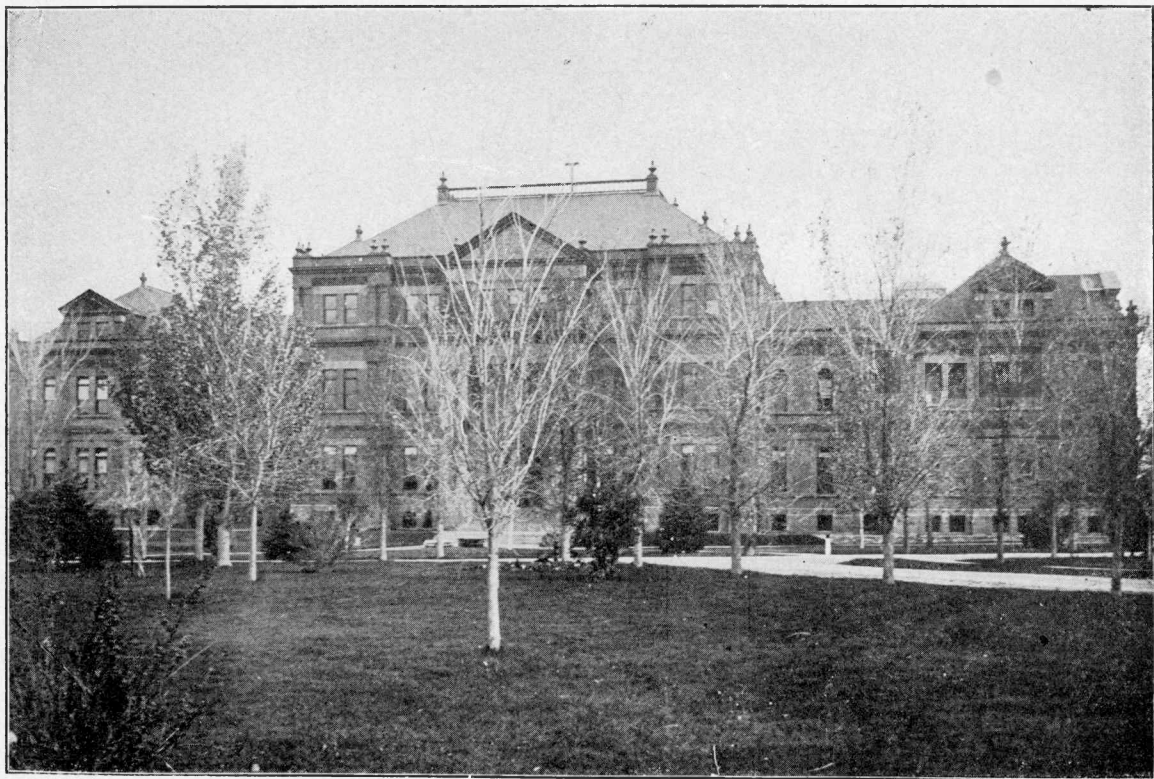
Conservatory.



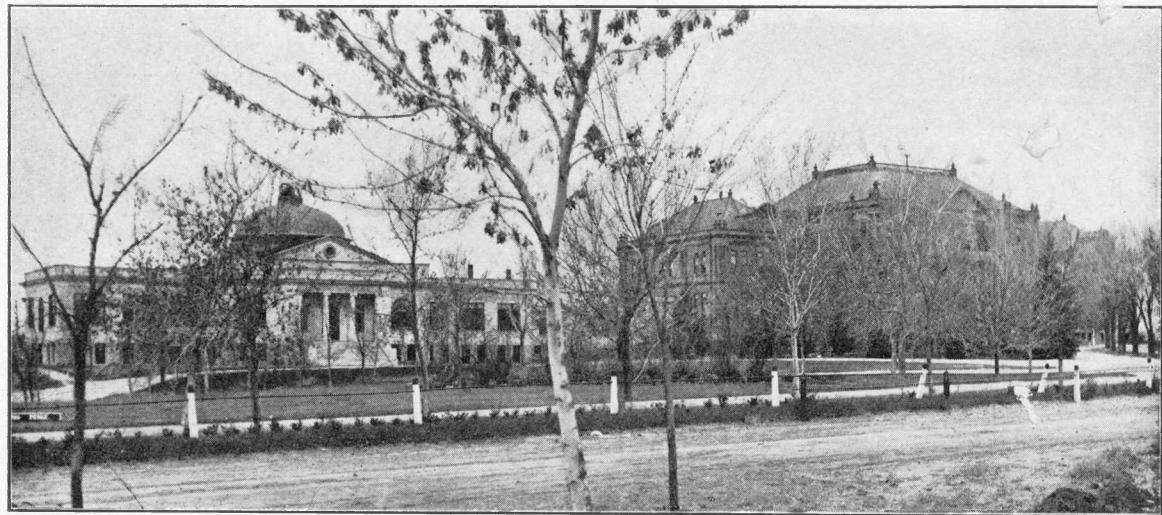
President's Residence.



Library.



Administration Building.



North Side Quadrangle.

HISTORY OF THE SCHOOL.

The State Normal School of Colorado was established by an act of the legislature in 1889. The first school year began October 6, 1890.

At the beginning of the second year the school was re-organized 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 makes the institution a professional school in the strictest sense.

LOCATION.

The Normal School is located at Greeley, in Weld county, on the Union Pacific and 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 thoroughly prohibition town. There are about 10,000 inhabitants.

BUILDINGS.

The main building is of red pressed brick, trimmed with red sandstone. It is one of the best and most commodious

normal school buildings in the United States. It is 240 feet long. This building is situated in the midst of a campus containing forty acres overlooking the city. The building is heated thruout by steam—chiefly by indirect radiation. A thoro system of ventilation is in use, rendering the building helthful and plesant. It is supplied with water from the city water works.

There is a very commodious and well arranged residence for the president. It is so arranged and equipt as to be specially suited for the various functions given to the students and faculty by the president.

The heating plant is of the most modern type, and is in architecture the same as the other buildings.

The library is a beautiful building, commodious and well adapted to the use for which it was intended. The equipment is thoro modern.

The greenhouse is of cement, iron and glass. It is one hundred and sixteen feet long by twenty feet wide, and has connected with it a servis room where the students of the Normal department and children of the Training department are taught to care for plants they may wish, now and in the future, to have in their homes.

MAINTENANCE.

The maintenance of the State Normal School is derived from a millage of one-fifth of a mill on the dollar for the entire assessment of the state. The legislature also makes special appropriations for building and general development.

NORMAL DEPARTMENT

THE FUNCTION OF THE NORMAL SCHOOL.

The function of the Normal School is to make teachers. To do this it must keep abreast of the times. It must lead in public education. It must project the future. The modern conception of education embraces all of human life. This wide and deep and rich notion enlarges the function of an institution that aims to prepare teachers. This function embraces in its relations: the faculty, the child, those preparing to teach, the home, the state, society, and the course of study.

I.—RELATION TO FACULTY.

The faculty is the school. Its power and influence consist in its faculty. The teachers should be pickt men and women. They should be persons who have especially fitted themselves. Normal School work is unique. To be a teacher of teachers requires very special qualifications and preparation.

a. Character stands paramount in the equipment of a teacher. Nothing can take its place.

b. Ability to teach ranks next in the hierarchy of qualification. This is ability to adapt self and subject to the pupil. It is ability to inspire to action. It means one whose nature blends with those being taught. It is a natural gift specially trained.

c. Scholarship is the reserve power of every strong teacher. It commands respect. The scholarship of a Normal School teacher should first be liberal, then special.

d. Culture is essential. It gives tone to the entire personality. It is the development of the finer nature. It means good manners, good taste, refined thoughts, elegant expression, pure spirit.

e. Professional ethics and spirit bind the faculty into one harmonious whole, without which there is a great lack of efficiency. A due recognition of this professional attitude should characterize all the members of the faculty. Due regard for each other in speech and manner should always exist.

II.—RELATION TO THE CHILD.

In the preparation of teachers the end in view is the education of the children of the state. The child is the supreme concern. The function of the Normal School is to give such an interpretation of the child and its development in all directions as will best prepare it to enter fully, readily, and righteously into its environment.

III.—RELATION TO THOSE PREPARING TO TEACH.

a. An individual who enters to take a course in the State Normal School should have maturity of mind. This is absolutely necessary, inasmuch as the student who is studying subjects in their relation to the education of children has a more complex problem than the person who is studying the subject for the subject's sake.

b. The individual who enters should have reasonably good health. The work of the Normal School demands that the student should have good health. The work of the teacher requires it.

c. One who is contemplating becoming a teacher should have a natural fitness to teach. The student can usually feel this; but when the authorities discover in a student a lack of natural ability to make a good teacher, that the student should have good health. The work of student should be informed.

d. Common sense is a very superior qualification for the teacher.

e. Clean character is fundamental. Clean thoughts, pure motives, high ideals are essential.

f. Intellectual ability is presupposed in the preparation of the teacher.

IV.—RELATION TO THE HOME.

A very close relation exists between the teacher and the home. The teacher and the parents should be acquainted. The teacher should be intimate enough to talk candidly and freely about the interests of the child. The function of the Normal School toward the home is so to prepare the people who enter that they may intelligently study the nature and wants of the child in common with the parent.

V.—RELATION TO SOCIETY.

Since the child must become an organic part of society, the teacher should have an intelligent view of the

relation of a child's education to the needs of society. The needs of the child and of society are reciprocal. The aim is to individualize and socialize the child.

VI.—RELATION TO THE STATE.

The function of the Normal School in the state is apparent. The state is interested in the education and general intelligence of all its people. To this end it founds schools and maintains a public school system. The Normal School becomes the very hart of this system. It prepares those who go out to have charge of the youth of the commonwelth.

The responsibility of no institution of learning is so great as that of a Normal School. It has a great function. It exerts its influence on the mountain and on the plain; the mining district, the stock-growing region and the agricultural sections all feel its influence. It reaches profoundly into the lives and activities of the people. It is the people's school.

ADMISSION.

1. All who enter must give evidence of good moral character.
2. An applicant for entrance must be free from any contagious disease that might endanger the students of the school.

3. High school graduates, or those having an equivalent education, enter the Junior year for the Normal Course, or the Freshman year for the Normal College Course without examination.

4. Graduates of Normal Schools or Colleges may enter the Normal Graduate course without examination.

5. Graduates of Normal Schools may enter the Junior year of the Normal College course without examination.

6. Graduates of Colleges may enter the Senior year of the Normal College course without examination.

7. Practical teachers who have not had high school training may enter, and such work be taken as will prepare them for the regular course.

SCHOOL YEAR IN TERMS.

There are four terms in the school year: the fall, the winter, the spring, and the summer terms.

The fall, winter, and spring terms average twelve weeks; the summer term is six weeks long, but the time in recitation is doubled, enabling the student to get term course credits.

UNIT OF CREDITS.

A *term course* is five recitations a week, or its equivalent, for twelve weeks.

COURSES OF STUDY.

I. *Regular Courses leading to licenses to teach and degrees in the Colorado State Normal School are of three kinds:*

1. Normal course.
2. Normal Graduate course.
3. Normal College course.

II. *Degrees and Diplomas:*

1. The Normal course leads to the degree of Bachelor of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

2. The Normal Graduate course leads to the degree of Master of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

3. The Normal College course leads to the degree of Bachelor of Arts in education and a diploma, which is a license to teach for life in the public schools of the state.

III. *The work of the courses:*

A. **The Normal Course.**

1. Thirty term courses are required for graduation. Eleven of these are required in professional work, viz.:

Three term courses in Psychology and Pedagogy.

Three term courses in Education.

Three term courses in Teaching.

One term course, in the Junior year, in observation and preparation for teaching.

One term course for conference, etc., in the Training School in the Senior year.

2. Nineteen of these thirty courses are elective, selected from the following subjects:

a. Art—Drawing, water color, oil, pottery.

- b. Manual Training—Carving, joinery, metal work, foundry work, basketry, etc.
- c. Domestic Science—Cooking, sewing, chemistry, sanitation.
- d. Vocal music.
- e. Modern Foreign Languages—German, French, Italian.
- f. Ancient Classics—Latin.
- g. History—Greek, Roman, Medieval and Modern, American.
- h. Literature and English.
- i. Physical Sciences—Physics, chemistry, geology, geography.
- j. Sociology.
- k. Kindergarten.
- l. Biology—Nature study, histology, botany, zoology, elementary agriculture.
- m. Mathematics—Arithmetic, algebra, geometry, trigonometry, analytics, calculus.
- n. Interpretation—Reading, dramatic art.
- o. Psychology—Experimental pedagogy, child study.
- p. Education—Philosophy of, science of, art of, history of.
- q. Physical Education — Physiology, gymnasium, field, play grounds.

B. Normal Graduate Course.

The requirements for the Normal Graduate course shall be twelve term courses in addition to what is required

for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

C. Normal College Course.

Requirements for the Normal College course are twenty-four term courses in addition to what is required for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

D. Normal Special Courses.

Beside the above regular Normal courses, there are Normal Special courses leading to graduation and diplomas in Kindergarten, Physical Education, Manual Training, Domestic Science, Art, Music, and Modern Foreign Languages. These diplomas are licenses to teach.

1. The work required for the special diplomas shall be selected by the heads of the departments offering such diplomas, subject to the approval of the Executive Committee, provided that this work, including electives, is equivalent to nineteen term courses in addition to the professional work required in the Normal course, of which at least six term courses shall be given by the department offering the diploma.

2. No student shall receive two diplomas until he shall have completed at least ten term courses in addition to what is required for either diploma, and has done sufficient teaching to satisfy the training department in regard to his ability to teach both kinds of work acceptably.

3. When these special courses are fully completed, the individual receives a degree and a diploma of the same value and standing as in the other courses.

REQUIRED AND ELECTIV WORK.

1. The professional work is required; viz: Psychology, pedagogy, education, teaching, observation, and conferences—in all, eleven term courses.
2. All other work is electiv—in all, nineteen courses.
3. No student may, without the approval of the proper faculty committee, take less than one term course nor more than two term courses in any subject, nor more than four term courses in any department.
4. Two-thirds of the courses for advanced degrees shall consist of advanced courses.

ORDER IN REGISTERING.

Students should observe the following order in registering:

1. Go to room 103 for registration.
2. Pay fees in the front office.
3. Get program and classification in room 203 A.

 EDUCATION.

ZACHARIAH XENOPHON SNYDER, Ph. D.

DAVID DOUGLAS HUGH, A. M.

GURDON RANSOM MILLER, A. M.

WILL GRANT CHAMBERS, M. S., A. M.

JAMES HARVEY HAYS, A. M.

COURSES OF STUDY.

The following is an outline of three consecutiv required courses.

The courses in Education are arranged for the Senior class, and are required. Education from the standpoint of philosophy will extend thru the entire year twice a week. Education from the historic standpoint will run thru one term three times a week. Education from the psychological standpoint is a course running thru one term three times a week. Education from the biological standpoint is a course running thru one term three times a week. Education from the standpoint of school economy runs thru one term twice a week.

Below will be found a general outline of work.

Course 1. Education From the Historical Standpoint.

The purpose of this course is to give the student an insight into the great educational ideals that have controid the practis of the school room, especially of those that play an important part in the thought of the present, and to show their relation to the history of civilization, in order that he may have a more intelligent understanding of the trend of educational progress. With this end in view, little emfasis is placed upon the study of individual educators except in so far as they are representativ of important educational movements. It is hoped in this way to be able to avoid the memorizing of unimportant details that too often fill the pages of text-books on this subject. Among the principal topics that will occupy the attention of the class will be the development of the Greek conception of culture, the rise of humanism, and the naturalistic, scientific, psychological and sociological tendencies in education. Noted educators will be carefully studied in connection with the history of

the movements with which they are associated. It is hoped that time will also permit a first-hand acquaintance to be made with the more important educational classics. Special attention will be devoted to contemporary educational thought and to the lives of prominent educators who are markedly influencing the work of the schools at the present time. In this connection a brief review will be made of the history of education in this country. MR. HUGH.

Course 2. Education From the Biological Standpoint.

The aim of this course is to present, in one term, the conception of education as a progressive modification of a functioning organism. It will include the chief fundamental generalizations of physiological psychology, and dynamic and experimental pedagogy. Lessons, discussions, readings, and themes on such topics as the interrelation of mental and motor processes, play, imitation, development of co-ordinated activities, causes and effects of fatigue, economy in learning, mental and physical hygiene, sensory and motor defects, age, sex, environment, and heredity in relation to mental progress, retention and organization of experience thru use, the educational significance of physical exercise and constructive activities, industrial and social efficiency as the end of education, will constitute the major part of the work. Constant use will be made of the training school both as a source of problems, a place for suggestive observation, and a field for the application of conclusions. Group work on assigned topics, and carefully conducted experiments under standard conditions will supplement the more formal methods of the class room. The

course will be sufficiently informal and plastic at all stages to permit its being turned into the line of dominant interest or greatest need of the members of the class.

MR. CHAMBERS.

Course 3. Education From the Standpoint of Sociology.

Lessons, discussions, library reading and reports.

This course comprizes a study of education as a social function; education as the reproduction of the spiritual environment; the nature of mind; educational values; science and art in education; history in the educational scheme, its place and function; the individual and society; the school and society.

MR. MILLER.

Course Complementary to 1, 2, and 3. Education From the Scientific Standpoint.

(This course, two days a week throughout the Senior year, is complementary to courses 1, 2, and 3. This, together with one term each of courses 1, 2, and 3, constitute the work required of all Seniors in the Philosophy of Education.)

I. The Meaning of Education.

1. From the standpoint of the individual.—An involution of possibilities; his education an evolution of the possibilities in relation to life; his expansion into health, strength, power, and skill to function in relation to his environment.

2. From the standpoint of society.—His adjustment to society in efficiency; his obligation to society, and the ob-

ligation of society to him; his relation to the state, and the relation of the state to him.

II. *The importance of heredity in education.*

1. Heredity and inheritance; facts and laws; growth and suppression of elements of inheritance in education.

2. Racial, national, parental, and individual heredity elements as influencing education.

3. Hereditary versus somatic transmissions in the individual and his education.

4. Hereditary and environmental variations in the education of the individual.

5. Theories of heredity—Lamarck, Darwin, Weismann, DeVries, and their relation to education.

III. *Evolution as a basis for education.*

1. Universal evolution as a working hypothesis.

2. The evolution of life, mind, society and the state, in its relation to civilization.

3. Universal recapitulations.

4. Recapitulation and the "culture epochs."

5. Religious recapitulation.

6. Its value to education.

V. *Functional Education.*

1. Education is functional—dynamic—pragmatic.

2. All activities of the individual are the result of cell structure.

3. Education is motorization—doing—realization.

4. The maturation of truth.

VI. *The evolution of truth.*

1. The potential value of a truth—anticipation.

2. The actual value of a truth—realization.
3. The efficient value of a truth—servis.
4. The making of truth—relation of facts.
5. The genesis of truth.

VII. *Life and its evolution.*

1. The creation of life values in relation to education.
2. Relativity of life values in the process of education.

VIII. *The serial theory of life as growing out of the doctrine of evolution.*

1. The unity of all organic action.
2. The variations of the cross sections of a series.
3. The serial determination of the unity of the neurones.

IX. *Education is motorization.*

1. Education is the functioning of cells.
2. Education, a natural science.
3. Application of the foregoing in the process of education.
4. Principles of education growing out of the above.

ART OF EDUCATION.

Organization of a School.

I. **Parts.**

1. Children.
2. Teacher.
3. Directors.
4. Patrons.

II. Functions.

1. Of children.
2. Of teacher.
3. Of directors.
4. Of patrons.

*Government of School.***I. Harmony.**

1. Object—preservation.
2. Aim—disciplin.
3. End—freedom.

*Instruction.***I. Processes.**

1. Thinking.
2. Knowing.
3. Expressing.

II. Results.

1. Knowledge.
2. Power.
3. Culture.
4. Motivity.
5. Realization.

Three terms.

PRESIDENT SNYDER.

PRINCIPLES AND METHODS OF TEACHING.**Course 4. Required Junior Observation.**

This course will begin with the discussion of the meaning of education in the light of the normal activities of the child and of the demands made upon him by society. From

this point of view the work of the schoolroom will be considered as a means of satisfying the needs of the child and of fitting him for social service. This will lead to a brief consideration of the educational value of the different subjects of the curriculum and especially of the principles of teaching and methods of instruction which are most in harmony with the facts of child life. Lesson organization will receive careful attention and will be illustrated in connection with the teaching of different subjects of the curriculum, such as history and geography. Among the topics included in this work will be the teacher's preparation for the recitation, the outlining of the lesson, the right line of approach to the teaching of the subject, different methods of presenting knowledge, questioning, the assignment of the lesson, the use of the study period, etc. The hygienic aspect of the various school activities will also be considered.

At least two hours a week of the time of this course will be devoted to the observation and discussion of lessons taught in the training school. These observations and discussions will be in charge of a training or departmental teacher, and will illustrate the various principles and methods of instruction studied during the course.

MR. HUGH.

The following courses in Education are elective.

The courses in Secondary Education are offered, primarily, for those who are teaching, or expect to teach, in schools of that grade. Such work, however, should be useful to those who wish to gain a comprehensive view of the educational field as a unit; to superintendents and princi-

pals; and to grade teachers who often have adolescent or adult pupils. A wide reading of current educational journals will be expected as a part of the study.

Course 5. Secondary School Problems.

1. Aims of Secondary Education (Cultural, vocational). 2. The Curriculum (Evaluation of subjects, apportionment of time, length of course, etc.). 3. Discipline (as affected by adolescence, public sentiment, social spirit, etc.). 4. Organization (Interdependence of departments, elective system, the program, etc.). 5. The Recitation (Its purpose, spirit, method, etc., so far as peculiar to secondary schools).

De Garmo's "Principles of Secondary Education" will be used quite largely. MR. BULLOCK.

Course 6. Institutions and Organizations of the Secondary School.

1. Social organizations (Classes, fraternities, sororities, clubs, societies, etc.). 2. Athletics (Purpose, principles, methods, competitive games, etc.). 3. Morning Exercises (Purpose, principles involved, dominant character, as religious, educational, ethical, moral, inspirational, social, civic, etc.). 4. Literary Work (Literary societies and various equivalents). MR. BULLOCK.

Dr. Hall's large work on "Adolescence" will be a general reference.

Course 7. Evolution of the Secondary School System.

This course will be based upon E. E. Brown's book, "The Making of our Middle Schools." MR. BULLOCK.

Course 8. The Hygiene of Instruction.

The fundamental aim of this course is to acquaint teachers with the new and rapidly growing science of school hygiene in a broad sense. In the first place the simpler and better known problems pertaining to the surroundings of the child in school, as heating, lighting, ventilating, and seating of the school room will be discust. Next, the means at the teacher's disposal for the detection of common physical defects in children, especially those of the eye, ear, nose, throat, teeth, and nervous system, and the effect of such defects upon school efficiency will be treated. Teachers will learn how to detect the common school diseases and what to do to prevent the spread of such in the school.

In the second part of the course hygiene is treated as a positiv rather than a negativ science. Early education has much to do in the development of correct habits of helthful activity, both physical and mental. Pedagogical hygiene has mainly to do with the means to the development of mental and nervous helth, and to this end is concernd with the problems of nutrition and other conditions of helthful growth. The following questions will receive consideration in this connection, all from the standpoint of economy of physical and mental energy: the hygiene of study; fatigue; grading; vacations; length of the school day; length, number, and distribution of recess periods; home study; arrangement of studies in the school program; and the like. Finally, the question of economy in teaching the various school subjects as influenced by individual differences in memory type, imagination, association, and attention. The light that experimental pedagogy has to shed

upon the teaching of spelling, writing, drawing, reading, music, arithmetic, manual work, and other school subjects will be reviewed and systematized. Whenever possible the training school will be made use of to test conclusions or to make original observations or experiments.

DR. WADDLE.

Course 9. Primary Education.

This course consists of a series of practical discussions of the experiences and discoveries of the last few years in regard to children in the primary grades. An effort is made to discover the fundamental interests of children, and the form of self activity best suited to their development.

As a preparation for these discussions, students are required to make themselves familiar with the courses of study of various noted schools, as, for example, the Horace Man School, connected with the Teachers' College, the University Elementary School of Chicago, and several normal schools. The public school reports of Denver, Chicago, New York, Boston, and other large cities are likewise considered. Very briefly the trend of the work is that indicated under the following heads:

1. Discussion of the essentials of a course of study for the primary grades.

(a) Description of continued constructiv play. (b) Its value tested by its reaction upon the children. (c) Primitiv homes, caves, wigwams, Eskimo huts, industrial implements.

2. Life and interests of the children the determining guide in the work.

(a) Art. Blackboard drawing. (b) Cutting. (c) Stories in clay, brush, and pencil.

3. Reading—As a means of finding out how to play, build, draw, make.

4. Phonics. (a) As ear training. (b) As an aid to the pronunciation of new words. (c) As an aid in the teaching of spelling.

4. Language. (a) Oral. (b) Written.

5. Busy work, rug weaving. MRS. SIBLEY.

Training Teachers' Meetings.

All Training Teachers meet once a week their practis teachers. The time of this conference is devoted to the discussion of the practical problems growing out of the work of the respectiv grades.

Kindergarten Courses.

For Kindergarten courses see the outline of the work of the kindergarten department, page 96.

SCIENCE IN GENERAL.

The foundation of all knowledge consists in correctly representing sensible objects to our senses so that they can be comprehended with facility.—Johann Amos Comenius.

The work in science is done from the pedagogical standpoint. While the subject-matter is thoroly treated, it is with the view that the student be able to teach it to children or to adults.

Science teaching is leading the pupil to be able to interpret his surroundings as a composite of objects and forces, and to see his own individual relation to nature, so as to be able to utilize these objects and forces and to derive a discipline and culture therefrom, whereby he may be a potent factor in the development of the race; and as a being who possesses an immortal nature, 'see in objects and forces and laws Providence, as an intelligent and supreme ruler of the universe.

This conception of science teaching requires activity upon the part of the pupil. In accordance with this view all science work is pursued; and to facilitate study, the school is provided with well equipped laboratories.

LABORATORIES.

Almost the entire third story of the main building is now devoted to the departments of science. The laboratory for *Biology, Zoology and Botany* is the largest, and contains ten tables, each large enough for four students. These are supplied with drawers, small aquaria, and facilities for microscopic work and dissections. Around the walls are blackboards, large aquaria, and cabinets containing the natural history collections. Especially worthy of notice are the herbarium cabinet and the fine cases of insects.

Across the corridor is the *physical laboratory* and recitation room. It is fitted with substantial cherry-top tables for individual work by about thirty students at once, and has also for the instructor's use, a large demonstration table, with sink and water, drawers and closets. This room and

two others used by the instructors in biology and geography are equipt with facilities for solar projection work.

The *chemical laboratory* adjoins the physical laboratory, and is probably as conveniently arranged as that of any similar school in the country. It is furnisht with eight desks, exclusiv of that used by the instructor, having shelvs, cupboards and drawers with individual locks for three divisions of thirty-two students each. Each desk is intended for four students at a time, and has two led-lined sinks with water and gas pipes and a two-chambered ventilating hood with glass doors, led floors, and copper flues thru the ceiling for carrying off foul gases. The desks are of butternut and have renewable oil-cloth tops. The instructor's desk is similarly furnisht, but has also apparatus for the distillation of water, including a large copper retort and condenser with block tin worm. There are also tables and a work bench with a set of tools for the making of apparatus. On three sides of the room are cases with glass doors for apparatus, chemicals, and other supplies; the remaining side has blackboards, bulletin board, and keyboard.

Handsome cases all about the walls of the large corridor on this floor are also used for the larger apparatus of the departments of physics and physiology and for museum collections in natural history.

PSYCHOLOGY AND CHILD STUDY.

WILL GRANT CHAMBERS, A. M., M. S.

J. D. HEILMAN, Ph. D.

PSYCHOLOGY.

The work of this department is based on the belief that psychology is of prime importance to the teacher. It is therefore the aim to make the instruction as thoro and as positiv as possible. While all topics of the subject have a cultural value which would justify their place in a course of study, there are certain ones, the bearing of which on the profession of teaching is more direct, and these are selected for special emfasis. Slight variations are made from year to year, both in methods of instruction and in subject matter, with a view to finding the material and the method which, in the limited time allotted to the subject, will produce the most genuin and lasting interest and the clearest insight into the more common phenomena of mental life. Whatever the topic or method, the attempt is constantly made to keep the work on a practical basis, and such as can be continued when the student has left school.

No body of psychological knowledge, however* carefully acquired, can long be retaind or be helpful while retained unless it has been fitted into the personal living of the student—unless he constantly recognizes it in all his own daily perceiving, remembering, feeling, and doing, and in the expression of these activities observable everywhere

about him. As far as possible, therefore, principles are arrived at inductively, and reading and lectures are constantly supplemented by experiments and observations both in and out of class. Emphasis is continually placed on the importance of movement as the expression and the necessary completion of mental processes. Each process is studied, not only as it appears in adult life, but also with reference to its growth and its characteristics at each level of mental development as illustrated in child and animal life. The practical origin of all the conscious processes, and the unitary character of mind in all its functionings are principles upon which all instruction depends.

COURSES OF STUDY.

Course 1. Physiological and Experimental Psychology.

Thru lectures, readings, discussions, and dissections a thoro study is made of the brain and central nervous system, of the sense organs, and of the relation of mind and brain. Physical growth, precocity and dullness, motor ability, and certain phases of the hygiene of instruction are dwelt upon in this connexion. Sensation, affection, attention, perception and apperception, illusions, and memory are studied in detail with numerous laboratory experiments, personal observations, and exercises in introspection. Constant use is made of a well stockd library, and themes and note books give evidence of work done by students. *One term.* For Juniors. [Every Term.]

Course 2. Descriptiv and Analytical Psychology.

Using Course 1 as a foundation, this course proceeds with a study of the higher types of mental processes, such

as emotion, action, thinking, self-consciousness, suggestion and imitation, and related topics. Laboratory methods are still used wherever possible, but more emphasis is placed on introspective analysis than in Course 1. The derivation of pedagogical principles from the natural laws of mental activity is a prominent feature of the course, and illustrations are drawn daily from school-room and play-ground. *One term.* For Juniors. [Every Term.]

Course 3. Pedagogical Psychology.

This is an attempt to put the main conclusions of psychology into a more usable form for application in the school-room. Starting with Dr. Dewey's conception of education as a "reconstruction of experience," it proceeds to show how all the sound principles of pedagogy are but aids to the mind's natural processes of reconstructing itself. From the viewpoint of functional psychology the Herbartian formal steps are criticized and interpreted, and the culture epoch theory discussed. From a study of the nature and origin of knowledge as revealed in the development of the sciences in primitive society, the constructive activities are found to be the true center of correlation for the studies of the curriculum, and the methods of differentiating these studies from the pupil's social-industrial activities are suggested. The school as a social institution naturally comes to be a conspicuous thought of the course, and the best literature along that line is read. The psychology and pedagogy of drawing, writing, reading, and other school subjects are considered in their broader aspects. The work is closely correlated throughout with observation of teaching in

the training school, and is expected to prepare the students to approach their own practis teaching with some mesure of confidence and appreciation of its significance. *One term.* For Juniors. [Every Term.]

CHILD STUDY.

Aim: The purpose of this study is not to turn out scientific investigators of child life nor, primarily, to add to the literature of the subject, tho the latter is accomplisht to some extent incidentally. The aim of the work in this department may be stated as follows:

a. To make the students familiar with the fundamental principles establisht by the science.

b. To show the application of these principles in practical pedagogy and school hygiene.

c. To establish a habit of careful observation and interpretation of the conduct of children.

d. To arouse that sympathy for child life which is essential to a real teacher and which can be acquired only thru carefully directed, immediate contact with children.

e. To make plain the legitimate methods of child study, in order that students may be able to determin the value of conclusions met with in their later reading and practis.

f. To conduct one careful inductiv study from beginning to end, under direction, to insure a first hand knowledge of all the foregoing points, to bring out all the difficulties incident to such work, and to give practis in weighing material and deriving generalizations.

Method: Diversity in the sources of material and in the purposes of the different courses makes a diversity in methods of presenting the material necessary. But the one insistent principle which dominates all methods is *informality*. No conventional routine nor rigid formality is allowed to stifle enthusiasm. Whatever the topic or the method, the class meets as a sort of seminar or informal club to talk the matter over in a familiar way. A formal classification of methods used thruout the courses would include: (1) Lectures, (2) Student Reports on Reference Readings, (3) Recitations from Text Books, (4) Personal Observations, Experiments, and Examinations, (5) Informal Discussions, Quizzes, etc., and (6) Papers or Theses on Topics Investigated.

COURSES OF STUDY.

Course 1. Systematic Child Study.

The course includes:

I. *Introductory lectures* on the history of the child study movement, its relation to the scientific, industrial, and educational development of the last quarter century, its chief promoters, aims, methods, and results. Readings, reports, and discussions by students.

II. *The Physical Nature of the Child.* Readings, reports, and discussions. (a) Growth, its significance; (b) Physical training, exercise, bodily attributes, etc.; (c) School hygiene.

III. *Interrelation of the Physical and the Mental.* Readings and discussions; (a) Mind and body; (b) Re-

lation of motor power and intelligence; (c) Unidexterity and ambidexterity; (d) Fatigue; (e) Psychology of writing; (f) Psychology of drawing.

IV. *Expansion of the Intellectual Life.* Lectures, readings, and discussions.

V. *Expansion of the Moral and Religious Consciousness.*

VI. *Expansion of the Social and Civic Consciousness.*

VII. *Adolescence.* Lectures, readings, and reports.

VIII. Concluding lectures on the General Psychology of Child Development.

IX. An Inductiv Study conducted by the class on some important topic. *One term.* [Fall Term.] Prerequisite: Psychology 1, 2, and 3.

Course 2. A Practical Course.

All the pupils of the Training School are examined for defects of eye, ear, nose and throat, motor ability and co-ordination, speech, nerve signs, etc. Tests of memory types are made, and the results related to age, sex, physical condition, and school standing, both for individuals and groups. Records are kept and studied by students taking the course. Primarily for Juniors. *One term.* [Fall Term.]

Course 3. Observation and Direction of Play.

Juniors are required to be present on the playground during the play hour of the training school to participate

in the children's games and to direct them when necessary. Careful observations of the children's activities and daily written reports are made, including cases of leadership, imitation, outcasts, bluffers, snobs, bullying, teasing, unusual reactions toward weaklings or cripples, playing with children of different age, etc. At a weekly conference these reports are discust, and causes and significance of reported phenomena brought out. Thru lectures and readings, the meaning of infancy and play is dwelt upon and the relation to education pointed out. This course has proved one of the most interesting and direct approaches to the observation of practis teaching in the training school. For Juniors. *Three terms.*

Note.—This course is continuous thru the year, but different groups of students are making the observation at different times.

EXPERIMENTAL PEDAGOGY.

Course 1. A Practical Course.

A. Superintendents, principals, and teachers who have a sufficient basis of scholarship and practical experience are encouraged to take up experimental investigations of problems which arise in their every-day school experience. Such studies as comparisons of progress in pupils of different races or social conditions, relation of mental and motor abilities, relation of sensory defects and school progress, fatigue, retarded pupils, mental types, correlation of different abilities, formal disciplin, individual instruction, elastic systems of grading and promotion, are suggestiv of

what will be accepted as legitimate work for this course. The school will aid by suggestions and will put investigators in touch with what has been done elsewhere along the line of the study.

B. Reading of monograph, periodical, and other literature bearing on the problem selected.

C. A thesis giving a detailed account of the investigation, its generalizations, its scientific relations, and its application to practical pedagogy.

D. An oral examination and defense of the thesis.

Prerequisites: Psychology 1, 2, 3, and Child Study 1, and 2.

BIOLOGICAL SCIENCE.

ARTHUR EUGENE BEARDSLEY, M. S.,

H. W. HOCHBAUM, B. S. A.

L. A. ADAMS, A. M.

BOTANY.

COURSES OF STUDY.

Course 1. Elementary Botany—Plant Relations.

A study of the plants in their relations to the environment. Field and laboratory work and recitations. *One term.* [Fall Term.]

Course 2. Elementary Botany—Plant Structures.

In this course the development of the plant is considered together with its life history. The various structures

of plants are studied in relation to their functions, and the modifications of structure correlated with modifications of function and environment. Some of the higher groups of plants are carefully studied as to their characteristics. Some exercise is required in the use of keys in classification, and in determining the names of common plants. *One term.* [Spring Term.]

Courses 3, 4, and 5. Advanced Botany.

A laboratory course in advanced botany is offered, covering a general survey of the plant kingdom, ecology and experimental physiology. *Three terms.*

Course 6. Economic Botany.

Yeasts, Molds, and Bacteria.

This course is primarily for special students in Domestic Economy, but is open to students in any course. *One term.* [Winter Term.]

ZOOLOGY.

Course 1. Elementary Zoology.

An elementary course, including laboratory and field work.

Courses 2, 3, and 4. Advanced Zoology.

Advanced Invertebrate Zoology. (One-half year.)

Advanced Vertebrate Zoology. (One-half year.)

These three courses are open only to students who are candidates for graduation in the Normal Graduate or Normal College Courses. *Three terms.*

Course 5. Ornithology—Classroom and Field.

This course is a combination of field and class-room work, and at least half of the time will be spent out of doors, in order to become familiar with the forms studied in the classroom. This is rather a comprehensive course and is planned for those who desire an intimate knowledge of bird life. It combines the technical with the popular, as they are complementary to each other, for without one, the other loses its value.

Course 6. Mammology.

Study of the mammals taken up in the same manner as in the course above. Much time will be spent out of doors, investigating the forms that are common in the vicinity. This is also a comprehensive course and will take up the group of mammals and their gross structure. The habits of the different types will also be carefully studied.

NATURE STUDY.

Greeley is an ideal place in which to begin the study of nature. The campus of the Colorado State Normal School is the most beautiful one in the state. Here may be found hundreds of different kinds of flowers, shrubs and trees, and the homes of many birds of different species. Garden and field, farm and plain afford opportunity for the study of animal and plant life. In the greenhouse and school-garden that form part of the equipment of the school, gardening and elementary agriculture may be studied. Here earth may be dug over, seeds sown, plants planted, and that practical handicraft gained that is essential in teaching school gardening and elementary agriculture.

In the nature study work, the aim is to bring before the teacher the true nature study ideal; namely, that nature study should be taught, not for the mere accumulation of facts about nature, but rather as a means to a greater end, i. e., to instil in the heart of every child a greater love and appreciation of nature. Too many teachers still believe nature study to be a kind of elementary science, something to be studied for the facts that may be gained. It is not facts we are after, but a greater sympathy and enthusiasm for nature. Nature study is not facts, but spirit.

Course 1. Nature Study.

The theory, practice and material of nature study. A course designed to prepare teachers for teaching nature study in the elementary school. In this course we consider:

I. The Nature Study Idea. A review of the writings of Professors L. H. Bailey, S. C. Schmucker, C. F. Hodge and others, on the aims and ideals of nature study teaching. The significance and importance of the nature study movement. The theory and practice of nature study teaching.

II. The Material of Nature Study. First-hand acquaintanceship with the good and common things of the outdoor world, thru actual, first-hand observation in garden and laboratory, on field and plain.

Course 2. School Gardening; Outdoor Art; Elementary Agriculture.

The principles of landscape improvement applied to school and home grounds. How to beautify the school and home grounds. Studies of the best native and introduced

decorativ plants. The laboratory garden idea. Practis in garden handicraft. Planning and planting the laboratory garden. Soil studies. Plants in relation to soils. The principles of soil and plant management.

Course 3. The Principles of Agriculture.

The principles of soil, plant, and animal management. An elementary course designd for preparing teachers to teach agriculture in the rural schools. The above course must precede this.

PHYSICAL SCIENCE.

FRANCIS LORENZO ABBOTT, A. M.

PHYSICS.

Physics is studied by the laboratory method. Students here learn to "read nature in the language of experiment." They spend two hours consecutivly in the laboratory once a week, performing experiments for themselves, taking notes, making drawings and explaining what they observ. This is followd by reading from reference books and by discussions. Special attention is given to the application of physical principles in the explanation of common inventions and every-day phenomena. Illustrations of the law of the conservation of energy are everywhere sought for. The school is provided with a well equipt laboratory containing all necessary apparatus; but tho good use is made of this

apparatus, the members of the class are taught to improvise, from such materials as may be gathered anywhere without expense, apparatus which they can take into the public schools and use in performing simple experiments to explain the elementary facts of physics, chemistry, physical geography, meteorology and physiology.

COURSES OF STUDY.

Course 1. Elementary Physics.

This is practically a course in high school physics. It treats the following subjects: Electricity, light, mechanics, solids and liquids, heat, sound. *One and a half terms.* [Begins in Fall Term.]

Note.—This course extends thruout the year, the class meeting every other day, and alternates with Botany 1.

CHEMISTRY.

All chemistry is taught by laboratory work and recitations. The laboratory is fully equipt, and students are required to do individual work. Four periods per week of laboratory work are required for the first twenty-four weeks. The remaining time is spent in analytic work and requires ten periods per week. Two laboratory periods are equivalent to one class period. The subject is correlated with Physiology, Physiography and Domestic Economy, that students may make immediate use of the chemical experiments in elucidating the teaching of these subjects.

COURSES OF STUDY.

Courses 1 and 2. General Chemistry.

The following is an outline of the work for these courses:

- a. Review of properties of oxygen, nitrogen, hydrogen, and carbon.
 - b. Study of compounds of the above elements.
 - c. Relative importance of these elements and their compounds in the inorganic and organic worlds.
 - d. Writing of chemical equations and solution of chemical problems.
 - e. Characteristic acids, bases and salts.
 - f. Preparation of salts, acids and bases.
 - g. Study of the properties of typical acids and bases.
 - h. Study of properties of non-metals, metals and some of their compounds. *Two terms.* [Begins in Fall Term.]
- Prerequisite: *One-half year high school chemistry.*

Course 3. Quantitative Analysis.

- a. Twenty or more solutions, containing but one salt.
- b. Solution containing any or all of the common metals.
- c. Alloys.
- d. Baking powder, etc.
- e. Mineralogy: Blow pipe tests, heating in open and closed tubes, etc., simply to determine the names of many of common minerals. *One term.* [Spring Term.]

Prerequisites: *Chemistry 1 and 2.*

Courses 4 and 5. Organic Chemistry.

- a. Methane and Ethane.
- b. Halogen Derivatives of Methane and Ethane.

- c. Oxygen Derivatives of Methane and Ethane. Alcohols—Fermentation—Formic and Acetic Acids, etc.
 - d. Nitrogen Derivatives of Methane and Ethane, or the Cyanids, etc.
 - e. Hydrocarbons of Methane, or Paraffins.
 - f. Oxygen Derivatives of Paraffin Series, or the Higher Alcohols—Stearic Acid, Soaps, Glycerin, etc.
 - g. Carbohydrates — Glucose — Sugars — Starch — Gums.
 - h. Benzene Series of Hydrocarbons and their Derivatives, etc. *Two terms.*
- Prerequisites: *Chemistry 1, 2 and 3.*

Course 6. Physiological Chemistry.

This course aims to give a thoro acquaintance with the principal ingredients of the animal body, and of their relation to food, to tissue, and to waste. The study covers the following topics:

- a. Proteids: nativ albumen, derived albumen, globulins, etc.
- b. Carbohydrates: starches, dextrin, sugars, glycogen.
- c. Fats.

This is followed by a study of various digestive processes.

- a. Saliva and the digestion of starch by ptyalin; amylopin.
- b. Gastric juice and the digestion of proteids by pepsin.

- c. Pancreatic juice and the digestion of proteids by trypsin.
- d. Analysis and digestion of milk. *One term.* [Winter Term.]

GEOGRAFY.

FRANCIS LORENZO ABBOTT, A. M.

Course 1. Methods in Geografy.

It is customary to treat geografy under separate divisions, such as mathematical, commercial, and physical. The New Geografy treats the subject simply as geografy. The basis of the new geografy is industries and commerce. If the subject is treated from this standpoint, all the reciprocal relations of the different sections of the United States can be shown. By starting with the industries of a country we must necessarily be brought into very close relation with the climatic conditions; and the climate is very largely the result of topografy and latitude.

Whether we study the different sections of the United States or the world at large, this method will show the relations and inter-relations of the various countries.

Geografy, when properly presented, should show the great cities as they really are—industrial, political, art and educational centers, and great aggregations of people. It should show their relations, and their influence one upon another and upon the surrounding country.

Geography, when treated from the above standpoint, presents itself as it really is, a complete organic unit. It is thus removed from the list of memory studies and becomes a thought study of true educational and practical value to the child.

Course 2. Physiography.

In this course special emphasis is put upon climatology. Connected with the department of geography is a geographical field 150 by 125 feet, in which are located all the modern instruments for making observations on climate, and in which the continents are molded on a large scale. *One term.*

GEOGRAPHICAL MATERIALS.

The geography library contains about one hundred and fifty bound volumes, well representing such lines, as descriptive, commercial, and historical geography, physiography, geology, meteorology, astronomy, agriculture, methods and general geographical reading. Besides these books, most of the standard geographical magazines in the English language are subscribed for. The government publications, which are of interest to the student of geology, are regularly received.

Daily observations are made of climatic elements, both for immediate results and as a preparation for advanced work. These observations include: thermometer readings, barometer readings; observations of direction and velocity

of wind; of clouds, rain or snow; of sun's noon altitude; of place and time of sun's rising and setting.

The laboratory is supplied with the most faithful representations of nature, such as government maps and charts, fotografs and models of actual and typical forms in nature. It also has all customary apparatus, such as terrestrial globes, a celestial globe, a black globe, a tellurian, a solar lantern, wall maps, relief maps, thermometers, barometers, hydrometers, rain gage, and a number of home-made pieces. Lantern views, fotografs, and models have become an important feature in our equipment.

The school is indetted to the Santa Fe and Colorado Midland Railroads for some excellent and valuable framed pictures, which are very useful as geographical illustrations. The Florence & Cripple Creek and Midland Terminal roads have also given us excellent views.

Cabinet specimens are rapidly accumulating, and include already collections of woods, of agricultural products, and of interesting minerals. Contributions from students and all friends of the school are always welcome.

MATHEMATICS.

GEORGE BRUCE HALSTED, PH. D.

The courses in mathematics have in view giving future teachers such principles for the selection of material, and such mathematical disciplin, and such knowledge of the new methods and procedures, as will make their teaching of

arithmetic, algebra, and geometry more rational and effective. The best methods of study and the new ways of teaching are constantly inculcated.

COURSES OF STUDY.

Courses 1, 2, and 3. Elementary Algebra.

The usual high school work, including quadratics. Especial emphasis on interpretations of meaning, on the principles of permanence and the fundamental laws of freedom. Effort to develop independent thinking. Mechanical manipulation explained and utilized. *Three terms.*

Courses 4 and 5. Plane Geometry.

The equivalent of high school work. Especial emphasis on original and inventive work. The new simplifications utilized. The errors of the books still current taken as sectional material. Text: Halsted's Rational Geometry. *Two terms.* [Fall and Winter Terms.]

Course 6. Solid Geometry.

The new method dominated by the two-term prismatoid formula. *One term.* [Spring Term.]

Course 7. Methods in Arithmetic.

Special study of the material to be given in the grades, and of the best order and mode of presenting it. Study based on spontaneity of child. Effort to fit the arithmetic to the child instead of the child to the arithmetic. Explanation of the practical simplifications which are an outcome of the modern advance. *One term.* [Given every term.]

Courses 8 and 9. Advanced Algebra.

The usual work given in first year of college. For method of treatment, compare courses 1, 2, 3. *Two terms.* [Fall and Winter Terms.]

Course 10. Plane Trigonometry.

The equivalent of a first course in college. Logarithms reviewed. *One term.* [Given in Spring Terms.]

Course 11. Analytical Geometry.

The Yale course.

Note.—Courses in more advanced mathematics will be given as required. These will be planned especially to meet the needs of students preparing to teach mathematics in high schools.

HISTORY AND SOCIOLOGY.

GURDON RANSOM MILLER, A. M.

Course 1. European History.

Mediæval European history, from the fall of Rome to 1520 A. D. The Teutonic invasions; growth of the Church and Empire; early European civilization, its social and economic evolution; Saracen civilization, and its relation to European civilization; the Crusades, and economic results; the Renaissance; and the Reformation.

Lectures and discussion of the aims, purposes, and possibilities of history teaching. [Fall Term.]

Course 2. European History.

Modern European history from the Reformation through the French Revolution to A. D. 1814. The struggle for

nationality in France; contrast between growth of nationality in France and other European countries; Austria and the German States; the decadence of Spain; rise of Prussia and Russia; the French Revolution; the economic revolution in Europe. Early American history interpreted thru the above events.

Special lectures and treatment of history stories for grade work; compilation and arrangement of material; story telling; manual expression; the work of one grade worked out in full detail. [Winter term.]

Course 3. European History.

The history of Europe from A. D. 1814 to the present time. This course is virtually a history of the Nineteenth Century. It treats of social and political changes in England, France, Germany, Italy, Austria, Turkey and the Balkan States, Spain and Russia; the industrial and commercial relation of the world nations; the transformation of Africa; changes in the far East. In every possible related case American history is interpreted.

Lectures on teaching and preparation of teachers for grade history work of the Fall term. [Spring Term.]

Course 1. American History.

European background of American History; Colonial history, Spanish, French, Dutch, and English Colonies in America, inter-colonial relations; social life, industries, commerce; change of boundaries; and evolution of national ideas in English colonies.

Special lectures on teaching and the preparation of teachers for the grade work of the Winter term. [Fall Term.]

Course 2. American History.

Including the Critical period of American History; the formation of the Constitution; the growth of nationality; economic evolution; westward movement, and development of the Great West.

Lectures and discussion of high school curricula and methods. [Winter Term.]

Course 3. American History.

Sectionalism and slavery; economic causes of the Civil War; reconstruction and economic revolution in the South; general economic changes in the United States; national problems and the expansion of the United States as a world power.

Lectures and discussion of special grade curricula in American history. [Spring Term.]

SOCIOLOGY.

Three courses in sociology are offered. These courses comprize a connected study of social evolution in all its prominent phases.

However, each course is a separate unit in its subject matter, and is open to election by students.

Course 1. Anthropology.

Comprizing zoogenic, anthropogenic, and ethnogenic association; invention and growth of language; evolution of habitations, clothing, tools; evolution of ornament, and beginnings of art; tribal organization, the family, and early evolution of law.

Special attention given to the industrial activities of primitiv peoples, and the possible relation of these activities to the elementary school curriculum. [Fall Term.]

Course 2. Principles of Sociology.

Including a study of modern social organization; the historical evolution of institutions; laws of social progress; lectures and discussion of modern social problems.

A special emfasis is given to the modern school as a social organization. [Winter Term.]

Course 3. Economics.

Comprizing the elements of modern economic theory; industrial organization; government ownership and control of industries; theory of socialism; trusts and monopolies; and discussions of method in high school economics and industrial history. [Spring Term.]

LATIN.

JAMES HARVEY HAYS, A. M.

The Latin courses, for the most part, are taken by those students who have completed three or four years of

Latin in the high school. To such students as have completed high school courses of Latin, an elective course of two years is offered. This course has been prepared from the viewpoint of the teacher of Latin, and aims to do these things: *a.* To correct careless and faulty pronunciation; *b.* to review in a critical manner the grammar of the language; *c.* to present the best methods of teaching the subject; and *d.* to afford the students an opportunity to extend their acquaintance with authors beyond those found in the high school. The texts usually read are Sallust's *Catiline*, Horace's *Odes*, Cicero's *De Senectute* and *Amicitia*, and Tacitus's *Germania* and *Agricola*.

The opportunity of teaching Latin classes in the high school of the Training Department is given to competent students. All such teaching is done under the direction, supervision, and criticism of this department.

COURSES OF STUDY.

Course 1. The Teaching of Latin.

Studies in the art of teaching Latin; instruction in the art of reading Latin; review of such parts of the grammar as seem necessary. *One term.* [Fall Term.]

Course 2. Readings from Horace.

One term. [Winter Term.]

Course 3. Readings from Cicero.

One term. [Spring Term.]

Courses 4, 5, and 6.

Readings from Sallust and Tacitus; teaching Latin in the high school of the Training Department. *Three terms.* [Begins in Fall Term.]

MYTHOLOGY.

Course 1.

An acquaintance with the body of ancient mythology being necessary to the understanding of the most ordinary literature, as well as being the most primitive literature itself, this course has been planned to assist not only in the mastery of these myths as stories and the development of power and skill in their telling, but also to give to each myth such an interpretation as is readily apparent in the story.

An attempt at the classification of the origins and values of these child-age stories will be made. Practical, under careful criticism in the effective telling of myths is a leading feature of this course. A comparison of the classic myths will be made with Norse and Hebrew myths, where such comparisons are apparent. *One term.*

**MODERN FOREIGN LANGUAGES AND
PHONETICS.**

ABRAM GIDEON, PH. D.

GENERAL STATEMENT.

The work of this department is two-fold in purpose:
(a) Cultural, (b) Professional.

(a) In accordance with the first aim the department offers instruction in Modern Foreign Languages as part of a liberal education. The elementary school teacher needs,

by way of indirect preparation for his life's work, the stimulus gained from and the broader horizon created through an acquaintance with some language other than the mother tongue. These courses are open to all students, and for work accomplished credit is given on the regular Normal diploma.

(b) The professional courses aim to provide the student with the training necessary for the equipment of a teacher of Modern Foreign Languages. In order to meet the constantly growing demand for teachers who, together with other qualifications, are also competent to give instruction in these branches, the State Normal School has incorporated into its program a course of study, the completion of which entitles the graduate to a special diploma in Modern Foreign Languages. The special certificate testifies to the ability of the teacher holding it to give instruction in the language qualified for. These courses are open to all students whose previous training shall have included the preliminary discipline necessary to furnish a basis for professional studies. In general the preliminary training required to follow the courses may be said to coincide in extent with the four years' high school course in the language selected (consult the recommendations made by the Committee of Twelve of the Modern Language Association); yet this rule will not be mechanically applied to all cases.

GERMAN LANGUAGE AND LITERATURE.

A.—PRELIMINARY COURSE OF STUDY.

Courses 1, 2, and 3. Elementary German.

Grammar, reading, reproduction, conversation, sight reading.

Text Books: Thomas's German Grammar, Part I; Thomas & Hervey's German Reader and Theme-book; Storm's *Immensee*; Heyse's *L'Arrabbiata*; Gerstäcker's *Germelshausen*; von Hillern's *Höher als die Kirche*. In lieu of the texts mentioned, others of the same character may be substituted. *Three terms.*

[This is strictly a beginner's course, presupposing no previous acquaintance with the subject.]

Courses 4, 5, and 6. Intermediate German.

Grammar (especially syntax), reading, reproduction, composition, sight reading.

Text Books: Thomas's German Grammar, Part II; reading matter selected from such works as Riehl's *Der Fluch der Schönheit*, Auerbach's *Brigitta*, Freytag's *Journalisten*, Keller's *Dietegen*, or *Kleider machen Leute*, or *Romeo und Julia auf dem Dorfe*, Meyer's *Gustav Adolf's Page*, or *Der Schuss von der Kanzel*, Heine's *Harzreise*, Schiller's *Das Lied von der Glocke* and *Wilhelm Tell*, Lessing's *Minna von Barnhelm*. *Three terms.*

[This course, conducted partly in German, is open to students who have satisfactorily completed the course outlined above or one equivalent. Correct pronunciation, knowledge of the most common grammar facts, appreciation of sentence structure are presupposed, and therefore insisted upon as prerequisite.]

Courses 7, 8, and 9. Advanced German.

Grammar and composition, reading of texts selected from the literature of the past 150 years, reference read-

ing, themes, sight reading. The literature red is chosen mainly from such works as Goethe's *Dichtung und Wahrheit* (in adequate extracts) or *Iphigenia*, or *Egmont*, Schiller's *Maria Stuart* or *Wallenstein*, Lessing's *Nathan der Weise*, or *Emilia Galotti*, Scheffel's *Ekkehard*, Freytag's *Soll und Haben* (extracts), Grillparzer's *Der Traum, ein Leben*, Heine's *Ueber Deutschland*, Hebbel's *Maria Magdalene*, a drama of Hauptmann, Sudermann or Wildenbruch. *Three terms.*

[Students in this course, conducted mainly in German, are expected to be able to read German with considerable facility. Some of the work is done under the direction of the instructor outside of the class room; some text is read aloud by the instructor in the class room, without previous preparation on the part of the student, who is subsequently required to write in German a report upon it.]

B.—COURSES PRIMARILY FOR ADVANCED STUDENTS.

Courses 10 and 11. German Lyrics and Ballads.

von Klenze's *Deutsche Gedichte* is used as a hand-book.
Two terms. [Offered in alternate years.]

Courses 12 and 13. German Classics.

Selected works of Lessing, Goethe, Schiller and Heine.
Two terms. [Offered in alternate years.]

Course 14. History of German Literature.

One term.

FRENCH.

A.—PRELIMINARY COURSE OF STUDY.

Courses 1, 2, and 3. Elementary French.

Grammar, reading, reproduction, conversation, sight reading.

Text Books: Fraser & Squair's French Grammar, Part I; reading matter selected from Modern French prose, *e. g.*, some of Daudet's short tales, Halévy's *L' Abbé Constantin* or Meilhac & Halévy's *L' Été de la Saint Martin*, Erckmann-Chatrain's *Le Conscrit de 1813*, or *L'Histoire d'un Payson*, Merimée's *Colomba*, Labiche's *La Grammaire*. *Three terms.* [Not given in 1909-1910.]

Courses 4, 5, and 6. Intermediate French.

Grammar (especially syntax), reading, conversation, composition, reference reading, sight reading.

Text Books: Fraser & Squair's French Grammar, Part II; Francois's Advanced French Prose Composition; reading matter chosen from such texts as Daudet's *La Belle-Nivernaise* or *Tartarin de Tarascon*, Dumas's *La Tulipe Noire*, Sand's *La Mare au Diable*, Saint Pierre's *Paul et Virginie*, or others of a similar degree of difficulty. *Three terms.*

[In order to enter this course the student must have satisfactorily completed the elementary course in French. Accurate pronunciation, the leading facts of grammar, and the ability to comprehend with facility ordinary literature and simple conversation are presupposed.]

Courses 7, 8, and 9. Advanced French.

Reading, composition, themes, reference reading, sight reading. The literature read in this course is chosen from classical and modern prose and poetry, some of the work being done under the direction of the instructor outside the class room. *Three terms.*

B.—COURSES PRIMARILY FOR ADVANCED STUDENTS.

Course 10. History of French Literature.

A study of a standard compendium, supplemented by extensiv reading. *One term.*

Courses 11 and 12. Modern French Drama.

Two terms. [Offerd in alternate years.]

ITALIAN.

Courses 1, 2, and 3. Elementary Course.

Grammar, reading, conversation, sight reading.

Text Books: Grandgent's Italian Grammar; Bowen's Italian Reader; De Amicis' *Cuore* (selections); Goldoni's *La Locandiera*. *Three terms.*

FONETICS.

COURSES PRIMARILY FOR ADVANCED STUDENTS.

Course 1. General Fonetics.

A study of speech sounds with reference to their physiological origin and mode of production. [Fall Term.]

Courses 2 and 3. Comparativ Fonetics.

Continuation of course one. The results arrived at thru the preceding investigation are here applied in a com-

parativ study of English, German, and French sounds. Lectures supplemented by practis in reading fonetic texts. The work is based upon Vietor's *Elemente der Phonetik*. *Two terms*. [Begins in Winter Term.]

[While course one is introductory and open to all students, courses two and three presuppose a knowledge of either German or French, and are required of all students who contemplate teaching a modern foren language.]

LITERATURE AND ENGLISH.

LOUISE MORRIS HANNUM, PH. D.

ETHAN ALLEN CROSS, PH. M.

The courses offerd in Literature and English, except course 12, fall into three classes: preparatory courses, which give the work found to be needful for the best participation in more advanced courses in literature and in teaching (courses 1, 5); pedagogy courses, which deal with material and methods from the teacher's standpoint (courses 3, 4, 2); and culture courses (courses 6, 7, 8, 9, 10, 11), which aim to develop a larger capacity to appreciate and to enjoy literature. The courses offerd for 1909-10 are listed below and also arranged by terms, in order that pupils may adjust their work with reference to the whole year, rather than term by term.

As courses are numberd by subject (grammar and composition, then pedagogy, then literature), instead of by degree of advancement, the most advantageous order of

work is here indicated. Juniors who expect to make but the two regular credits in English should take course 1, followed by course 5, those who take course 1 in the Fall term taking course 5 in the Winter or the Spring term, and those who take course 1 in the Winter term taking course 5 in the Spring term. Juniors who desire additional credits in the department may elect courses 6, 7, in the Fall and the Winter term, reserving course 5 for the Spring term; but they should not substitute these courses for course 5. Seniors who intend to make but two credits in English are advised to choose one pedagogy and one culture course. Those who wish to specialize in English may elect additional courses in either pedagogy or literature, according to their predominant aim. Course 4 may be elected for the reading by any who desire a simpler course in literature, even tho they be not chiefly interested in teaching in the upper grades or the high school. Course 12 is open to both Juniors and Seniors who have adequate preparation. Such as wish to make but one credit in English may elect any course for which they are prepared; but here there can, of course, be no question of order, except as between courses intended for Juniors (courses 1, 5, 6, 7) and courses planned for Seniors (courses 8, 9, 10, 11), courses 2 and 12 being open to both Juniors and Seniors.

Foundation Courses.

English 1.

Constructiv and functional grammar, with practis in oral composition and paragraf writing. [Fall Term.]

English 5.

Junior literature: introduction to the epic and the drama; careful reading of the *Iliad* and of *Hamlet*. Needed as preparation for both pedagogical courses and courses in literature. [Winter Term and Spring Term.]
Pedagogical Courses.

English 2.

Constructiv methods in grammar and composition. Open to Seniors and Juniors who already have a fair knowledge of grammar. [Spring Term.]

English 3.

Oral literature for the lower grades. Oral literature and constructiv work for the grades from the first to the fifth inclusiv, including the principles of story-making and story-telling for children, and the treatment of the myth, and the folk epic. Primarily for Seniors and expected of all who wish to do practis teaching in English in the lower grades. [Winter Term.]

English 4.

Literature for the sixth, the seventh, and the eighth grade. The work of this course includes a study of the treatment for children of the following literature, besides that used orally in the sixth grade: *Border and Robin Hood ballads*; Scott's *Lay of the Last Minstrel*, *Lady of the Lake*, and *Ivanhoe*; Whittier's *Snow Bound*; Irving's *Rip Van Winkle and Legend of Sleepy Hollow*; Poe's *Gold Bug* and certain of his poems; Hawthorne's *House of Seven Gables*; a group of American poems. Primarily

for Seniors, expected of all who wish to do practis teaching in English in the upper grades, and open to any who wish a simpler reading course. [Fall Term.]

Culture Courses.

English 6.

The history of English literature: a reading course following the chronological development of our literature from 1400 to 1660. For Juniors. [Fall Term.]

English 7.

The history of English literature: a reading course following the chronological development of our literature from 1660 to 1892, with special emfasis on the development and teachings of the novel. For Juniors. [Winter Term.]

English 8.

Studies in the drama: the two great periods, with reading and discussion of twelv plays of to-day. [Winter Term.]

English 9.

The development of the English lyric, from the begining, thru the first fruits of the Romantic Period as expressed in Burns. [Fall Term.]

English 10.

Nineteenth Century poetry: the great elements of the Romantic Period as exprest in Wordsworth and Shelley, with some attention to Keats and Byron. [Winter Term.]

English 11.

Victorian poetry: Tennyson, Browning, and the general choir. [Spring Term.]

English 12.

Advanced composition. [Spring Term.]

READING.

FRANCES TOBEY, B. S.

The courses in Reading take cognizance of the cultural as well as the utilitarian value that Reading, as an art, offers.

a. Facility in mastery of the printed page; redy visualization and instant realization of units of thought.

b. Training in analysis of a piece of literature as an art unit.

c. Personal culture thru an approximately adequate response (vocal, bodily, imaginativ, emotional, volitional) to a wide range of beauty and truth in literature. This end is sought thru devotion to the ideal of revelation, supplanting the limited and self-centering ideal too long held for the recitation—performance. The reading class is recognized as the best means for the quickening of the social consciousness; the only legitimate end of oral reading before a class is to serv the class by directing its thinking. Realization of this higher ideal for the recitation leads to

that self-control which results only from self-surrender in obedience to truth.

COURSES OF STUDY.

Course 1. The Evolution of Expression.

A systematic, directed endeavor to reflect, for the inspiration of the class, the spirit and dominant truth of varied literary units. The ultimate end of this endeavor is growth in personal power, manifested, thru presence and address, in spontaneity, life, vigor, purpose, directness, poise.

Analysis of simple literary units: the essential truth, the parts, the servis of the parts, the relationship of the parts. (The lyric, the dramatic narrativ poem, the short story, the oration.)

Course 2. Further Advanced Reading.

Development of imaginativ, emotional, and expressiv power, thru analysis and impersonation of characters in literature. Vital picture painting. Analysis of longer and more complex literary units. (The drama, the epic, the novel.) Careful study of structural plan. Story telling, study of verse forms, arrangement and presentation, in groups, of dramatizations from standard literature. Study of courses of reading for the grades. Methods of teaching. Study of the relation of forms of expression to mental states.

Course 3. The Drama.

The technique and interpretation of the drama. Analysis and presentation of plays.

MUSIC.

THEOPHILUS EMORY FITZ, Director.

JOHN CLARK KENDEL.

The music department of the State Normal School of Colorado is open to all students alike who wish to study music and prepare themselves to teach music to the extent demanded by their grades. It aims to provide comprehensive training for students who intend to devote themselves to the profession of teaching, and who are required to teach music in the public schools of this state. A course in technical study is offered to those who desire to become supervisors of music.

COURSES OF STUDY.

Courses 1 and 2. Public School Music and Methods.

The impulse given by the early singing school, with its crude attempts to teach the reading of music by note to adults, naturally led to efforts in the same direction with children. Musical instruction in the public schools was the result. Despite the inadequate equipment and the crudity of their instruction, the early singing-masters were keen enough to perceive that music was an important part of the education of the people and began to instruct them in the essentials of musical art. In courses 1 and 2 the students are taught to read music by note at sight, to present difficult studies in melody and rhythm, and the fundamental principles of teaching as applied to musical instruction in the city and rural schools. *Two terms.*

Courses 3, 4, and 5. History of Music.

No student who is required to teach music, either vocal or instrumental, can neglect the study of musical history without serious loss. The present can be understood only in the light of the past. Musical history acquaints the student with every music loving people of the world, their musical literature and instruments, and with the origin and development of musical forms and notation from the earliest Greek scales to the present day. *Three terms.*

Courses 6, 7, and 8. Harmony, Counterpoint and Fugue.

To those who desire to become acquainted with the hidden beauties and inner workings of the art of music and acquire the ability of song-making, harmonizing, and arranging, this course is earnestly recommended. *Three terms.*

Courses 9, 10, and 11. Post-Graduate Work.

This course is especially arranged for teachers who have received credit for the foregoing courses and have been in the State Normal School one year after the degree of Bachelor of Pedagogy has been conferred. *Three terms.*

ART.

RICHARD ERNESTI.

This department offers full courses of instruction in public school art, such as is required in most of the graded

and high schools of this country, and also has a special art course to qualify graduates to act as supervisors of art education in public and private schools.

COURSES OF STUDY.

Courses 1 and 2. Elementary.

The first year, two terms, will be spent in the study of the underlying principles of art instruction, its theory and practice, consisting of drawing in pencil, charcoal, pen and ink, covering the three branches of representation; namely, pictorial art, constructive drawing, and design, in relation to the industries and life in general. Here co-relation of this branch with construction and its value in the manual arts is emphasized. The study of perspective, the use of water colors in all branches, clay building, modeling, pottery. *Two terms. Five times a week.*

Courses 3 and 4. Drawing and Painting.

Special art students take these courses. Here the Junior art student will be expected to do his academic drawing and painting in the different media. *Two terms. Five times a week.*

Course 5. Art Seminar.

This course is for both Junior and Senior special art students. Here the problems relating to the teaching of art are discussed. The course extends over the two full school years. *Given once a week. One credit.*

Courses 6 and 7. History of Art.

The work of two terms for special students of art is devoted to the history of art. Regular students are ad-

mitted to this class if they desire to attend. *Two terms. Five times a week.*

Courses 8 and 9. Advanced Drawing and Painting.

The work in the courses numbered 8 and 9 is taken by senior special students of art. Here they complete their course in drawing and painting. A given amount of work is laid out, for which two credits are given. Some students are able to meet the instructor's requirements in two terms; others require three.

MANUAL TRAINING.

SAMUEL MILO HADDEN, A. M.

MRS. BELLA BRUCE SIBLEY, P. D. M.

PRINCIPLES UNDERLYING TOOL WORK.

I. The value of tool work in the elementary school is educational; it is an expression of an impression—the realization of an idea in construction; it is only incidentally useful in an economic sense.

II. In tool work the children in the elementary school should make, not things that are ultimately useful, but such things as are useful in *their* lives *now*; then the things they make are part of *their* lives.

1. This word "useful" has been misapplied in tool work in the schools. It has been interpreted to mean "useful" from an economic standpoint.

2. The useful in tool work in the elementary school means something that touches the child's life now—gives interest—has educational value. The child may not be interested in this same object the least bit in a week, or month; but the making has served its purpose. The child has had the educational value growing out of thinking, designing, constructing and enjoying something that touches his life at the time. It may be that what he makes has also a permanent value, but this value is incidental. The more stress that is laid on permanent value, the more the economic or commercial side is emphasized.

III. As soon as the doing of a particular kind or piece of work has become automatic, it has largely reached the limit of its educational value.

IV. Tool work, to secure its highest educational value, should be correlated with other subjects, as history, nature work, science, etc.

V. The esthetic in tool work should be correlated with the work the child does, in so far as it corresponds with his development and interests. Excellent results grow out of a proper correlation of the tool work department with the art department.

COURSES OF STUDY.

Course 1. Elementary Woodwork.

This course is designed to give a general knowledge of woods, a fair degree of skill in using wood-working tools, and an acquaintance with the underlying principles of manual training. It also includes mechanical and free-

hand drawing in their application to constructiv design and decoration. *One term. Eight hours per week.* [Every Term.]

Course 2. Elementary Wood Carving.

This course, which is conducted by laboratory methods, includes preliminary exercises in the care and use of tools, and aims to give a general training in the practical application of the fundamental principles of art in drawing, design, clay modeling and historic ornament, as applied to the special work of wood carving. The regular course in art should be taken in connection with this work. *One term. Eight hours per week.* [Fall Term.]

Course 3. Advanced Wood Carving.

This course is a continuation of the Elementary Course in wood carving and is conducted in the same manner. The work gives a greater opportunity for self-expression in the designing and carving of larger and more complicated objects, and keeps in mind the practical application of the fundamental principles enumerated in the elementary course. *One term. Eight hours per week.* [Winter Term.]

Prerequisite: *Wood Carving 2.*

Course 4. Constructiv Woodwork.

This course should be taken in connection with the wood carving courses, as the principles of cabinet and furniture construction receive special attention with a view to applying them in the construction of pieces carvd in the carving courses. Special attention is also given to the

different methods of staining and finishing woods. *One term. Eight hours per week.* [Spring Term.]

Prerequisite: *Manual Training 1.*

Course 5. A Course in Woodwork Suitable for Elementary Schools.

This course includes the planning and constructing of a series of objects suitable for the different grades, keeping in mind the following considerations: Correlation, child interest, powers of the individual, and the degree of skill required in the different constructiv processes in wood-working. The course also includes methods in teaching, relation of teacher to work, discussion and preparation of materials, care of tools, and working drawings. *One term. Eight hours per week.* [Fall Term.]

Prerequisite: *Manual Training 1.*

Course 6. Textils.

The object of this course is to fit students to teach textils in the grades. The course consists of play-house, rug-weaving, and basketry. The latter subject is studied under the following topics: the place of basketry in the history of art; its relation to pottery, its symbolism, its colors, its materials—braids, raffia embroidery, coil work and rattan models—all leading up to original plans, patterns, forms and combinations, and culminating in the preparation of a course of study for the grades. *One term. Eight hours per week.* [Winter Term.]

Course 7. History of Industrial Education.

This course includes a study of the early industrial processes of primitiv people; the history, evolution and logical development of tools; fundamental and necessary

steps involved from the first crude operations to the more complex. The development of the social and artistic impulses of prehistoric people is considered in connection with the handicrafts having an intimate place in their daily life. The course also includes the history and development of the manual training notion from the economic and pedagogic standpoints, a study of the different European systems and of their influence upon the manual training movements in the United States. The four movements in the United States and their influence upon industrial development in the different schools of the country receives careful study. This course includes the planning of manual training equipment and the development of a course of work for the different elementary grades, based upon the knowledge of the subject obtained in the pursuit of the earlier courses and a practical experience in teaching in the training school. *One term. Four hours per week.* [Spring Term.]

Prerequisites: *Manual Training 1, 4, 5, and practical experience in teaching in the Training Department.*

Course 8. Sheet Metal Working—Elementary.

This course is a laboratory course, and deals entirely with the simple processes—those suitable for the elementary school. It will include work with Venetian iron and sheet metal, and aims to create objects of artistic worth. The purpose of this course is to make evident those qualities characteristic of good design, as fine proportion, elegance of form, and correct construction. *One term. Eight hours per week.* [Spring Term.]

DOMESTIC SCIENCE.

ELEANOR WILKINSON.

COURSES OF STUDY.

Course 1. Elementary Cooking and Food Study.

This course offers instruction in plain cookery together with an elementary study of food stuffs. Its aim is to give the student a knowledge of the general principles underlying food preparation, methods of cooking, effect of heat upon foods, and a fair amount of skill in the manipulation of material. Special attention is paid to food selection, composition, food values, and cost. The preparation and serving of simple meals, which shall emphasize the combining of foods according to good dietetic, esthetic, and economic standards, is a feature of the work. For Juniors. *One term.* [Fall Term.]

Course 2. A Continuation of Course 1.

The aim is to continue the work of food preparation in such a way as to take up and solve problems of an increasing complexity. The study of the food principles is worked out more in detail, and a broader and more comprehensive study of food stuffs is undertaken. Foods are studied as to preparation, (1) effect upon food value, (2) upon appearance and palatability; as to selection, (1) appearance, (2) season, (3) use to which it is to be put, (4) cost; as to structure and composition, digestion, food values, cultivation, distribution, and manufacture. The preparing and serving of meals to teach correct combinations of

foods is continued. For Juniors. *One term.* [Winter Term.]

Course 3. Courses in Cooking for the Elementary Schools.

The purpose of this course is to plan and work out courses suitable for the elementary and high schools in cooking and the study of food stuffs. The aim is to prepare such courses as shall meet the requirements of the city schools, the schools of the smaller towns, and the rural schools. Methods in teaching are given special attention, while the economic side of the work is carefully considered for the purpose of securing such training as is necessary to teach the work effectively when there is but a small sum available. Training is given in what equipment to buy for a given sum, as \$15 to \$25, \$100 to \$150, \$200 to \$300, \$400 to \$600, while convenient and sanitary school kitchens and kitchen furnishings, and good desk accommodations are duly considered. For Juniors. *One term.* [Spring Term.]

Course 4. Canning, Preserving, Pickling.

This work covers the work of canning, preserving, and pickling, dealing with the problems involvd in these processes. Information is given concerning some of the common food preservativs and adulterations, and when possible, simple tests are made for their detection. Cand products, ketchups, fruit sauces and extracts are among the foods most commonly adulterated. A part of the time only is spent upon this phase of the work, the rest being devoted to the keeping of household accounts. The apportioning

of the income so as to cover more than the running expenses is considered, emphasis being laid upon a business-like keeping of expense accounts, and system in the general management of the work. Bills of fare for a week at a minimum cost are worked out for a given number of people, while each senior teacher keeps strict account of all expenditures connected with her teaching, always endeavoring to accomplish the greatest amount with the least expense. For Seniors. *One term.* [Fall Term.]

Course 5. Fancy and Chafing Dish Cookery.

Fancy cookery, chafing dish cookery, and the preparing and serving of full course dinners, elaborate luncheons, and refreshments for various functions are the principal features of this course. At this time more special attention is given to marketing. For Seniors. *One term.* [Winter Term.]

Course 6. Dietetics and Invalid Cookery.

This course includes a study of dietetics, invalid cookery, emergencies, and home nursing. In the preparation of dietaries to meet the needs of the different members of the family in health, also invalid dietaries, the work is based upon previous study of foods and food preparation, physiology and physiological chemistry. Some of the factors to be taken into account in varying the food supply in health are age, habits of life, occupation, climate, season, personal idiosyncrasy, while in preparing invalid dietaries consideration must be made for the specific condition due to disease.

The aim in invalid cookery is properly to prepare and serv food for the sick, and to know something of the proper diet in special diseases.

In emergencies and home nursing, it is designd to instruct in methods of dealing with simple emergency cases, and the practical treatment of minor bodily ailments. For Seniors. *One term.* [Spring Term.]

Courses 7 and 8. Physiology and House Sanitation.

Physiology.

The study of physiology covers :

1. Physiologic ingredients.
2. Nervous system, so far as it is necessary to understand the control of function.
3. Muscular system, sufficient to appreciate the physiology of exercise and the part which muscular tissues play in heart action, gastro-intestinal action and the like.
4. Circulation.
5. Digestion.
6. Absorption.
7. Respiration.
8. Excretion.
9. Metabolism.
10. Nutrition. *One and one-half terms.*

House Sanitation.

The work in house sanitation deals with the problems of location, construction, heating, ventilation, lighting, plumbing and drainage, cleaning and cleansing agents. As a part of a term only can be given to this work, it is taken

up after completing the course in physiology. For Juniors.
One-half term.

Two terms. [Fall and Winter Terms.]

DOMESTIC ART.

COURSE OF STUDY.

Course 1. Elementary Sewing.

This course aims to instruct in the drafting and use of patterns and the making of simple garments, involving the principles of hand and machine sewing. Effort is made to raise the ideals of neatness and accuracy, to secure skill in the handling of materials, and to develop such other qualities as are necessary for the production of good work. Careful consideration is given to the adaptation of materials, trimmings, etc., for the uses to which they are to be put. Some time is devoted to patching, mending, and simple repairing. For Juniors. *One term.* [Fall Term.]

Course 2. Elementary Dressmaking.

The work of this course is a continuation of course 1, taking up the planning, cutting, fitting, and making of simple shirt-waist suits. The purpose is to teach the designing of plain garments, suitability of materials for such garments, good color combinations, and the use of line and proportion. In all the work it is designed to encourage originality based upon good judgment and to strengthen self-reliance.

The study of textil fibre is begun at this time. Cotton, flax, hemp, and other vegetable fibres, also silk and

wool are studied as to their history, distribution, cultivation, steps in milling, and the weaving of the various kinds of cloth from the same. Dye stuffs are considered, as to source, color, characteristics and effect upon fiber. For Juniors. *One term.* [Winter Term.]

Course 3. Dressmaking and Art Needlework.

This course offers advanced work in dressmaking, the making of elaborate garments, and art needlework. It is the outgrowth of and is based upon the knowledge and skill acquired in courses 1 and 2. The planning and working out of a course in sewing suitable for the elementary and high school takes up the latter part of this term's work. In planning such a course the nativ interests of the children at different ages and their powers and skill in technique will be considered, also the correlation of this work with the other studies of the curriculum. For Seniors. *One term.* [Fall Term.]

Course 4. House Furnishings and Decorations.

This course deals with the evolution of the house and house furnishings, and with plans for the building and furnishing of a modern home. It aims to teach something of the character of the crude abodes of primitiv man, as the cave-dwellings, lake-dwellings, etc., also to consider typical homes of the Assyrians and Babylonians, Egyptians, Greeks, Romans, Teutons, English, and American homes in colonial days.

In the planning and furnishing of a modern home, there is close correlation with the earlier work of the department, and with such departments as the Art Depart-

ment, where special attention is paid to design, color, decoration, and mechanical drawing. House furnishings being under consideration, the materials (their adaptability, color, design, conformity to given space and values) for floor coverings, wall finishes and covers, curtains, draperies, furniture, and fittings in general. Thruout the course, attention is called to the ever changing relations of the home to the industrial world, also its social and ethical relations to society at large. For Seniors. *One term.* [Winter Term.]

PHYSICAL EDUCATION.

JOHN THOMAS LISTER, A. B.

AIMS OF THE DEPARTMENT.

The aims of the department are: to train the student in correct habits of hygienic living; to develop the physical powers and helth of the individual; to qualify students to direct and conduct school gymnastics, games, and athletics; and to train special teachers in Physical Education.

EQUIPMENT.

The equipment of the department is large and in every way adequate to carry out its work. There is an examining room containing a complete set of anthropometric instruments; there is a gymnasium equipt with apparatus for all kinds of drills and in-door exercises; there is a new out-door gymnasium equipt with all the modern play-

ground apparatus; there is an excellent athletic field, with a quarter mile running track, grand stand, etc., besides several tennis and basketball courts.

All students are required to wear at physical training classes the regular gymnasium uniforms. The uniform for women consists of a blouse and divided skirt, and gymnasium shoes. The uniform for men consists of the ordinary track suit and gymnasium shoes. These suits can be secured in Greeley, but students are advised to bring with them any suits that they may own.

PHYSICAL EXAMINATIONS.

All students are required to take the physical examination. The examination is made by the director of the department, assisted by those Senior students who are making a specialty of Physical Education.

CONTESTS.

Inter-class, inter-fraternity, inter-sorority, and inter-society games are encouraged. Under proper conditions games for men are arranged with other school teams. Women are not allowed to play outside teams either on the campus or at other places, and games for women are open only to women spectators. During the Spring Term there are two class contests, one for men and one for women, the winning class in each case having its name inscribed upon the cup. To encourage the all-around development of students the Director has offered prizes to those students who win the highest number of points in the Pentathlon Contests, the events of which vary from year to year.

COURSES OF STUDY.

THEORETICAL COURSES.

Course 1. Physiology and Hygiene.*(a)* Physiology (six weeks).

Text and reference books:

Human Body (Martin).

Elementary Physiology (Foster and Shore).

Physical Nature of the Child (Rowe).

Nervous System of the Child (Warner).

(b) Hygiene (six weeks).

Text and reference books:

Personal Hygiene (Pyle).

Graded Lessons in Hygiene (Krohn).

Hygiene of the School (Barry).

Course 2. Kinesiology and Physiology of Bodily Exercises.

Text and reference books:

Special Kinesiology (Posse).

Physiology of Bodily Exercises (LaGrange).

Physical Education (Sargent).

Practical Physiology (Blaisdell).

Applied Physiology (Overton).

Course 3. Outdoor Games, Etc.

Games for the school and yard, track and field athletics. Preparation for track and field meets, and rules governing the same.

Text and reference books:

Book of Games (Arnold).

One hundred and Fifty Gymnastic Games (Boston Normal School).

Games for School and Gymnasium (Schæffer).
Education by Plays and Games (Johnson).
Swedish Song Plays (Bolin).
Marching Calisthenics and Fancy Steps (Lundgren).

Course 4. Anthropometry.

Physical Diagnosis and Anthropometry. Practis in taking and recording measurements, etc.

Text and reference books:

Physical Diagnosis and Anthropometry (Seaver).

Rules for Measuring (Sargent).

Course 5. First Aid to the Injured.

Text and reference books:

Accidents and Emergencies (Dulles).

Personal Hygiene (Pyle).

Course 6. General Athletic Training.

Ancient and Modern Methods compared.

PRACTICAL COURSES.

FOR WOMEN.

Course 7. Outdoor Games.

Tennis, basketball, baseball (in-door rules), golf, gymnastic games, fancy steps, Swedish gymnastics. Junior course. [Fall Term.]

Course 8. Gymnasium and Games.

Basketball, captain ball, baseball (in-door rules), gymnastic games, dumb bells, wands, clubs, marches, drills, etc. Junior course. [Winter Term.]

Course 9. Outdoor Games.

Tennis, baseball, basketball, golf, walking, running, field day sports, playground apparatus. Junior course. [Spring Term.]

Course 10. Gymnastics and Games.

Work on ladders, poles, rings. Tennis, golf, basketball, folk dances, fancy steps, etc. Senior course. [Fall Term.]

Course 11. Gymnastics and Games.

Work on horse, ladders, bars, ropes, rings. Advanced club, dumb bells, and wands. Baseball, basketball, gymnastic games, folk dances, fancy steps, drills, marches, etc. Senior course. [Winter Term.]

Course 12. Sports and Games.

Athletic sports and playground games. Work out of doors entirely. Senior course. [Spring Term.]

PRACTIS COURSES.

FOR MEN.

Course 13. Athletics and Games.

Football, tennis, basketball, golf, Swedish gymnastics, gymnastic games, etc. [Fall Term.]

Course 14. Gymnastics and Games.

Basketball, indoor baseball, apparatus work, indoor athletics. [Winter Term.]

Course 15. Athletics and Sports.

Baseball, track and field athletics, tennis, golf, etc. [Spring Term.]

KINDERGARTEN DEPARTMENT.

ELIZABETH MAUD CANNELL, DIRECTOR.

In the evolution of public education it is becoming apparent that the kindergarten is to serv as a transition from the home to the primary school. It servs to initiate the child into the long establisht primary school, just as industrial education initiates it into civil society.

The school law makes the kindergarten a part of the educational system of the State of Colorado. Hence, there is a demand thruout the state for well-equipt kindergartners. To this end the Normal School has increast the efficiency of its Kindergarten Department, and its primary purpose is to give a strong and thoro theoretical and practical training for teachers of kindergartens.

As the diploma given upon finishing the two-year Kindergarten course licenses the holder to teach in the public schools of Colorado, ample opportunity is given for practis and observation in the primary grades of the training school.

KINDERGARTEN COURSES.

ENTRANCE REQUIREMENTS.

Graduates from high schools or schools whose course is equivalent to that of a high school, are admitted to the Kindergarten Department without examination, provided they give evidence of some musical ability. Failing to have the musical requirement, and other requirements being

satisfactory, the applicant by taking lessons and practising at least one hour a day may overcome this condition. At the close of the Senior year each student is required to play music suited to the various needs of the kindergarten, as found in such books as Miss Hofer's volumes of Music for the Child World, and the best kindergarten song books.

As character, culture, and a certain aptitude are peculiarly necessary for kindergarten work, the department reserves the right of selection and decision in each case; and as soon as it is determined that the individual has no aptitude for the work, she is requested to withdraw from the class.

Those who have finished the Preparatory year of the regular Normal course may elect the two years Kindergarten course if they show fitness for that work.

Graduates from State Normal Schools and Colleges may complete the Kindergarten course in one year provided they have the requisite training in music.

Persons who do not come under the foregoing conditions may be entered by submitting satisfactory credentials.

COURSES OF STUDY.

Course 1. Kindergarten Theory.

Discussion of practical child-training questions, based upon the observation of the children in the kindergarten, supplemented by the student's recollection of his own childish interests and pleasures. The discussions will include such topics as the significance of physical activity, proper means for securing motor co-ordination, the uses and limitation of imitation, the proper training of the

senses, etc. From a first hand discussion of such topics, the student will pass to the study of Froebel's *Mutter und Kose Lieder*, which embodies his philosophy of child nature. Abstracts will be written on each song.

Gifts—Theory of the gifts in general with experimental work with the first two.

Occupations—Theory and practical working out of perforating, sewing and intertwining. These, in connection with all kindergarten occupation, are used as points of departure for the general construction work of to-day with the effort to use chiefly nature's materials and those found in the usual home surroundings.

Games—"In the Gifts and Occupations the child becomes conscious of his will as a power over matter to convert it to use. In the Games and Plays he becomes conscious of his social self, and there dawns the higher ideal of a self that is realized in institutions." The chief value of Froebel's system lies in the Plays and Games rather than in the Gifts and Occupations; therefore, especial emphasis is placed on developing the play spirit of the student. Games are played which secure large, broad movements, general motor co-ordination and quick reaction time. The traditional street games of children form the point of departure, and competitive games with the ball are emphasized. For Juniors. *One term.* [Fall Term.]

Course 2. Kindergarten Theory.

Mutter und Kose Lieder continued.

Gifts—Theory and practice with the third and fourth gifts.

Occupations—Free-hand and needle weaving, and folding.

Games—Traditional street games continued. Circle kindergarten games strest, dramatization of natural forces of the industrial world, etc. Finger plays. For Juniors. *One term.* [Winter Term.]

Course 3. Kindergarten Theory.

Mutter und Kose Lieder continued.

Gifts—Theory and practis with the sixth and seventh gifts.

Occupations—Theory and practical work in cutting and in poster work.

Games—Games cultivating rythm; simple hand and foot movements workt out spontaneously and in sequences. Utilization of such traditional rythms as “bean porridge hot.” Each student will originate a game to be tested in class. Theories of play advanced by Spencer, Groos and others, discust and compared.

Observation—Students observ in the kindergarten according to outlines given them in their work in pedagogy. This is followd by a critical discussion of the work seen. For Juniors. *One term.* [Spring Term.]

Course 4. Kindergarten Theory.

Froebel’s *Mutter und Kose Lieder* continued.

A fuller treatment and more discussion of the modern views of the psychological questions there treated.

Froebel’s Education of Man—A careful study of the first division as the ground work of kindergarten philosophy with parallel reading from educational writers of to-day.

Theses will be written on selected topics making practical application to the problems of daily teaching in kindergarten and beyond.

Gifts—Theory and practis with gifts dealing with the line and the point.

Occupations—Peas and cardboard modeling. Color and poster work.

Program—Advanced work. Discussion of daily difficulties. Constant practis in making subject plans and lesson plans, utilizing the “formal steps” as far as they are helpful to the spirit of the kindergarten.

Games—Same as Junior work.

Stories—Method in story telling. Adaptation of stories for kindergarten use.

PRACTICAL WORK IN KINDERGARTEN.

Each student has ample opportunity to carry out with the children the theoretical knowledge she has gained, not only at the tables, but in telling stories, teaching songs, conducting morning circle, march and games. *One term.* [Fall Term.]

Course 5. Kindergarten Theory.

Mutter und Kose Lieder continued.

Education of Man—Part two in some detail. Topics from the rest of the book assigned for individual work, relating with modern school methods.

Program—Continued. Discussions of Kindergarten organization, mothers' meetings, etc.

Games—Same as Junior work.

Teaching in kindergarten continued. For Seniors.
One term. [Winter Term.]

Course 6. Kindergarten Theory.

This now centers itself about the practical work of the kindergarten and the problems it suggests. Program and story work will be continued.

Teaching in kindergarten continued. For Seniors.
One Term. [Spring Term.]

Course 10. Program Making and Story Telling.

A discussion of the value and limitations of a formal program. Practis in making outline for a year's work in the kindergarten. A study of source materials and of the programs of representativ schools.

The subject matter of the different compilations of kindergarten stories will be studied comparativly and discuss as to form and content. Original stories and adaptations will be presented in sketch form for discussion, and then tested by being told to the children. For Seniors.
One term.

Courses 7, 8, and 9. Kindergarten for Primary Teachers.

Realizing that the educational sentiment of to-day asks that all teachers have at least a general understanding of Froebel's philosophy, and also that the best primary positions are open only to those who can make close connection with public school kindergartens, an electiv course is offerd to prepare Normal students to meet these requirements. This is a one-year course giving the same credit as other electiv courses, and is designd especially to meet the need

of those preparing for lower grade work. The work is similar to that of the special kindergarten course in the Junior year, but less minute. It aims to give a general survey of kindergarten philosophy as it relates to general educational theories, with discussions on the resulting reconstruction of school curricula and methods. The kindergarten hand work is selected and adapted to primary needs. The course in games and rythms corresponds to that of the Junior year. Observation in the kindergarten is required, followed by interpretativ and critical discussion with the supervisor. *Three terms.*

GENERAL KINDERGARTEN OBSERVATION.

It is a necessary part of the pedagogical training that the principles and practis of the kindergarten be understood by all the graduates of the school. Hence in connection with their pedagogical seminars all the students of the Normal School occasionally observ in the kindergarten room. This is followd by critical discussions of the work seen.

THE TRAINING SCHOOL KINDERGARTEN.

The morning kindergarten gives opportunity for putting into practis the principles and instructions given in the theoretical work. One is useless without the other. The points made under the Training Department are equally applicable in the kindergarten. The real center about which all the kindergarten work revolves is the child's instinctiv interest in nature and life, and it is the

endeavor of the kindergarten to make the child's contact with nature as close and vital as possible. To this end each child has a garden plot in which he digs, sows seed, and watches and tends the growth of his plants. This garden work is the basis of much of the nature work with the children.

"It is of the utmost importance that children should acquire the habit of cultivating a plot of ground long before the school life begins. Nowhere as in the vegetable world can his actions be so clearly traced by him, entering in as a link in the chain of cause and effect."—FROEBEL.

As many animals as possible are cared for by the children. When the wether permits, the games and work are carried on out of doors.

Since the kindergarten is situated at the edge of town, it is specially conducive to the frequent excursions which each Senior takes with her group of children. The flowers, leaves, stones, etc., gathered upon these walks are brought back to the kindergarten and are there utilized in some way, such as being pressed, pasted or painted. While it may be necessary that the Senior have sufficient scientific knowledge as a basis for this work, she must also have an appreciative love of nature, that she may unconsciously lead the children to see the beauties and mysteries of nature.

"The child's first tutor is nature, and her tuition begins from the moment that the child's senses are open to the impressions of the surrounding world."—PESTALOZZI.

MOTHER'S CLUBS.

All over the country mothers are becoming interested in child study. They are appealing to kindergartners for guidance in this work.

Frequent requests have been made of the supervisor of the Kindergarten Department for suggestions and plans of work in regard to mother's clubs. These have led us to attempt to do some work in this line by correspondence. It is proposed to furnish clubs that may desire it with such subjects for discussion and study as are relativ to child study. All this may be arranged by correspondence.

Besides the correspondence work, the supervisor of the kindergarten would be glad to meet such clubs, at a time to be arranged, and give talks relativ to the work. There would be no expense except such as would be incurd in traveling and entertainment. For information address the Normal School.

The Supervisor holds occasional mothers' meetings during the year at the Normal School.

THE LIBRARY.

ALBERT F. CARTER, M. S., Librarian.

SELA BOYD, PH. B., Assistant Librarian.

ALICE E. YARDLEY, PD. B., Assistant Librarian.

For the use of all connected with the school there is an excellent library and reading room, containing about thirty

thousand volumes. This is housed in a splendid new library building closely adjoining the main building, and constructed in the most approved form, with all modern conveniences. It is well lighted, ventilated, and heated, and with its spaciousness and artistic features is well suited to provide a comfortable and attractive environment for readers. Because in the selection of books there has been careful adaptation to the actual needs of the readers, the library has become an essential feature of the school. The shelves are open to all, and no restrictions are placed upon the use of books, except such as are necessary to give all users of the library an equal opportunity and to provide for a reasonable and proper care of the books.

The library is particularly strong in the reference section. Among the reference books are the following: Encyclopedias—the new International, the Encyclopædia Britannica, Encyclopædia Americana, Johnson's, People's, Iconographic, Universal, Young People's, American, etc. Dictionaries—the Century, the Encyclopædic, the Standard, the Oxford, Webster's, Worcester's, etc.; dictionaries of particular subjects, as Architecture, Education, Horticulture, Painting, Philosophy, Psychology, Technology, etc.; Lippincott's Gazetteers; Larned's History of Ready Reference; Harper's Cyclopædia of United States History, etc.

The library subscribes regularly for about three hundred and twenty-five of the best magazines and educational journals. It also receives, thru the courtesy of the publishers, most of the county papers of the state and many of the religious papers of the country. As volumes of the

leading magazines are completed, they are bound and placed on the shelves as reference books, forming a magnificent collection such as is rarely seen in any library. To facilitate the use of periodicals, Poole's index, Reader's Guide, and many other good indexes are provided.

In the library are to be found many rare and valuable works, such as Audubon's Birds of America, Audubon's Quadrupeds of North America, Sargent's Sylva of North America, Buffon's Natural History, Nuttall and Michaux's North American Sylva, Linnæus' General System of Nature, and the works of Kirby and Spence, Cuvier, Jardine, Brehm, and others.

In addition to the general library, there is a section of government publications containing a nearly complete series of congressional documents and departmental publications. Most of these publications are received regularly by the school.

LIBRARY WORK.

This work is intended for those who wish to get a better understanding of library methods, and for the prospective teacher who wishes to connect more vitally the school-room and the library as a co-operative means of education. It aims to aid them in the selection and care of books and material for their school libraries, and to enable them to make a more intelligent use of the library. This work can be elected as part of the industrial work of the school, for which credits will be given. No complete course or library diploma will be given.

The work will include selection of books for purchase, mechanical preparation of books for actual use, the making of library records, cataloging and classification according to subjects, arrangement of books on the shelves, with labeling devices and numbers for the ready finding of books. There will also be practical work in charging out books, checking in, etc., with practice in the use of reference books and indexes as an aid to the general reader. It is expected that by the actual participation in library work, students will gain a practical knowledge of library methods, and of the means of acquiring and rendering available all possible information, as well as a love and respect for books.

In addition to this work as an elective, general instruction is given to all students in the practical working of the library, and as to the best means of making ready use of its material. This instruction is given in the form of lectures to classes from time to time in the library, with practical problems to be worked out by the students.

TRAINING DEPARTMENT

FACULTY OF TRAINING DEPARTMENT.

ZACHARIAH XENOPHON SNYDER, Ph. D., President.

EDUCATION.

DAVID DOUGLAS HUGH, A. M., Dean of the Training School.

ROYAL WESLEY BULLOCK, Ph. B., Principal of High School.

CHARLES WILKIN WADDLE, Ph. D., Principal of the Elementary School.

ELIZABETH HAYS KENDEL, Pd. M., Training Teacher—Grammar Grades.

DORA C. LADD, Pd. M., A. B., Training Teacher—Primary Grades.

BELLA BRUCE SIBLEY, Pd. M., Training Teacher—Primary Grades.

ELIZABETH MAUD CANNELL, Director of Kindergarten.

ALICE M. KRACKOWIZER, B. S., B. Ed., Supervisor of Geografy and Nature Study.

EDGAR D. RANDOLPH, Assistant Training Teacher—Upper Grammar Grades.

SUPERVISORS.

JAMES HARVEY HAYS, A. M., Latin.

LOUISE MORRIS HANNUM, Ph. D., English Language and Literature.

ARTHUR EUGENE BEARDSLEY, A. M., Biological Science.

WILL GRANT CHAMBERS, A. M., M. S., Observation.

FRANCES TOBEY, B. S., Reading.

RICHARD ERNESTI, Art.

ELEANOR WILKINSON, Domestic Science.

SAMUEL MILO HADDEN, A. M., Manual Training.

H. W. HOCHBAUM, B. S. A., Nature Study.

FRANCIS LORENZO ABBOTT, A. M., Physical Science.

ABRAM GIDEON, Ph. D., Modern Foren Languages.

THEOPHILUS EMORY FITZ, Music.

JOHN THOMAS LISTER, A. B., Physical Education.

GURDON RANSOM MILLER, Ph. B., A. M., History.

LEVERETT ALLEN ADAMS, M. A., Nature Study and
Zoology.

ETHAN ALLEN CROSS, Ph. M., English Language and Lit-
erature.

TRAINING DEPARTMENT.

IMPORTANCE OF A TRAINING DEPARTMENT.

A training department has long been regarded as an essential part of the equipment of a normal school. The work of this department is the center of interest in all the activities of the larger institution with which it is connected. The problems it presents intensify the interest in every other department, and upon the solution of these problems should be focust the academic and professional training of all members of the school. It is essential, therefore, that every teacher and pupil should be brought into the closest possible relations with the work of this department, and should enter into its activities in a spirit of harty coöperation.

ORGANIZATION.

The organization of the Training Department of this Normal School is intended to facilitate this coöperation. For the accomplishment of this purpose all grades are represented, from the kindergarten to the high school inclusiv. These grades are directly in charge of training teachers and their assistants. The heds of departments in the Normal School, moreover, assist in the teaching of their own subjects in the Training School. This relation of departmental and training teachers is not intended to destroy the spontaneity of the latter, but to secure for the work of this department both the broader knowledge of the

specialist and the practical experience and professional insight of the training teacher. This interaction of different persons concerned with the work tends also to keep alive a healthy interest both in the advancement of knowledge along special lines, and in the practical problems of school organization and methods of instruction.

The Normal School student comes into contact with the work of this department both in his Junior and Senior years. In the former he spends two hours a week in the observation of the teaching of the children in the Training School. These observations are conducted in a systematic manner in connection with the Junior course in psychology and pedagogy. Each observation is in charge of a teacher of the training or of an academic department, and is followed by a discussion of the merits of the lesson. In the Senior year the student teaches a lesson each day under the direction of the same teachers. The subject and the grade are changed each term. In this way the student acquires during the course of the year considerable experience in the planning and teaching of lessons and in the management of children. By means of personal conferences and teachers' and supervisors' meetings the necessary criticisms are given. Consequently the young teacher is enabled to make more rapid progress in acquiring the art of teaching than when thrown solely upon his own resources in a school of his own.

THE CURRICULUM.

Among the more important problems that demand attention is the organization of the curriculum. The con-

sideration of this subject has become all the more necessary on account of the many new subjects that have been introduced into the schools in recent years. These subjects now make so great a demand upon the time and energy of the child that the educational value of each new claimant to a place in the curriculum must be carefully scrutinized. No new subject should be added unless it satisfies two requirements: First, it must develop and enrich the inner life of the child; and, second, it must help him to become a more useful member of society. In proportion to its value for the realization of these purposes a subject is worthy of consideration.

Tested by these standards most of the newer subjects have fairly well established their right to a place in the curriculum, though their relative value is yet a matter of doubt. Accordingly, the subjects selected for the curriculum of the Training Department include all those now taught in the more progressive schools. In addition to the three R's, literature, drawing, picture study, music, history, geography, nature-study, manual training, domestic science and art, and physical training are represented practically in every grade during at least a part of the year. This does not mean that the traditional subjects are eliminated, but they are taught more largely as tools for the mastery of the content subjects. The child has consequently a more natural motive for studying the formal subjects, and can master them in a shorter time. The elimination of many useless details in such subjects as arithmetic, geography, and history also helps to make room for a larger variety of material.

CORRELATION OF SUBJECTS.

The main solution of the overcrowding of the curriculum, however, must be sought in a closer relation of the subjects taught. This is a problem of primary importance, and is a much larger question than merely the relation of the formal to the content subjects. The different subjects in the curriculum represent different aspects of the environment of the child, and in view of that fact should form an organic unity. They should be to the child simply inter-related parts of his experience. To accomplish this end there is very little differentiation of subjects in the primary grades. In the third and fourth grades the differentiation is more obvious, but the subjects are still taught in close relation to each other. In the study of primitive, pastoral, and agricultural life, for example, literature, art, reading, nature-study, arithmetic, and industrial work are all very closely related because they all are organic parts of the life the child is living. In the upper grades a greater amount of differentiation occurs, but helpful relations between the subjects are still maintained. During the past year or two especially, considerable reorganization of the curriculum has taken place with a view to bringing the subjects into more organic relations with each other. While this work is not wholly completed, a marked improvement in this direction has been effected.

METHODS OF INSTRUCTION.

In the work of instruction the self-activity of the child is considered of paramount importance. Hence a great deal of emphasis is placed upon the various modes of ex-

pression, as oral and written language, drawing, painting, making, modeling, and dramatic representation. Industrial work is given a prominent place in the curriculum. This is intended to enable the pupil to secure a more intelligent understanding of the subjects he is studying by affording him more natural conditions for mental activity. All subjects are approacht, as far as possible, from the functional point of view. Uses and activities are considered before structure. This is true both in subjects that deal with natural phenomena, as nature-study and geography, and in humanistic subjects, as literature, grammar, and reading. Thus the aspect of the subject which elicits the strongest interest of the child and calls forth the greatest activity is approacht first.

THE PROGRAM.

The program of studies in the Training Department has of necessity to be governd in part by that of the Normal School. It has been found possible, however, so to adjust the two programs that no serious inconveniences result to either. While in general the forty-five minute periods of the Normal School are observd in the Training Department, in the lower grades two or more lessons are given during this time. In the higher grades one subject as a rule is taken up during this period, but as far as possible ten or fifteen minutes of this time is devoted to a study of the lesson. The length of the lesson can, consequently, be adjusted to the needs of the pupil. The morning hours as a rule are devoted to the more difficult and abstract subjects, while the later hours of the day are occu-

pied chiefly with industrial work, nature-study, drawing and other studies that admit of a greater amount of muscular activity.

THE HIGH SCHOOL.

The High School is an integral part of the Training Department, and, like the Elementary School, offers opportunity for the training of student teachers. It differs very considerably in its organization from schools that are intended primarily to fit young people for college. This is manifest in the more generous provisions for electives, in the dominant character of the courses that are offered, and, to some extent, in the methods of instruction. Less emphasis is placed upon the traditional subjects of the preparatory school, taught chiefly for their disciplinary value, as the formal study of mathematics and the classics, while more value is attached to subjects that are directly helpful in fitting young people to become intelligent members of society. Accordingly, such subjects as social economics, industrial history, commercial geography, household sciences and art, applied physics, and various forms of manual training are given much attention. The so-called culture subjects are not neglected. Literature, history, and art occupy a prominent place in the curriculum. While considerable liberty is allowed in the choice of electives, students are required to choose the larger part of their studies from a few groups of closely related subjects. In this way liberty of choice on the part of the pupil is not incompatible with a systematic organization of the subjects pursued. For examples of such groups of studies see the high school curriculum on page 164.

THE KINDERGARTEN.

The kindergarten, like the high school, is an organic part of the Training Department. It is intended that the transition from the kindergarten to the first grade shall be as easy and natural as that between any other two grades. The work of the kindergarten is open to the observation of students during the Junior year, just the same as that of any other part of the school. Students specializing in the kindergarten teach one term in the primary grades in addition to teaching thruout the year in the kindergarten. In this way a closer relation is established between the kindergarten and the primary grades.

LITERATURE AND ENGLISH IN THE GRADES.

Among the different aspects of the environment of the child, it is the ideal and spiritual, not the factual, which are properly presented thru the artistic story. Since, then, only the need for treatment which reaches the imagination and the emotions properly engages the department of literature, the handling of material adapted to the general purposes of the curriculum will be, especially in the lower grades, divided between the History and the English departments according to the dominant interests to be served. It will accordingly be understood that whatever subject-matter is taken over by the department of literature will be presented, not in mere chronicle, nor, except for needful transition and interpretation, in exposition, but in appropriate literary form—artistic story, poem, or drama. When, as often happens in the lower grades, pieces are not to be found which present the ideal aspects of the material to be

used in a manner suitable to the child, pupil teachers are encouraged and aided to construct such pieces, arranging, working over, and illuminating the factual matter until the desired impression is attained. This characteristic function of seeking to realize in appropriate forms the feeling elements of experience does not, however, prevent the English department from attempting to develop thru structure, close motivation, and the various aspects of form, those subtler intellectual activities for which the appreciation and study of literature has always afforded the most perfect training.

A constant factor of all English work is composition, chiefly oral in the lower grades, the effort being to develop more individual and constructiv features as pupils gain in the power to embody the more significant features of their own experience. The impulse to draw and to make dramatic representation is encouraged for vivifying and adding variety to self-expression. The aid given by the study of form is afforded by oral development of the paragraf from the third grade, by attention to the function of the steps of the narrativ, and thru constant emfasis on the need for unity and close connection. In this part of the work grammar facts and rhetoric facts are interrelated and taught from the standpoint of their use as tools for more adequate expression. While grammar is thus nowhere taught for its own sake, the effort of mastering English syntax as a vehicle of expression is aided, from the fifth grade on, by some systematic instruction in the structure and types of the sentence and in the common form of words as used in the sentence.

FIRST YEAR.

Purpose: To enrich the child's participation in the primary human experiences that center in home by presenting these in simplified form thru the life and activities of birds.

Material: Stories of seeking the home spot, biding, adapting the home to the young, providing food, garding and teaching the little ones; of bird language, of coöperation between birds and men, of change of home (migration).

SECOND YEAR.

Purpose: To promote natural sympathies by presenting in somewhat idealized form those aspects of primitiv life which best show fundamental and simple human experience.

Material: More emotional expression in artistic story, song, dance, and primitiv ritual, of the chief phases of early domestic, industrial, and social life.

THIRD YEAR.

Purpose: To present in attractiv form the more idylic phases of hunting and fishing life; to show the entire course of development of a simple personality unfolding under these primitiv conditions.

Material: Longfellow's "Hiawatha," adapted as a story-series for children.

FOURTH YEAR.

Purpose: To give in an appropriate setting (that of boy life in Homeric times) selected Greek myths in which

the human and religious experience can be clearly and pleasingly presented and can be given point and significance by the occasion on which the story is told.

Material: The boyhood of Achilles as constructed from the suggestions of the *Iliad*, the *Odyssey*, and other Greek material; twenty Greek myths.

FIFTH YEAR.

Purpose: To lead the children to participate in the growth of the ideal of Teutonic manhood from the "invincible fighter" to the "chivalric statesman."

Material:

1. The life of the North presented in a group of stories.
2. *Beowulf*, arranged as a series for telling.
3. The education of the knight presented in story form.
4. The work of King Arthur and the Round Table, presented in a story series.

SIXTH YEAR.

Purpose: To develop feeling for the deeds and ideals of the heroic individual as a part of the epic life of his people.

Material: Stories of the immigration, establishment, rise, and greatest national achievement of three remarkable peoples; development thru these nation stories of the characteristic qualities and ideals of each people, and the expression of these in the folk-epic of each.

1. The Greeks—Iliad.
2. The Romans—Æneid.
3. The Norman French—Song of Roland.

SEVENTH YEAR.

Purpose: To develop interest in life as pictured in the Border and the Robin Hood Ballads; to make this interest an introduction, both to poetry and to the work of Scott, by showing how Scott developed it in his longer narrative poems; to go on to the great pictures of life in the past as given by Scott in "Ivanhoe" and "The Talisman."

Material:

1. Selected ballads, including old ballads and certain ones written by Scott himself.
2. The Lay of the Last Minstrel.
3. The Lady of the Lake.
4. Ivanhoe.
5. The Talisman.

EIGHTH YEAR.

Purpose: To give an introduction to American literature, leading the pupils to interpret some pieces and to see some relation between the content and spirit of these pieces and the phases of developing American life and thought.

Material: Cooper's "Last of the Mohicans," Whittier's "Snowbound," Poe's "Gold Bug," a group of patriotic and other poems; Hawthorne's "House of Seven Gables," and selected short stories.

READING.

The course in reading aims primarily to supplement the instruction given in the content subjects, such as history, literature, geography and nature-study. It follows, therefore, that reading is taught as a means of obtaining facts not possible to be got at first hand, and of intensifying the experiences narrated in history and literature. While no strict correlation is attempted, as can be seen by a comparison of the courses, yet in the longer literary wholes used in reading, other branches of study are used for apperceptive background. The sustained effort necessary for the mastery of the words is brought about largely by arousing a desire to know the content of a story rather than by depending upon the usual formal, mechanical drill. Libraries in each room are designed to furnish attractive books with which to start the reading habit. This extensive reading also helps to provide the necessary visual training for fixing the symbols. The class recitation is largely given over to realizing thought and feeling by means of vocal and bodily expression. Festivals, birthday celebrations of poets, artists, and statesmen, and other special programs are also occasions for acquiring freedom of expression. Pupils compose and act simple dramatizations, make speeches, debate, and hold conversations in a natural, easy manner. Performances are used only as a means of intensifying the pupils' experiences, not for the sake of show. Emphasis is placed upon memorizing the literature which is especially used for expression work, and upon dramatization throughout the grades.

GRADES 1 AND 2.

Purpose: To enable the child to relate his thoughts to written or printed symbols, and to master these symbols by using all his senses, emotions, and dramatic instincts.

Material: Lessons composed by the pupils based upon nature excursions, classic stories told by the teacher, home experiences, construction work, music and pictures; rimes, jingles, and simple poetry; The Thought Reader; The Tree Dwellers; The Cave Men; selected lessons from many other readers.

GRADES 3 AND 4.

Purpose: To lead the child to pronounce unfamiliar words by the use of diacritical marks and syllabication; to help him to live thru a narrativ and impersonate the different characters with intelligence; to intensify his experiences and his memory of the symbols by combining making, drawing, modeling, and dramatic representation with the oral reading.

Material: Much material should be read, rather than less material studied intensively; the biografies of artists whose pictures the children know; Hiawatha; the story of David; lessons from Roman history—Cincinnatus, Regulus, Cornelia; Grecian myths; poetry containing vivid imagery and action; e. g., The Hunting Song by Scott.

GRADES 5 AND 6.

Purpose: To fix the habit of curiosity to know the pronunciation and meaning of unfamiliar words; to assist

pupils to get facts from a book in an organized way; to deal with the true causes of good expression in an effective way, including work for earnestness, tone-color, emphasis, phrasing, and impersonation.

Material: Supplementary history reading, including Pioneer Americans (McMurry), and Four American Pioneers; King Arthur and His Knights (Radford); Beowulf; The King of the Golden River (Ruskin); Dramatic Poems; e. g., The Inchcape Rock; Knight's Chorus (Tennyson); Short Poems From Great Poets.

GRADES 7 AND 8.

Purpose: To train children to get information from books silently, rapidly, accurately, systematically, and independently; to extend their reading interests to many good biographies, histories, and novels; to make the oral reading of poetry, dramatic narrative, description, and orations a genuine pleasure.

Material: Selections from Ulysses (Lamb), and Ivanhoe; The Nürnberg Stove; Rip Van Winkle; Evangeline; Hervé Riel; The Revenge; Lochinvar; How They Brought the Good News from Ghent to Aix; The Owl Critic; Psychological Development of Expression, Volume I; Lincoln's Gettysburg Speech; The New South; Bannockburn; The Charge of the Light Brigade; Patrick Henry's Speech: The Call to Arms.

MUSIC.

GRADE 1.

Rote-Singing. Ear-Training. Song-Making. Musical-Pictures. Scale Practis. Intervals. Rythm.

GRADE 2.

Rote-Singing. Ear-Training. Song-Making. Musical Pictures. Scale Practis. Rythm. Intervals. Notes of different lengths. Breathing exercises. Sight-Singing melodies. Song studies.

GRADE 3.

Sight-Singing melodies and song studies from the First Music Reader. Tone development thru the vowel sounds oo, o, aw, ah, and i. Two-Part singing. Breathing exercises. Intervals including simple dissonances. Sharp four and flat seven. Dictation.

GRADE 4.

Sight-Singing melodies and song studies from the second part of the First Music Reader. Two-Part singing. Catch for three voices. Interval practis, including augmented and diminisht chords. Time and Rythm. Melody writing from memory. Catches in three and four voices. Daily exercises in sight reading and individual singing.

GRADE 5.

Sight-Singing melodies and song studies from the Second Music Reader. Time and Rythm. Two-Part singing.

Catches in three and four voices. Voice placing and building. Memorizing of musical terms. Daily exercises in sight-reading and ear-training. Transposition. Phrasing.

GRADE 6.

Sight-Singing melodies and song studies from the second part of the Second Music Reader. Time and Rythm. Three-Part singing. Musical signs and their meaning. Memorizing of musical terms. Melody writing. Intonation. Classification of the tones of the scale and their relationship to the tonic or Do. Intervals. Daily exercises in sight-reading and ear-training.

GRADE 7.

Sight-Singing melodies and song studies from the Third Music Reader. Time and Rythm. Intervals with their classification. Writing from memory all the scales, both in the major and minor modes. Staff notation. Transposition. Chord Formations. Singing and harmonizing of original matter.

GRADE 8.

Sight-Singing melodies and song studies from the second part of the Third Music Reader. Writing from memory all the scales, both the major and minor. Memorizing of musical terms. Intonation and Pronunciation. Two and three-part singing from memory. Musical forms and class singing.

ART.

In no department are there such possibilities of correlation with the other studies of the school curriculum as in the department of art. While the general purpose of the work of this department is to refine the taste of the pupil, to intensify his appreciation of the beautiful, and to disciplin his powers of observation, this training is best secured in connection with the objects the child comes in contact with in his daily life. Hence drawing, modeling, painting, and picture study are used to illustrate the subject matter of the other studies, the plants and animals in nature-study, scenes from literature and history, land and water forms in geografy, etc. The study of design is closely correlated with industrial work. In these ways not only is the esthetic nature of the child developot, but the study of art has been used to increase his interest in various phases of his environment. The following outline naturally omits much of this correlated work, as the sequence in this case depends very largely upon the subject-matter of the other studies.

ARRANGEMENT OF TOPICS.

GRADES 1, 2, 3.

Nature Drawing.

Ideas of growth in leaves, flowers, common animals and birds, developot and embodied in typical forms, thru memory drawing.

Color.

Natural order of colors as found in the spectrum; washes of pure color; the three primary colors; picture study.

Pictorial Drawing.

Clear images of common objects, as house, barn, pond, path, etc., developed thru memory drawing; practice to fix ideas of direction and proportion; illustrative drawing.

Structural Drawing.

Free movement; circles; direction of lines and perpendicular relations; paper folding; practice upon elementary drill forms; memory drawing of geometric figures and application; paper cutting; abstract curves.

Decorative Drawing.

Arrangement of drawing upon sheet for balanced effect; rhythmic arrangement of movable units derived from animal and plant forms; regular arrangement of units in borders, surfaces, etc.

GRADES 4, 5, 6.

Nature Drawing.

Beauty of line in growing forms; balance of masses; radiation of parts from center of growth; characteristic tree shapes; the growth from seed to seed thru the cycle of the year.

Color.

Color scales of three tones between white and black; color scales of standard colors and intermediate tints and shades; harmonies and contrasts of color.

Pictorial Drawing.

Representation of proportions and of foreshortend surfaces, as seen in leaves, flowers, etc.; study of pictures for illustrations of effects; elements of good pictorial arrangement; principles of foreshortening; memory drawing of foreshortend forms in any position.

Structural Drawing.

Abstract curvs; study of pleasing proportions and of adaptation of form to function; designs for objects involving but one view; beauty of curvature; design of simple objects involving one or two views; drawing to scale.

Decorativ Drawing.

Designs with geometric elements, embodying consistent measures; interpretation of leaf and flower forms into ornaments; study of principle of symmetry.

GRADES 7, 8.

Nature Drawing.

Beauty in details of growth; interpretation of natural forms into decorativ forms; interpretation of natural schemes of color into simpler decorativ schemes made up of a limited number of values and hues.

Color.

Study in masses of local and complementary colors in still life work; arrangement of color masses in landscapes.

Pictorial Drawing.

Principles of convergence studied from pictures and objects; memory drawing of type forms in any position;

elements of pictorial composition; values; interiors; landscapes; composition in color.

Structural Drawing.

Study of working drawings to learn to read them; study of good examples of applied art; designs for common household utensils, furniture, etc., and for ornamental details; drawing to scale.

Decorativ Drawing.

Designs with abstract spots and with terms derived from plant forms, embodying flow and opposition of line and the other elements of harmony; applications in surface patterns, panels, rosettes, and in ornamental initials, enclosed ornaments, book covers, etc.

HIGH SCHOOL COURSE.

This course embraces all of the higher grade work and the execution of academic drawing, painting, and clay modeling, and the study of perspective.

HISTORY.

The course in history begins in the first grade and continues thruout the entire elementary school course. During the first four years the supervision of the work is shared by the English department and the history department, thus creating a closer unity and correlation of the work of these departments.

In all primary classes the oral story method is followed exclusively. In all intermediate classes the oral story method is continued, supplemented by class readings and individual library reading. In upper grades the amount of individual library reading increases, pupils reporting orally to class the results of their work.

The history course is planned to cooperate and correlate with the work of other departments at all possible points of contact. This outline by reason of its brevity indicates only a few of these possibilities.

GRADE 1.

Home life in relation to its environment is the general subject of the year's work. This consists of simple stories of child life at home, and the relation of that life to school and the community. It also includes stories of birds and animals.

GRADE 2.

The general topic is primitive human life—the hunting and fishing period in the evolution of man. Selections are made from the history of cave dwellers, lake dwellers, and cliff dwellers. The material used is stories of the home life and activities of these peoples, the beginnings of human industries, the development of the use of tools and implements. The children dramatize many of the stories, and learn to make and use simple tools. These stories are made a basis for considerable work in drawing.

GRADE 3.

In this grade the transition is made from early primitive life to the more advanced stages of pastoral and agri-

cultural life. Stories are told of early Aryan shepherd life, Bible pastoral life, and shepherd life in Colorado. These are followed by stories of early Aryan agricultural life, and Colorado farm and ranch life. This year offers opportunity for the study of wool industries, including the use of looms, and primitive methods of agriculture. Much of the subject-matter correlates readily with the beginnings of local geography, the study of domestic seeds, plant life, gardening, wild plants and animals.

GRADE 4.

The work of this grade centers around the general theme of community life. Stories of Greek, Roman, and Germanic life are used, including in the last, the migrations of the Saxons to England and the beginnings of English history. This material affords a basis for much correlated work in art, literature, manual training, and physical training.

GRADE 5.

The history of the English people is continued in this grade, including the beginnings of American colonial life. The work of the year falls into three main divisions:

1. Stories from early English history.
2. Stories of the Crusades with special reference to England.
3. Stories of Puritan life in England, and the migration of the Puritans to America; life in early Massachusetts colonies; and plantation life in colonial Virginia; Spanish in the Southwest.

Emphasis is placed upon industrial life in the American colonies.

GRADE 6.

American history continues thruout this year. This includes:

1. The Dutch and French in America,—Westward movements of the French; Marquette, Joliet, and La Salle. Westward movement of the English,—Boone; Kentucky and the Ohio Valley.

2. Stories of the French and Indian wars; Stories of the Revolution.

3. Stories of the great westward migrations, west of the Mississippi river, with special emphasis upon commerce and transportation.

From the beginnings of the colonial period, the correlation of history and geografy is constant and close.

GRADE 7.

The work of this year consists of a study of European countries, medieval and modern, with special emphasis on art and travel. The stereopticon is freely used, elementary lectures given, and readings assigned on all special topics. The principal countries studied are the following:

Great Britain,—its great cities, and scenes of historic, commercial, and industrial interest.

Germany,—the principal cities and the river Rhine.

Holland,—the people and their art.

Italy,—Rome, Venice, Florence.

Switzerland,—scenery and industries.

France,—the people, the revolution, art, industries, Paris.

GRADE 8.

A review and completion of American history by textbook and library study, with special emphasis upon biography.

GEOGRAPHY.

The general purpose of all the work in geography is to lead the child to observe and interpret geographical phenomena and to know important geographical facts.

GRADE 3.

The geography work of the third grade is very simple and hardly to be distinguished from general nature study. Through simple, informal studies of the food products of the immediate locality—sugar, flour, beef, mutton—of common building materials, of materials for clothing, etc., an effort is made to give the pupil some idea of the relation of these products to the life of the people of the community, and to interest him in the lives of people of other countries. Simple observations are made of the direction of winds, of time of sunrise and sunset; and many simple facts of this kind are acquired.

GRADE 4.

(First half of year.)

In the fourth grade the work of the third grade is continued; and with the aid of relief maps, political maps, pictures, etc., the pupil is given a general acquaintance with the physical and political divisions of North America.

GRADE 5.

(First half of year.)

In the fifth grade the pupil studies Europe, Asia, South America, Africa, and the Philippine Islands much as he studied North America in the fourth grade, but in a somewhat more advanced manner.

The work includes a study of such industrial topics as mining, farming, manufacturing, where each is most carried on, and why, transportation (river systems, lakes, seas, etc., studied in this connection); of such political topics as centers of population, government, and political divisions (very elementary), and of such physiographical topics as the courses of winds, the planetary belts—trade winds, etc.—the effects of warm and of cold winds.

Students bild relief maps of sand and of paper pulp.

GRADE 6.

(First half of year.)

In the sixth grade the study becomes more formal and systematic. The following is an outline of the work:

North and South America—

I. Relief maps made in connection with study of topics.

II. Industrial topics.

A. Industries of mountain regions.

1. Mining: coal, iron, gold, etc.

2. Lumbering.

B. Industries of plains.

1. Stock raising: cattle and sheep.

2. Agriculture.

- C. Industries of prairies.
 - 1. Agriculture: corn, wheat, other grains, stock raising and fattening, and fruits.
 - 2. Mining: coal, iron, copper.
 - 3. Lumbering.
- D. Industries of coast plains.
 - 1. Agriculture: cotton, rice, sugar, and fruit.
 - 2. Fisheries: cod, salmon, mackerel.
- III. Centers of commerce, transportation, manufacturing: Pittsburg and Pueblo, Chicago, Omaha, Kansas City, New Orleans, Galveston.
- IV. Climate: Causes of seasons, etc.

GRADE 7.

(First half of year.)

Careful study of Europe; general review.

NATURE STUDY.

The *Aim* or *Purpose* of nature study is to broaden and deepen life by putting the individual into touch and sympathy with his environment, or, at least, a part of his environment often neglected. In doing this, latent interests are developed and new ones created, and both are made permanent. Nature study aims to educate according to correct principles, and it is believed that its influence tends directly and wholly toward developing a rational human being. Because of her great influence upon man and her

close relation to God, Nature should be well-known to all; and as a foundation for a proper understanding of the problems of all ages, nature-knowledge is of the most vital kind; but it is in the broadening and deepening of everyday life thru interest in and sympathy for Nature that results are most to be hoped for.

The *Method* of studying nature emphasized in the Normal School is that of personal investigation. In no subject should "learning by doing" receive more emphasis. The most skillful teacher is the one who, while securing a proper amount of progress in the attainment of knowledge and interest, gets the most work done by the pupils themselves. The teacher should himself study nature, but *with* the children, not for them. Most of all, the teacher needs to avoid the habit of getting information, always uncertain, from books and passing it on to the children. The excursion by teacher and pupils, or by individuals, is the most successful device thus far discovered for securing the study of nature by personal investigation.

Hence the preëminent *Source* of nature study must be Nature herself. "Nature studied first hand" is the foundation motto of the whole present movement. The minor, supplementary sources, too often made the main one, are books, specimens, pictures, and persons. These have their value when properly used, but cease to do harm instead of good only when *made supplementary*.

The *Scope* of the present nature study course consists entirely of lessons with animals and lessons with plants. Each kind of plant and animal is studied as an individual, and the child is expected to learn to know it by sight and to

become acquainted with those things about it that are most adapted to interest him at his particular stage of development; those that are, in other words, most closely correlated with the child's life.

The lessons with animals are devoted to such animals as are found in the vicinity of the school and town and are thus accessible for first-hand study; and to those others which, while not accessible, are yet of such importance as to deserve study from the supplementary sources. These animal lessons relate to domestic animals, birds, mammals, fishes, insects, and a number of other miscellaneous animals.

The lessons with plants are designed not only to get the child to know plants, but in addition, to acquaint him with methods of rearing them and to encourage him to grow them. To this latter end, an extensive school garden is maintained, in which all grades, from the kindergarten to the eighth inclusive, grow flowers, vegetables, shrubs, fruits, and trees. It is planned to build up an orchard and to plant a large part of the campus with trees grown by the children themselves. Designated spring and fall plants are studied, and special lessons are had upon the plants grown in the school garden, and upon any incidental plants or animals connected with these, such as weeds, insect pests, birds, and so forth.

THE COURSE OF STUDY.

(As followed by each grade.)

I. *Lessons with Animals*—

1. Domestic animals—as listed.

2. Birds—as listed.
3. Mammals—as listed.
4. Fishes—as listed.
5. Insects—as listed.
6. Miscellaneous animals—as listed.
7. Special work—as outlined and as selected and approved.

II. *Lessons with Plants*—

1. Spring flowers—as listed.
2. Fall flowers—as listed.
3. School garden work.
 - (a) Vegetables—as listed. Rear and study.
 - (b) Sweet herbs—as listed. Rear and study.
 - (c) Flowers—as listed. Rear and study.
 - (d) Trees—as listed. Rear and study.
 - (e) Fruits—as listed. Rear and study.
 - (f) Shrubs—as listed. Rear and study.
4. Flowerless plants. Study as outlined.
5. Special work—as outlined and as selected and approved.

III. *Special and Additional Work*—not comprehended above.

The *Results* of the nature study work hoped for, and that it is expected will be realized from the course, are: (1) a wide *acquaintance* (comparatively) with plants and animals, both wild and domestic; (2) a deep and active *interest in* “seeing and doing” along the lines touched upon in the course; (3) a large stock of fundamental knowledge

necessary to a proper understanding of present day problems; (4) loving and sympathetic contact with nature, resulting in a broader and deeper life.

ARITHMETIC.

The following outline of the arithmetic work is intended to indicate merely the scope of the treatment. In addition to this work, however, many practical applications of number are made in connection with such subjects as nature-study, geography, manual training, and industrial history. In this way the child meets with natural conditions for the use of number, and learns to appreciate more fully the significance and value of the science. In the primary grades especially, the number facts are taught, for the most part, in connection with the study of other subjects. In the intermediate grades much more emphasis is placed upon the scientific aspects of the work in order to secure a practical mastery of the fundamental operations of number. In the grammar grades considerable attention is paid to the use of number in connection with the commercial and industrial activities of the community.

GRADES 1 AND 2.

- (1) The natural number scale.
- (2) The primary addition facts.
- (3) Subtraction worked by addition.
- (4) The primary multiplication facts.
- (5) The corresponding division facts.

- (6) Relations of foot, yard, inch; pint, quart, gallon; cent, nickel, dime, dollar; used primarily in illustrations.
- (7) Length. (8) Area. (9) Volume.

GRADE 3.

- (1) Mastery of operations with integers. New facts especially.
- (2) Decimals.
- (3) Meaning and use of fractions, their addition, subtraction, and simpler cases of multiplication and division.
- (4) Relations between fractions.
- (5) Denominate number facts. (Used primarily in illustrations.)
- (6) Length. (7) Area. (8) Volume.

GRADE 4.

- (1) Facility in operations with integers.
- (2) Facile use of decimals.
- (3) General meaning of fractions, and general use.
- (4) General method of addition and subtraction of fractions,—work confined, however to fractions in common use.
- (5) Simpler cases of multiplication and division of fractions.
- (6) Denominate numbers in common use. (Used primarily in illustrations.)
- (7) Simpler multiplication and division by numbers of two places.

- (8) Length. (9) Area. (10) Volume.

GRADE 5.

- (1) Multiplication and division of numbers of three places.
- (2) General methods of multiplication and division of decimals.
- (3) Length. (4) Area. (5) Volume.

GRADE 6.

- (1) The use of approximation emphasized.
- (2) Abbreviated multiplication and division by numbers of three or more places.
- (3) Abbreviated methods for multiplication and division of decimals.
- (4) Percentage as a treatment of hundredths in a new notation.
- (5) Much work involving "per cents" most used.
- (6) Application of percentage to simple cases of interest, commissions and bank discounts.
- (7) Length. (8) Area. (9) Volume.

GRADE 7.

- (1) Constructural and inventional geometry.
- (2) Areas of parallelograms, triangles, trapezoids, etc., and circles.
- (3) Volumes of prisms, pyramids, right circular cones and cylinders, spheres, etc.
- (4) The Prismatoid.

GRADE 8.

- (1) Review of principles of arithmetic. Some attention to short cuts in work.
- (2) Introduction of simple algebra symbols and methods.
- (3) Application of percentage in business,—interest, taxes, stocks, bonds, etc.
- (4) Significance and units of metric system of weights and measures.
- (5) Involution of small numbers. Meaning.
- (6) Extraction of square root by logarithms.

MANUAL TRAINING.

PRIMARY GRADES.

A great deal of work done in the first four grades is carried on in the regular class room, avoiding the necessity of fitting up a room especially for the manual training work.

FIRST GRADE.

The work done in the first grade is entirely suggested by the subjects developed in the regular lesson along the lines of nature study, home, literature, industries, etc.

Below are a few of the notions that have been worked out in the first grade manual training:

The weaving of a doll's blanket for a doll's bed, on a simple loom, consisting of a small frame with ten nails driven at each end. This work is done in the nature work in connection with the study of sheep. Cutting and past-

ing of the Pilgrims during the Thanksgiving season. The clay work consists of the modeling of birds, bird nests, people, houses, animals of various kinds, as dogs, horses, cows, sheep, etc. Molding of peaches, pears, apples, etc., in connection with the study of fruits. Sewing: the gathering of seeds to fill a cushion for the doll house. Basketry: the making of baskets of raffia, during the study of fiber, home work or Indian basketry.

SECOND GRADE.

Pasteboard cutting and pasting preparatory to the developing of the playhouse, as a small village made by entire class, consisting of houses of various sizes, bridges, rivers, etc. Bilding Indian village while studying Hia-watha. Log house, brick house, or house of any other material suggested by the children. The house may be bilt in connection with the study of the Puritan, as in the case of the log house, or the kinds of material used for bilding purposes. Bilding and furnishing of pasteboard house in connection with the study of the home. The house should have four rooms, or the number thought necessary by the children for the carrying on of actual housekeeping. Below are a few suggestions as to furniture and fixtures for the house. These should vary according to the notions the children have as to what constitute essentials in the way of furniture for the house. Kitchen: tub, washboard, washstand, bucket, stove, chairs, table, designd and colord oil-cloth for the floor may be made of pasteboard. The servants' pots, kettles, pans, etc., may be made of clay. Dining room: chairs, table, sideboard, etc., of pasteboard. Bed

room: bed and chairs of raffia, dresser of pasteboard, bowl and pitcher of clay. Parlor: chairs of various kinds, stand made of pasteboard, carpet of silkalin strips woven on loom, curtains of thin paper or cloth, people of pasteboard, dresses of cloth or tissue paper, hats of raffia.

After the house is put up, a fence should be made of bent iron or wire.

THIRD GRADE.

Children in the third grade are old enough to use the simple tools found on the ordinary manual training bench, as the knife, rip and crosscut saws, ruler, chisel and plane.

Pupils are encouraged to make any objects that will assist them in their play; as, small toy carts, furniture for doll houses, etc. During holiday seasons presents for parents, brothers, sisters or friends may be constructed of wood, raffia, or cardboard. Many objects will be presented by the children as the ones they wish to make during the season. During the development of a series of lessons upon an industry the different machines used in carrying on that industry should be explained. If a loom is mentioned in connection with the study of textiles, looms of different kinds are described, and, if possible, the children are shown a loom in operation. After a general notion of a loom is acquired, its use, etc., the entire class make simple looms upon which they weave simple patterns. In the development of basketry, the different materials are explained of which baskets are made, their uses, etc. Afterwards a few simple baskets, or mats, of raffia, hemp, or any other suitable material are made.

FOURTH GRADE.

Simple working drawings of objects to be made. A series of objects is made that will be of use to the children and will form a set of objects useful for some purpose or purposes, as, a writing set, consisting of a rolling blotter of soft wood, book penwiper made of two board covers, bent iron pen rack, stamp box woven of raffia, mat of raffia for ink bottle, letter box of wood to hold mail. Many other useful series are suggested during the year's work. During holiday seasons presents of different materials may be made.

FIFTH GRADE.

A working drawing, showing the different steps in the construction of the object to be made, is marked out before the pupil is allowed to begin the construction. Below are the names of a few objects that seem to be very good for boys in this grade.

Footstool, out-door seat, book rack, wall shelf, pencil box, plant stand, bird house, rabbit hutch, pin tray, doll chair, doll bed, doll cradle, checkerboard.

SIXTH GRADE.

With gain in mechanical skill comes more care in working out the details of plans to be followed. Encouragement is given to make apparatus useful in games, as boats, sleds, and kites. During the study of the industries, water wheels, undershot and overshot, may be made. Other suggestive models are camp stool, doll bed, bread boards, etc.

SEVENTH GRADE.

Working drawings, together with a development of design, with practis in the decoration of objects completed, including marketry, simple wood carving, and bent iron work.

EIGHTH GRADE.

More advanced work along the same lines as those followed in the seventh grade, with more stress placed on the decoration and finishing, as stains, polishes, etc.

HIGH SCHOOL.

The work in the High School is entirely individual, each pupil being expected to work out his own design, preparatory to the constructiv work. The course in general consists of constructiv work, picture frames, chairs, taboretts, stools, bookcases, tables, etc. Decorativ practis in designing, uses of ornament with a view of suiting the decorating to the object to be decorated. Wood carving, marketry, staining and finishing are studied.

 SEWING AND COOKING.

GRADE 5.

Position.	Hemming.
Use of thimble.	Gathering.
Length of thread.	Articles.
Knot.	Handkerchiefs.
Warp and woof.	Laundry bags.
Basting.	Sewing bags.
Running.	Doll clothes.
Overcasting.	Simple aprons.

GRADE 6.

- | | |
|-------------------------------|--------------|
| I. Review of former stitches. | Feld seam. |
| Overhanding. | French seam. |
| Bands. | Placket. |
| Gathering. | Aprons. |

II. Elementary cooking.

GRADE 7.

- | | |
|-----------------|-------------------------------|
| Button holes. | Christmas work. |
| Hemstitching. | Cooking outfit for next year. |
| Fancy stitches. | Study of different materials. |
| Garments. | |

GRADE 8.

Cooking.

HIGH SCHOOL.

- I. Suit of underwear, shirtwaist suit, study of material.
- II. Cooking.

PHYSICAL EDUCATION.

HYGIENE.—GYMNASTICS.

The purpose of these courses is to secure health, improved bodily development, recreation, promotion of growth and functions, disciplin, and attention. The means employd to these ends are play, games and sports, drill, gymnastics. The basis of efficiency in developing the physical condition is a proper understanding of the individual

helt. This understanding is accomplisht by the careful physical examination given at the beginning of each year. This investigation of the conditions of helt, growth, and general and special development is carried on by a specialist and forms a valuable aid in the direction of the child's instruction. All the influences that bear upon the preservation of the best physical conditions for the child are scrutinized and regulated as far as possible.

GRADES 1 AND 2.

Aim. Development of coördination, muscular and rythm senses. Emfasis of recreativ element. Development of spontaneous activity and attention.

Means. Use of imitativ games, exercise songs and stories, minute plays. Exercise of large fundamental muscle groups; running, skipping, simple marching, easy fancy steps, bean bag and ball tossing; imitation and musical accompaniment derive uniformity and later disciplin.

This work occurs several times during the day, for a few minutes between classes.

GRADES 3 AND 4.

Aim. Training and disciplin and attention and development of muscular coördination and control.

Means. Simple educational and Swedish gymnastics, by command; simple fancy steps; elementary marching tactics; and story gymnastics, which are given thru the medium of play. These natural movements of childhood give opportunity for muscular coördination, so highly de-

sirable in all physical exercises for children. Special attention is given to carriage and posture thru correctiv exercises.

GRADES 5 AND 6.

Aim. Emphasis of development of disciplin. Relaxation from class work. Correction of posture and carriage. Improvement of general appearance of class.

Means. Swedish free exercises. Fancy steps and marching. Military drill, with organization of company. Setting up exercise. Manual of arms with wands. Competitiv games. Field day sports.

At this period increast growth requires a large amount of carefully adjusted exercise. The respiratory and heart power should receive attention and be develop. The teacher must instruct by precept, example and correction.

GRADES 7 AND 8.

Aim. In these grades individual conditions of growth and development receive especial attention. The teacher directs exercise to assist the formation of correct habits of posture and carriage, and to correct defectiv habits. Disciplin and orderly habit is still a direct aim.

Means. Free exercise, fancy steps, figure marching, dumb bell exercises, Indian club drill, games and sports for the girls.

The boys will have military drill, with the organization of a regular company with officers, military "setting up" exercise, wooden dumb bell drill. In more advanced class work, there is required exercise on fixt apparatus in

gymnasium, field and track sports outdoors, school fencing. The hygienic value of the relaxation of gymnasium games and exercise is fully utilized.

The work occurs daily for twenty minutes on play ground or in gymnasium.

HIGH SCHOOL DEPART-
MENT

HIGH SCHOOL DEPARTMENT.

ROYAL WESLEY BULLOCK, PH. B., PRINCIPAL.

The High School Department of the Normal School offers an excellent opportunity for high school training free of tuition to those who have completed the eighth grade of a common school or its equivalent.

Students who hold an eighth grade county diploma are admitted without examination. All students entering the high school for the first time should bring some record of their previous work to facilitate their assignment to proper classes.

GENERAL NOTES.

Ideals and Purposes.

The time has come when the American high school must be in fact, as it is in theory, a public school, closely continuous with the grammar grade school, and offering opportunities to all the youth of the land. The high school must be more than a college preparatory school, more than an elementary trade school, more than a school for any single class of people. It must lead naturally and easily, either to the college, to the trade and technical school, to the professions, or to the immediate business of life without further school training.

To prepare students for so wide and varied a range of possibilities the high school must put the individual in possession of at least three factors of success, viz: (1) Large knowledge of facts; (2) Good intellectual habits; (3) High civic ideals.

Knowledge of facts is still, as always, an essential, but it is not now, as formerly, the sole end and aim of school activity. Information may be considered the grist of the intellectual mill; it is dead material, but it is golden grain, capable of being elaborated and assimilated into rich red blood. One business of the school, then, is to see that the student is constantly acquiring truth and steadily building it into his own life and experience. Not by reading alone, but, as well, by observation, by experiment, by experience, and by contact with other minds, should the student come into his just intellectual inheritance, the wisdom of the past and the present.

Intellectual habits are formed from characteristic modes of thought, and these, in turn, become ability along the line of the acquired mental habit. The school concerns itself, consequently, with the establishment of correct habits of thought. Each study affords opportunities which must not be overlooked for the development of judgment, caution, reflection, investigation, perseverance, and similar qualities of mind which collectively constitute good common sense. These habits, crystallized into character, remain with the individual through life though the subject matter of the studies may be forgotten.

Civic ideals are the outgrowth of social experience under circumstances favorable to reflection and considera-

tion for others. Modern society is complex and highly organized. To live happily in this great social body the student must early learn to adapt himself readily to the varied and ever-changing demands of the social circle in which he moves. Experience in class organizations, in literary societies, in athletic teams, and in the numerous groups organized in the school for different purposes soon teaches effectively the lessons of consideration for others, unselfishness, gentleness, curtesy, and all those social virtues and graces which constitute refinement and good breeding. At the same time such experience brings out the strong qualities of leadership and administrativ ability in those who are to become moving forces in adult society. To be a good citizen one must not only be good, but be good for something. Civic usefulness is the result of habits of co-operation with others for a common purpose.

Disciplin.

That disciplin is best which soonest enables a youth to direct his own activities to useful ends while, at the same time, co-operating with others for the common good. The truest freedom is the result of the greatest self-restraint. In the Normal High School only such restrictions are enforced as will safeguard the individual and protect the rights of the student body. Coercion is resorted to in no case, the student always being allowd to deliberate upon an issue and choose for himself a course of conduct. If that conduct is wholly inconsistent with the ideals and purposes of the school, the student is advised to withdraw.

Students living in other than their own homes are

under the general supervision of the school at all times, and are expected to preserve a proper decorum at all times, in the town as well as in the school.

Each student has a regular program of recitations to attend. His study hours and vacant periods are, with slight restrictions, at his own disposal.

Equipment.

High School students have the use of all the regular Normal School equipment. This includes the library of 30,000 volumes; the laboratories for chemistry, physics, biology, sloyd, domestic economy, etc.; the very extensive museums of natural history, botany, biology, mineralogy, anthropology, modern industries, etc.; the gymnasium and athletic equipment; the art and ceramic studios and exhibits; the stereopticon and slides; and, in short, all the educational apparatus of a well equipped state institution. This makes the Normal High School probably the best equipped secondary school in the state.

Entrance Requirements.

Students holding an eighth grade county diploma are registered in the ninth grade without examination. All persons desiring advanced standing should present written statements of work done in other schools. This work will be given such credit as the statements presented seem to justify.

Fees and Expenses.

Tuition is free. Text books are furnished by the school. All students pay \$3.00 per term book fee, \$1.00 per term

athletic fee, and \$1.00 per term museum and laboratory fee, \$1.00 per term industrial fee, \$1.00 per term music fee, and \$1.00 per term art fee. A deposit of \$2.00 is required from each student when he registers, which is returned, less the value of any books lost or damaged, when the student leaves school or at the end of the year.

All fees are payable in advance at the beginning of each term.

Registration.

The registration for 1908-1909 in the High School Department numbered 205.

COURSE OF STUDY.

36 weeks in one year's work.

20 to 25 recitations per week required.

900 recitations in one year's work.

60 recitations count one credit.

15 credits in one year's work.

45 credits required for graduation.

"R" indicates required subjects, all others are elective.

In order to take full work, the student must take all the required work of each year and enough elective to make at least 25 recitations per week.

NINTH GRADE.

FALL TERM.

WINTER TERM.

SPRING TERM.

EnglishR	ReadingR	EnglishR
AlgebraR	AlgebraR	AlgebraR
Ancient History..	Ancient History..	Medieval History.

FALL TERM.	WINTER TERM.	SPRING TERM.
Latin	Latin	Latin
German	German	German
Zoology	Zoology	Zoology
Mechanical Draw- ing.....	Pictorial Drawing	Designing
Music	Music	Music
Elementary Join- ery.....	Elementary Join- ery.....	Advanced Joinery
Physical Training	Physical Training	Physical Training

TENTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
ReadingR	EnglishR	EnglishR
Algebra	Algebra	Arithmetic
Civics	Civics	Civics
English History..	English History..	Modern History..
Bird Study.....	Taxidermy	Bird Ecology.....
Botany	Physiology	Botany
History of Com- merce.....	Geografy of Com- merce.....	Physical Geografy
Latin	Latin	Latin
German	German	German
Sewing	Sewing	Textiles and house- hold art.....
Wood Turning...	Advanced Joinery	Advanced Joinery.
Music	Music	Advanced Joinery.
Pictorial Drawing	Mechanical Draw- ing.....	Music
		Decorativ Design

ELEVENTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
EnglishR	EnglishR	Reading
Industrial History	Industrial History	Economics
.RR	Geometry
Geometry	Geometry	Latin
Latin	Latin	German
German	German	Food composition
Cooking	Cooking and Die-	and food values.
Physics	tetics	Physics
Agriculture	Physics	Agriculture
Wood Carving	Agriculture	Parketry
Printing	Inlaying	Printing
Music	Printing	Music
Pictorial Drawing.	Music	Decorativ Design-
Library Handi-	Mechanical Draw-	ing
craft	ing	Library Science..
Physical Training.	Library Handi-	Physical Training
	craft	
	Physical Training.	

TWELFTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
EnglishR	EnglishR	Reading
Political Economy	Political Economy	Political Economy
History Modern	History Modern	History Modern
Europe	Europe	Europe
Chemistry	Chemistry	Chemistry
Latin	Latin	Latin
German	German	German

FALL TERM.	WINTER TERM.	SPRING TERM.
Trigonometry	Trigonometry	Trigonometry
Bacteriology	Bacteriology	Bacteriology
Music	Music	Music
Art	Art	Art
Manual Training.	Manual Training.	Manual Training.
Physical Training.	Physical Training.	Physical Training.

The regular course of the high school is three years in length, and students who finish this course satisfactorily receive the diploma of the school. A fourth year of work is offered in the twelfth grade for those students who wish to prepare for college or who, for any reason, wish to extend their course. For this year's work is given a special certificate showing the fulfillment of college requirements.

The arrangement of the program is such as to facilitate and to encourage the grouping of related subjects by the students when choosing their electives. In this way a student may pursue some special line of work thruout his course, while taking the required work and some promiscuous electives. Some of the suggested groups are as follows:

AGRICULTURAL

GROUP.

Zoology	3
Botany	2
Biology	1
Agriculture	2
Soil Bacteriology	1
Chemistry	3

MANUAL TRAINING GROUP.

Mechanical Drawing	1	Advanced Joinery	2
Pictorial Drawing	1	Wood Turning	1
Designing	1	Wood Carving	1
Elementary Joinery	1	Inlaying	1
Printing	3	Iron Work	1

INDUSTRIAL GROUP.

History of Com- merce	1	Physical Geograpy	1	Industrial History	2
Geograpy of Com- merce	2	Business Arith- metic	1	Economics	1

DOMESTIC SCIENCE GROUP.

Mechanical Draw- ing	1	Designing	1	Chemistry	3
Pictorial Drawing	1	Sewing	2	Physiology	1
		Household Art..	1	Bacteriology	1
		Cooking	3		

Note.—Figures indicate number of terms the subject is given each year.

Similarly groups can be formed in History, Mathematics, Language, Physical Science, and the like, by consultation with the principal of the High School and the superintendent of the training school.

Students who finish satisfactorily the three years' course in the High School enter the Junior year of the State Normal School.

MISCELLANEOUS

GOVERNMENT.

That government of a school which brings about self-control is the highest and truest type.

Disciplin consists in transforming objectiv authority into subjectiv authority.

The *object* of school government is to preserve the thing governd; the *aim* is to develop the power of self-control in the students; the *end* is to make the pupils willing subjects of their higher motivs and obedient servants to the laws of man and God. This conception of government put into execution is the only one capable of develop- ing high character. The school aims to develop this power of self-control, and to cultivate such sentiment as will render disciplin unnecessary. Activity is the principle of development. Self-government makes the student strong and fits him for life, while coercion, or government from without, renders him unfit for self-regulation. By thus bringing the student's regulativ powers into use—*i. e.*, by his self-acting—there is produced an abiding tendency to self government. This is nothing more than training the will. If in the *government* of a school no effort is made to develop the will, no other opportunity so potent presents itself. The aim should be to bild up a symmetry of growth in the three general powers of the mind—intellect, sensibility and will. Students who cannot conform to such training, 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 askt 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.

DISCIPLIN—MORAL AND SPIRITUAL INFLUENCE.

While the school is absolutely free from denominational or sectarian influence, yet 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 attaining to a higher life.

THE STANDARD OF THE SCHOOL.

It is the purpose of the trustees and faculty of the Colorado State Normal School to maintain a high standard of scholarship and professional training. Those who are graduated shall be thoroughly 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.

The school gives special diplomas in certain lines of work, which entitle holders to teach in the schools of the state.

TRAINED TEACHERS.

Trained teachers are in demand. Many districts and towns employ no others. We have inquiries for good teachers. We expect to supply this demand from the graduates of the Colorado State Normal School.

MUSEUM OF FINE ARTS AND ARTS-CRAFTS.

The Art Museum is one of the features of the equipment of the institution. It contains excellent copies of ancient, medieval, and modern art. In sculpture there are life size pieces of Niobe and Child, the Annunciation of the Virgin, the Wrestlers, Spinario, Venus de Milo, The Boy and Swan, David, *Nike*, or Victory, Jeanne d' Arc, Beatrice, Paul Revere, Plato, Froebel, Armor of Achilles, Beethoven, Judgment, Trojan Shields, Miltonic Shield, Water Nymphs, Declaration of Independence, Treaty of Peace, Frieze of the Parthenon, Singing Boys, Apollo Belvedere, Diana of the Stag, Pestalozzi, Hiawatha, Chief Ouray, Olympian Hermes, Demosthenes, Greek Slave, Flight of Night, Lincoln, Washington, Shakespeare, Two Doves, etc.

In pictures there are many very good pieces—oil and water color—and about ten thousand fine photographs of the best art of the schools of the world.

In pottery there is a good collection. It is possible that there is no normal school in the country that has as good a ceramic collection. The specimens are used in the

arts-craft work, to inspire and instruct, to the end of creating a feeling for the beautiful and useful. The ceramics of a number of countries are already represented in the museum. Among them are a number of American potteries; a very good Japanese collection; China; Mexico; Italy; Hungary; Holland; France; Ireland; many potteries of England; Sweden; Belgium; Norway; Russia; etc. There is also a very fair collection of Cliff Dweller and Indian Pottery.

NATURAL HISTORY MUSEUM.

A museum is indispensable to an educational institution. It is a center of information and inspiration. If properly classified, it brings nature into a small compass and enables the pupil to see the orderly whole. In this age of science, teachers of public schools must have a working knowledge of the subjects of elementary science, and also know how to present them as nature study that they may be able to lead children to have a feeling for nature, to love nature, and to know it. The school has a good, working museum. The specimens are not in a separate room under lock and key, but the cases are in the laboratories, halls and rooms where they are to be used. The museum contains the birds of Colorado, the birds' eggs of Colorado and surrounding states, many nests and eggs mounted as they are in nature, many insects of this and other states and countries, numerous specimens prepared in liquids, the best collection of Colorado fishes in the state, nearly all the mammals of the state, about 6,000 plants, numerous fossils, an excellent collection of microscopic specimens,

charts, maps, living specimens, and a fair collection of minerals. There are about 25,000 individual specimens in the museum.

The museum is the outgrowth of the field work done in the school by teachers and pupils. In science and nature study great stress is laid on coming in contact with the objects of nature in their natural habitat. It is the field work that makes the museum so vital in our work. In all the grades of the training school the museum has its influence. Specimens suitable to the grade are in every room. If there are persons who have specimens and do not have places to keep them, the school will gladly give them room in cases where they may put them on deposit for safe keeping. If there are persons who have specimens and care to donate them, the institution will cheerfully receive them and give full credit to the donor. Quite a number of specimens have been donated by friends of the school.

The trustees are arranging to secure, in pairs, stuffed specimens of all the large animals of Colorado. During the year a number of specimens will be added to the collection. At present a taxidermist is at work preparing the smaller animals and collecting all such specimens as are necessary to complete the collection.

CHRISTIAN ASSOCIATION.

Realizing the necessity for religious and social culture in the school, and believing 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. Much good is also done by this association in the way of creating closer social relations among the students.

The officers of the Young Women's Christian Association at present are:

President.....	GRACE DAVIS
Vice-President	NELLIE JACKSON
Secretary	JENNIE DOHNER
Treasurer	ROSAMOND LITTLE

LITERARY SOCIETIES.

CLIONIAN, FRANCESCAN.

There are in the school two literary societies, organized and managed by the students. Membership is optional. The societies are for the cultivation of such powers and graces as are usually cultivated in such organizations. Their programs are made up of music, declamation, oratory, dramatic reading and interpretation, parliamentary practis, etc. Each society meets twice in each school month.

The present organization of the societies is as follows:

CLIONIAN.

President	ELIZABETH STAUGHTER
Vice-President.....	CLARA DANNELS
Secretary	CARL BURKHOLDER
Treasurer	NANCY MCCARTHY
Sergeant-at-Arms	JESSE BEATTIE

FRANCESCAN.

President	JOSEPHINE SMITH
Vice-President	HALCYON HALSTED
Secretary	NETTIE MCNICHOLAS
Treasurer	GERTRUDE PEARSON
Sergeant-at-Arms	JOHN JOHNSON

THE EXCELSIOR FORENSIC CLUB.

In response to a desire among the young men of the Normal School for an organization devoted to debating and forensic practis, the Excelsior Forensic Club was organized in September of 1908. The aim of the club is to develop and realize the power of logical argumentation in its members thru participation in debate and parlimentary practis.

The club has as its motto: "Freedom and Unity." In the sessions held every week the members of the organization are realizing the motto in thot and in expression.

OFFICERS.

First Term.	Second Term.
P. W. LLOYD.....	President.....D. M. HIBNER
J. I. LOCKHART....	Vice-President-Treasurer...H. KYLE
J. M. STEWART.....	Secretary.....G. YOUNG

ALUMNI ASSOCIATION.

The Alumni Association is the strongest organization for influence connected with the school. There are now 1,348 members, not including the class of 1909. This means as many centers of influence for better educational work and for their *Alma Mater*, "Old Normal."

PUBLICATIONS OF STATE NORMAL SCHOOL,
GREELEY, COLO.

Revised to April, 1909.

During the year bulletins are issued from departments setting forth the work done in special lines, etc. These bulletins are sent out over the state to educational people, giving the point of view of the treatment of subjects in the Normal. They have a good effect on the educational interests of the state.

The Crucible is a monthly magazine conducted by the student body. It gives the treatment of subjects in the Normal as they have affected the student, and also gives school and alumni news.

The Cache la Poudre is the annual student publication.

Biennial Reports, 1889-90 to Date.

In reports of Superintendent of Public Instruction. Report for 1899-00 also printed separately and called "Annual report of trustees and president."

Prospectus, S. N. S. Ja. 1891, 12 pp.

First annual circular, 1890-91, (2 eds.) 19 p. 12 mo.

Summer school of methods, 1892; 1894.

Model school library, 1895, 7 p. 16 mo.

Syllabus I: Studies in history, literature and expression,
by Emma Ruff, 1895-6, 24 p. 12 mo.

Circular, 1896, 24 mo.

Financial statement, July 31st, 1896, 4 p.

Physiography: A course for the seniors, 1898-99, by N.

M. Fenneman, 21 p. 22 mo.

Child study, 16 p. n. d.

Announcement, Musical department, 1895, 4 p.

Annual report of trustees and president, 1899-00.

Announcement of S. N. High School, 1903-4, 4 p. 16 mo.

Crucible (The). Published monthly by the students of the school. Vol. 1, 1892-3, to Vol. 17, 1908-9.

Cache la Poudre (The). Published annually by the senior class. Vol. 1, 1907, to Vol. 3, 1909.

Annual Catalogs, 1890-91 to Date.

Catalogs 1896-7; 1897-8; were also printed in five parts: Part 1, Normal department; 2, Model department; 3, Kindergarten department; 4, Miscellaneous; 4, announcements.

Catalog for 1900-1 called State Normal School *Bulletin*, Series 1, No. 1; Catalog 1901-2, Series 2, No. 1, and following years, catalog being first number of each series:

Bulletins.

Beginning with catalog for 1900-1901, all Normal School Publications issued as *Bulletins*, a series for each school year:

Series 1, No. 1, Catalog 1900-1.

2, New developments at the S.

N. S. Ag. 01

3, English in the S. N. S. O. 01

4, Library of the S. N. S. Ja. 02

5, Manual training in the S.

N. S. Ap. 02

6, The training school. My. 02

- Series 2, No. 1, 12th Annual Catalog, 1901-2.
 2, Report of information, S. N.
 S.Ja. 03
 3, A study in current pedagogy. F. 03
- Series 3, No. 1, 13th Annual Catalog, 1902-3.
 2, Announcement, (leaflet 4
 pp.) n. d.
 3, Preliminary bulletin, sum-
 mer term, (folder 6 pp.)
 n. d.
 4, Bibliography of school gar-
 densMy. 04
 5, Summer termMy. 04
- Series 4, No. 1, 14th Annual Catalog, 1903-4 .Ju. 04
 2, Library departmentJa. 05
 3, English departmentF. 05
 4, Report of information.....Ja. 05
 5, Preliminary bulletin, (6 pp.
 folder).
 6, Bulletin, (4 pp. folder).
- Series 5, No. 1, 15th Annual Catalog, 1904-5.
 2, Summer term, 1906.
 3, Poole's Index list.....Ja. 06
 4, Preliminary bulletin, (6 pp.
 folder).
- Series 6, No. 1, 16th Annual Catalog, 1905-6.
 2, Preliminary bulletin, summer term,
 (6 pp. folder).

- 3, High school department, June, 1905-06.
- 4, Bulletin (6 pp. folder).
- 5, Summer term, 1907.
- 6, Report to legislature, 1907.
- 7, State normal school vs. colleges.

Series 7, No. 1, 17th Annual Catalog, 1906-7.

- 1a, High school, June, 1907 (unnumbered).
- 2, English bulletin, Sept., 1907.
- 3, English bulletin, Oct., 1907.
- 4, Education is motorization, Oct., 1907.
- 5, English bulletin, Nov., 1907.
- 6, Preliminary bulletin, summer term.
- 7, Kindergarten, Feb., 1908.
- 8, Summer term, 1908.
- 9, Museums, May, 1908.

Series 8, No. 1, 18th Annual Catalog, 1908-9.

- 2, High school, June, 1908 (unnumbered).
- 3, Training school bulletin, Nov., 1908.
- 4, Non-resident and summer school, Dec., 1908.
- 5, Report to holdover committee, Jan., 1909.
- 6, Summer term, 1909.

SESSIONS OF SCHOOL.

In the Normal Department there are no regular daily sessions which all students are required to attend. The library is open every morning at 7:30, and regular recitations begin at 8:10. Students are required to be present only during their recitation and laboratory periods; the rest of the time they are free to employ as they find most to their advantage. Regular recitations are over for the day at 3:50, and the library closes at 5:00 in Winter, and at 5:30 in Autumn, Spring and Summer.

In the Training Department there are two daily sessions, the morning session opening at 9:00 and closing at 12:00, the afternoon session opening at 1:15 and closing at 3:15.

EXPENSES.

Tuition is free to citizens of this state.

The use of all text books (our plan of work requires a great many), library books, 30,000 in all; the use of 350 magazines; all materials, such as iron, wood, rattan, raffia, etc., for the Manual Training Department; all foods and materials for the Domestic Science Department; all chemicals in the laboratories; all equipment in the music department; and the use of the museum in the Art Department are furnished by the school to the students for the following fees:

NORMAL DEPARTMENT.

All Normal students pay the following fees each term:

Book fee	\$4
Industrial fee	1

Laboratory fee	\$1
Museum fee	1
Music fee	1
Art fee	1
Athletic fee	1
	—
Total.....	\$10

All Normal students not citizens of Colorado pay \$10 per term in addition to the fees enumerated above. To be a citizen of Colorado means to be in the state long enough to qualify as a legal voter.

TRAINING SCHOOL DEPARTMENT.

Each student in the High School Department pays the following fees each term:

Book fee	\$3
Museum and laboratory fee	1
Industrial fee	1
Music fee	1
Art fee	1
Athletic fee	1
	—
Total.....	\$8

Each pupil in the Grammar Department pays the following fees each term:

Book fee	\$2
Industrial fee	1
	—
Total.....	\$3

Each pupil in the Primary Department pays the following fees each term:

Book fee\$1

Each pupil in the Kindergarten Department pays the following fee:

Fee for each term.....\$1

BOARD AND ROOM.

Board and room costs from \$3.75 to \$4.50 per week, where two students occupy one room. There are a number of chances for students to do work in families whereby they may be able to earn their room and board or part of the same. There is opportunity for self-boarding for those who desire it.

CAPS AND GOWNS.

All members of the Senior class provide themselves with college gowns and caps. Gowns may be purchased ready made at prices ranging from \$1.60 to \$6.00. The price of the caps ranges from \$1.60 to \$2.50. The color of both gown and cap is black.

SUGGESTIONS TO PROSPECTIV STUDENTS.

1. Any one who contemplates attending a teachers' school would do well to write us. Do not hesitate to ask questions about the school; that is what we want. We like to answer them.

2. Any one who purposes attending our school should write as soon as he has made up his mind, letting us know how he wishes to board, and whether he wishes us to make

arrangements for him, and letting us know on what train he will arrive.

For further information, address the Secretary or President.

VISITORS.

The school is open to visitors. All are made welcome. The teachers and educators of the state are especially invited. The school belongs to the state—it belongs to the teachers of the state. Any one who may have a day, a week or a month to spare would be profited by paying us a visit, entering the classes—taking part if he so desires. It should be quite a privilege to visit our school.

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 loaned 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

tresurer of the Board of Trustees of the Normal School is the custodian of the fund.

Applications for loans are made to the Mentor 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 the student has already completed the greater part of his course in the school, and is consequently well known to the teachers. In case of a favorable vote of the committee, the money is paid the applicant by the tresurer of the fund upon presentation of an order signed by the president of the school and the chairman of the committee. The tresurer accepts the student's note for the amount, and collects it when it becomes due.

It is believed that this fund will be the means of helping many capable and deserving young people to complete their education and to fill positions of usefulness in the public schools of the state. It is earnestly commended to all public-spirited persons as worthy of their consideration and support.

GIFTS TO NORMAL SCHOOL.

The school has received some generous gifts from various sources.

I. Money and Land—

1. The Colorado Mortgage & Investment
Company\$15,000

2. John T. Cranford, 32 acres of land valued at \$2,000 per acre.....\$64,000
3. Citizens of Greeley, 8 acres..... 16,000

II. Gifts by Classes—

- 1891—Life size bust of Plato.
- 1893—Life size bust of Pestalozzi.
- 1894—Large picture.
- 1895—Life size bust of Shakespeare.
- 1896—Picture—The Acropolis.
- 1897—Frieze of Parthenon, three sections, plaster.
- 1898—Mahogany cabinet and life size bust of Indian.
- 1899—Pictures—the Sistine Madonna, the Last Supper, and the Immaculate Conception.
- 1900—Flemish oak desk.
- 1901—Pictures—the Dance of the Muses, Aurora, Hoffman's Christ.
- 1902—Ninth Avenue Entrance—stone—large.
- 1903—Bust of Beatrice—marble—life size on marble pedestal.
- 1904—Picture—Spanish Peaks—Adams.
- 1905—Flying Mercury—Bronze, 5 ft. 10 in.
- 1906—Arts-Crafts Clock with chimes, 7 ft. 6 in. high.
- 1907—Stained Glass Window for Library.
- 1908—Stained Glass Window for Library.

III. Other Gifts—

1. Two fine pieces of pottery from Teco Company, Chicago.

2. Three plates from Robinson & Co., England.
3. Six pieces of porcelain from Haviland, France.
4. A collection of tiles from Pittsburg, Pa.
5. Piece of delft ware, Holland.
6. Several pieces of Beleck, Ireland.
7. Vase, Hermann Kahler, Holland.
8. Several ceramic medallions, Italy.
9. Vase, Owens, Zanesville, by W. C. Wilson, Greeley.
10. Six pieces of pottery, by Weller, Zanesville.
11. Fifteen books for library, F. A. Meredith, Fort Lupton.
12. The Infusoria, by Mr. Plumb, Greeley.
13. Twenty Cliff Dweller Skulls, by Prof. Hewett.
14. A Porcupine.
15. Bust of Sir Walter Scott, by H. T. West.
15. An American eagle, mounted, by Mr. Thayer, Greeley.
16. Two mounted blue herons, by Mr. Freeman, Greeley.
17. Mastodon tooth.
18. A number of books for library.
19. A collection of eggs, by Tyndall Snyder.
20. A collection of birds, Colorado and Pennsylvania.
21. A collection of minerals and fossils from Pennsylvania.
22. A lifting machine, Dr. Marsh, Greeley.
23. A pelican, Mr. Martin, La Salle.

24. Pair of tongs, old timers, Mrs. Cheeseman, Greeley.
25. A New England ferrule, Mrs. Thayer, Greeley.
26. Shrubs and trees, by different classes and by citizens of Greeley.
27. Collection of plants, by Prof. F. H. Byington.
28. An oil portrait of Judge J. M. Wallace, first President of Board of Trustees, Prof. Ernesti.
29. A large Indian olla, Prof. Ernesti.
30. Collection of rocks, Smithsonian Institution.
31. Collection of animals, Smithsonian Institution.
32. Melodeon, Mr. and Mrs. Bullard.
33. Egyptian pottery, H. T. West.
34. Collection South American and Oriental silver coins, Flora Cross.
35. Collection of pictures, Miss Tobey.
36. Collection of pictures, Miss Krackowizer.

IV. Gifts by Training School—

1. Dance of the Muses, High School.
2. Picture.
3. A mission clock, by Eighth Grade.
4. Flying Mercury, plaster, Eighth Grade.
5. Picture—Holland scene, Eighth Grade.
6. Three Madonnas, Eighth Grade.
7. Portrait of Tennyson, Eighth Grade.
8. Bust of Lincoln, Eighth Grade.
9. Bust of Washington, Eighth Grade.
10. Pictures—Three others, Eighth Grade.
11. Picture by Senior Class of High School, 1906.

V. On Deposit—

1. A collection of birds' eggs of Iowa, Mr. Crone.
2. A collection of minerals, polisht, Mr. Lyons.
3. A collection of coins and script, A. J. Park.

THE GREELEY WATER.

The water supply of Greeley is obtained from the cañon of the Cache la Poudre, forty miles from Greeley, in the mountains. From the cañon it is taken into the settling basin (a cut of which is given here), where the rougher foren material is eliminated; from the settling basin it is taken into the filter basin, where it it freed from all foren matter; from the filter basin it is taken to the distributing basin, from which it is distributed over the town. This water system cost the city of Greeley about \$400,000.

CATALOG OF STUDENTS

CATALOG OF STUDENTS.

1908-9.

675.

Abbott, Vivian	Greeley, Colo.
Adams, Birdie F.	Pueblo, Colo.
Agnes, Virginia	Walsenburg, Colo.
Aldrich, Alice	Grand Junction, Colo.
Allard, Lucile	Pueblo, Colo.
Allen, Anna	Canon City, Colo.
Allen, Dorothy A.	Georgetown, Colo.
Allsworth, Brainard	La Junta, Colo.
Amoss, Georgiene	Windsor, Colo.
Anderson, Dorothea	Denver, Colo.
Anderson, May	Greeley, Colo.
Anderson, Myrtle	Trinidad, Colo.
Angove, Ethel	Loveland, Colo.
Archibald, Henrietta	Denver, Colo.
Ardell, Georgia Z.	Pueblo, Colo.
Arfsten, Rosa R.	Denver, Colo.
Asmus, Karine	Akron, Colo.
Atto, Elsie	Edgewater, Colo.
Auble, Stella	Independence, Colo.
Aultman, Lela E. (Mrs.)	Trinidad, Colo.
Aylesworth, Elaine E.	Ft. Collins, Colo.
Avison, Florence	Falcon, Colo.
Bagley, Helen	Pueblo, Colo.
Bailey, Hattie L.	Littleton, Colo.
Bailey, Latilla W.	Lake City, Colo.
Bailey, Lydia J.	Chivington, Colo.
Bailey, Maud	Grand Valley, Colo.
Bailey, W. L.	Lake City, Colo.
Baird, Alice	Greeley, Colo.
Baird, Myrtle	Greeley, Colo.

Baker, E. M.....	Natchez, Miss.
Baker, Georgia I.....	Greeley, Colo.
Baldwin, F. H.....	Greeley, Colo.
Ball, Mary A. (Mrs.).....	Poncha Springs, Colo.
Baller, Theresa	Arvada, Colo.
Balch, Mabel E.	Greeley, Colo.
Barndollar, Josephine	Pueblo, Colo.
Barnes, Frances	Holly, Colo.
Baron, Rena L.....	Silver Plume, Colo.
Barnard, Saide R.	Pueblo, Colo.
Bauer, Flora	Loveland, Colo.
Bean, Elizabeth	Denver, Colo.
Beardsley, Edith	Greeley, Colo.
Beattie, Elizabeth	La Salle, Colo.
Beattie, Jessie F.	La Salle, Colo.
Beattie, Nettie	Sterling, Colo.
Beale, Olive A.	Ft. Morgan, Colo.
Beck, Catherine	Greeley, Colo.
Bedford, Merton I.	Greeley, Colo.
Belden, Ethel	Fruita, Colo.
Bell, Evelyn M.	Crook, Colo.
Bell, Leona J.	Seibert, Colo.
Bentley, Ketura	Cripple Creek, Colo.
Bentley, Ruth	Atwood, Colo.
Bennett, Amanda C.	Cortez, Colo.
Bennett, Gertrude.....	La Junta, Colo.
Bennett, Nellie	Longmont, Colo.
Bernard, Amelia M.....	Florence, Colo.
Bernard, C. R.	Florence, Colo.
Bernethy, Ruth J.....	Greeley, Colo.
Berry, Helen	Denver, Colo.
Berryman, Dorothy J.....	Colorado Springs, Colo.
Betts, Ethel D.....	Pueblo, Colo.
Bishchoff, Nellie	Independence, Colo.
Bivans, Florence N.....	La Junta, Colo.
Black, W. W.....	Victor, Colo.
Blasenich, Elizabeth	Leadville, Colo.
Blumer, Henrietta	Elizabeth, Colo.
Bohn, Minnie	Ft. Lupton, Colo.

Bolton, Gertrude	Cripple Creek, Colo.
Bond, Margaret	Idaho Springs, Colo.
Bowles, Jessie M.	Denver, Colo.
Bowley, F. D. (Mrs.)	Canon City, Colo.
Boyd, Carrie C.	Greeley, Colo.
Boyd, Maude	Greeley, Colo.
Bradburn, Edith	Denver, Colo.
Bradfield, Louis	Greeley, Colo.
Bragg, Lottie B.	Ft. Collins, Colo.
Brainard, Fay	Denver, Colo.
Broadbent, Hattie	Ordway, Colo.
Brown, Addie	Pattonsburg, Mo.
Brown, Emily	Denver, Colo.
Brown, Mona	Canon City, Colo.
Brown, Rowena	Colorado Springs, Colo.
Brunelle, Horace F.	La Salle, Colo.
Budin, Anna	Sterling, Colo.
Burkholderer, Alida	Sioux Rapids, Ia.
Burkholderer, Daisy	Waterloo, Ia.
Burkholder, Hazel M. H.	Georgetown, Colo.
Burkholder, James E.	Georgetown, Colo.
Bullock, Mabel	Braymer, Mo.
Bunner, Catherine	Colorado City, Colo.
Burns, Jessie E.	Monte Vista, Colo.
Burns, Pearl M.	Telluride, Colo.
Burke, Alice	Rocky Ford, Colo.
Burk, Urmal	Ft. Morgan, Colo.
Burr, M. Eleanor	Canon City, Colo.
Burwell, Laura	Durango, Colo.
Busey, Alma B.	Montrose, Colo.
Byers, Ethel	Rocky Ford, Colo.
Cadwell, Alice	Canon City, Colo.
Calvin, Nona A.	Greeley, Colo.
Cameron, Deta	Greeley, Colo.
Camp, Myrtle	Greeley, Colo.
Campbell, Carrie	Ault, Colo.
Campbell, Sadie	Greeley, Colo.
Carlson, Emma	Greeley, Colo.
Cary, Leta C.	Greeley, Colo.

Carey, Marie	St. Joseph, Mo.
Chapman, Maude	Shenandoah, Ia.
Chatin, Janet	Walsenburg, Colo.
Cheatley, Emma L.....	Russell Gulch, Colo.
Cheely, Genevieve	Larkspur, Colo.
Chesnut, Asa R.....	La Salle, Colo.
Chester, Emma C.....	St. Joseph, Mo.
Chilson, Elma M.	Pueblo, Colo.
Choury, Bertha	San Luis, Colo.
Churchill, Isabel L.....	Greeley, Colo.
Clark, Anna M.....	Trinidad, Colo.
Clark, Betty	Denver, Colo.
Clark, Gretta M.....	Glenwood Springs, Colo.
Clendenen, Nellie V.....	Denver, Colo.
Cline, Rosetta	Pueblo, Colo.
Clock, Louva C.....	Yampa, Colo.
Cochran, Mary F.....	Denver, Colo.
Coggins, Laura M.....	Westboro, Mo.
Collom, Mattie J.....	Golden, Colo.
Comstock, Yoland B.....	La Junta, Colo.
Conkright, Josie	Morganville, Kan.
Cook, Alfaretta H.....	La Junta, Colo.
Cook, Charlotte	Stratton, Colo.
Cook, Edith	Rocky Ford, Colo.
Cook, Helen G.....	Delta, Colo.
Courtney, Julia	Montrose, Colo.
Conboy, Irene	Denver, Colo.
Conner, Gertrude G.....	Canon City, Colo.
Cooper, Bessie B.....	Colorado Springs, Colo.
Copeland, Lora M.	Greeley, Colo.
Coughlin, Willa G.....	Loveland, Colo.
Coulson, Marguerite G.	Boulder, Colo.
Courtright, Mabel	Greeley, Colo.
Courtright, Harriett M.	Greeley, Colo.
Craig, Carrie M.	Durango, Colo.
Craig, Maude	Evans, Colo.
Crawford, May	Denver, Colo.
Crosby, Jean	Denver, Colo.
Cross, Flora	Greeley, Colo.

Crowell, Edith	Pueblo, Colo.
Cunningham, Carl (Mrs.).....	Cripple Creek, Colo.
Curran, Mabel	Coaldale, Colo.
Dakins, Una H.....	Colorado Springs, Colo.
Dannels, Clara	Bayfield, Colo.
Dapper, Emma	Quincy, Ill.
Davis, Ethel A.....	Shenandoah, Ia.
Davis, Grace M.	La Junta, Colo.
Davis, Helen B.	Denver, Colo.
Davis, Nell M.....	Coon Rapids, Ia.
Davis, Sadie	Montclair, Colo.
Dean, Rose	La Salle, Colo.
Delling, Evelyn E.	Greeley, Colo.
Delling, Mabel K.	Greeley, Colo.
Devinney, Marie	Edgewater, Colo.
Dille, Margaret	Cripple Creek, Colo.
Dohner, Jenne K.	Loveland, Colo.
Doke, Nellie	Greeley, Colo.
Donovan, Mattie	Longmont, Colo.
Dorsey, Helen	St. Joseph, Mo.
Dotson, Nellie	La Veta, Colo.
Douma, Robert W.	Cedar Edge, Colo.
Dowling, Katharyn	Greeley, Colo.
Draper, Julia E.....	Boulder, Colo.
Dubber, Bessie P.....	Greeley, Colo.
Duescher, Alma C.....	Kankanna, Wis.
Duggins, Florence C.....	Pueblo, Colo.
Dunshee, Faye	Monte Vista, Colo.
Doull, Frances	Greeley, Colo.
Douglas, Elma I.....	Colorado Springs, Colo.
Eades, Emma	Bayfield, Colo.
Easterly, Sara B.....	Gunnison, Colo.
Eckman, Flora A.	Denver, Colo.
Edman, Minnie	Ault, Colo.
Ellerbe, Bettie P.....	Denver, Colo.
Elliott, Bessie E.	Pueblo, Colo.
Ellsworth, Sheila H.	Leadville, Colo.
Elmer, Marjorie	Greeley, Colo.
Ewing, Ernest F.	Durango, Colo.

Ewing, Cora E.	Denver, Colo.
Faires, Ruby E.	Lake City, Colo.
Farrar, Eliza R. (Mrs.).....	Pueblo, Colo.
Farley, Ruth	Denver, Colo.
Farrington, Flora	Denver, Colo.
Fedde, Agnes	Fowler, Colo.
Ferrier, Josephine E.	Ft. Collins, Colo.
Fezer, Marion	Greeley, Colo.
Fick, Theo. G.....	Hugo, Colo.
Filger, Ilma	Breckenridge, Colo.
Finch, Pearl	Colorado Springs, Colo.
Finch, Lester R.....	Greeley, Colo.
Finley, Florence	Denver, Colo.
Fisher, Helen H.....	Colorado Springs, Colo.
Fitzgerald, Myrtle B.	Chicago, Ill.
Floyd, Jessie	Greeley, Colo.
Flemming, Gertrude	Morrison, Colo.
Foley, Nellie	Pueblo, Colo.
Foley, Marie	Omaha, Neb.
Fowler, E. M.....	Denver, Colo.
Fowler, Garnet G.	Trinidad, Colo.
Frantz, Katherine	Georgetown, Colo.
Franzen, Lillie T.	Roswell, N. Mex.
French, Ola M.	Greeley, Colo.
Friel, Pauline	Cripple Creek, Colo.
Gaines, Joysa	Pueblo, Colo.
Gaines, Mary	Pueblo, Colo.
Garrigues, Grace L.....	Greeley, Colo.
Gates, Allie B.	Greeley, Colo.
Geffs, Bessie (Mrs. Carlson).....	Denver, Colo.
Geiser, Eva M.	Greeley, Colo.
Gildersleeve, Helen	Aguilar, Colo.
Gjellum, Bertha	Fowler, Colo.
Gleasant, Belle	Greeley, Colo.
Gleeson, Josie E.	Denver, Colo.
Godfrey, Hazel M.....	Greeley, Colo.
Godfrey, Maude (Mrs.)	Trinidad, Colo.
Goodrich, Anna H.	Greeley, Colo.
Goodrich, Pearl	Wheatland, Wyo.

Goodrich, Rosalie	Wheatland, Wyo.
Gordon, Ethel I.	Greeley, Colo.
Gourley, Anna L.	Grand Junction, Colo.
Grable, Laura	Greeley, Colo.
Graham, Alivia I.	Red Cliffe, Colo.
Granger, Ethel C.	Salida, Colo.
Granger, Margaret	Canon City, Colo.
Grant, Marie	Denver, Colo.
Grantham, Mayme	Pattonsburg, Mo.
Greene, B. R.	Genoa, Colo.
Griffin, Alice M.	Anthon, Ia.
Griffin, J. Luther	Boulder, Colo.
Griffin, Ruth	Phillips, Wyo.
Griffin, Viola	Phillips, Wyo.
Hale, Katherine	Denver, Colo.
Hall, Grace B. (Mrs.)	E. Las Vegas, N. Mex.
Halsted, Halcyon	Greeley, Colo.
Hamilton, Isabella	Holyoke, Colo.
Hammel, Anna	La Junta, Colo.
Hammers, Mildred (Mrs.)	Denver, Colo.
Hanning, Lula	Idaho Springs, Colo.
Hansen, Noma	Denver, Colo.
Hard, Nellie	Longmont, Colo.
Harris, Delia L.	Socorro, N. Mex.
Harris, Edith	Greeley, Colo.
Hartung, Belle	Greeley, Colo.
Hartung, Louise	Greeley, Colo.
Hatcher, Roberta	Cripple Creek, Colo.
Hawkins, Josephine A.	Wheatland, Wyo.
Hay, Mary	Junction City, Kan.
Hays, Carrie	Lamar, Colo.
Hayes, Mary P.	Victor, Colo.
Heath, Edith	Montrose, Colo.
Heenan, Florence M.	Denver, Colo.
Henderson, Louise	Collbran, Colo.
Henderson, Wilma M.	Denver, Colo.
Hennes, Marie	Greeley, Colo.
Hennes, Olive	Greeley, Colo.
Hennes, Wilma C.	Greeley, Colo.

Heppner, Mary Frances	Denver, Colo.
Herchenroder, Clara	St. Joseph, Mo.
Herren, Ida V.	Salida, Colo.
Hess, Fannie A.	Ault, Colo.
Hetzl, Eva M.	Newton, Kan.
Hibner, Dee	Greeley, Colo.
Hill, Mildred F.	Greeley, Colo.
Hill, Richard D.	Pueblo, Colo.
Holleck, Mabel	Cripple Creek, Colo.
Hoober, Hazel D.	Pueblo, Colo.
Hopkins, Carrie	Maryville, Mo.
Horton, Mamie	Milwaukee, Wis.
Horsh, Minnie	Lincoln, Neb.
Horton, Nellie	Pueblo, Colo.
Howard, Dora C.	Rocky Ford, Colo.
Hubert, Gladys R.	Trinidad, Colo.
Hubbell, Julia	Ault, Colo.
Hull, Marie	Lake City, Colo.
Hunt, Carolyn N.	Lake City, Colo.
Hunter, Calla M.	Greeley, Colo.
Hurst, John L.	Denver, Colo.
Hutchison, M. H.	Yampa, Colo.
Imes, Laura B.	Sawpit, Colo.
Ingersol, Edna	Delta, Colo.
Ingledeu, Gwendolyn	Leadville, Colo.
Inman, Katharine S.	Denver, Colo.
Jackson, Nellie M.	Wabash, Ind.
Jensen, Magie	Potter, Neb.
Joel, Ethel E.	Canon City, Colo.
Johnson, Anna G.	Greeley, Colo.
Johnson, Ella	Greeley, Colo.
Johnson, Gladys H.	Greeley, Colo.
Johnson, Harry	Evans, Colo.
Johnson, John C.	Greeley, Colo.
Johnson, Mabel	Ft. Lupton, Colo.
Johnson, Mary E.	Sterling, Colo.
Johnson, Mildred	Greeley, Colo.
Jones, Alice J.	Loveland, Colo.
Jones, Bea	Victor, Colo.

Jones, Bessie	Victor, Colo.
Jones, Lynn	Littleton, Colo.
Jones, Robert A.	Telluride, Colo.
Jonik, Elizabeth	Pueblo, Colo.
Judd, Effa	Manzanola, Colo.
Karnes, Antoinette	Ouray, Colo.
Kauffman, Hattie R.	Greeley, Colo.
Keating, Mary A.	Pueblo, Colo.
Keefe, Verma A.	Denver, Colo.
Keene, Anna	St. Joseph, Mo.
Keener, Goldie E.	Carr, Colo.
Kenehan, Kate	Denver, Colo.
Kelley, Lillian	Greeley, Colo.
Kemp, May	Logansport, Ind.
Kendel, Mary	Greeley, Colo.
Kennedy, Lurra	Greeley, Colo.
Kenny, Aimee	Blair, Neb.
Kenton, Nuna	Pueblo, Colo.
Kermode, Dorothy	Walden, Colo.
Kibbey, Ilah	Kansas City, Mo.
King, Alice	Greeley, Colo.
King, Anna	Junction City, Kan.
King, Ellen (Mrs.)	Pueblo, Colo.
King, Estella	Lucerne, Colo.
Kisler, Elizabeth	Ft. Morgan, Colo.
Kistler, Isabelle A.	Denver, Colo.
Knight, Myrtle	Denver, Colo.
Konkel, Anna B.	Vilas, Colo.
Krakel, Nina D.	Sterling, Colo.
Kramer, Mary Gertrude	Denver, Colo.
Kuhnley, Irene	Delta, Colo.
Kuhnley, Stella	Delta, Colo.
Kyle, Henry	Evans, Colo.
Kyle, Clover M.	Evans, Colo.
Lacher, Luella	Montrose, Colo.
Lace, Jessie A.	Pueblo, Colo.
Lace, Mona V.	Pueblo, Colo.
Lackore, Lillian	Greeley, Colo.
Ladd, Helen M.	Union Village, Vt.

Lalumander, Mayme	Idaho Springs, Colo.
Lamma, Clara	La Salle, Colo.
Lamb, Helen	Grand Junction, Colo.
Landers, Laura	Eaton, Colo.
Landers, Prudence	Eaton, Colo.
Lannon, Abigail	Pueblo, Colo.
Lapham, Etta	Grand Junction, Colo.
Larsen, Emma	Kimball, Neb.
Larson, Gladys	Leadville, Colo.
Larson, Rose	Kimball, Neb.
Latham, Mabel	Ames, Ia.
Laughead, Myrtle S.	Denver, Colo.
Law, Bess H.	Julesburg, Colo.
Lawrence, Effie L.	Boulder, Colo.
Lay, Edith	Lamar, Colo.
Lee, Ruby H.	Edgewater, Colo.
Legler, Rosina	Sac City, Ia.
Leiper, Vera	Greeley, Colo.
Levis, Edna B.	Greeley, Colo.
Leverton, Nettie R.	Warren, Ill.
Lewis, Blanche	Edgewater, Colo.
Lilly, Louise	La Junta, Colo.
Limbocker, Zoe	Pueblo, Colo.
Linville, Eva B.	Greeley, Colo.
Little, Rosamond	Canon City, Colo.
Livesey, Mary	Denver, Colo.
Lloyd, Phillip W.	Rockvale, Colo.
Long, Geraldine M.	E. Syracuse, N. Y.
Long, Margaret	Lafayette, Colo.
Lockhart, James	Greeley, Colo.
Lowe, Naamah	Durango, Colo.
Lucas, Cora	Greeley, Colo.
Luce, Vala (Mrs.)	Hubbell, Neb.
Lynds, Mary E.	Denver, Colo.
Lyman, Genevieve M.	Denver, Colo.
Lyon, Florence	Denver, Colo.
Lyon, Maude A. (Mrs.)	Denver, Colo.
Mahoney, Elizabeth	Victor, Colo.
Marshall, Grace	Delta, Colo.

Marsh, Margaret	Lamar, Colo.
Martin, Frances	Greeley, Colo.
Martin, Nellie M.	Coon Rapids, Ia.
Martin, Maude	Greeley, Colo.
Marvin, Grace H.	Sterling, Colo.
Matzick, Emma	Monte Vista, Colo.
Mays, Josephine	Red Cliff, Colo.
McAllister, Winifred E.	Denver, Colo.
McCarthy, Nannie	Denver, Colo.
McCrery, Elizabeth G.	Greeley, Colo.
McDonald, Christina M.	Denver, Colo.
McDougal, Mary B.	Denver, Colo.
McBride, Sallie	Swallows, Colo.
McClelland, Mary E.	Wheatland, Wyo.
McCloskey, Anna	Pueblo, Colo.
McElhaney, Lenora	Wheatland, Wyo.
McGinty, Frances	Junction City, Kan.
McGinn, Margaret M.	Denver, Colo.
McKibben, Edith J.	Greeley, Colo.
McLean, Mary	Brush, Colo.
MacManus, Lavane F.	Denver, Colo.
McMillan, Mary A.	Greeley, Colo.
McNew, Addie F.	Julesburg, Colo.
McNicholas, Abbie	Durango, Colo.
McNicholas, Nettie	Durango, Colo.
Meads, Mildred H.	Greeley, Colo.
Mead, Wilhemina	Greeley, Colo.
Meachem, Edna M.	Denver, Colo.
Mellor, Ethel	Aspen, Colo.
Mellor, Florence	Aspen, Colo.
Melvin, Harriette	Santa Cruz, Calif.
Metcalf, Della	Ft. Collins, Colo.
Mickelson, Alma E.	Rocky Ford, Colo.
Middleton, W. E.	Longmont, Colo.
Miller, Alta M.	Greeley, Colo.
Miller, Florence (Mrs.)	Greeley, Colo.
Miller, Georgia M.	Pueblo, Colo.
Millard, Nathan	Ft. Collins, Colo.
Milligan, Mabel H.	Crested Butte, Colo.

Mills, Freda	Ft. Collins, Colo.
Moler, Lenita	Colorado Springs, Colo.
Money, Carrie E.	La Junta, Colo.
Monroe, Gussie R.	Thatcher, Colo.
Montague, Bessie B.	Denver, Colo.
Moore, Grace G.	Greeley, Colo.
Moore, Gertie	Pueblo, Colo.
Moore, Hazel H.	Denver, Colo.
Moore, Jessie R.	Ft. Collins, Colo.
Moore, Maude L.	Greeley, Colo.
Morrison, Delaphine	Leadville, Colo.
Morrison, Kellaphene	Howard, Colo.
Morris, Clara	Greeley, Colo.
Moseley, F. N. (Mrs.)	Loveland, Colo.
Moynahan, Minnie C.	Leadville, Colo.
Mulnix, Maisie	Denver, Colo.
Mulvaney, Alma K.	Loveland, Colo.
Mulvaney, Grace A.	Loveland, Colo.
Nash, Mary	Cripple Creek, Colo.
Nelson, Ellen	Manhattan, Kan.
Nelson, Flora	Montrose, Colo.
Nelson, Nell	Howardsville, Colo.
Nesbitt, Winifred (Mrs.)	Rocky Ford, Colo.
Newcum, Charles L.	Denver, Colo.
Newcomb, Kate	La Jara, Colo.
Newton, Bessie L.	Durango, Colo.
Nichols, Harriett M.	Pueblo, Colo.
Nichols, Helen E.	Pueblo, Colo.
Norris, Lena	Colorado Springs, Colo.
Norris, Lillian	Colorado Springs, Colo.
Norton, Marguerite	Denver, Colo.
Norviel, Alma	Fountain, Colo.
Noyes, Frances	Silver Plume, Colo.
Noyes, Mary	Greeley, Colo.
Nunemaker, Walter T.	La Junta, Colo.
Olin, Marguerite	Pueblo, Colo.
O'Connell, Anna	Anaconda, Colo.
O'Connell, Sara A.	Georgetown, Colo.
O'Rourke, Helena	Idaho Springs, Colo.

Osterhout, Katie	Las Animas, Colo.
Ott, Luella	Greeley, Colo.
Olsen, Leah	Ault, Colo.
Ovren, Josephine Mary	Victor, Colo.
Packer, Winifred R.	Greeley, Colo.
Page, Catherine	Windsor, Colo.
Paine, Velma E.	Greeley, Colo.
Palmer, Ethel	Golden, Colo.
Palmquist, Christina M.	Trinidad, Colo.
Parkyn, Esther	Trinidad, Colo.
Parr, Estelle	Victor, Colo.
Parfet, Lois	Cripple Creek, Colo.
Parlow, Mary E.	Toledo, Ohio
Paul, Elna T. (Mrs.)	Greeley, Colo.
Parkinson, Emma	Moundville, W. Va.
Payne, Bird M.	Greeley, Colo.
Pearce, Lela E.	Cripple Creek, Colo.
Pearson, Hazel	Lafayette, Colo.
Pemberton, Arthur W.	Greeley, Colo.
Pennock, Ella (Mrs.)	Cripple Creek, Colo.
Peterson, Hanna E.	Silver Plume, Colo.
Peterson, Hilda	Durango, Colo.
Phillips, Zelma	Pagosa Springs, Colo.
Piedalue, Laura	Greeley, Colo.
Peirson, Gertrude R.	Colorado Springs, Colo.
Pierson, Sadie L.	Delta, Colo.
Pitnam, Frances	Florence, Colo.
Poynter, Mary L.	Georgetown, Colo.
Pound, John L.	Canon City, Colo.
Powers, Mary G.	Grand Rapids, Mich.
Price, Sylvia	Monte Vista, Colo.
Probert, Bessie	Buffalo Creek, Colo.
Purdy, Ethel M.	Pueblo, Colo.
Purrier, Harriette E.	Gunnison, Colo.
Quick, Anna	Ft. Collins, Colo.
Quinlan, Agnes	Gypsum, Colo.
Quinlan, Elizabeth	Gypsum, Colo.
Ramsdell, Fred	Greeley, Colo.
Ramsey, Carrie B.	Rocky Ford, Colo.

Ramsey, Adele A.	Crook, Colo.
Rayner, Mary	Pueblo, Colo.
Rayner, Marguerite F.	Pueblo, Colo.
Reed, Ethel	Canon City, Colo.
Read, Fay	Pueblo, Colo.
Redic, Ray	Butler, Pa.
Reed, Gertrude	Greeley, Colo.
Rehn, Katherine	Greeley, Colo.
Reid, Janet	Greeley, Colo.
Reilly, Kathryn A.	Empire, Colo.
Reno, Alice	Manitou, Colo.
Rice, Grace	Golden, Colo.
Rice, Katharyn	Greeley, Colo.
Richart, Lillian M.	Greeley, Colo.
Richardson, Etta E.	Greeley, Colo.
Rider, Ida M.	Colorado Springs, Colo.
Ripley, Eva	Canon City, Colo.
Robertson, Edna	Del Norte, Colo.
Robb, Gertrude	Rocky Ford, Colo.
Rockefeller, Edna M.	Crested Butte, Colo.
Roddy, Gary	Greeley, Colo.
Rogers, Grace L.	La Salle, Colo.
Rogers, Ruth	Colorado Springs, Colo.
Roe, Anna	Pueblo, Colo.
Rose, Vira I.	Denver, Colo.
Rosenburg, Frances	Denver, Colo.
Rosendahl, Charlotte	Denver, Colo.
Ross, Ada	Canon City, Colo.
Rowe, Edith	Prowers, Colo.
Rule, Beatrice	Idaho Springs, Colo.
Ryan, Grace (Mrs.)	Evans, Colo.
Sallen, Katharine	Denver, Colo.
Sandstedt, Hilma	Pinon, Colo.
Sampson, Nellie E.	Cheyenne, Wyo.
Schultz, Mary D.	Arvada, Colo.
Schenck, Gertrude	Denver, Colo.
Schoppe, Gyp	Ft. Morgan, Colo.
Scott, Letitia	Greeley, Colo.
Seaman, Maud L.	Denver, Colo.

Sellers, Elizabeth	Sturgis, S. Dak.
Sells, Mae	Colorado Springs, Colo.
Schertel, Max	Greeley, Colo.
Schultz, Minnie E.	Guthrie, Okla.
Shambo, Maebelle	Greeley, Colo.
Shamel, Harold	Newton, Kan.
Sherman, Jessie S.	Greeley, Colo.
Sheeder, Elizabeth (Mrs.)	Victor, Colo.
Shonka, Rose	Schuyler, Neb.
Shreves, Rolla M.	Ripley, Okla.
Shull, Beulah B.	Berthoud, Colo.
Sievers, Clarinda	West Bend, Wis.
Sibley, Blanche T.	Greeley, Colo.
Skinner, Edith	Montrose, Colo.
Slater, Catherine M.	Denver, Colo.
Slaughter, Elizabeth A.	Colorado Springs, Colo.
Smith, Alice	Cripple Creek, Colo.
Smith, Clara E.	Platteville, Colo.
Smith, Gertrude V.	Las Animas, Colo.
Smith, Josephine A.	La Salle, Colo.
Smith, Josephine	Florence, Colo.
Smith, Louise	Cripple Creek, Colo.
Smith, Margaret L. (Mrs.)	Longmont, Colo.
Smith, Mary A.	Boulder, Colo.
Smith, Minnie F. (Mrs.)	Sterling, Colo.
Smith, Nettie P.	Atwood, Colo.
Snead, Lucy	Greeley, Colo.
Snoddy, Martha B.	Las Animas, Colo.
Snook, Carrie	Greeley, Colo.
Snodgrass, Geneve	Trinidad, Colo.
Songer, Myrtle	Edgewater, Colo.
Sprague, Jessie	Cutler, Ill.
Stanton, Nellie	Denver, Colo.
Stapp, Melvina	Colchester, Ill.
Stauffer, Ida	Delta, Colo.
Steele, Lenore	Pueblo, Colo.
Stephen, Elsie M.	Denver, Colo.
Stein, Louise	Eagle, Colo.
Stern, Edith	Denver, Colo.

Stetter, Leah	Holyoke, Colo.
Stevens, Eva (Mrs.)	Pueblo, Colo.
Stewart, J. Mack	Greeley, Colo.
Stiffler, Robert E.	Denver, Colo.
Stockdale, Martha E.	Colorado Springs, Colo.
Stockdale, Mary	Colorado Springs, Colo.
Stone, Gertrude M.	Pueblo, Colo.
Strows, Nellie V.	Gypsum, Colo.
Stryker, Mary	Boulder, Colo.
Sullivan, Mae E.	Denver, Colo.
Strang, Anna	Montrose, Colo.
Strong, Myrta	Brighton, Colo.
Sullivan, M. S. (Mrs.)	Canon City, Colo.
Swart, Frank E.	Amethyst, Colo.
Swanson, Emma H.	Las Animas, Colo.
Sweet, Lewis	St. Joseph, Mo.
Tandy, Martha Frances	Carbondale, Colo.
Tandy, Helen	Carbondale, Colo.
Tanquory, Ruberta	Denver, Colo.
Templeton, Helene	Sterling, Colo.
Thomas, H. F.	Greeley, Colo.
Thill, Estella L.	Florence, Colo.
Thompson, Anna F.	Denver, Colo.
Thompson, Florence	Greeley, Colo.
Thompson, Laura	Greeley, Colo.
Tidball, Elizabeth	Victor, Colo.
Tierney, Anna A.	Denver, Colo.
Tohill, Enid V.	Monte Vista, Colo.
Tope, Minne E.	Manzanola, Colo.
Townsend, Etha	Victor, Colo.
Tracy, Lillian	Denver, Colo.
Tredway, Jesse M.	Denver, Colo.
Triem, Emma	Winston, Mo.
Tucker, Henry M.	Loveland, Colo.
Tucker, Pearl E.	Greeley, Colo.
Twombly, Della	Ft. Lupton, Colo.
Twomey, Iona	Julesburg, Colo.
Twomey, H. Jane	Julesburg, Colo.
Tyler, Cecilia M.	Buena Vista, Colo.

Ummel, Maude	St. Joseph, Mo.
Umstead, Aura	Rocky Ford, Colo.
Van Atta, Prudence.....	Colorado Springs, Colo.
Van Buren, Arthur	Rariton, Ill.
Van Darpen, Anna	Denver, Colo.
Van Buskirk, Caroline E.....	Alta, Ia.
Van Winkle, Grace I.....	Cope, Colo.
Vincent, Jessie H.	Goodland, Kan.
Van Gorder, Elizabeth	Greeley, Colo.
Wagner, Alice M.	Russel Gulch, Colo.
Wagner, Marguerite G.	Denver, Colo.
Waldron, Mary G.	Leadville, Colo.
Walker, Ethel	Beloit, Kan.
Wallick, Mary	Edgewater, Colo.
Walsh, Delia	Cripple Creek, Colo.
Walsh, Eva	Denver, Colo.
Walsh, Lottie E.	Greeley, Colo.
Walz, Mina M.....	Glenwood Springs, Colo.
Washburn, Elizabeth Z.	Harper, Colo.
Waterman, Verna H.	Ohio City, Colo.
Weaver, Nellie F.	Coon Rapids, Ia.
Weaver, Inez E.	Austin, Colo.
Weber, Anna	Durango, Colo.
Weber, Lina	Sugar City, Colo.
Webster, Ruth	Canon City, Colo.
Weekes, Edna	Denver, Colo.
Wegerer, Berana M.	Marion, Kan.
Welch, Edith C.	Gunnison, Colo.
Wesner, Eleanora M.	Zion City, Ill.
Weist, Mabel B.....	Rocky Ford, Colo.
Welsh, Losia	Clarinda, Ia.
Welsh, Josephine	Windsor, Colo.
Whetsel, Anna L. (Mrs.)	Pueblo, Colo.
Whitehead, Jennie	St. Joseph, Mo.
White, Julia K.	Carbondale, Colo.
White, Lois	Greeley, Colo.
Whitman, Bertha H.	Denver, Colo.
Wilkinson, Olive Fay	Auburn, Neb.
Wilkinson, Nannie D.	Humboldt, Neb.

Williams, Letha	Delta, Colo.
Williams, Sarah	Sterling, Colo.
Wilson, Alice I.	Denver, Colo.
Wilson, Alma	Eaton, Colo.
Wilson, Minnie	Denver, Colo.
Wood, Jean	Cripple Creek, Colo.
Woods, Elizabeth M.	Schuyler, Neb.
Wogan, Arthyrn	Cripple Creek, Colo.
Wolff, Elsa	Cripple Creek, Colo.
Woodring, Helen	Colorado Springs, Colo.
Wright, Edna	Greeley, Colo.
Wren, Lena	Pueblo, Colo.
Wright, Lois	Greeley, Colo.
Wright, Lora	Greeley, Colo.
Wyatt, Clifton	Greeley, Colo.
Yardley, Hattie F.	Greeley, Colo.
Yerion, Cena	Greeley, Colo.
Young, George	Evans, Colo.
Yoder, Albert H.	Sterling, Colo.
Zilar, Bessie B.	La Salle, Colo.
Zingg, Ottway C.	La Salle, Colo.

HIGH SCHOOL DEPARTMENT.

ELEVENTH GRADE—82.

Anthony, Hazel	Emerson, Mae
Ashby, Hope	Erickson, Arthur
Backus, Lillian	Finch, Clarence
Baker, Charles	Finch, Callie
Beardsley, Inez	Glover, Nellie
Beattie, Robert	Hamilton, Elsie
Bennett, Nellie	Hatch, Frank
Bischoff, Nellie	Hayden, Mary
Blaisdell, Oscar	Heighton, Charles
Blazer, Esta	Hennes, Elizabeth
Brake, Jane	Hopkins, Mildred
Campbell, Ruth	Horton, Mary
Carrithers, Glessner	Hunter, Sarah
Culver, Betsey	Keefe, Blanche
Dickey, Harley	Kennedy, Lyra
Doke, Harold	Konkel, Mary

Lamb, Florence
 Laughrey, Berenice
 Lewis, Carrie
 Ling, Bessie
 Lockhart, Mae
 Mayhoffer, Frances
 Moore, Elizabeth
 Morris, Ruth
 Motheral, Clare
 Mott, Irene
 Mundy, James
 Musgrove, Mary
 Mulvehill, Rita
 McCoy, Adelaide
 McCullom, Agnes
 McCullom, Merriam
 McCunniff, John
 McCunniff, Dennis
 New, Nellie
 Nordstrom, Sylvia
 Noyes, Mary
 Oliver, Bertha
 Oliver, Elsie
 Oliver, Ruth
 Peery, Blanche

Piedalue, Regina
 Phillips, Zelma
 Pritchard, Henrietta
 Probert, Bessie
 Reeves, Frank
 Richey, Helen
 Shambo, Mabel
 Snodgrass, Geneva
 Steck, Susie
 Swanson, Lois
 Sweet, Gladys
 Sullivan, Vera
 Tibbets, Elsie
 Thompson, Aline
 Thornton, Theresa
 Townsend, Alice
 Truelson, Norma
 Tucker, Mary
 Turner, Elmer
 Varvel, Emmett
 Wilcox, Eula
 Willson, Anna
 Wilmarth, Alta
 Wood, Mary
 Woods, Della

TENTH GRADE—62.

Alden, Lee
 Baab, Bertha
 Bashor, Esta
 Bashor, Mary
 Bedford, Everett
 Bly, Hazel
 Boreson, Emma
 Boreson, Martha
 Boston, Roy
 Bowerman, Austin
 Bowland, Edward
 Campbell, Ruth
 Collins, Mary
 Colpitts, Guy
 Crone, Harry
 Cross, John
 Davidson, Chief
 Dellling, Minnie
 Dotson, Edna
 Dotson, Ruth

Durning, Charles
 Eberhardt, Pearl
 Emerson, Inez
 Hartung, Emil
 Hopkins, Helen
 Horton, Mary
 Hunter, Hugh
 Hull, Orlo
 Jillson, Helen
 Kelley, Myra
 Konkel, James
 Kyle, Norma
 Lay, Edith
 Lee, Arthur
 Lewis, Ralph
 Lloyd, Nathaniel
 Lyon, Evelyn
 Malm, Carl
 McKelvey, Lillian
 Nessler, Estelle

Phelps, Mattie
 Riddle, Ray
 Robb, Grace
 Samson, Ida
 Sanford, Hazel
 Smith, Belva
 Snider, Jesse
 Stewart, Edna
 Svedman, Ellen
 Tague, Harold
 Todd, Maude

Tope, Mary
 Tope, June
 Truelson, Katie
 Waite, Earl
 Watson, Gertrude
 Williams, Fern
 Wright, Zada
 Wyatt, Hilda
 Wyatt, Mabel
 Yerion, Grace
 Zilar, John

NINTH GRADE—59.

Adams, Roy
 Anderson, Fritz
 Anderson, Nellie
 Billings, Gordon
 Bickling, Francena
 Bishop, Ida
 Boreson, Grace
 Bowles, Dotta
 Briscoe, Edwin
 Carle, Mary
 Center, Fred
 Champion, Ernest
 Davis, Charles
 Davidson, Lulu
 DuBois, Karl
 Durning, James
 Easton, Edison
 Eberhardt, Frances
 Erwin, Eva
 Edwards, T. M.
 Evans, Mozelle
 Fagan, Edward
 Forquer, Ellen
 Gates, Frank
 Gilmore, Claude
 Gilmore, Daisy
 Gore, Floy
 Gordon, Carl
 Harris, Earl
 Holmes, Agnes

Hunter, Eugene
 Jenkins, Charles
 Laughrey, Beulah
 Lloyd, Mamie
 Malm, Esther
 Martin, Rebecca
 Martin, Olive
 Miller, Ernest
 Mosier, Ruth
 Nicholas, Clifford
 Nicholas, Ora
 Offerlee, Molly
 Parsons, Maude
 Pattee, Isabelle
 Peterson, Grace
 Ringle, Helen
 Robinson, Inez
 Shultz, Juanita
 Spencer, Clarke
 Statler, Stewart
 Stewart, Hazel
 Svedman, Lillie
 Swanson, Mae
 Teghtmeyer, Velma
 Tell, Sylvia
 Waite, Rosa
 Weiss, Rosa
 Wickline, Walden
 Williams, Charles

GRAMMAR DEPARTMENT.

EIGHTH GRADE—35.

Adams, George	Kindred, Roy
Adams, Ruth	Knous, Miriam
Anderson, Ellen	Knous, Mildred
Anderson, Dagmar	Kyle, Edna
Asling, Harvey	Lofgren, Hattie
Bruckner, Fred	Martin, Anna
Bruckner, Johannah	Miller, Burt
Camp, Greeley	Mundy, Emery
Carlson, Albin	Newman, Charles
Dedrick, Helene	Pfleiderer, Anna
Edwards, Lizzie	Riekemann, Mattie
Elmer, Catherine	Riekemann, Willie
Elliott, John	Stephens, Dorothy
Fairchild, Lola	Swart, Katherine
Howard, Elmer	Sweet, Marian
Inman, Mamie	Tell, Lorette
Johnson, Shirley	Van Sickle, Hazel
Kidder, Jay	

SEVENTH GRADE—24.

Anderson, Albert	Hopkins, Esther
Balch, Wilbur	Houghton, Genette
Becker, Edgar	Howard, Helen
Benton, Elbert	Kirk, Ole
Billings, Ada	Martin, Marie
Bons, Barbara	Mundy, Edwin
Calvin, Clyde	Nagel, Helen
Evans, Lucille	Newman, Esther
Farr, Ruth	Riekemann, Ida
Galland, Mamie	Stephens, Alan
Gill, Richard	Stephens, Edith
Hakanson, Stella	Snider, Claude

SIXTH GRADE—25.

Adams, Donald	Ericson, Ruth
Adams, Mary	Foley, Ruth
Anderson, Lucien	Hakanson, Ruby
Bickling, Marietta	Kiest, Ernest
Bracewell, Harold	Kimbley, Orville
Brainard, Omer	Meacham, Ruth
Calvin, Bert	Neeland, Mary
Erdbrugger, Elsie	Ovesen, Esther

Probert, Florence
 Prunty, Iona
 Ringle, Harold
 Shattuck, Mary
 Spencer, Ada

Stodghill, Gilbert
 Waite, Clarence
 Walker, Madge
 Williams, Phillip

FIFTH GRADE—24.

Anderson, Carl
 Anderson, George
 Anderson, Lillie
 Bly, Lucius
 Calvin, Elizabeth
 Calvin, Maggie
 Carlson, Anna
 Crawford, Kenneth
 Dedrick, Walter
 Hill, Hazel
 Karn, Winifred
 Kimbley, Ona

Loewus, Sidney
 Lowe, Florence
 Markus, Mary
 Miller, Katherine
 Pleiderer, August
 Riebe, Ella
 Ringle, Margaret
 Stodghill, Corinne
 Sweet, Mildred
 Tegtman, Eddie
 Tegtman, Ernest
 Town, George

PRIMARY DEPARTMENT.

FOURTH GRADE—32.

Anderson, Blanche
 Anderson, Henry
 Bennett, Ada
 Bickling, McKinley
 Boyd, Albert
 Bracewell, Helen
 Brainard, Boyd
 Bruckner, Clara
 Bruckner, Grace
 Calvin, Van
 Carlson, Tillie
 Courtney, Ocie
 Davis, Ralph
 Deelux, Neill
 Foley, Irene
 Hatch, Orville

Hays, Robert
 Howard, June
 Hughes, Clara
 Kirk, John
 Lawrence, Roy
 Lawrence, Willie
 Lofgren, Mable
 McAfee, Ida
 McClelland, Alvin
 Milligan, Clara
 Probert, Richard
 Prunty, Leuty
 Riekemann, Elsie
 Tegtman, Frank
 Twist, Paul
 Walker, Charles

THIRD GRADE—23.

Adams, Elizabeth
 Adams, Willie

Ashby, Evalyn
 Barger, Virgil

Barry, Leta
 Calvin, Leuria
 Evans, Basil
 Fitz, Josh.
 Foley, Irene
 Gale, Jessie
 Hill, Arthur
 Hughes, Bennett
 Kyle, Ray
 Lawrence, Carl

Markus, Katie
 Moore, Novelyn
 Prunty, Lloyd
 Sanford, Brainerd
 Shattuck, Flora
 Smyzer, Sharon
 Stapleton, Blanche
 Talbert, Flossie
 Talbert, John

SECOND GRADE—30.

Anderson, Clayton
 Barker, Chester
 Bruckner, John
 Bullock, Philip
 Bickling, Elsie
 Catherwood, Carmileta
 Dotson, George
 Ernesti, Virginius
 Galland, Charlie
 Hays, Helen
 Hakanson, Melvin
 Ketcham, Gladys
 Martin, Alice
 Miller, Alex.
 Miller, Fred.

Mott, Frank
 Murry, Evalyn
 Petty, George
 Preston, Harold
 Riebe, Otto
 Ringle, Arthur
 Stephens, Jennie
 Stevens, Horace
 Smiser, Marvin
 Thompson, Clyde
 Thompson, Earle
 Whitaker, Lois
 Wood, Finis
 Zingg, Ruth
 Zingg, Robert

FIRST GRADE—29.

Adams, Howard
 Bernard, Charles
 Bly, Helen
 Bowley, Roland
 Boyd, Esther
 Crippen, Howard
 Ecker, John
 Hotchins, Eric
 Hotchins, Loren
 Kindred, Jacob
 Kortney, Clifford
 Lawrence, Alfred
 Lawrence, Hannah
 Mawhinney, Lucetta
 Markus, Emma

Martin, Earle
 Miller, Mary
 Mott, Irving
 Murry, Agnes
 Reed, Nellie
 Riebe, Fred
 Ross, Myrle
 Thompson, Beulah
 Tope, Ted.
 Walker, Mildred
 Williams, Teddie
 Williams, Marian
 Wood, Samuel
 Wynegar, George

KINDERGARTEN—57.

Baab, William	Marshall, Byron
Beardsley, Alma	Memford, Grove
Buman, Paul	Miller, Warren
Bush, Walter	Milligan, Mary
Card, Elizabeth	Moore, Margaret
Clayton, Genevieve	Murchison, Vail
Cornin, Dorothy	Myers, Leon
Davis, John C.	Neill, Mildred
Dedrick, Mary Francis	Nims, Eleanor
Gill, Mabel	O'Donnell, Juanita
Hall, Mabel	O'Donnell, Wanda
Heuring, Katherine	Onstine, Daniel
Hill, James	Patterson, Russell
Houtchens, Samuel	Paulson, George
Hughes, Margaret	Pogue, Peggy
Jacobs, John T.	Pollock, Bethel
James, George	Probert, Beatrice
Jenkins, Donald	Purcell, Margaret
Jennings, Margaret	Sims, James
Johnson, Nels E.	Smith, Anona
Johnson, Coil	Snouffler, Neal
Lawrence, Alice	Stevens, Ethel
Lawrence, Arthur	Stone, Charles Jordan
Lyon, Richard	Sturgeon, Ruth
McAfee, Avis	Sufphin, Nughbert
McCarthy, Ernest	Thompson, Loree
McKelvey, Paul	Ward, Mary Alice
Mawhinney, Edwin	Whitaker, Iris
Mallonee, Clair	

SUMMARY OF ATTENDANCE

NORMAL DEPARTMENT.

Students 1908-09	675
------------------------	-----

TRAINING SCHOOL.

High School Department:

Eleventh Grade	82	
Tenth Grade	62	
Ninth Grade	59	
	—	203

Grammar Department:

Eighth Grade	35	
Seventh Grade	24	
Sixth Grade	25	
Fifth Grade	24	
	—	108

Primary Department:

Fourth Grade	32	
Third Grade	23	
Second Grade	30	
First Grade	29	
	—	114

Kindergarten		57
--------------------	--	----

Total.....	1,157
------------	-------

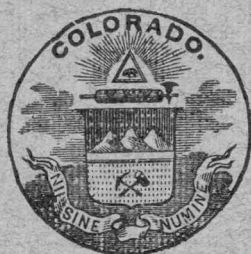
CONTENTS.

	PAGE
Admission to School.....	22
Alumni Association	175
Announcements	3
Arithmetic	142
Art	78, 129
Biological Science	48
Board of Trustees.....	4
Calendar	2
Catalogue of Students—	
Normal	191
Training and High School.....	208
Chemistry	53
Christian Association	173
Committees—	
Faculty	10
Standing	5
Costumes	182
Courses of Study—	
Kindergarten	97
Normal	23
Training School	114
High School	161
Crucible	176
Diplomas	24
Directions for Coming and Entering.....	182
Discipline—Moral and Spiritual Influence.....	170
Domestic Science	85
Education	27
Examining Board	9
English, Literature and History.....	71, 119
Expenses	180
Faculty	6

	PAGE
Faculty Committees—	
Normal	10
French	69
Function of the Normal School.....	19
German Language and Literature	66
Gifts to Normal School	184
Government of the School	169
High School Department	155
History	60, 132
History of School	15
Italian	70
Kindergarten	96
Latin	63
Library	104
Literary Societies	174
Location of School	15
Manual Training	80, 145
Maintenance of School	16
Mathematics	58
Methods in Geography.....	56
Miscellaneous	167
Modern Languages	65
Museum of Fine Arts and Arts Crafts.....	171
Music	77, 127
Nature Study	50, 138
Natural History Museum	172
Normal Department	17
Officers	4
Outline of Work..... (See name of subject or department.)	
Pedagogy	47
Physical Science	52
Physical Education	91, 150
Psychology and Child Study.....	41
Publications	176
Reading	75, 124
School Buildings	15
Sessions of School.....	180
Sociology	62

	PAGE
Standard of the School.....	170
Student's Relief Fund	183
Summary of Attendance	215
Training School	109
Trained Teachers	171
Visitors	183
Water Supply	188

State Normal School of Colorado



Bulletin of Announcement of
The Normal College Course
1909-1910

In all publications of this institution is employed the spelling
recommended by the Simplified Spelling Board

Series IX. No. 2

Published Quarterly by the Trustees of the State
Normal School of Colorado, Greeley, Colorado

Entered at the Postoffice, Greeley, Colo., as Second-class matter

...COLORADO...
STATE NORMAL SCHOOL
Greeley, Colorado

Bulletin of Information

CONCERNING THE

Normal College Course

OF THE

Colorado State Normal School

July 1909

ANNOUNCEMENTS

1909-1910

FALL TERM

Opens Tuesday, September 14, 1909.

Closes Monday, December 6, 1909.

WINTED TERM

Opens Tuesday, December 7, 1909.

Closes Monday, March 21, 1910.

SPRING TERM

Opens Tuesday, March 22, 1910.

Closes Thursday, June 9, 1910.

SUMMER TERM

Opens Tuesday, June 21, 1910.

Closes Friday, July 29, 1910.

CHRISTMAS HOLIDAYS

Christmas Holidays from Friday, December 17, 1909, to Monday, January 3, 1910.

SPRING VACATION

Spring vacation from Friday, March 12, 1910, to Monday, March 21, 1910.

COMMENCEMENT WEEK

Baccalaureate Sermon, Sunday afternoon, June 5, 1910.

Class Day Exercises, Tuesday evening, June 7, 1910.

Alumni Anniversary, Wednesday, June 8, 1910.

Commencement, Thursday, June 9, 1910.

The President's Reception to the Graduating Class,
Thursday evening, June 9, 1910.

Alumni Banquet, December, 1909, Denver, Colorado.

ADMIMISTRATION OF SCHOOL

I. Board of Trustees

- HON. GEORGE M. HOUSTON Greeley
Term expires 1915
- HON. JOSEPH A. THATCHER Denver
Term expires 1915
- HON. S. J. DONLEAVY Trinidad
Term expires 1913
- HON. L. W. MARKHAM Lamar
Term expires 1913
- HON. MILTON R. WELCH... .. Delta
Term expires 1911
- MRS. THALIA RHOADS Denver
Term expires 1911
- MRS. KATHERINE M. COOK Denver
State Superintendent Public Instruction
Term expires 1911

II. Officers

- L. W. MARKHAM, Lamar President
A. J. PARK, Greeley Secretary
J. M. B. PETRIKIN, Greeley Treasurer

III. Standing Committees

Finance

MR. WELCH, MR. HOUSTON, MR. MARKHAM

Teachers

MR. HOUSTON, MR. THATCHER, MR. WELCH,
MRS. COOK

Library

MR. THATCHER, MRS. COOK, MRS. RHOADS,
MR. DONLEAVY

Kindergarten and Training Departments

MRS. RHOADS, MR. THATCHER, MR. DONLEAVY.

Executive and Building

MR. MARKHAM, MR. HOUSTON, MR. THATCHER,
MR. WELCH.

EDUCATIONAL MANAGEMENT

I. Faculty

1908-1909

ZACHARIAH XENOPHON SNYDER, Ph. D., President,
Professor of Education

JAMES HARVEY HAYS, A. M., Vice-President,
Dean of School and Professor of Latin

LOUISE MORRIS HANNUM, Ph. D., Dean of Women,
Professor of English Literature and Language

ARTHUR EUGENE BEARDSLEY, M. S.,
Professor of Biology and Economic Biology

ELIZABETH HAYS KENDEL, Pd. M.,
*Training Teacher and Professor of Intermediate
Education*

SAMUEL MILO HADDEN, Pd. B., A. B., A. M.,
Professor of Manual Training

DAVID DOUGLAS HUGH, A. M.,
Dean of Training School and Professor of Education

FRANCIS LORENZO ABBOTT, B. S., A. M.,
Professor of Physical Science and Physiography

ROYAL WESLEY BULLOCK, Ph. B.,
*Principal High School and Professor of Secondary
Education*

BELLA BRUCE SIBLEY, Pd. M.,
Training Teacher and Professor of Primary Education

ELIZABETH MAUD CANNELL, Director of Kindergarten,
Professor of Kindergarten Education

ABRAM GIDEON, B. L., M. A., Ph. D.,
Professor of Modern Foren Languages

RICHARD ERNESTI,
Professor of Drawing and Art

WILL GRANT CHAMBERS, A. M. and M. S.,
*Dean of Professional and Research Work, and
Professor of Psychology*

ELEANOR WILKINSON,
Professor of Domestic Sciences

ACHSA PARKER, M. A.,
*Associate Professor of English Literature and
Language*

GURDON RANSOM MILLER, Ph. B., A. M.,
Professor of History and Sociology

CHARLES WILKIN WADDLE, Ph. D.,
*Principal of Elementary School, and Professor of
Grammar Grade Education*

GEORGE BRUCE HALSTED, A. B., Ph. D.,
Professor of Mathematics

FRANCIS TOBEY, B. S.,
Professor of Reading and Interpretation

STATE NORMAL SCHOOL,

ETHAN ALLEN CROSS, A. B., Ph. M.,
*Associate Professor of English Literature and
Language*

H. W. HOCHBAUM, B. S. A.,
*Associate Professor of Nature Study, School Gardening
and Elementary Agriculture*

LEVERETT ALLEN ADAMS, B. A., M. A.,
*Associate Professor of Biology, and Curator of the
Zoological Museum*

DORA LADD, Pd. M., A. B.,
*Training Teacher and Professor of Intermediate
Education*

ALBERT FRANK CARTER, M. S., Librarian,
Professor of Bibliografy

JOHN THOMAS LISTER, A. B.,
*Professor of Physiology, Director of Physical
Education*

W. B. MOONEY, Pd. M.,
School Visitor, Professor of School Administration

THEOPHILUS FITZ,
*Professor of Vocal Music, Harmony, and History of
Music*

J. D. HEILMAN, Ph. D.,
Associate Professor of Psychology

MARSHALL PANCOAST, B. L.,
Assistant Training Teacher High School

ALICE M. KRACKOWIZER, B. S., B. Ed.,
*Training School Supervisor of Geografy and Nature
Study*

SELA BOYD, Pd. B., Ph. B.,
Assistant Librarian

ALICE I. YARDLEY, Pd. B.,
Assistant Librarian

JOAN CLARK KENDEL, Pd. B.,
Assistant in Music

EDGAR D. RANDOLPH,
Assistant Training Teacher—Grammar Grades

HENRY A. CAMPBELL, A. B.,
Assistant Training Teacher—High School

VERNON MCKELVEY,
President's Secretary

Office, Normal Building. Office hours, 8 to 12 and 1:30 to 5:30.

EXAMINING BOARD

1909

MRS. KATHERINE M. COOK,
State Superintendent of Public Instruction

MISS MARIE V. DONAHUE,
County Superintendent
Teller County

DR. Z. X. SNYDER,
President, State Normal School of Colorado

COUNCIL OF DEANS

JAMES HARVEY HAYS.....Dean of School
 LOUISE MORRIS HANNUM.....Dean of Women
 DAVID DOUGLAS HUGH.....Dean of Training School
 WILL GRANT CHAMBERS.....
Dean of Research and Professional Work

FACULTY COMMITTEES

1908-1909

Executive

Function: Courses, Classification, Credits, Graduation and Commencement.

PROFESSOR HAYS, PROFESSOR CHAMBERS,
 PROFESSOR HUGH

Non-Resident and Summer School

Function: Detail Management for Non-Residents and Summer Term Work.

PROFESSOR CHAMBERS, PROFESSOR MILLER,
 PROFESSOR MOONEY

Social Counsel

Function: Y. W. C. A., Conduct and Interests of Girls.

MISS HANNUM, MISS TOBEY, MISS KENDEL,
 MISS WILKINSON, MISS LADD

Business

Function: General Program, Registration, Records and Bulletins.

PROFESSOR CROSS, PROFESSOR HUGH,
PROFESSOR MOONEY

Physical Education

Function: Gymnasium, Athletics, Playground, Sanitation, Helth.

PROFESSOR LISTER, PROFESSOR HADDEN, MISS TOBEY,
PROFESSOR BULLOCK, PROFESSOR HOCHBAUM

Museum

Function: Specimens, Cataloging, Inspection.

PROFESSOR MILLER, PROFESSOR HADDEN, PROFESSOR
BEARDSLEY, PROFESSOR HOCHBAUM, PROFESSOR
HUGH, PROFESSOR ADAMS

Educational Progress

Function: Reports—What is Going on in Educational World.

PROFESSOR WADDLE, PROFESSOR CROSS, MISS HANNUM,
PROFESSOR MOONEY, MISS CANNELL

Alumni

Function: Meetings, Organizations, etc.

PROFESSOR HADDEN, PROFESSOR MOONEY, MRS. SIBLEY,
MISS LADD, MISS KENDEL

Social

Function: Receptions, Entertainments, and Meetings in Building.

PROFESSOR ABBOTT, P ROFESSOR GIDEON, MISS
HANNUM, MISS TOBEY, MISS WILKINSON,
PROFESSOR CHAMBERS

Mentor

Function: Student's Fund and General Welfare of Students.

PROFESSOR BEARDSLEY, MISS KENDEL,
PROFESSOR GIDEON

Music

Function: Entertainments.

PROFESSOR FITZ, MISS KENDEL, PROFESSOR MILLER,
MISS CANNELL, PROFESSOR KENDEL

Arts Crafts

Function: Exhibits, Buildings.

PROFESSOR ERNESTI, MISS TOBEY, PROFESSOR ADAMS

Literary Exercise

Function: Literary Societies, Class Play and Public Exercises of Students.

MISS TOBEY, PROFESSOR GIDEON, MISS KENDEL,
PROFESSOR PANCOAST, MISS PARKER,
PROFESSOR KENDEL

Bureau

Function: Placing Graduates, and Press Publications.

PROFESSOR MOONEY, PROFESSOR HAYS,
PROFESSOR HUGH

Training School

Function: Organization, Work, Management and Growth.

PROFESSOR HUGH, PROFESSOR BULLOCK, PROFESSOR
WADDLE, MISS KENDEL, MISS LADD, MRS. SIBLEY,
MISS CANNELL, PROFESSOR RANDOLPH, MISS
KRACKOWIZER, PROFESSOR MOONEY

Grounds

Function: Designs, Construction and Beautification.

PROFESSOR HOCHBAUM, PROFESSOR CARTER,
PROFESSOR GIDEON

Young Men

Function: Organizations, Conduct and Interest of
Boys.

PROFESSOR WADDLE, PROFESSOR BULLOCK,
PROFESSOR LISTER

Library

Function: Organization, Use, Conduct, Books.

PROFESSOR CARTER, PROFESSOR CHAMBERS, PROFESSOR
WADDLE, PROFESSOR BULLOCK, MISS T OBEY

The Teacher's College Movement

The teacher's college movement in America is one of the latest steps in the practical evolution of the professional training of teachers. It is an effort to make complete and efficient both the general and technical education of teachers destined for the public school system. It aims to make the preparation of teachers for both elementary and high schools fully adequate to meet every demand of their professional work.

The Normal School system of the United States has a well-defined history. Originating in Massachusetts, it has extended its operation to every state of the Union, each of which now supports a school or system of schools for the training of teachers.

These schools entered upon their function in response to the public demand for better teachers in the public schools, and in the earlier days of Normal work the public high school had not yet evolved. Necessarily, then, the original function of Normal Schools was the training of elementary teachers.

Today conditions are radically changed. The public school system is an extended series of institutions, rapidly increasing in function. This extension of the public schools has and must still more increase the function of Normal Schools. New and extended fields of teaching—the kindergarten, the growing curriculum of the elementary school, the rapidly extending high school and its enlarging work, industrial education, manual training, physical education, domestic science and trade schools—these new facts and functions mark a new era in the history of Normal School training work.

The legitimate public demand upon Normal Schools is to meet in full these growing educational needs,—and the demand is being met by the inauguration of Teacher's College Courses in Normal Schools.

The greater Normal Schools are taking up their new necessary work of pedagogical college training of teachers for all branches of professional teaching work.

The Colorado State Normal School takes up the new work with every facility for success. Its equipment is adequate for the added work. The new advanced courses described in this bulletin offer Teacher's Training College opportunities to Colorado teachers. Our state needs the work. We are equipt and redy to do it.

The Normal College Course

This course is the full equivalent of a four years' course taken in any college, and its completion entitles the graduate to the degree of A. B. in education.

To be admitted to the course, a student must be a graduate of an approved high school or must present evidence of an equivalent training.

The first two years of the Normal College Course are the same as the two years of the Normal Course. During these years the student must earn thirty credits,—eleven credits for required work (five in the training school, three in psychology and three in education) and nineteen credits for work elected by the student under direction of the faculty.

During the third and fourth years the student is required to earn twenty-four credits, twelve per year, or four per term. The work of these years is wholly electiv, but must be distributed as follows:

- (a) One credit per term in a major electiv.
- (b) One credit per term in a minor electiv.
- (c) One credit per term in educational theory.
- (d) One credit per term for training school work.

A major course is a term's work in the department in which the student is specializing.

Each candidate for graduation shall complete six major courses. Courses in other departments are minor courses.

The minor electivs may be chosen from among courses closely related to the major electivs, or they may be relativly independent, according to the needs of the student. But not more than three minor electivs may be chosen from any one department without special permission.

One period per day is devoted to teaching thruout the last two years. The subject taught must be some phase or part of the major electiv, or at least a closely related subject. Indeed, the close interdependence of the teaching and the principal studies of the students is one of the main features of the course and one of its most valuable means of culture.

The courses in educational theory are also constantly related to the teaching of students on one hand and to their major studies on the other. The college aims not only to put the students in possession of the subject matter of the subjects studied, but to make them masters of the pedagogy of those subjects. This involvs both a careful analysis of the subjects themselves and a sympathetic insight into the nature and needs of the pupils taught.

Before graduation each student shall present a thesis setting forth the results of at least a year's serious

individual work in the pedagogy of his major subject. This thesis shall give the results of the student's practical teaching in the training school and shall bring them into relation to the published theories and practices of the profession in educational literature. The subject for the thesis shall be chosen not later than the beginning of the senior year.

A wide range of elective courses is offered in the various departments of the school, thus making it easy for any student to satisfy his chief interests in the arrangement of his program. The following is a partial list of courses, by departments, a detailed description of which will be found in the general catalog:

PROFESSIONAL.

The departments of psychology, pedagogy, philosophy, history and sociology all offer advanced work of college grade suited to the needs and capacities of students applying. Most of this work is of the nature of research, combining class work with library investigation, and observation or experiment in the Training School. These courses are shaped to the special needs of superintendents, principals, specialists, and various administrative officers.

ENGLISH.

The advanced courses in English will consist of a study of the usual materials of college English with special study of methods of analysis and presentation to a class, with practice in the teaching of classes in the Training School.

LANGUAGE.

The usual college work is offered in Latin and in modern foreign languages.

SCIENCE.

Work of college grade is given in physics, chemistry, biology, zoology, botany, physiology, geology, and mineralogy. These courses are given with special reference to application in the arts and industries, and include, in each case, the historical background of the particular subject.

MATHEMATICS.

Courses are offered in trigonometry, analytical geometry, and calculus.

ART AND MUSIC.

The college courses in these subjects will include a study of the history and evolution of the art, together with practis in execution suitable to the student's attainments.

MANUAL TRAINING.

College courses in manual training will include a study of the evolution of industry and of tools, of the relation between esthetics and industries, of the pedagogics of the subjects, and practis in teaching the subjects.

Advant courses in domestic science will deal with the historical and theoretical aspects of the subjects usually taught in such department, and will be designed to train directors for that work.

For more definit outlines of special courses the reader is referd to the general catalog of the school or invited to correspond with the school or with the head of the department in which he is most interested.

The Advantages of a Course in the Normal College

There are many reasons why a person preparing himself for serious and permanent work in the profession of teaching should get his training in a Normal College rather than in an institution of "general culture." Some of these reasons apply to Normal Colleges in general and some to this institution in particular.

1. In the ordinary college or university there is a great diversity of aims represented. In most classes there are prospective candidates for all kinds of business and for all professions. Necessarily the instruction for such a class must be general, and class spirit centers about some trivial thing. In a Normal College, however, there is a community of aim which specializes instruction and develops class spirit into professional spirit. For the average college the teaching profession is a mere incident and no serious, abiding respect is developed for it; in a Normal College teaching is the one important end of all the students' efforts and it comes to be regarded as a vocation worthy the best efforts of a lifetime.

2. Teaching has become a profession, and a Normal College is comparable to a professional school rather than to a college of liberal arts. There is no real competition between a college and medical or law or mining schools, and there should be as little between such an institution and a Normal College. No profession is more dependent on the right kind of professional enthusiasm than teaching. Such enthusiasm can be developed in the pervading pedagogical atmosphere of a Normal School, with its constant observation and practice in the training

school—the educational clinic. Professional poise means perfect at-home-ness in the atmosphere of the school room. This is secured for the teacher by training school experience as it is secured for the doctor by the clinic and the hospital.

3. The attitude of the learner makes a great deal of difference in the assimilation of subject matter. In ordinary instruction the teacher is concerned only with putting the learner in possession of the lesson. In normal instruction the effort is to have the student assimilate the material in such a way that he can most easily convey it to another. The normal student not only acquires the content of a science, but he examines the interrelations of its parts and its relations to other sciences. He must know it both as an organized system—
—a unit in itself—and as a part of the larger system of human knowledge. Again, he not only studies the subject matter, but he studies how he studies it. In other words, the processes of learning and teaching become self-conscious. This is a very valuable instrument for general culture, regardless of teaching.

4. Again, it is commonly understood that acquisition and retention are much more certain when the individual has immediate use for the matter involved. In our plan of closely relating the academic work with the practical teaching of the students, this principle of utilization has a large place. What the student acquires from one point of view in one class he teaches from a different point of view in another class; and in order to adapt his material he must thoroughly assimilate it.

5. Imitation is undoubtedly the most influential factor in the training of teachers. In most respects we teach as we have been taught. It is commonly admitted

that the very worst teaching done anywhere is done in our colleges and universities. Most specialists in higher education scorn to adapt their instruction to the capacities and needs of their students, being interested chiefly in the science. In a Normal College, where the teaching and learning processes are special objects of study, each lesson becomes, in a sense, an object lesson and is made to illustrate the conclusions of scientific pedagogy. The teachers in training therefore get only good models for imitation.

6. Too much emphasis cannot be placed on the value to a prospective teacher of being brought, for a period of four years, into the closest touch with a complete public school system. Our training school is a complete public school unit, extending from the kindergarten thru the high school. Each student is expected to become thoroughly familiar with the subjects, methods of instruction, forms of discipline, dominant occupations, and all other phases of the school life of each grade. As a result, no matter where in the system he takes up his work, he knows what his pupils have undergone before reaching him, and he knows what is expected of them after they leave him. Opportunities for such a comprehensive and thorough view of the scope of education are rare even in normal colleges. One of the crying defects of our public schools is the failure of teachers to understand what is going on in other grades or departments than their own.

7. We have space for a mere suggestion of the very unusual advantages offered by this school in the way of laboratories, museums, library, conservatory and gardens, the best kept campus in the west, outdoor gymnasium, and numerous other features, for a descrip-

tion of which the reader is referd to our general catalog. Small classes, seminar methods, close personal contact of teacher and students are markt characteristics of the Normal College work.

Non-Resident Work

The Normal School has been carrying on for the past year a system of non-resident work which has proved so popular and so valuable that this department will be enlarged and enrich. A large number of courses may be pursued by candidates unable to attend the school. Among these courses are many of collegiate grade, credits for which will count toward the A. B. degree. Teachers who cannot give up their school work to attend school but who desire to carry their studies further, are referd to our Non-Resident Bulletin, where descriptions of these courses are given. By means of these non-resident courses and attendance at our summer school students may complete a large part of the work required for the A. B. degree without giving up activ teaching.

Opportunities for Normal College Graduates

In High Schools

The growing demand for professionally traird teachers in high schools is definit and insistent. As the best grade schools no longer employ high school graduates without experience or training in teaching, so the high schools realize the inconsistency of employing graduates of higher schools who have had neither experience nor training in school administration.

The problems of secondary education are numerous, serious, and unique. The discipline and instruction of adolescents is a task requiring both natural ability and special preparation if the boys and girls of our high schools are to avail themselves fully of the educational opportunities offered them.

Our Normal College courses give a most effective training for high school teachers. The Normal High School, with over two hundred students, with a broad curriculum largely elective, and with the full equipment of a large state institution, is essentially a laboratory for the study of secondary educational problems. Teachers in training for high school work not only teach such classes daily throughout their course, but also share in the general administrative duties of the school. They conduct morning exercises, plan programs and celebrations for special occasions, direct literary and athletic work, organize library material, promote and guide suitable social gatherings, and, in every way possible, enter helpfully into the life interests of the students.

Teachers who have successfully taken this training are able to command the best positions and to fill them with distinction, rendering a social service far above that of the mere hearer of lessons.

As Superintendents and Principals

The older men at the head of our school systems, both large and small, have gained their positions and their ability through a long and tedious apprenticeship. Modern notions of time economy suggest that young men of natural administrative ability should avail themselves of the experience of others, and, by technical training, fit themselves for the highly specialized work

of school administration. The special training of our college course includes observation and practice in a complete modern school system, affording every opportunity for the study of curricula, methods, organization, and policy, from the kindergarten to the high school inclusiv.

With such a training a man, while still young, may take charge of a school system, confident that if he begins well in the front ranks of educational workers he may hope to keep pace with the rapid advance of educational thought and public demand.

As Training Teachers

For men and women of maturity, experience and natural ability, well trained in a Normal College, there are opportunities for work as training teachers in Normal Schools. Such work is attractiv, offering a wide field of usefulness. Several from this school have been placed in such positions, and the demand always exceeds the supply. The college course may be pland with such electivs as to fit one specially for the work of a training teacher.

As Supervisors of Special Subjects

With the rapid introduction of special subjects, as manual training, domestic science, art, music, etc., comes a demand for specially trained supervisors of these subjects. A supervisor, being related officially to all departments of the school, must have a broad general training such as will guarantee sympathetic and intelligent co-operation with all teachers, and correlation of all subjects. At the same time the supervisor must

be an individual naturally gifted and well trained in the special work he is directing.

The Normal College Course well meets the need of students desiring such positions. By electing the specialties for a major and adding the related minors, meantime keeping up the practical teaching and pedagogical study, one may adequately prepare for positions as directors of kindergarten, physical education, manual training, domestic science, art, music, and modern foreign languages, receiving the degree of Bachelor of Arts. Positions are always open for such candidates. For further information concerning these special courses the reader is referred to special bulletins of each subject and to the general catalog.

HIGH SCHOOL
OF
The Training Department
OF
Colorado
State Normal School

Series 9 No. 3



JUNE, 1909



HIGH SCHOOL

OF

The Training Department

OF

Colorado
State Normal School

(In all publications of this institution is employed the spelling recommended by
the Simplified Spelling Board.)

JUNE, 1909.

1909

1910

JANUARY							JULY							JANUARY							JULY																
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										
--	--	--	--	--	1	2	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
3	4	5	6	7	8	9	11	12	13	14	15	16	17	2	3	4	5	6	7	8	9	10	11	12	13	3	4	5	6	7	8	9	10	11	12	13	14
10	11	12	13	14	15	16	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24	25	26	27	17	18	19	20	21	22	23	24	25	26	27	28
17	18	19	20	21	22	23	25	26	27	28	29	30	31	23	24	25	26	27	28	29	30	31	--	--	--	24	25	26	27	28	29	30	31	--	--	--	--
24	25	26	27	28	29	30	--	--	--	--	--	--	--	30	31	--	--	--	--	--	--	--	--	--	--	31	--	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY							AUGUST							FEBRUARY							AUGUST																
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										
--	1	2	3	4	5	6	1	2	3	4	5	6	7	--	--	1	2	3	4	5	--	1	2	3	4	5	6										
7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12	7	8	9	10	11	12	13										
14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19	14	15	16	17	18	19	20										
21	22	23	24	25	26	27	22	23	24	25	26	27	28	20	21	22	23	24	25	26	21	22	23	24	25	26	27										
28	--	--	--	--	--	--	29	30	31	--	--	--	--	27	28	--	--	--	--	--	28	29	30	31	--	--	--										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
MARCH							SEPTEMBER							MARCH							SEPTEMBER																
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										
--	1	2	3	4	5	6	--	--	--	1	2	3	4	--	--	1	2	3	4	5	--	--	--	1	2	3	4										
7	8	9	10	11	12	13	5	6	7	8	9	10	11	6	7	8	9	10	11	12	4	5	6	7	8	9	10										
14	15	16	17	18	19	20	12	13	14	15	16	17	18	13	14	15	16	17	18	19	11	12	13	14	15	16	17										
21	22	23	24	25	26	27	19	20	21	22	23	24	25	20	21	22	23	24	25	26	18	19	20	21	22	23	24										
28	29	30	31	--	--	--	26	27	28	29	30	--	--	27	28	29	30	31	--	--	25	26	27	28	29	30	--										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
APRIL							OCTOBER							APRIL							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										
--	--	--	--	1	2	3	--	--	--	--	1	2	--	--	--	--	1	2	--	--	--	--	1	2													
4	5	6	7	8	9	10	3	4	5	6	7	8	9	3	4	5	6	7	8	9	2	3	4	5	6	7	8										
11	12	13	14	15	16	17	10	11	12	13	14	15	16	10	11	12	13	14	15	16	9	10	11	12	13	14	15										
18	19	20	21	22	23	24	17	18	19	20	21	22	23	17	18	19	20	21	22	23	16	17	18	19	20	21	22										
25	26	27	28	29	30	--	24	25	26	27	28	29	30	24	25	26	27	28	29	30	23	24	25	26	27	28	29										
--	--	--	--	--	--	--	31	--	--	--	--	--	--	--	--	--	--	--	--	--	30	31	--	--	--	--	--										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
MAY							NOVEMBER							MAY							NOVEMBER																
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										
--	--	--	--	--	1	2	--	1	2	3	4	5	6	1	2	3	4	5	6	7	--	--	1	2	3	4	5										
3	4	5	6	7	8	9	7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12										
10	11	12	13	14	15	16	14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19										
16	17	18	19	20	21	22	21	22	23	24	25	26	27	22	23	24	25	26	27	28	20	21	22	23	24	25	26										
23	24	25	26	27	28	29	28	29	30	--	--	--	--	29	30	31	--	--	--	--	27	28	29	30	--	--	--										
30	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27	28	29	30	--	--	--										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
JUNE							DECEMBER							JUNE							DECEMBER																
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										
--	1	2	3	4	5	6	--	--	--	1	2	3	4	--	--	--	1	2	3	4	--	--	--	1	2	3	4										
6	7	8	9	10	11	12	5	6	7	8	9	10	11	5	6	7	8	9	10	11	4	5	6	7	8	9	10										
13	14	15	16	17	18	19	12	13	14	15	16	17	18	12	13	14	15	16	17	18	11	12	13	14	15	16	17										
20	21	22	23	24	25	26	19	20	21	22	23	24	25	19	20	21	22	23	24	25	18	19	20	21	22	23	24										
27	28	29	30	--	--	--	26	27	28	29	30	31	--	26	27	28	29	30	31	--	25	26	27	28	29	30	31										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										

ANNOUNCEMENTS.

1909--1910.

FALL TERM.

Opens Tuesday, September 14, 1909.

Closes Monday, December 6, 1909.

WINTER TERM.

Opens Tuesday, December 7, 1909.

Closes Monday, March 21, 1910.

SPRING TERM.

Opens Tuesday, March 22, 1910.

Closes Friday, June 9, 1910.

Christmas Holidays from Friday, December 17, 1909, to Monday, January 3, 1910.

Spring Vacation, from Friday, March 12, 1910, to Monday, March 21, 1910.

Commencement Sermon, Sunday, May 29, 1910.

Class Day Exercises, Thursday, June 2, 1910.

Graduation Exercises, Friday, June 3, 1910.

HIGH SCHOOL FACULTY.

ZACHARIAH XENOPHON SNYDER, Ph. D.,
President Normal School.

DAVID DOUGLAS HUGH, A. M.,
Superintendent Training School.

ROYAL WESLEY BULLOCK, Ph. B.,
Principal High School.
History and Economics.

MARSHALL PANCOAST, B. L.,
Assistant Principal High School.
Reading and Literary Work, and German.

ACHSA PARKER, M. A., Preceptress,
English and Literature.

JOHN CLARK KENDEL, Pd. B.,
Vocal and Instrumental Music.

HENRY A. CAMPBELL, A. B.,
Mathematics and Science.

Members of Normal Faculty who teach or supervise
High School classes :

JAMES HARVEY HAYS, A. M.,
Professor of Latin.

STATE NORMAL SCHOOL.

ARTHUR EUGENE BEARDSLEY, M. S.,
Professor of Biology.

SAMUEL MILO HADDEN, Pd. B., A. M.,
Professor of Manual Training.

FRANCIS LORENZO ABBOTT, B. S., A. M.,
Professor of Physical Science.

ABRAM GIDEON, B. L., B. H., M. A., Ph. D.,
Professor of Modern Foren Languages.

RICHARD ERNESTI,
Professor of Drawing and Art.

ELEANOR WILKINSON,
Professor of Domestic Economy.

GURDON RANSOM MILLER, Ph. B., A. M.,
Professor of History and Sociology.

GEORGE BRUCE HALSTED, B. A., M. A., Ph. D., F. R. A. S.,
Professor of Mathematics.

FRANCES TOBEY, B. S.,
Professor of Reading and Interpretation.

H. W. HOCHBAUM, B. S. A.,
Professor of Nature Study and Out-Door Art.

L. A. ADAMS, A. B., A. M.,
Associate Professor of Biology.

ALBERT F. CARTER, M. S.,
Librarian.

GREELEY, COLORADO.

7

JOHN T. LISTER, A. B.,
Physical Education.

SELA BOYD, Ph. B., Pd. B.,
Assistant Librarian.

ALICE T. YARDLEY, Pd. B.,
Assistant Librarian.

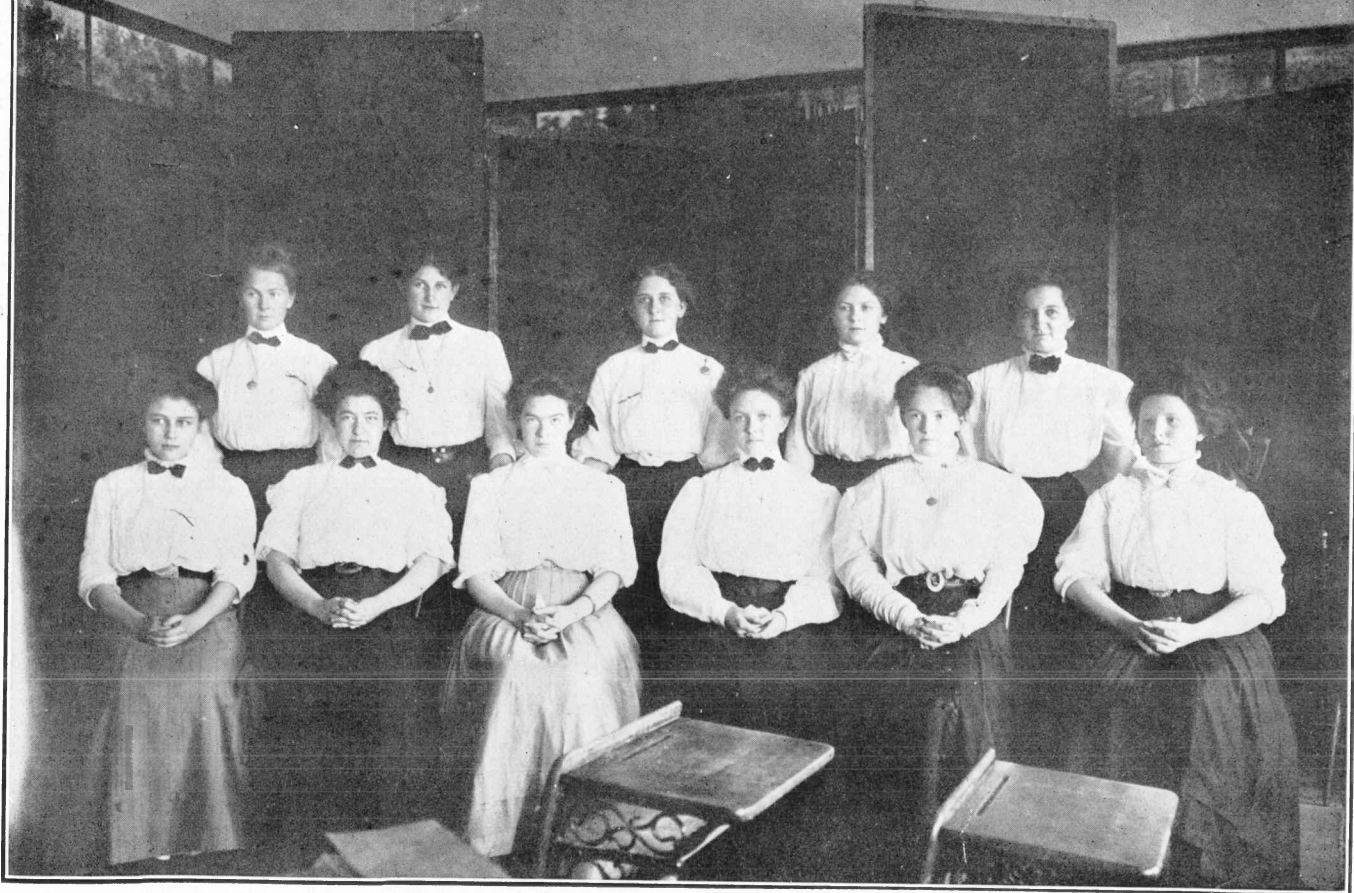
VERNON MCKELVEY, *Secretary.*
Office: Normal Bilding.





High School Class of 1910.





The Emerson Club.

COLORADO STATE NORMAL HIGH SCHOOL.

Historical.

In the year 1900 a few pupils in the Training School were given ninth grade work. The next year ninth and tenth grade classes were conducted, still in connection with the upper grammar grades. In 1902 the High School was fully organized with a complete course of study, and with a principal in charge, thus making it a distinct department, while still an integral part of the Normal School system. In 1904, upon completion of the west wing of the main building, the High School was assigned to its present beautiful assembly room and the surrounding recitation rooms.

Ideals and Purposes.

The time has come when the American high school must be in fact, as it is in theory, a public school, closely continuous with the grammar grade school, and offering opportunities to all the youth of the land. The high school must be more than a college preparatory school, more than an elementary trade school, more than a school for any single class of people. It must lead naturally and easily either to the college, to the trade and technical school, to the professions, or to the immediate business of life without further school training.

To prepare students for so wide and varied a range of possibilities the high school must put the individual in pos-

session of at least three factors of success, viz., (1) Large knowledge of facts; (2) Good intellectual habits; (3) High civic ideals.

Knowledge of facts is still, as always, an essential, but it is not now, as formerly, the sole end and aim of school activity. Information may be considered the grist of the intellectual mill; it is dead material, but it is golden grain, capable of being elaborated and assimilated into rich red blood. One business of the school, then, is to see that the student is constantly acquiring truth and steadily building it into his own life and experience. Not by reading alone, but, as well, by observation, by experiment, by experience, and by contact with other minds, should the student come into his just intellectual inheritance, the wisdom of the past and the present.

Intellectual habits are formed from characteristic modes of thought, and these, in turn, become ability along the line of the acquired mental habit. The school concerns itself, consequently, with the establishment of correct habits of thought. Each study affords opportunities which must not be overlooked for the development of judgment, caution, reflection, investigation, perseverance, and similar qualities of mind which collectively constitute good common sense. These habits, crystallized into character, remain with the individual through life, though the subject matter of the studies may be forgotten.

Civic ideals are the outgrowth of social experience under circumstances favorable to reflection and consideration for others. Modern society is complex and highly

organized. To live happily in this great social body the student must early learn to adapt himself redily to the varied and ever-changing demands of the social circle in which he moves. Experience in class organizations, in literary societies, in athletic teams, and in the numerous groups organized in the school for different purposes soon teaches effectivly the lessons of consideration for others, unselfishness, gentleness, curtesy, and all those social virtues and graces which constitute refinement and good breeding. At the same time such experience brings out the strong qualities of leadership and administrativ ability in those who are to become moving forces in adult society. To be a good citizen one must not only be good, but be good for something. Civic usefulness is the result of habits of co-operation with others for a common purpose.

Disciplin.

That disciplin is best which soonest enables a youth to direct his own activities to useful ends while, at the same time, co-operating with others for the common good. The truest freedom is the result of the greatest self restraint. In the Normal High School only such restrictions are enforced as will safeguard the individual and protect the rights of the student body. Coercion is resorted to in no case, the student always being allowd to deliberate upon an issue and choose for himself a course of conduct. If that conduct is wholly inconsistent with the ideals and purposes of the school, the student is advised to withdraw.

Students living in other than their own homes are under the general supervision of the school at all times,

and are expected to preserve a proper decorum at all times, in the town as well as in the school.

Each student has a regular program of recitations to attend. His study hours and vacant periods are, with slight restrictions, at his own disposal.

Equipment.

High School students have the use of all the regular Normal School equipment. This includes the library of 40,000 volumes; the laboratories for chemistry, physics, biology, sloyd, domestic economy, etc.; the very extensive museums of natural history, botany, biology, mineralogy, anthropology, modern industries, etc.; the gymnasium and athletic equipment; the art and ceramic studios and exhibits; the stereopticon and slides; and, in short, all the educational apparatus of a well equipped state institution. This makes the Normal High School probably the best equipped secondary school in the state.

Fees and Expenses.

Tuition is free. Text books are furnished by the school. All students pay \$3.00 per term book fee, \$1.00 per term athletic fee, and \$1.00 per term museum and laboratory fee, \$1.00 per term industrial fee, \$1.00 per term music fee and \$1.00 per term art fee. The total of these fees is \$8.00 per term, \$24.00 per year or about \$2.50 per month. Any one who will examine the equipment of the school will understand that this is a very moderate charge for the opportunity supplied by the school. All fees are to be paid in advance at the beginning of each term. A deposit of

\$2.00 is required from each student when he registers, which is returned, less the value of any books lost or damaged, when the student leaves school or at the end of the year.

Room and board costs from \$3.25 to \$3.75 per week, where two room together. There are many opportunities for young men and women to earn their board and room or either separately by working out of school hours. A great many students take their entire high school course in this way.

HISTORY AND CIVICS.

PROFESSOR GURDON RANSOM MILLER.

History is considered one of the fundamental subjects of the curriculum because it offers opportunity for unifying the student's fund of knowledge, and gives a basis for the establishment of new lines of study. History is the meeting ground of all branches of knowledge and can therefore be made a common viewpoint from which to discuss the relationship of all branches of study. This study, particularly, liberalizes the student's thought and puts him into the world stream of human life. By a constant use of the library the student is brought to know books also, knowing some books thoroly and many books familiarly.

In the first year of the course is given two terms of ancient history and one term of medieval; in the second year English history two terms and modern European history one term; and in the third year social institutions and civics, and industrial history and economics.

The ancient history comprizes a study of the Hebrew, Egyptian, Babylonian, Persian, Greek, and Roman civilizations to the year 476 A. D. It deals with the progress of industries, art, and government, and teaches by comparison what contributions these nations have made to our modern life. The course in medieval history covers the evolution of European nations from the fall of Rome to the Renaissance and Reformation, and the beginning of modern European civilization. The course in English history deals with the development of social, industrial and civic institutions in England, and with the relation of the growth of England to the development of America. The modern European history treats of the development and organization of European governments and gives a general view of world history during the nineteenth century.

The course in industrial history and economics gives a general survey of the evolution of differentiated industries, then follows with an intensiv study of typical special industries, as agriculture, fishing, mining, manufacturing, trading, transportation, etc., and of mechanical inventions, such as the telegraf, telefone and printing machines, in their effect upon social and industrial life. The course considers that application of human effort and ingenuity to the natural resources of our country which has resulted in our phenomenal material prosperity, and a corresponding increase in comfort, ease, and convenience. It deals with those social problems growing out of modern industrial conditions, with labor organizations, child labor, co-operation, socialism, government or municipal ownership, and with

all of the most prominent efforts for the solution of social problems.

The constant effort in this course is to arouse in the pupil a keen and abiding interest in all the life activities about him, and to train him to understand and interpret these activities thru his knowledge of the laws and forces that have in the past produced the conditions which he now experiences. Society in the process of making is the point of departure and the final goal in all the special investigations of this course.

CIVICS.

The course in Civics is a study of the theory and practice of citizenship. Such a study may begin where the old course in Civil Government used to end, with a study of the theory of government drawn from a reading of the constitution alone, but it must include the practical working out of civic problems down to the smallest local civic unit.

As the course is actually given in this school the work begins with organized observation of the work of the city council and committees, of the municipal courts and officers of the same, of school districts and their control, and of the county government in all departments, legislative, executive and judicial. Excursions are taken to the county offices and to the sessions of court by the class in a body, and individual students consult all local office holders for information relative to the position. The work of the juvenile

court is considered in some detail, and the method of enforcing all local ordinances is observed.

In the study of state government special attention is given to the work of the legislative body. The course of various bills of special interest is traced through committees, and all the forces that affect the final fate of a bill are estimated. All recent and pending legislation is critically examined. The work of important state boards is examined in a local and practical way.

The work on national government, besides the usual reading of the constitution, includes an exhaustive study of the administrative departments, particularly the Postoffice Department, Department of the Interior, Department of Commerce and Labor, and Department of Agriculture. The publications of the various bureaus are read and the most recent activities of the bureaus are discussed. Throughout the course every effort is made to understand the practical working of all governmental forces as they touch the actual life and interests of citizens.

MATHEMATICS.

PROFESSOR GEORGE BRUCE HALSTED.

PROFESSOR HENRY A. CAMPBELL.

Because of the ease and facility given by the new method being handed down from the higher mathematics, our high school, with less than the customary expenditure of time, makes accessible to every one, algebra, that giant pincers of modern practice, and geometry, basis of all arts.

After these broadening world tools are in hand, renewed opportunity is given to work over arithmetic with deepening grasp and scope. The principle of performance, disentangling and unifying all of these sciences, becomes a handle by which to carry them thru life as an always available part of one's necessary equipment for high efficiency.

Thru all the work in mathematics, we cultivate, along with accuracy of logic, clear, concise and forcible expression.

HISTORY OF COMMERCE.

As commerce is one of the evidences of civilization, so it has always been a large cause in shaping history. A study of the history of commerce gives the student an insight into human motifs and explains events which had previously had but little significance. In the case of our own country particularly, the story of its commercial development is essential to any thoro understanding of its remarkable political, social, and ethical advance.

ENGLISH.

PROFESSOR ACHSA PARKER.

The results of the study of English in the high school are, it is hoped, many. Not alone should the pupil gain the culture which comes from knowing something of "the best that has been said and done," tho this knowledge is worth much expenditure of time and energy. Nor should

the chief aim be the acquisition of a taste for reading, which shall be a solace and means of self-improvement in after years, tho it would be a great misfortune if this aim were not to a great degree attained. More important than these are the cultivation of right ideals of conduct, the widening of the pupil's sympathies, and the enriching of his emotional nature, thru the study of the world's literary masterpieces.

On the more formal side, the instructor aims, by requiring constant work in composition, to deepen the impression gained from the masterpieces studied, and to secure ease and accuracy in self-expression. Not only do the pupils write on topics connected with their literary studies, but they are required, particularly in the ninth grade, to write various kinds of letters, and to express themselves on the affairs of ordinary school life. In every grade attention to sentence and paragraph structure is given, and the faults in every day English are vigorously combated. Classes have been formed during the last year in which a small number of pupils requiring more than usual attention could receive training under Normal students specially interested in such cases.

Two terms of English are required in each year, the work conforming as nearly as possible to the following outline:

NINTH GRADE.

I. Easy prose and short narrative poems: Selections from Irving's Sketch Book, particularly the Bracebridge

Hall Papers; Coleridge's *Ancient Mariner*; Byron's *Prisoner of Chillon*; Arnold's *Sohrab and Rustum*.

II. Heroic types belonging to classical times: Homer's *Iliad*; Shakespeare's *Julius Cæsar*.

Pupils are expected to read outside of class at least ten books of general interest. These are to be selected from a list furnished by the instructor.

TENTH GRADE.

I. Heroic types belonging to the days of chivalry: Scott's *The Talisman*; Lowell's *The Vision of Sir Launfal*; Tennyson's *The Idylls of the King*.

II. Studies in the development of unheroic types, particularly the humorous: Shakespeare's *Henry IV*; Addison's *Sir Roger de Coverley Papers*.

A review of grammar.

ELEVENTH GRADE.

I. George Eliot's *Silas Marner*: Work in composition involving the application of the principles of unity, coherence and mass to the composition as a whole, the paragraphs and the sentences.

II. Some attention to the characteristic poetry of different periods: Milton's *L'Allegro* and *Il Penseroso*, with Macaulay's *Essay on Milton*; selections from Burns, with Carlyle's *Essay on Burns*; selections from Wordsworth; Shakespeare's *Macbeth*.

The following elective courses have been given during the last year:

I. The Short Story: This course, it is believed, will do much toward widening the pupil's knowledge of life under various conditions, as well as extending his knowledge of the rise and development of this popular form of literature. Stories by the following writers were studied in class: Irving, Hawthorne, Poe, Bret Harte, George W. Cable, Thomas Nelson Page, Mary E. Wilkins Freeman, Hamlin Garland, Jack London, Kipling, and Tolstoi.

II. Composition: This course is for those that need more extended training along the lines indicated in the work of the first term of the eleventh grade, or for those that wish to specialize in English.

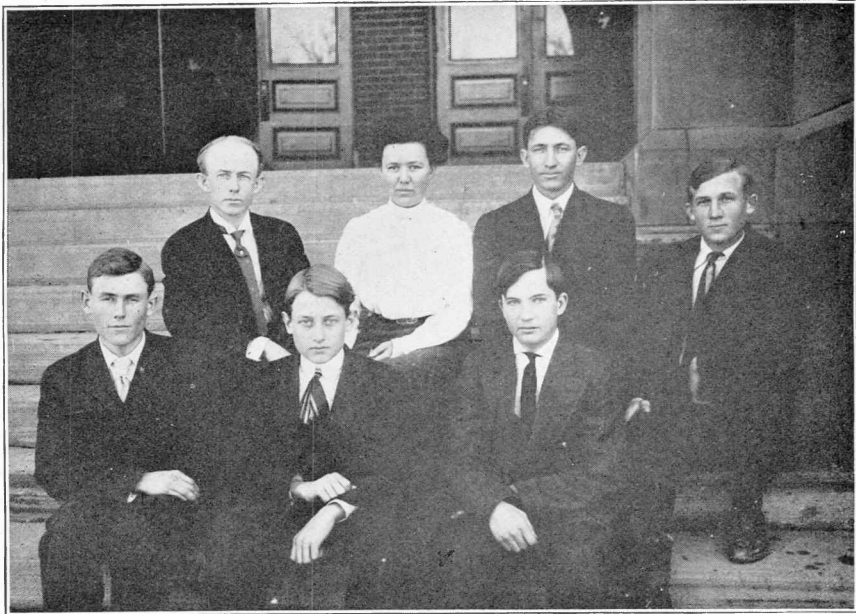
III. American Literature: Beginning with a review of Irving's Legend of Sleepy Hollow, an attempt is made to show some of the best and most characteristically American works of the foremost American writers. Selections are studied from the novels of Cooper, the short stories of Hawthorne and Poe, the lyric and epic poems of Longfellow, Whittier and Lowell, and the essays of Emerson, each selection always being a literary whole.

READING AND ORATORY.

PROFESSOR FRANCES TOBEY.

MARSHALL PANCOAST, Assistant.

Expression is necessary to evolution. A power is developed in the ratio in which it is used. A rounded development of the individual is attained only by calling



Orators in Declamation Contest.



Nature Study.

forth his powers in co-ordinated activity. This law is ample justification for the emphasis placed upon the work of the department of Reading and Oratory.

The old-time elocution sought to fix forms of expression upon the growing soul, thus limiting its growth and narrowing its individuality. The new school of expression recognizes that it is never educational to dictate form to spirit; that the spirit, if quickened, and directed, will command its own forms, more beautiful, because truer, than any which artist or teacher might impose upon it.

The department aims, then, to attain a co-ordinate activity of all the powers of the pupil: instant realizing power, which involves keen intellectual activity and imaginative grasp; ready emotional response, which inevitably follows realizing power; force of character, manifest in habitual self-control and in definiteness and strength of purpose; and physical freedom and power, manifest in good presence and bodily and vocal responsiveness.

No other course of training in the curriculum aims so directly at the co-ordinated development of the entire being, physical, mental, moral, and spiritual, as the persistent and systematic endeavor to lead out into adequate expression all the growing powers of the young mind. The pupil must learn to think quickly, on his feet, before audiences. His imagination must play actively about the thoughts and pictures which he would make vivid to an audience. His emotional nature must be stirred before he can move his hearers. Earnest purpose must possess him if he would carry conviction through his discourse.

Since oratory is a social power, concerned with directing the thinking, feeling and willing of an audience, most of the training of the department consists of class work. A spirit of class unity is encouraged; the pupil is alternately the teacher and the interested, sympathetic listener. In his growing desire and persistent endeavor to influence minds thru his thought or the thoughts of great authors, he soon forgets any ideal he may have held of performing prettily, to be approved by the listeners. Thus the limitations of self-consciousness and of petty ideals gradually disappear, and spontaneity and purpose begin to mark his expression. This end attained, no limit can be set to his growth, except the limit of his earnestness and of his capacity for work.

This ideal of service thru revelation is held before the students in all classes, in every department. The student is led to appreciate that the only excuse he may have for coming before a class for oral recitation, is to reveal truth to the class. Thus the daily class work of the pupil is conducive to freedom and purpose.

The pupil becomes practist in the vocal interpretation of a varied range of literature. As a means of quickening his perception of literary values, such training has been found inestimable. In recognition of this fact, a close correlation is sought between the department of Reading and the English department. It is a question whether the fullest appreciation of the beauties of the greatest literature is gained until one can reveal them thru a luminous oral reading. Much literature makes an appeal thru the ear,

and will not yield all its beauty to a silent reding of the printed page.

But, altho the culture value of systematic training in vocal expression is the primary reason for the maintenance of the department, there is a secondary end of no small significance. The practical importance of the speech arts is recognized to-day in the schools and in the pursuits of life. A young woman of free, poised, expansiv presence, who can illuminate great literature thru an intelligent, sympathetic vocal interpretation, is prepared to give much pleasure in whatever sphere she may enter. A young man who can marshal his thoughts and express them with adequate clarity and force, possesses an equipment for which he will have need in any career which he may choose. Young people who have been put in possession of their developt faculties, and who have had the social instinct awakend and quickend within them, are in a position to serv largely and vitally.

The Shakespearean Literary Society, of which every student is a member, presents weekly programs of varied nature, affording thereby ample opportunity for individual effort. While the organization is maintaind and controlld by the students, the exercises presented are under the direction of instructors, and constructive criticism follows every program. The exercises of the society are usu-ally an outgrowth of the daily class work of the school. Thus the advantages of the old-fashiond lyceum, with its drill in public address and its parliamentary practis, with its appeal to the social instinct and its scope for the exercise of executiv ability, are supplemented by systematic

training and judicious direction. The students enjoy much freedom in planning and carrying out the work of the society, while their plans and work are unified by definite ideals of culture.

Annual oratorical and recitation contests between the classes offer a stimulus to effective work. The Senior Class play, presented during commencement week, affords close familiarity with a literary and dramatic product of merit, and careful drill in dramatic response. The class plays from 1904 to 1909 inclusive were, in order: "The Rivals," "As You Like It," "A Winter's Tale," "Twelfth Night," "Martin Chuzzlewit" and "A Midsummer Night's Dream."

BRIEF OUTLINE OF HIGH SCHOOL READING COURSES.

A. *Required Courses.*

Course I.

Course I covers the colossal period and the melodramatic period in the student's evolution in the art of expression. The first period is concerned with the spirit of the selection as a whole. Life, spontaneity, vigor, and directness are especially sought in the study. Force, or stress is the characteristic form of emphasis in this period.

The melodramatic period considers the parts of the whole and involves study for smoothness, phrasing, clear-cut articulation, and vivid picturing. Inflection, or vital slide, is the chief form of emphasis.

The material for Course I includes nature lyrics, ballads, and vivid narrative such as is found in "The Evolution of Expression," volumes I and II.

Course II.

Course II covers the realistic period and deals with the service of the parts in a given selection. Breadth, purpose, and radiation are the ends sought; and the form of emphasis most employed is volume.

The material for this course is dramatic narrative, in verse or prose, and orations, such as those contained in "The Evolution of Expression," volumes II and III.

Course III.

Course III, in the suggestive or creative period, deals with the relation of the parts. Most of the study is upon the relation of values (shading, proportion, balance), and climax. The characteristic form of emphasis is time, or the thought-filled pause.

Lyric verse, and argumentative and philosophical discourse are studied. Careful and interpretative study of a drama is given, followed by dramatic presentation before the school.

B. Elective Courses.**Course VI.**

Course VI. Story-telling. Course VI gives a careful study of story structure in its relation to interpretation. Practice is given in informal story-telling, and in reading tales in prose and verse.

Course VII.

Course VII is a continuation of course VI and includes the adaptation of a novel for story-telling (as *Silas*

Marner or *A Tale of Two Cities*). Original work is required from each student. The novel, as arranged, is presented before the Shakespearean Literary Society.

The ends chiefly sought in these courses are freedom, vigor, life, realization, and constructiv habits of reading.

Course IX.

Course IX gives a study of the drama with the analysis and interpretation of a play.

Course X.

Course X includes the dramatization and presentation of a novel.

Course XI.

Course XI is a study of oratory. Clark and Blanchard's book is largely used for this purpose.

The ends sought in these courses are: varied and vital bodily and vocal response, insight into character, facility and power in impersonation, comprehensiv grasp of the unity of a scene and of a play, bredth, flexibility, and vigor.

LATIN.

PROFESSOR JAMES HARVEY HAYS.

Latin as taught in the High School is taught for its own sake, for the benefit of a better knowledge of English, a richer insight into words of our own language, a closer touch with a civilization which has wrought itself so effectively into our own, and a culture born of a close acquaintance with the best thoughts and greatest activities of a

people who were at one period masters of the civilized world.

Particular care is given to pronunciation, sentence structure, order of words and phrases in the sentence, as well as the meaning of each case and mood as met in the text which the pupil is reading. Nor is any feature of history or archeology that is calculated to illuminate Roman life neglected.

The class room method has always in view the accomplishment of the greatest results with as little waste as possible. The texts read, after preparation in an introductory book, are the Gallic Wars, selections from Eutropius, Nepos and others, Orations of Cicero and the Æneid of Vergil.

GERMAN.

PROFESSOR ABRAM GIDEON, Supervisor.

MARSHALL PANCOAST, Assistant.

The study of a modern foren language in a secondary school has both a cultural and a technical aim. By the cultural aim is ment, from the standpoint of individual growth, the training of the mind which attaches to all properly conducted language study, together with the social growth, the expansion of the mental and emotional horizon which comes from a knowledge of the language and literature of a people other than our own. Under the technical aim is ment the acquisition of such an accomplishment as is a necessary instrument or helpful tool for carrying on the affairs of life.

The results which the pupil is expected to attain by the course in German include the ability to pronounce accurately and with confidence in his ability to do so the sounds of the language; a fair command of colloquial expression; familiarity with the salient facts of the grammar; a knowledge of standard pieces of literature gained thru systematic study, together with the power to read understandingly without previous preparation easy texts.

COURSES OF STUDY.

The scope of the work and the terms employed to designate the courses coincide with the recommendations of the Modern Language Association of America. The Elementary Course extends over two years. In the first year of the course Spanhoofd's "*Lehrbuch der deutschen Sprache*" is used as a text-book. During the latter part of the second and thruout the third term the work includes sight reading from a book chosen for the purpose. The work of the second year includes reading of texts *L'Arrabbiata* (Heyse), *Höher als die Kirche* (v. Hillern), *Germelshausen* (Gerstäcker), *Immensee* (Storm), an easy modern German comedy in one act, which is usually presented by the class during the latter part of the third term; continued study of grammar; sight reading; selected poems and folk-songs with music.

The Intermediate Course of one year is a continuation of the preceding course, and includes the study of more difficult works in prose and poetry, both modern and classical. Moreover, an increasing appreciation of the distinctive qualities of German speech and a growing command of oral expression are ends constantly kept in view.

GEOGRAFY.

PROFESSOR FRANCIS ABBOTT.

Geografy study in the High School is designed to give pupils a vivid impression of the earth as the *home of man*. The two great factors involvd are the physical features and the industry and intelligence of man. Co-operation of these two forces produces products which, in turn, give rise to trade and commerce. In tracing causal relations, then, the pupil will sometimes work from physical conditions to man's influence in mastering these conditions, to products obtaind, and to commerce resulting; and sometimes he will work from his immediate interest in a product or its commerce back to the physical conditions which determin the product.

Studied in this way geografy yields splendid returns in valuable practical knowledge, in thought power, in bredth of view, and in realization of the great social relations and interdependence of mankind.

Most of the work has to deal with three main topics: animal products, vegetable products (both food and fiber plants), and mineral products. Each single article under these topics is then studied with reference to its location, physical conditions, method of production, commercial importance, etc.

PHYSICS.

Three terms are devoted to the study of physics. The work is taken up from the practical side, using actual machinery to illustrate the principles of physics. We endeavor to make the study of practical value in the everyday life of the pupil.

CHEMISTRY.

The course in chemistry runs thru the entire year, special attention being given to those facts which are significant in practical affairs, such as cookery, medicin and the arts.

ZOOLOGY AND BOTANY.

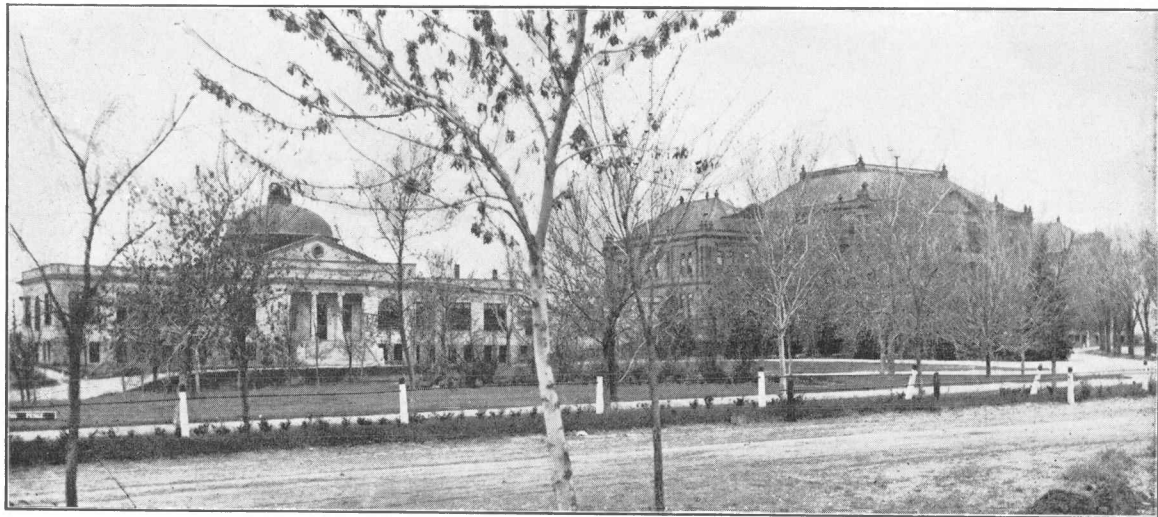
PROFESSOR ARTHUR EUGENE BEARDSLEY.

In the Zoology course animals are studied with respect to their structure, habits, life history and geographical distribution; their relation to their environment, to man, and to other members of the animal and plant worlds, and to inorganic nature; and their classification as indicated by the relationship existing among them.

The work of the course consists in laboratory and field studies and class recitations; complete reports of the studies upon chosen animals are required from time to time. In



The Greenhouse.



North Side Quadrangle.

this work particular attention is given to the fauna of Colorado, with the purpose of familiarizing the pupil with the animals of his own state.

BOTANY.

The course in botany extends thru two terms, the first of which is given in the fall, the other in the spring term. In the fall term the plants are studied with reference more especially to their relations to the environment, such as the relation to light, nutrition, reproduction, the relation of flowers and insects, the struggle for existence, protection, plant societies and Botanical Geograpy.

In the spring term more emfasis is placed upon the study of the plant as an individual and upon its structural relationships. The common plants of the vicinity are studied in the classroom and in the field, leading to a determination of the name, habits, relationships and mode of life of each.

BIRD STUDY.

PROFESSOR L. A. ADAMS.

This course is pland to meet the needs of the High School pupil and will necessarily be of a popular nature. A study of birds is always interesting and one's life is greatly enrichd if he is able to know and appreciate the little featherd friends of the wood and field. We greet

the robin with joy in the spring and feel that we are meeting an old friend. The object of this course will be to make friends of a larger number of our common birds.

The first half term will be spent in becoming familiar with the different groups of birds, with special attention to their habits and ecology. References will be given to popular articles in some of the magazines, such as *Outing*, *Country Life in America*, *Bird Lore*, etc. In the second half of the term, the time will be spent in the laboratory, where the birds will be studied and drawn, and the relation of the external anatomy to the ecology will be worked out. Some outdoor work will be undertaken when the opportunity offers.

AGRICULTURE.

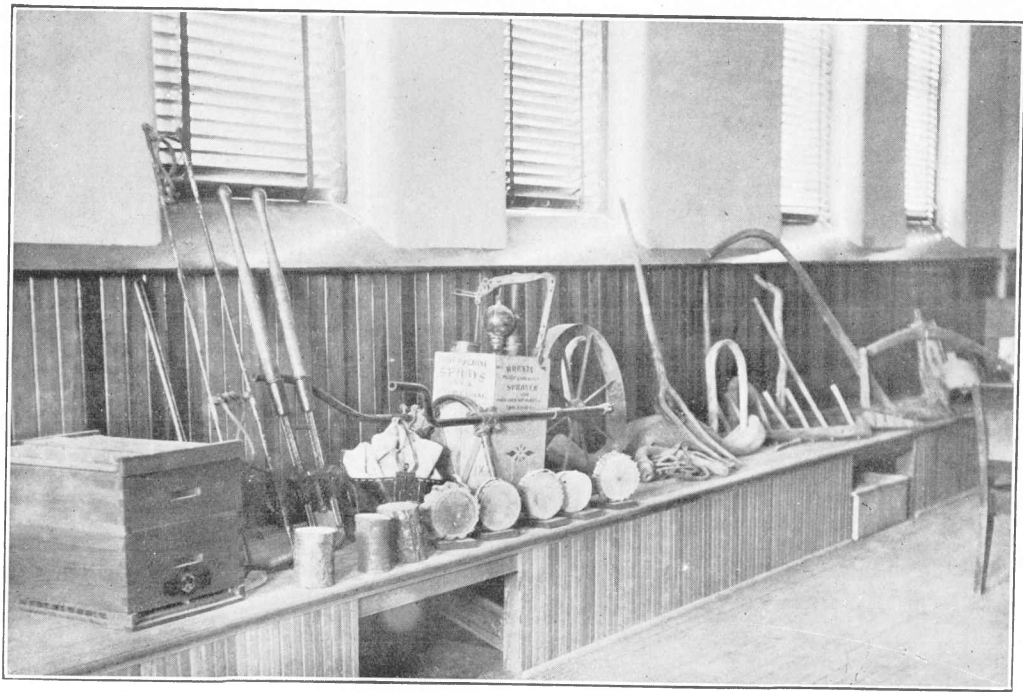
PROFESSOR H. W. HOCHBAUM.

In adding the study of agriculture to the High School curriculum the idea was not that of simply adding a subject rising in popularity, in this day of the "simple life," and the "new agriculture," nor was it intended that we should in any way compete with the agricultural colleges of the country. Their equipment is larger and better than an institution such as the State Normal School could hope to have. Moreover, the ideals and purposes of the two classes of institutions are widely different.

The introduction of agriculture as a school study in the high and grade schools, at least those of agricultural regions, is but an expression of the need felt for a more



Museum of Elementary Agriculture.



Museum of Elementary Agriculture.

sympathetic relation between the school life of the child and his daily life. That may be said to be the kernel of modern education; i. e., to have a living sympathy between the everyday life of the pupil and his school life. As a result of the need felt for this relation we have successfully introduced such subjects as domestic science, nature-study, manual training and other things which teach of the good and common things of the child's environment and daily occupation.

The introduction of the study of agriculture in the high school curriculum needs scarcely to be defended, when we think how important a role the agricultural industries of this state and country play. In spite of the great increase within the last few years in manufactures, agriculture still leads by a large margin in the value of exports. The present agricultural population of Colorado, a state in the richest agricultural country of the world, is large. Yet ten years from now that population will be increased fifty times. The economic status of the state will soon depend upon its agricultural efficiency. That efficiency must be increased and the youth of the land, the farmers of the future, must be educated in better agricultural methods, and to see in agriculture, the oldest and best of man's industries, something besides a mere livelihood.

The course in agriculture runs thru the year. The student should elect it preferably in his last year of school, after having studied some of the natural sciences, as botany or chemistry, in the earlier years of the high school course. An elementary knowledge of chemistry and botany are very

helpful, for agriculture has to do with the way in which the plant or animal lives.

There are two immediate purposes of agricultural operations: to raise plants, and to raise animals. Plants are raised either for their own value or for their use in feeding man and animals. In studying agriculture, then, it is well to begin with the plant, proceed to the animal, and then consider questions of practice and management that grow out of these subjects.

The study of the plant may be provided for under two general heads: (1) the plant itself; (2) the environment that influences the plant.

The subject of environment is studied under the following heads:

- (A) Light and air. Influence of seasons, temperature, light, etc.
- (B) Air. Function above ground and in the soil.
- (C) Soil. Functions. Origin. Kinds. Composition. Texture.
- (D) Moisture. Purpose. Importance. Quantity. How modified.
- (E) Applied plant food. Fertilizers. Leading plant foods; how supplied.
- (F) Repressive agencies. Insects, fungi. Toxic agencies and untoward conditions.

The plant is studied in relation to—

- (A) Composition.
- (B) Structure.
- (C) Physiology.

(D) Heredity.

(E) Classification.

In the class work actual study is made of the leading crops of the community. Methods of growing the crop are discust, as well as methods of preparing the land; fertilizing; harvesting; marketing; value and profit.

The four main crops of the region—wheat, potatoes, sugar beets and alfalfa—will be thus studied in detail. Crops which might be added with advantage to the list of agricultural products raised in the region will also be studied.

ANIMALS AND ANIMAL HUSBANDRY.

(A) Classification of domestic animals.

(a) Cattle, sheep, swine, horses, fowls, bees, etc.

(b) Origin and history. Purposes and uses. Breeds and varieties.

(B) Nutrition of domestic animals.

(C) Foods.

(a) Pasturage and bulky foods, forage and foddors, green and dried foddors, concentrated foods.

(b) Grains and seeds, etc.

(D) Rations.

Food requirements of different animals for different purposes.

(E) Animal products.

(a) Meat. Eggs. Milk. Wool, etc.

(b) Beef fattening; wool growing; dairy industry, making cheese and butter; poultry raising, for eggs; for meat production.

FARM MANAGEMENT.

- (A) Farm schemes.
- (a) Kinds of farming.
 - (b) Rotations.
 - (c) The farmstead. Laying out of the farm with reference to arrangement of buildings, fields, water supply.
- (B) Farm practices.
- (a) Tillage—purpose and methods.
 - (b) Irrigation—purpose and methods.
 - (c) Drainage—purpose and methods.

In the study of farm crops and animals, excursions will be made from time to time to study the crops of the region and the various animal industries, represented near by. The agricultural museum, with its large collection of farm and garden seeds will afford valuable laboratory practice in getting acquainted with the various kinds of seeds, as well as study in the value of seed selection. This museum will also have exhibits of the smaller agricultural implements, modern and primitive.

ART.

PROFESSOR RICHARD ERNESTI.

The work of the department embraces three branches of art, all of which make for a larger and better life, and also afford a preparation for college or for technical and engineering courses. These are mechanical drawing, pictorial drawing and designing.

The aims of the three lines of work are definite and the purpose is a serious one. Students need drawing as they need writing. Drawing should be studied as a *mode of thought*. It develops the power to see straight and to do straight, which is the basis of all industrial skill. Industrial skill, which will largely dominate the future of America, must be acquired by youth in the public schools.

A knowledge of the fundamental principles of the science of representation, skill of hand, culture which comes with an habitual right attitude towards works of art, familiarity with the best products of art, and a knowledge of the principles of design, are among the aims in the different lines of art work.

In the mechanical course all the individual problems scattered thru the work of the lower grades are gathered and placed in a proper relation to each other in a scientific study of structural drawing, with its subheadings of geometry, projection and developments. Practical problems arising in the chemical and physical laboratories, in the manual training department, in the home, in short, in the daily life of the pupil, will be met and solved intelligently. A beginners' course in architecture is embraced in this division of the work, which gives the home the prominence which it deserves. The pleasure of planning and constructing a home belongs to every one. Floor plans are made, all principles of utility, hygiene, and esthetics are considered; elevations to these plans follow, and schemes of interior structure, design and color are prepared. The home being the foundation of the nation, the value of this lesson for

life's sake becomes at once apparent, aside from the fact that these studies add to the privileges of entry into the best technical schools and universities of the land. Instruction is also given in the principles of structural design, in the modes of beauty, and in the history of the great craftsmen.

In the free hand course is given a scientific study of pictorial drawing with its subhedings of perspectiv, color, light and shade, together with a solution of those practical problems of representation arising in the school or in the home. Instruction is given in the principles of composition, in beauty, and in the history of the great artists. Examples of the best in art are studied, and collections are made of fotografs of merit, especially those which are typical of seasonal beauty or show commonplace objects glorified by conditions of weather or of setting.

The course in decorativ design deals with practical problems from the department of domestic science, from the school paper and other school work, and from the home and daily life. Instruction is given in modes of beauty, in the historic styles of ornament, and in the history of the great designers. Examples of the best results of decoration should be studied in the art museum and from reproductions and prints. In this connection the school art museum is as important in its way as is a library in the study of literature.

MANUAL TRAINING.

PROFESSOR SAMUEL MILO HADDEN.

Doing with the hands has always been an important aid in the development of civilization. Doing with a purpose has as its result all new discoveries and inventions. The great gulf between the savage and the civilized man was spanned by the fundamental hand-working tools.

Carlyle gives a graphic and poetic picture of the influence of tools on civilization when he says: "Man is a tool-using animal. He can use tools, can devise tools; with these the granite mountains melt into light dust before him; he kneads iron as if it were soft paste; seas are his smooth highways, wind and fire his unerring steeds. Nowhere do you find him without tools; without tools he is nothing, with tools he is all."

With this knowledge alone of the tremendous influence of tools upon the destiny of the human race every child should have tool practice incorporated into his work in the schools.

Joinery—Elementary Course.

This course is designed for individuals who have had no previous training in the use of hand wood-working tools.

The course aims to give an acquaintance with the underlying principles of construction and a fair degree of skill in the use of tools, including in general about what is enumerated below:

Talks on saws: use, kinds, setting, filing.

Talks on planes: use, abuse, sharpening, etc.

Talks on the various other fundamental tools: squares, gages, chisels, screwdrivers, braces, bits, etc.

Talks on the construction of various joints.

Application of the above knowledge to the end that simple, artistic, well balanced, useful pieces may be constructed, the product of a thinking, knowing, doing individual.

Wood Carving—Elementary Course.

This course is conducted by the laboratory method and includes preliminary exercises in the care and use of tools. It is aimed to give a general training in the practical application of the fundamental principles of art in drawing, design, clay modeling and historic ornament, as applied to the special work of wood carving. Courses in art should be taken either before or in connection with this work.

Cabinet Making.

Talks on woods, grain, quarter sawing, seasoning and drying.

The use of clamps, handscrews, wedges, presses and vises.

Talks on glue, glued joints, dowel joints, tongue and groove joints, etc.

The fundamental principles of cabinet and furniture construction will receive special attention with a view to applying them in the construction of substantial and artistic pieces of work.

Mechanical and free hand drawing in their application to constructive design will be included in this course.

Wood Turning—Elementary Course.

The following subjects will be discust: power, hangers, shafting, speed, belting, counter shaft;

The lathe, primitiv and modern, care of lathe, oiling, cleaning, speed for various purposes;

Turning tools, chisels, gages, skewes, grinding and whetting;

Turning between centers of cylindrical forms, V grooves, concave and convex curves, and their application in various artistic and useful forms;

Chuck turning, face plate turning, surfaces, beads and hollows, wood chucks, etc., and their application in rings, pulleys, etc.

Printing Course.

The work will be so arranged that every student taking the work will have an opportunity to become acquainted with all the different necessary steps which enter into the production of a printed page.

In general the work will cover the following fundamental processes:

Composition and distribution, dealing with materials, tools and appliances.

Paragraf structure, spacing, capitalization and indentation.

Making up into pages, locking into forms.

Reading and correcting proofs.

Press work, tools and appliances.

Management of inks.

Cleaning of type.

DOMESTIC SCIENCE.

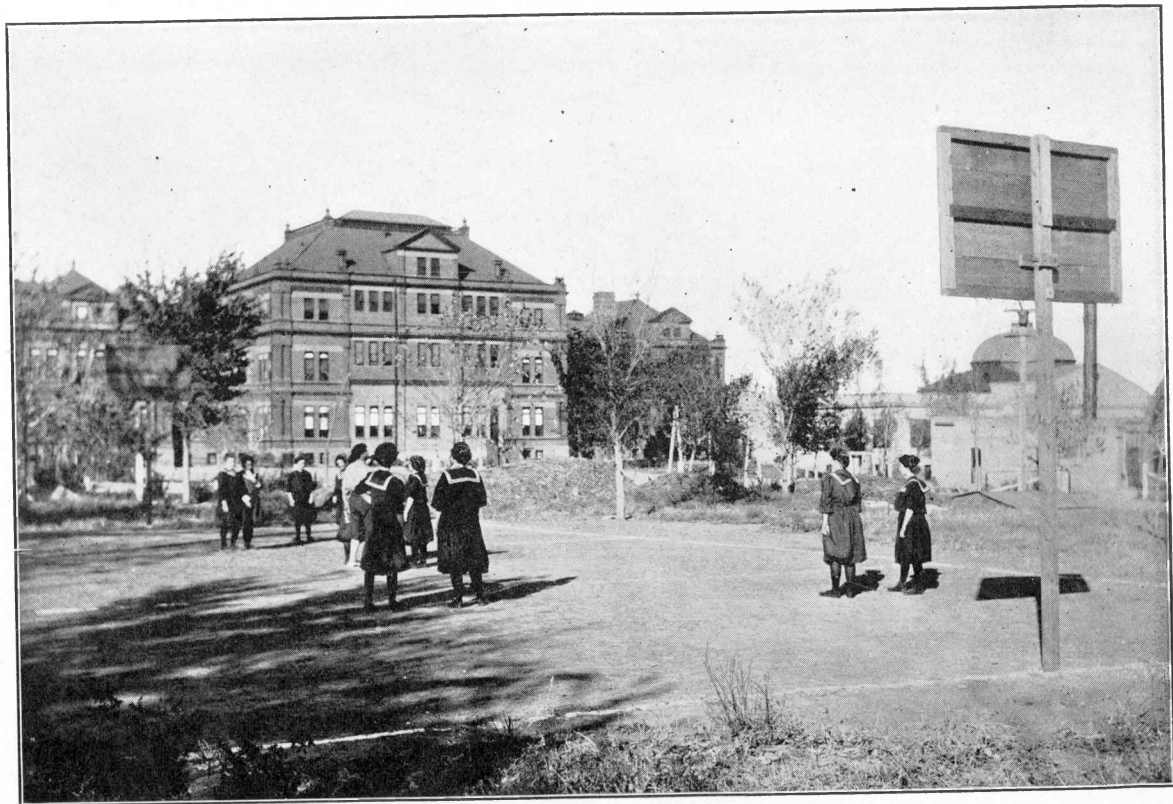
PROFESSOR ELEANOR WILKINSON.

The work in cooking and sewing in the high school should be closely related to whatever of science, art or practical work the pupils have had. The kitchen laboratory, which is only another kind of chemical laboratory, should be a place where an interest is awakened in the application of the laws learned in the chemical and physical laboratories. That this work may be effective there must be correlation between this subject and a connected and systematic course in general science. When thus taught in its proper relation to these other branches, cooking stimulates investigation, develops powers of accurate observation and leads to the application of knowledge of natural sciences to practical use in the preparation of foods.

That cooking and sewing are of practical value is no argument against their being made a part of the school curriculum, but that they should be taught as an end in themselves rather than a means is a mistake. The aim is "not to teach how to make a living, but how to live." These subjects when rightly understood afford ample opportunity for thought as well as manual demonstration, and are, therefore, educational.

The high school course in cookery includes a study of the nature, constituents, and relative values of foods, the objects of cooking and the effect of the various cooking processes on the different food principles.

The following foods are studied as to their source,



Basket Ball.



Playground.

preparation for the market, chemical composition, physical structure, digestibility, absorption, nutritive value, economy, etc.

Vegetable Foods—pulses, roots, tubers, green vegetables and fruits; sugars, wheat flour, breads.

Leavening agents, such as baking powders, eggs, yeasts. Various fermentation processes.

Animal Foods—milk, cheese, eggs, meats. Studies in dietaries, preparation of simple menus, table setting and serving. Class room work is illustrated by work in the kitchen.

The work in sewing includes both hand and machine work, cutting and fitting, and the making of such garments as are of greatest interest to girls of high school age. The study of textiles and harmony of color combinations are also taken at this time.

PHYSICAL EDUCATION.

PROFESSOR J. T. LISTER.

AIMS OF THE DEPARTMENT.

The aims of the department are: to train the student in correct habits of hygienic living; to develop the physical powers and health of the individual; to qualify students to direct and conduct school gymnastics, games, and athletics; and to train special teachers in Physical Education.

EQUIPMENT.

The equipment of the department is large and in every way adequate to carry out its work. There is an examining room containing a complete set of anthropometric instruments; there is a gymnasium equipt with apparatus for all kinds of drills and in-door exercises; there is a new outdoor gymnasium equipt with all the modern playground apparatus; there is an excellent athletic field, with a quarter mile running track, grand stand, etc.; besides several tennis and basket ball courts.

All students are required to wear at physical training classes the regular gymnasium uniforms. The uniform for women consists of a blouse and divided skirt, and gymnasium shoes. The uniform for men consists of the ordinary track suit and gymnasium shoes. These suits can be secured in Greeley, but students are advised to bring with them any suits that they may own.

PHYSICAL EXAMINATIONS.

All students who enroll for Physical Education are required to take the physical examination. The examination is made by the director of the department assisted by those Senior students who are making a specialty of Physical Education.

CLASSES.

Girls.

The class work for girls consists of instruction in correct walking, marching tactics, calisthenics, dum bell, wand, and club exercises, fancy steps, folk dances, gymnastic and athletic games.

Boys.

The boys are not only trained in gymnastics, but also in athletic sports.

MILITARY DRILL.

All high school boys are eligible to the Cadet Company. The school is supplied by the State with fifty Winchester repeating rifles. The manual of arms and marching tactics are taught.

OUTDOOR SPORTS.

Tennis tournaments, basketball games, cross country running, football, baseball, and track and field athletics are encouraged and are under strict faculty supervision. The school is a member of the Northern Colorado Interscholastic Athletic League. Several annual meets have been held on the Normal School athletic field, and the Normal High School has always taken its share of the prizes.

MUSIC.

PROFESSOR J. C. KENDEL.

The work of the first year in vocal music includes sight singing, notation, ear training, tone production, theory of music, part singing, and a study of the lives and works of leading musicians. From the very start students are made familiar with the work of the best composers, great care being taken to develop correct musical taste, as well as to secure effective musical performance.

The work of the second year is an extension of that of

the first year with the addition of training in elementary harmony. The history of music is also studied in this year with illustrations of various musical forms in their order.

In the third year course the work of the previous years is continued with an advanced grade of music. Especial attention is now given to interpretation of music and to the reading of works which are conducive to a better understanding of the language of music.

A girls' chorus is maintained thruout the year, composed of about fifty voices. This chorus presents musical numbers frequently at the various school exercises. Special attention is always paid to tone quality and intelligent interpretation.

A chorus of mixt voices follows much the same line of work as above, but with music selected for both male and female voices.

The boys' Glee Club and the Male Quartet follow the line of work usual to such organizations. Membership in these is secured by the request of the musical director and is conditiond upon ability to read music redily and faithfulness in attendance upon rehearsals.

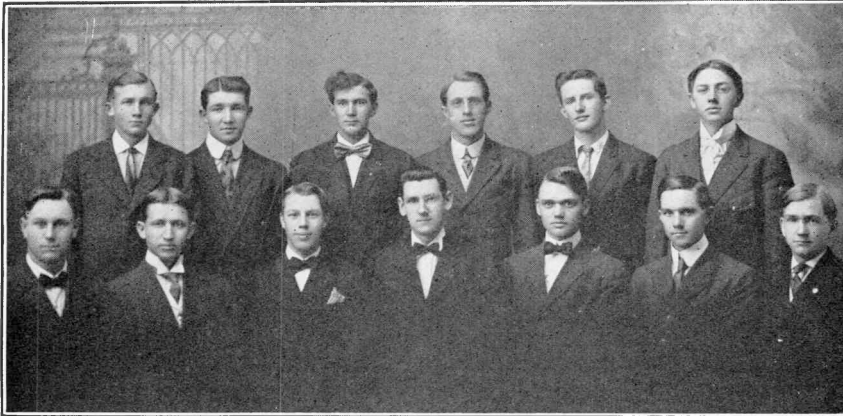
An orchestra of twenty pieces is maintaind, composed of students from all departments of the school. This organization is designd primarily for the serious study of classical music. Incidentally it adds much to the interest of school life by contributing a good class of music to various school programs. This orchestra meets twice a week. Membership is secured upon invitation from the director. A smaller orchestra, composed entirely of high school stu-



High School Basket Ball Team.



High School Orchestra.



High School Glee Club.

dents, furnishes music at morning exercises and other occasions.

A regular class for instruction in ensemble stringed instrument playing is contemplated, and will be formed if a sufficient demand to warrant it appears.

LIBRARY WORK.

PROFESSOR ALBERT CARTER.

This work is intended for those who wish to get a better understanding of library methods than is offered in the general instruction given to all students, as an aid to the teacher in the selection and care of books and materials for their school libraries, and to enable the student to make more intelligent use of the library. No complete course is given.

The work will include selection of books for purchase, mechanical preparation of books for actual use, the making of library records, cataloging and classification according to subjects, arrangement of books on the shelves, with labeling devices and numbers for the ready finding of books. There will also be practical work in the charging out of books, checking in, etc., with practice in the use of reference books and indexes as an aid to the general reader. It is expected that by actual participation in library work, students will gain a practical knowledge of library methods, and of the means of acquiring and rendering available all possible information, as well as a love and respect for books.

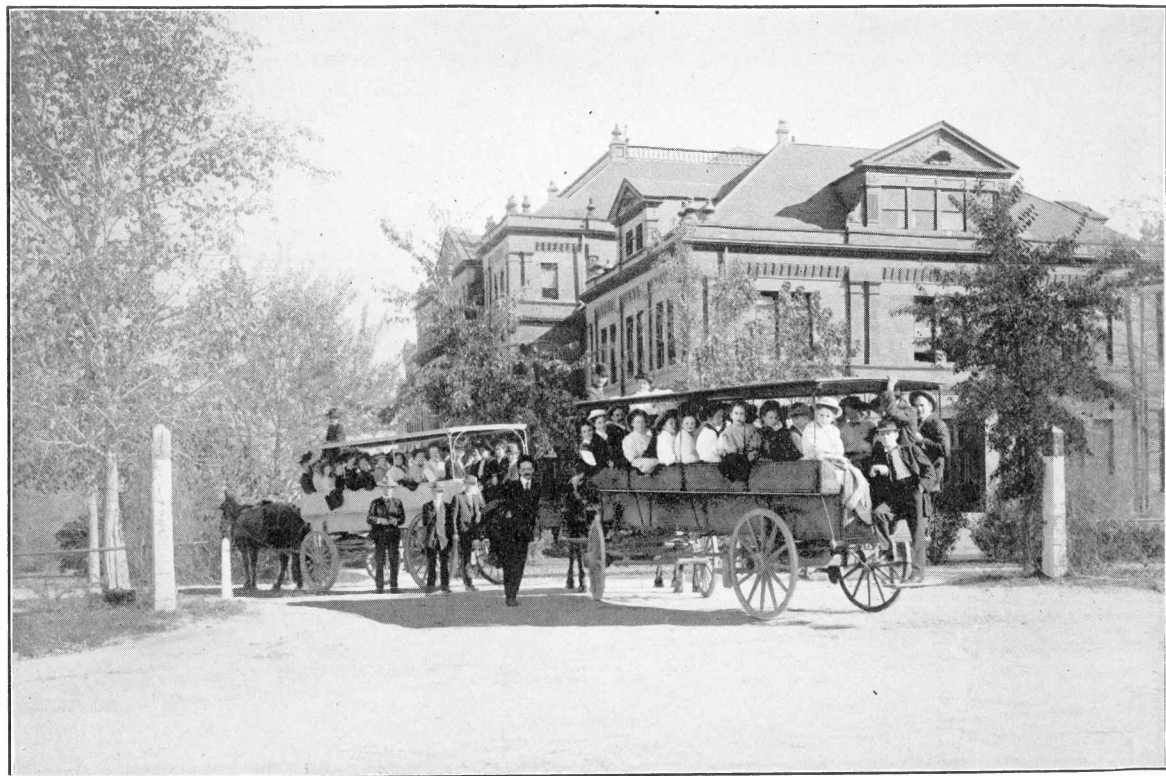
LIBRARY AND READING ROOM.

One aim and purpose of the Normal School is to make the library a general laboratory or scholar's workshop, and results show that it has not been unsuccessful. Students are referred to the library with references more or less specific, according to their advancement and individual needs, to the leading authorities and sources of information. Here is supplied material for study supplemental to the ordinary text-book outline.

No restrictions, save such as are necessary to place all users of the library upon an equal footing, have been thrown around the use of the books. A book is purchased and put in the library to be read. Its worth is in its use. The shelves are open to all throughout the day, and most books, except those strictly for reference, bound volumes of magazines, and a few books used in special classes, or held on account of their special value or rarity, may be taken out of the library, if properly recorded at the desk, for periods varying with the character and the special purpose of the book. The value of a library depends not alone upon the number of its volumes, but upon their character, and the ease with which they can be used.

Many rare and valuable books are found in the library, such as Audubon's *Birds of America*, Buffon's *Natural History*, Nuttall and Michaux' *North American Sylvia*, Sargent's *Sylvia of North America*, and the works of Cuvier, Kirby and Spence, Jardine, Brehm, and others.

Among the reference books are the following: Encyclopedias—the *Britannica*, the *American*, the *Americana*, the



Study by Excursion.



Nature Study.

International, the New International, Johnson's, the Iconographic, the People's, the Universal, the Young People's, etc. Dictionaries—The Century, The Encyclopedic, The Standard, The Oxford, Webster's, Worcester's, etc.; dictionaries of particular subjects, as Architecture, Education, Horticulture, Painting, Philosophy, Psychology, etc.; Lippincott's Gazetteers; Larned's History of Ready Reference; Harper's Cyclopedia of United States History, etc.

The library subscribes regularly for about 250 of the best magazines and educational journals. It also receives thru the courtesy of the publisher, most of the county papers of the state and many of the religious papers of the country. As volumes of the leading magazines are completed, they are bound and placed on the shelves as reference books. At present the library has about 4,000 volumes of bound magazines. To facilitate the use of these, Pool's Index, Reader's Guide, and many other good indexes are provided. Valuable matter upon almost any subject is found in these volumes, and students will do well to consult them freely.

A finding list is posted upon the stacks, giving section and shelf, thus: Century 49-5 indicates that the Century Magazine can be found in section 49, on shelf 5.

COURSE OF STUDY.

36 weeks in one year's work.

25 recitations per week required.

One subject five hours per week for one term makes one credit.

15 credits make one year's work.

45 credits required for graduation.

Not more than 17 credits may be earned by any student in one year.

Due credit will be given for work done in other schools if satisfactory evidence of the same is presented.

NINTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
English R	Reading R	English5 R
Algebra R	Algebra R	Algebra5 R
Ancient History..	Ancient History..	Medieval History.
Latin	Latin	Latin
German	German	German
Zoology	Zoology	Zoology
Mechanical Draw- ing	Pictorial Drawing.	Designing
Music	Music	Music
Elementary Join- ery	Elementary Join- ery	Advanced Joinery
Physical Training	Physical Training	Physical Training

TENTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
Reading R	English R	English R
Algebra	Algebra	Arithmetic
Civics	Civics	Civics
English History..	English History..	Modern History..
Bird Study	Taxidermy	Bird Ecology....
Botany	Physiology	Botany
History of Com- merce	Geography of Com- merce	Physical Geograpy Latin
Latin	Latin	German
German	German	Textils and house- hold art.
Sewing	Sewing	Advanced Joinery
Wood Turning... Music	Music	Music
Pictorial Drawing	Mechanical Draw- ing	Decorativ Design.

ELEVENTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
English R	English R	Reading
Industrial History R	Industrial History R	Economics
Geometry	Geometry	Geometry
Latin	Latin	Latin
German	German	German
Cooking	Cooking and Die- tetics.	Food Composition and food values.
Physics	Physics	Physics
Agriculture	Physics	Agriculture

FALL TERM.	WINTER TERM.	SPRING TERM.
Wood Carving....	Agriculture	Parketry
Printing	Inlaying	Printing
Music	Printing	Music
Pictorial Drawing	Music	Decorativ Design-
Library Work....	Mechanical Draw-	ing
Physical Training	ing	Library Work....
	Library Work....	Physical Training
	Physical Training	

TWELFTH GRADE.

FALL TERM.	WINTER TERM.	SPRING TERM.
English	English	Reading
Political Economy	Political Economy	Political Economy
History Modern	History Modern	History Modern
Europe	Europe	Europe
Chemistry	Chemistry	Chemistry
Latin	Latin	Latin
German	German	German
Trigonometry ...	Trigonometry ...	Trigonometry ...
Bacteriology	Bacteriology	Bacteriology
Music	Music	Music
Art	Art	Art
Manual Training.	Manual Training.	Manual Training.
Physical Training	Physical Training	Physical Training

The regular course of the high school is three years in length, and students who finish this course satisfactorily receive the diploma of the school. A fourth year of work is offered in the twelfth grade for those students who wish

to prepare for college or who, for any reason, wish to extend their course. For this year's work is given a special certificate showing the fulfillment of college requirements.

The arrangement of the program is such as to facilitate and to encourage the grouping of related subjects by the students when choosing their electives. In this way a student may pursue some special line of work thruout his course, while taking the required work and some promiscuous electives. Some of the suggested groups are as follows:

AGRICULTURAL GROUP.	MANUAL TRAINING GROUP.	INDUSTRIAL GROUP.
Zoology3	Mechanical Draw- ing1	History of Com- merce1
Botany2	Pictorial Drawing1	Geografy of Commerce . . .2
Biology1	Designing1	Physical Geogra- fy1
Agriculture2	Elementary Join- ery1	Business Arith- metic1
Soil Bacteriology1	Advanced Joinery2	Industrial History2
Chemistry3	Wood Turning . . .1	Economics1
	Wood Carving . . .1	
	Inlaying1	
	Iron Work1	
	Printing3	

DOMESTIC SCIENCE GROUP.

Mechanical Draw- Designing1	Chemistry3
ing1	Household Art..1
Pictorial Drawing Sewing2	Physiology1
.1	Bacteriology . . .1
Cooking3	

Note.—Figures indicate number of terms the subject is given each year.

Similarly groups can be formed in History, Mathematics, Language, Physical Science, and the like, by consultation with the principal of the High School and the superintendent of the training school.

Students who finish satisfactorily the three years' course in the High School enter the Junior year of the State Normal School.

GIFTS TO THE HIGH SCHOOL.

Gifts of large framed pictures have been made to the High School as follows:

The Vatican (etching), George D. Horne.

Ducal Palace, Venice (fotograf), Class of 1903.

Dance of the Nymphs—Corot—(fotogravure), Class of 1904.

Spring—Ruysdael—(fotogravure), Class of 1905.

Sir Galahad—Watt—(fotogravure), Class of 1906.

Shakespeare—(plaster cast), Class of 1907.

Cascade—Ruysdael (brown print); Song of the Lark—Breton (color print); Shepherd's Star—Breton—(color print), Class of 1908.

ALUMNI ASSOCIATION.

A Normal High School Alumni Association is maintained which holds annual reunions and banquets. The present officers are: Elizabeth Miner, president; Olive Delling, Vice-President; Hallie Gammon, Secretary.

REGISTERD STUDENTS.

CLASS OF 1911.

Adams, Roy	Hunter, Eugene
Anderson, Fritz	Jenkins, Charles
Anderson, Nellie	Laughrey, Beulah
Billings, Gordon	Lloyd, Mamie
Bickling, Francena	Malm, Esther
Bishop, Ida	Martin, Rebecca
Boreson, Grace	Martin, Olive
Bowles, Dotta	Miller, Ernest
Briscoe, Edwin	Mosier, Ruth
Carle, Mary	Nicholas, Clifford
Center, Fred	Nicholas, Ora
Champion, Ernest	Offerlee, Molly
Davis, Charles	Parsons, Maude
Davidson, Lulu	Pattee, Isabelle
DuBois, Karl	Peterson, Grace
Durning, James	Ringle, Helen
Easton, Edison	Robinson, Inez
Eberhardt, Frances	Shultz, Jaunita
Erwin, Eva	Spencer, Clarke
Edwards, T. M.	Statler, Stewart
Evans, Mozelle	Stewart, Hazel
Fagan, Edward	Svedman, Lillie
Forquer, Ellen	Swanson, Mae
Gates, Frank	Teghtmeyer, Velma
Gilmore, Claude	Tell, Sylvia
Gilmore, Daisy	Waite, Rosa
Gore, Floy	Weiss, Rosa
Gordon, Carl	Wickline, Walden
Harris, Earl	Williams, Charles
Holmes, Agnes	

—59

CLASS OF 1910.

Alden, Lee	Bly, Hazel
Baab, Bertha	Boreson, Emma
Bashor, Esta	Boreson, Martha
Bashor, Mary	Boston, Roy
Bedford, Everett	Bowerman, Austin

Bowland, Edward
 Campbell, Ruth
 Collins, Mary
 Colpitts, Guy
 Crone, Harry
 Cross, John
 Davidson, Chief
 Delling, Minnie
 Dotson, Edna
 Dotson, Ruth
 Durning, Charles
 Eberhardt, Pearl
 Emerson, Inez
 Hartung, Emil
 Hopkins, Helen
 Horton, Mary
 Hunter, Hugh
 Hull, Orlo
 Jillson, Helen
 Kelley, Myra
 Konkel, James
 Kyle, Norma
 Lay, Edith
 Lee, Arthur
 Lewis, Ralph
 Lloyd, Nathaniel
 Lyon, Evelyn

Malm, Carl
 McKelvey, Lillian
 Nessler, Estelle
 Phelps, Mattie
 Riddle, Ray
 Robb, Grace
 Samson, Ida
 Sanford, Hazel
 Smith, Belva
 Snider, Jesse
 Stewart, Edna
 Svedman, Ellen
 Tague, Harold
 Todd, Maude
 Tope, Mary
 Tope, June
 Truelson, Katie
 Waite, Earl
 Watson, Gertrude
 Williams, Fern
 Wright, Zada
 Wyatt, Hilda
 Wyatt, Mabel
 Yerion, Grace
 Zilar, John

—62

CLASS OF 1909.

Anthony, Hazel
 Ashby, Hope
 Backus, Lillian
 Baker, Charles
 Beardsley, Inez
 Beattie, Robert
 Bennett, Nellie
 Bischoff, Nellie
 Blaisdell, Oscar
 Blazer, Esta
 Brake, Jane
 Campbell, Ruth
 Carrithers, Glessner
 Carpenter, Edith
 Culver, Betsey
 Dickey, Harley
 Doke, Harold

Emerson, Mae
 Erickson, Arthur
 Finch, Callie
 Finch, Clarence
 Glover, Nellie
 Hamilton, Elsie
 Hatch, Frank
 Hayden, Mary
 Heighton, Charles
 Hennes, Elizabeth
 Hopkins, Mildred
 Horton, Mary
 Hunter, Sarah
 Keefe, Blanche
 Kennedy, Lyra
 Konkel, Mary
 Lamb, Florence

Laughrey, Berenice	Piedalue, Regina
Lewis, Carrie	Phillips, Zelma
Ling, Bessie	Pritchard, Henrietta
Lockhart, Mae	Probert, Bessie
Mayhoffer, Frances	Reeves, Frank
Moore, Elizabeth	Ritchey, Helen
Morris, Ruth	Shambo, Mabel
Motheral, Clare	Snodgrass, Geneva
Mott, Irene	Steck, Susie
Mundy, James	Swanson, Lois
Musgrove, Mary	Sweet, Gladys
Mulvenhill, Rita	Sullivan, Vera
McCoy, Adelaide	Tibbets, Elsie
McGrath, Margaret	Thompson, Aline
McGrath, Mary	Thornton, Theresa
McCullom, Merriam	Townsend, Alice
McCunniff, John	Truelson, Norma
McCunniff, Dennis	Tucker, Mary
New, Nellie	Turner, Elmer
Nordstron, Sylvia	Varvel, Emmett
Noyes, Mary	Wilcox, Eula
Oliver, Bertha	Willson, Anna
Oliver, Elsie	Wilmarth, Alta
Oliver, Ruth	Woods, Della
Peery, Blanche	Wood, Mary

—85

Grand Total.....206

GRADUATES.

CLASS OF 1902.

Beardsley, Myrtle	Denver
Buckley, Emma	Greeley
Cheese, Ida	Platteville
Day, William	Greeley
Day, Grace	Greeley
Dolan, Margaret	Leadville
Douglass, Russie	Mexico, Mo.
Ellis, Ruth	La Salle
Niemeyer, Blanche	Evans
Patterson, Bessie	Greeley
Remington, Katie	Greeley
Snyder, Tyndall	Greeley
	—12

CLASS OF 1903.

Adams, Roxana M.	Greeley
Alexander, Raymond P.	Mosca
Buchanan, Louisa D.	Brush
Cummings, Josephine S.	Greeley
Ellis, Ralph W.	La Salle
Hall, Ivan Clifford.	La Grange
Kendel, J. Clark.	Greeley
McDonald, Anna E.	Leadville
McFarland, Rachel.	Salida
Proctor, Emily L.	Loveland
Robb, Pearl G.	Greeley
Rutt, Raymond J.	Octavia, Neb.
Sibley, Blanche T.	Denver
Snook, Harry J.	Greeley
	—14

CLASS OF 1904.

Abbott, Vivian	Greeley
Alps, Rosaline L.	Loveland
Bodfish, Gertrude	Victor
Brake, Mona	Greeley
Camp, Leo	Vernal, Utah
Cheese, Cora	Platteville

Cozzens, Mabel M.....	Lucerne
Dean, Edna.....	Greeley
Doherty, Anita M.....	Cheyenne, Wyo.
Doke, Carrie.....	Greeley
Draper, Everette F.....	Greeley
Ellis, Edith E.....	La Salle
Finch, Myrtle.....	Greeley
Foote, Amy R.....	Hugo
Gardner, Ada E.....	Yuma
Hall, Mabel G.....	Greeley
Hiatt, Grace.....	Central City
Hoffman, Ethel A.....	Platteville
Hoffman, Pearl E.....	Platteville
Kellogg, Pearl A.....	Greeley
Laughrey, Maude L.....	Greeley
Madgett, Alma M.....	Platteville
Mincey, F. Myrtle.....	Eaton
Moore, Robert M.....	La Salle
Morrison, Marguerite.....	Evans
Murphy, Catherine.....	Rouse
McMillan, Ella M.....	La Salle
Norris, Louella.....	Greeley
Pike, Jennie.....	Morrison
Reid, Boyd.....	Greeley
Rhodes, Edith P.....	Ashton
Sanford, Olive M.....	Greeley
Schroeder, Helen M.....	Greeley
Schull, Beulah B.....	Bellevue
Sibley, Winifred.....	Denver
Ward, Olive.....	Greeley
Wylie, Eva.....	Evans

—37

CLASS OF 1905.

Baird, Olive.....	La Salle
Bane, Naomi.....	Frances, Colo.
Barry, Lois.....	Greeley
Beattie, Elizabeth.....	La Salle
Bly, Winifred.....	Greeley
Cook, Alfaretta.....	La Junta
Dean, Iva.....	Greeley
Dean, Sherman.....	Greeley
Doke, Bettie.....	Greeley
Duenweg, Rose.....	Platteville
Edgington, Blanche.....	Greeley
Gill, Emma.....	Lindon

Harbottle, Anna	Greeley
Herrington, Edith	La Salle
Herriott, Mary	Evans
Hedgpeth, Allena	Lamar
Hiatt, Paris	Central City
Johnson, Blanche	Monte Vista
Joyce, Gertrude	Cripple Creek
Kelsey, Cammie	Fort Lupton
Koster, Elizabeth	Rico
Lanham, Iva	Loveland
Laughrey, Leona	Greeley
Moore, Attie	Fort Collins
Muncaster, Edith	Rico
North-Tummon, Allene	Georgetown
Pearcey, Lillie	Eads
Reid, Glen	Greeley
Romans, Frank	Salida
Scott, Laura	Denver
Schwertfeger, Emma	Sterling
Spence, Mary	Chromo
Stampfel, Alvene	Rico
Smith, Clinton	Greeley
Wilkinson, Mabel	Greeley
Waite, Nellie	Greeley

—36

CLASS OF 1906.

Albee, Ida	Berthoud
Archibald, Allie	Evans
Baird, Myrtle	La Salle
Baker, Georgia	Greeley
Barry, Susie	Evans
Barmettler, Alice	Georgetown
Brainard, Fay	Greeley
Brainard, Iona	Greeley
Brown, Charlotte	Glenwood Springs
Crawford, Ada	Greeley
Dale, Ethel	Edgewater
Delling, Olive	Greeley
Duenweg, Anna	Platteville
Finley, Ethel	Windsor
Gammon, Hallie	Greeley
Grable, Laura	Denver
Hughes, Martha	Silverton
Hurley, William	Greeley
Johnson, Edna	Greeley

Johnson, Mildred	Greeley
Johnston, Harry	Evans
Kibby, Bertha	Berthoud
Kyle, Homer	Evans
Latson, Irma	Rocky Ford
Miner, Elizabeth	Crested Butte
Montague, Pearl	Denver
Moore, Charles	Evans
McLernon, Irene	Sidney, Neb.
O'Boyle, Alice	Denver
Patterson, Mae	Greeley
Peterson, Josie	Creston, Iowa
Ramsdell, Fred	Greeley
Rawls, Berenice	Creston, Iowa
Sopp, Helen	Georgetown
Stephens, Joseph	Akron
Wells, Rose	Beaver

—36

CLASS OF 1907.

Alan, Edwina	Denver
Baird, Alice	La Salle
Beardsley, Edith	Greeley
Camp, Myrtle	Greeley
Craig, Maud	Greeley
Crawford, Charles	Greeley
Dannels, Clara	Bayfield
Dean, Rose	La Salle
Delling, Evelyn	New Windsor
Devinny, Marie	Edgewater
Dick, Jean	Walsenburg
Durning, Bertha	Greeley
Erskine, Cora	Rouse
Finch, Lester	Greeley
Gammon, Minnie	Loveland
Hall, Beulah	Cheyenne Wells
Hall, Frank	Cheyenne Wells
Hall, Irene	Cheyenne Wells
Hibner, Dee	Greeley
Johnson, John	Greeley
Jones, Lynn	Buffalo Creek
Kelley, Lillian	Cripple Creek
Kindred, Avis	Greeley
Kyle, Henry	Evans
Lamma, Clara	La Salle
La Moy, Madalene	Iola

Lockhart, James	La Salle
Long, Margaret	Lafayette
Lucas, Cora	Greeley
Mackey, Gertrude	Greeley
Mead, Wilhelmina	Greeley
Morris, Clara	Greeley
McAfee, Montgomery	Greeley
McCreery, Mildred	Greeley
Patterson, Alice M.	Greeley
Pearson, Hazel	Lafayette
Piedalue, Laura	Greeley
Roberts, Mabel	Cripple Creek
Reid, Janet	Greeley
Roland, Garnet	Sterling
Royer, Russell	Greeley
Reilly, Kathryn	Georgetown
Tracy, Lillian	Denver
Van Gorder, Elizabeth	Greeley
Wright, Lora	Greeley
Young, George	Evans
Yerion, Cena	Greeley

—47

CLASS OF 1908.

Alexander, Edith	Hutchinson, Morris
Bedford, Merton	Johnson, Helen
Barrowman, Sadie	Kermode, Dorothy
Bernethy, Ruth	Konkel, Anna
Bolton, Gertrude	Kyle, Clover
Blair, Bessie	Miller, Alta
Blumer, Henrietta	McClintock, Alice
Bradfield, Louis	McCreery, Grace
Calvin, Nona	McKibben, Edith
Carpenter, James	Paine, Velma
Cary, Leta	Pence, Pansy
Chestnut, Asa	Peterson, Jennie
Clock, Louva	Richardson, Clyde
Cooper, Agnes	Rodgers, Grace
Delling, Mabelle	Rowe, Cora
Fedde, Agnes	Sherman, Jessie
Gate, Bernard	Snoddy, Martha
Garrigus, Grace	Smith, Josephine
Goodwin, Elizabeth	Straight, Allen
Gore, Stella	Stevens, Hazel
Graham, Olivia	Werkheiser, Ola
Green, Minnie	Wilmarth, Maud
Hunter, Calla	Zilar, Bessie

—46

CLASS OF 1909.

Anthony, Hazel	Mayhoffer, Frances
Backus, Lillian	Morris, Ruth
Baker, Charles	Mott, Irene
Beattie, Robert J.	Mundy, James H.
Beardsley, Maybelle	Musgrove, Mary
Bennett, Nellie L.	Mulvehill, Rita
Bischoff, Nellie	McCoy, Adelaide
Blaisdell, Oscar	McCullom, Merriam
Blazer, Esta	McGrath, Mary
Brake, Jane	McGrath, Margaret
Carpenter, Edith	New, Nellie B.
Carrithers, Glessner	Nordstrom, Sylvia
Culver, Betsy	Phillips, Zelma
Dickey, Harley	Pritchard, Henrietta
Emerson, Mae	Ritchey, Helen
Erickson, Arthur	Shambo, Mabel
Finch, Clarence	Snodgrass, Geneva
Finch, Callie	Steck, Susie
Hamilton, Elsie B.	Sullivan, Vera
Heighton, Charles	Swanson, Lois H.
Hennes, Elizabeth	Thompson, Aline
Hopkins, Mildred	Tibbets, Elsie
Horton, Mary	Townsend, Alice
Hunter, Sarah	Truelsen, Norma
Keefe, Blanche	Tucker, Mary
Kennedy, Lyrra	Turner, Elmer
Konkel, James	Varvel, Emmett
Konkel, Mary	Willson, Anna
Laughrey, Berenice	Wilmarth, Alta
Lewis, Carrie	Wood, Mary A.
Lockhart, Mae	

—61

 Total number of graduates.....288

CONTENTS.

	Page
Agriculture	32
Alumni Association	55
Announcements	3
Art	36
Bird Study	31
Botany	31
Calendar	2
Chemistry	30
Civics	15
Course of Study.....	50
Disciplin	11
Domestic Science	42
English	17
Expenses	12
Faculty	5
Geografy	29
German	27
Gifts to the High School.....	54
Graduates	60
History	13
Historical Sketch	9
Ideals and Purpose.....	9
Latin	26
Library	47
Library Science and Handicraft.....	47
Manual Training	39
Mathematics	16
Music	45
Physics	30
Physical Training	43
Reading and Oratory.....	20
Registered Students	57
Zoölogy	30

State Normal School of Colorado



Bulletin Concerning Rural Schools and Their Consolidation.

In all publications of this institution is employed the spelling
recommended by the Simplified Spelling Board.

Series IX. No. 4.

Published Quarterly by the Trustees of the State Normal School
of Colorado, Greeley, Colorado.

Entered at the Postoffice, Greeley, Colorado, as Second-class matter.

BULLETIN

Concerning Rural Schools
and Their Consolidation

Colorado State Normal School
Greeley, Colorado

August, 1909

By D. D. HUGH,
Dean of Training Department.

OUR RURAL SCHOOLS.

It is beyond controversy that our rural schools have not during the past generation kept pace with the educational progress of our city school systems. This is true alike of the material equipment in the way of bildings, apparatus and playgrounds, in the enrichment of courses of study, and in the provision made for securing both adequate supervision and a professionally traind corps of teachers. The reasons for this retardation of the rural school are not hard to find. The isolation of country life in the past has contributed in many ways to this result. In any country district there are necessarily few people who are vitally interested in the welfare of the schools and few opportunities exist for the meeting of either teachers or parents for the discussion of educational problems. There is lacking, therefore, the natural stimulus that comes from keen realization of the issues at stake and spirited debate in regard to the best means of attaining the desired ends. The meager salaries, moreover, of rural teachers are not a great incentiv to spend much time and money upon professional training, and those who do not make such preparation usually succumb sooner or later to the superior pecuniary attractions and social allurements of city life. Hence the rural school has remaind largely unaffected by the march of modern educational progress.

This assertion of the inadequacy of the rural school is

not invalidated by the fact that many persons of eminence have obtained the rudiments of their education within its walls. Their success in life is not in any large measure to be attributed to the educational efficiency of this institution. On the contrary a favorable environment for physical development, the helthful moral and intellectual influences of Nature, the establishment of habits of industry and self-reliance, and the opportunities for quiet meditation upon the problems of life, may all with more reason than any fancied superiority of the instruction be regarded as the causes of this success. It is important, therefore, that the district school should be aroused from its lethargy and be made alive to its splendid educational opportunities.

And there are abundant evidences that its renaissance is at hand. This is another indication of the recent revival of interest in country life. The isolation of the country that has so long retarded its social and educational activities is rapidly being broken down. The telephone and the rural mail delivery, the trolley cars, and even the automobile—that modern annihilator of distances—are all contributing to this result. The development of higher educational institutions, such as our agricultural colleges and normal schools, directly concerned with the social and intellectual welfare of the rural population, is also an important element in the situation. Everywhere there are evidences of new life and activity. With this rejuvenation of country life must come also, sooner or later, a reorganization of the rural school that will make it a potent factor in the social and intellectual life of the rural districts.

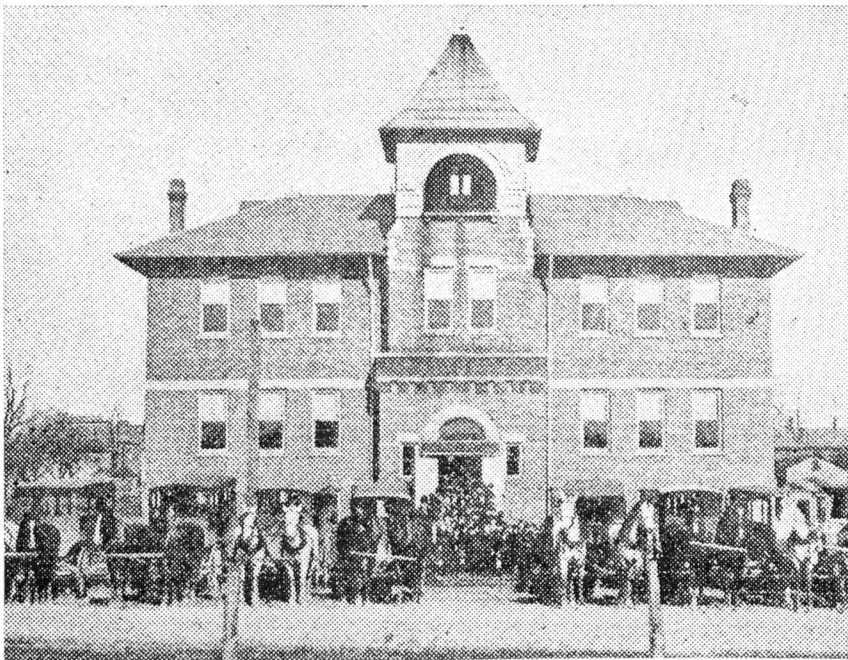
The term "reorganization" best represents the changes that must inevitably come to enable the rural school to do efficient work. As at present constituted it cannot furnish an adequate type of education. Its defects are those that are inherent in an ungraded school system: namely, imperfect classification; classes too numerous to permit the teacher to do other than the most perfunctory kind of routine work; no provision for the newer subjects that are vitalizing the work of our better schools; and, finally, lack of social spirit due to the small number of children in the classes. These defects can not be overcome by the well-intended efforts of the county superintendent or school directors or the self-sacrificing services of the teacher. We must have a new kind of school for the country districts—a school that will represent the new country life, a school that will employ well-trained teachers and that will provide a generous course of study designed as far as possible to satisfy the various intellectual and vocational needs of country boys and girls.

This higher type of rural school will be practicable, then, only where children can be brought together in sufficient numbers to make possible both a properly graded system and the employment of special teachers for some of the newer subjects. These results can be most readily attained by the establishment of consolidated schools. As President Butterfield of Massachusetts says: "The centralization of district schools and the transportation of pupils will probably prove to be more nearly a solution of all these difficulties (i. e., of the district schools) than will any other one

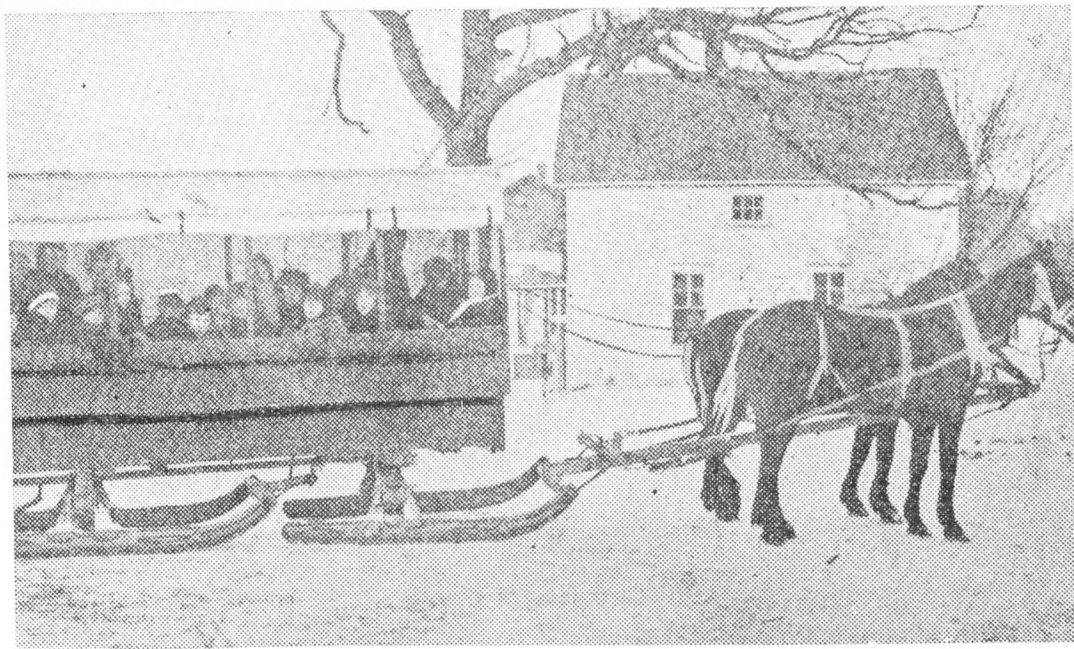
scheme. The plan permits the payment of higher wages for teachers and ought to secure better instruction; it permits the employment of special teachers, as for nature-study or agriculture; it increases the efficiency of superintendence; it costs but little if any more than the district system; it leaves the school amid rural surroundings, while introducing into the school-room itself a larger volume, so to speak, of world atmosphere; it contains possibilities for community service; it can easily be expanded into a high school of reputable grade."

These words uttered by the President of an agricultural college and of the Roosevelt commission on rural life, a citizen of a commonwealth that has always been in the van of educational progress and has had a longer experience with consolidated schools than any other state in the Union, are worthy of careful consideration on the part of every one interested in the rural school. They sum up in concise language the benefits that such an institution is capable of conferring upon country districts; they open up a broad vision of the possibilities of a more adequate type of education for country boys and girls.

Attention is particularly invited to the social and vocational aspects of the scheme here outlined. The rural school should be the center of the social activities of the community,—an object of pride and a source of inspiration to all concerned with it. It should be a place where the people of a community meet occasionally for the discussion of problems of general interest, for farmers' institutes, for entertainments and public lectures, for the cultivation of all



A Consolidated School—Wagons Redy to Take the Children Home.
(*Courtesy Woman's National Daily, St. Louis.*)



Cold Wether Does Not Hinder the Consolidated School Plan.

(Curtesy Woman's National Daily, St. Louis.)

the higher interests of life—intellectual, social, and esthetic. But most of all, it should afford opportunities for a broader intellectual and vocational education of the young people of the surrounding district. The courses of study in our city schools have been greatly enriched during recent years, and there are indications that the adjustment of the curriculum is only in its infancy yet. Vocational education is now one of the live issues among educators, and is bound to become a more important factor in school work in the near future. Our country schools should not try to imitate the city schools, but should work out a course of study especially suited to the needs of country children. They should afford a wide range of instruction in such subjects as nature-study, elementary agriculture, manual training, domestic science, and applied art—subjects of immediate interest and importance to every country child, and should provide, moreover, an education of high school grade for the older boys and girls. All these things are possible in a well-equipped school with an efficient teaching force and under adequate supervision, but can never be consummated in the ungraded country school.

The improved surroundings of this type of school should also be kept in mind. How inartistic and uninviting is the appearance of the average country school! And should not the surroundings of the child during these early impressionable years be made as beautiful as possible? At least the rural school should compare favorably in the general appearance of its buildings and of its well-kept grounds, supplied with trees and shrubbery and flowers, with the best type of country homes.

In any plan for the reorganization of the rural school it must be borne in mind that the primary object of the scheme is to secure better rather than cheaper schools. The consolidated school is desirable mainly because it makes possible a better grade of instruction. But it is incumbent upon those entrusted with its organization and management to see that these benefits are actually attained. Otherwise the instruction given in such a school may be as narrow and perfunctory as in any other rural school. And this higher type of instruction, as experience has shown, costs but little if any more than the meager routine of studies in our present schools. No taxpayer, therefore, can have any objection to making the education to be given in the new school as efficient as possible. And even if some slight additional taxation should be necessary, it surely will be cheerfully borne by anyone who has the welfare of country boys and girls at heart, and who realizes to even a small extent what this higher education would mean to them.

A more detailed discussion of some of the problems involved in this subject as well as some illustrations of consolidated schools will be found in the articles that follow. Particular attention is directed to the fact that we have recently had a well-equipped consolidated school established in Pueblo county. This, to the writer's knowledge, is the first up-to-date rural school organized in this State. It ought to be an object of interest to all concerned with country schools; and the obligations resting upon the patrons and directors of this district, not only for working out something of value to their own community but also of affording an



A Country School Garden.

(Curtesy Woman's National Daily, St. Louis.)

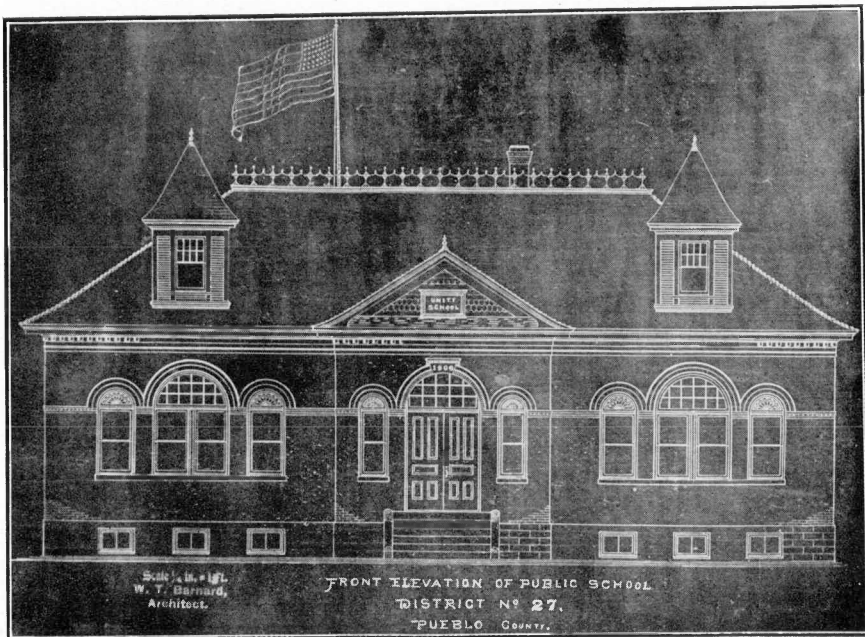
object lesson for all the citizens of Colorado, ought to stimulate them to put forth their best efforts for the realization of an ideal school. May we soon have many more such schools established!

A NEW TYPE OF SCHOOL FOR COLORADO

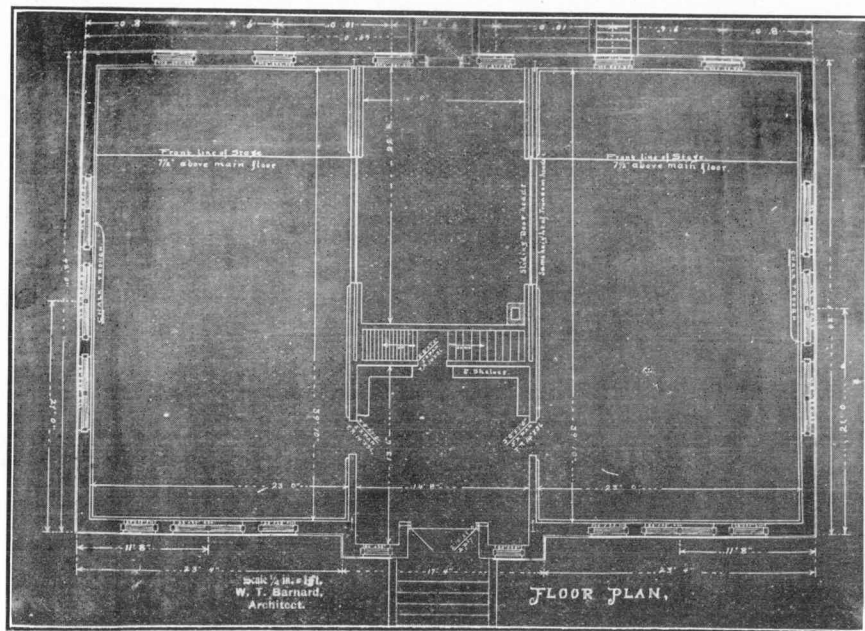
It is a great pleasure to the writer to be able at this time to call attention to the consolidated school recently established in this State. This school is situated in the extreme eastern portion of Pueblo County near the town of Fowler. The district consolidated is populated with a good, substantial class of farmers, chiefly of Scandinavian descent—a people who are not apt to be visionaries or to be carried away with a passing fad, but who are deeply interested in securing for their children a practical education. For this purpose they are developing at this place a type of school that is full of promise for rural districts.

This consolidated district formerly supported two schools. The old buildings have been condemned, and an attractive brick building has recently been erected on one of the sites. The new building possesses good architectural features, is comfortably heated by a furnace, and is equipped with a thoroughly efficient ventilating system. How few of our city school buildings are yet, alas! furnished with this most essential feature of a well equipped schoolhouse. How slowly do we emerge from the age of barbarism!

Another feature of this new school plant especially worthy of notice is the provision being made for ample school grounds. It is the intention of the directors of the district, it is understood, to purchase sufficient adjoining land to enclose ten acres within the school premises. This will afford space for suitable lawns and places of recreation



Front Elevation, Unity School Building, near Fowler, Colo.



Floor Plan, Unity School Bilding, near Fowler, Colo.

and also for plots for school gardens and work in elementary agriculture. The patrons of the school voted almost unanimously to include the latter subject in the curriculum. It has been wisely decided, however, that for the present the outdoor work shall take the form of improving and beautifying the school grounds. The energy and enthusiasm with which this work is being planned is prophetic of the development in a few years of a beautiful campus for this school. And why should not every other country school "go and do likewise?"

The basement of the building is being fitted up for a work shop where the boys can carry on some form of manual work. This will at first take the form of supplying material needed for the equipment of the new institution, such as the making of boxes for the irrigating ditches on the grounds. It is to be hoped that the district in time will see its way clear to establish a domestic science course for the girls. Ample space for such work could be easily supplied in a well-equipped basement. With a primary teacher skilled in domestic science and a principal qualified to teach manual training and elementary agriculture, such a school possesses magnificent opportunities for the education of country boys and girls even without the employment of a special teacher, tho in a larger school this would be desirable.

Another important asset of the school, not to be overlooked, is the library room conveniently located on the first floor between the two main rooms. The school library is proving itself to be one of the most important factors in the education of school children, and surely there is no place

where it is more important than in country districts where other libraries are not always accessible. The combination of a country environment with the possibility of outdoor life and occupation and the opportunity for the study of the world's best literature constitutes ideal conditions for the education of children.

The new school was opened with appropriate exercises on February 13 of this year. This was practically a holiday in the district, as the whole population turned out *en masse* to spend the day at the school building. An all day's program of addresses on educational topics was provided, dealing especially with problems of rural education, the development of the schools in this portion of the state, and the possibilities opened up by the introduction of the consolidated school. Among the speakers were the principal of the school, representatives of the building committee, persons prominent in the educational work and business interests of the surrounding country, including the county superintendent of schools, and Professor W. B. Mooney, School Visitor for the State Normal School. An enjoyable social feature of the occasion was the dinner furnished by the good ladies of the district in the school building. If the interest and enthusiasm manifest on this occasion is any indication of the success of the school, it has a bright future before it.

Much credit is due to the teachers and patrons of the school and to Miss Nellie Corkish, the county superintendent, for daring to place themselves in the vanguard of educational progress. The experiment will doubtless be watched with interest by other portions of the State.



Good Things to Eat at the Dedication Exercises of the Unity School Bilding.

A NEW EDUCATIONAL MOVEMENT IN CANADA.*

A knowledge of contemporary educational systems and practises is, of course, of value to us in so far as it affords us guidance and inspiration in our work. With this object in view it seemd to me that an account of the Macdonald School Movement in Canada, which I had the good fortune to have an opportunity to study at first hand during the past summer, might be of interest to the readers of the COLORADO SCHOOL JOURNAL.

THE ORIGIN AND NATURE OF THE MOVE- MENT.

The name itself for some possibly requires a word of explanation. The Macdonald School Movement is not an attempt to organize a system of private schools, as the term may seem to suggest, but it is rather an effort to enrich and amplify the work of the public schools, and especially the rural schools, by a better system of organization and by the introduction into their curricula of such subjects as nature-study, school gardening, manual training, and domestic science. The peculiar feature of the movement, from which it derives its name, consists in the fact that this attempt to

*Reprinted by permission from the *Colorado School Journal*, September, 1907.

improve the rural schools of Canada sprang from the initiative of a private citizen. Sir William Macdonald, a wealthy merchant of Montreal, had it in his heart to do something for the advancement of the country schools. Born amid rural surroundings down by the sea in Prince Edward Island, the baby province of the Dominion, Sir William was well acquainted with the limitations of the rural schools, and was anxious to spend in their improvement a portion of the wealth which he had had the good fortune to amass.

With this object in view he called to his aid a man eminently qualified both by genius and experience to organize and carry into execution the work he wished to accomplish. This man was Professor James W. Robertson, at that time the Canadian Commissioner of Agriculture and Dairying. Preaching the gospel of scientific farming, Professor Robertson was devoting himself with untiring energy to the betterment of agriculture, and was meeting with signal success, as is shown by the fact that in one province the export of dairy products actually increased nearly seventy-fold in ten years. But he was not satisfied with the material progress of his agricultural friends. He saw that the chief asset of the Canadian farmer was not his green meadows nor his dairy herds but the boy on the farm, and was unceasing in his efforts to stimulate a greater interest in rural education. The munificence of Sir William Macdonald, however, for the first time enabled him to give to the people a tangible illustration of what could be done for the education of the farmer's boys and girls. The outgrowth of this endeavor is what is known as The Macdonald School Movement.

EDUCATIONAL PROJECTS UNDERTAKEN.

INTRODUCTION OF MANUAL TRAINING.

As manual training had been introduced into very few of the public schools of Canada, either urban or rural, at the time of the inception of the Macdonald School Movement in 1899, it seemed best in the first place to begin with the cities, so that the sentiment aroused in favor of this subject might finally lead to its adoption in the country schools. Accordingly Sir William offered to equip the rooms and provide the teachers for manual training in a number of cities in the different provinces of the Dominion for a period usually of three years. As the work progressed, as many as forty-five teachers were at one time employed, and in this way manual training was established in over twenty Canadian towns and cities, which have as a rule continued to carry on the work after the expiration of the three years. While the general introduction of manual training into the country schools has as yet been far from realized, nevertheless a great stimulus has been given the teaching of this subject throughout the Dominion.

THE ESTABLISHMENT OF CONSOLIDATED SCHOOLS.

But the introduction of manual training was only an initial effort, carried on indirectly, to benefit the rural schools. A much more important, or at least a more direct, means was the establishment of consolidated country schools in the different provinces of the Dominion. In the establishment of these schools the leaders of the Macdonald

School Movement were a good deal influenced by the organization of consolidated schools in this country. Professor Robertson had visited and studied carefully these schools in several states, especially in Ohio, and had become convinced that the consolidated school offered a solution of the problem of the improvement of the rural schools of Canada. But he saw, too, that consolidation was not an end in itself, as it did not necessarily improve the mechanical routine of school work. To quote his own words before a Parliamentary Committee, "We in Canada want something better than mere consolidation. We want not simply consolidation, but consolidation as a means towards an improved time-table and a course of study and methods of study sufficient for present day needs."

With this purpose in view a consolidated school was established as an object lesson in most of the provinces. The usual plan, as in the case of the manual training, was to supply buildings, equipment and teachers for a period of three years without additional cost to the school patrons. Besides the ordinary subjects of the curriculum, a prominent place was given to manual training, nature-study, school gardening and household science. The teachers of these subjects were given a year's special instruction free of cost in the best educational institutions in the United States and Canada. As in most city schools, these branches are taught by specially trained teachers. Each building has at least four rooms, containing the children from six or more school districts. Vans are employed to carry the children to and from their homes.



A Glimpse of the Flower Plots—Colorado State Normal Training School.



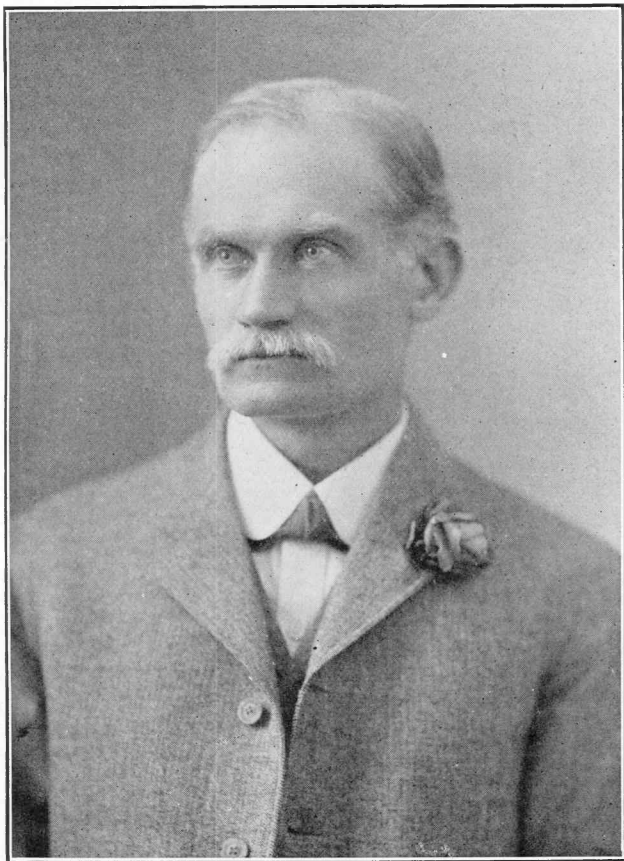
A Corner of the Vegetable Garden—Colorado State Normal Training School.



School Gardening at Colorado State Normal Training School.



Front Elevation of New Training School Building—Colorado State Normal School.



PRESIDENT JAMES W. ROBERTSON,
Macdonald College, Canada.



One of the Macdonald Consolidated Schools.

As the three-year period during which schools were to be supported by The Macdonald School Fund is now just about to expire, it is too early yet to speak with certainty of the success of the experiments as regards its permanent influence upon the public schools of Canada. But that this has proved to be an interesting and suggestiv experiment in school organization and that the instruction has been of a much higher order than that of the ungraded school, is doubtless true. Of course, as in any other experiment, many difficulties have to be met and overcome. The conservatism of popular opinion on educational matters and the increast expenditure for organization and for higher salaries for better qualified teachers, have to be taken into account, though the latter item of expense may in some cases be offset by the smaller number of teachers required. Local prejudices and dissensions, too, incidental to the introduction of so new an undertaking, have sometimes proved to be disturbing factors in the work. But an examination of these schools cannot but inspire one with new faith in the possibilities of rural education, nor can one dout that the time is coming when popular sentiment will be sufficiently educated to demand and pay for this higher type of school.

As to the immediate fate of these consolidated schools, the general expectation at the time of my visit last summer seemd to be that The Macdonald School Fund would contribute to the support of these schools for another period of three years, the tax-payers, however, becoming responsible for a larger share of the expense than before. In one or two of the provinces considerable work has been accomplisht in consolidation by the provincial authorities, so that this

plan bids fair to be utilized, at least in the more sparsely populated districts, for the improvement of rural education.

THE ESTABLISHMENT OF GARDENS FOR UNGRADED SCHOOLS.

Not satisfied with the effort to demonstrate the feasibility of the consolidated school with its enriched curriculum, the promoters of the Macdonald School Movement undertook also to establish school gardens in connection with a group of five ordinary rural schools, in each of the provinces of the Dominion, in order to illustrate what could be done to meet the special needs of the country boys and girls where consolidation might not be considered practicable. The schools selected for this purpose were situated a very short distance from each other, so that a trained inspector might superintend the work of each group. In these gardens some simple experiments are conducted in seed selection, use of fertilizers, effects of moisture, and other phases of elementary agriculture. The school garden material and activities are also utilized as a concrete basis of work in arithmetic, physics, language, writing, drawing, etc., besides affording the child a broader vision of the significance of home industries. In the organization of these gardens the esthetic development of the child is kept in mind, as well as his more purely intellectual and utilitarian interests, as is shown by the following description:

“The general plan of laying out each garden involves (1) a belt of native trees and shrubs surrounding the grounds except at intervals where a desirable view is available; (2) a half acre play-field for the boys; (3) a lawn

bordered with shade trees for the girls; (4) a shaded walk each for boys and girls, about a hundred yards long; (5) an attractive approach to the school consisting chiefly of a piece of open lawn with shrubs and flowers on either side; (6) a suitable reservation for individual and class plots; (7) an orchard plot or border; (8) a forest plot in which the chief native trees are grown from seed.”*

In fact one of the most important aims was to make these schools serve as object lessons for the beautifying of the country homes, and as centers for social gatherings of the community. As an illustration of nature-study work, these gardens have been of very great value in influencing educational opinion on this subject, and have received the highest approbation of such experts as Dr. C. F. Hodge of Clark University.

PROVISIONS FOR THE BETTER TRAINING OF TEACHERS.

Perhaps, however, the most striking and suggestive accomplishment of the Macdonald School Movement consists in the generous provision made for the training of teachers. One who has had any experience with nature-study knows that the great difficulty at present in attaining success in this work consists in the lack of knowledge of the subject on the part of the teacher. While our educational machinery is at present prepared to turn out teachers qualified to teach acceptably the traditional subjects of the curriculum, the preparation for the teaching of nature-study, in the modern sense of that term, is lamentably insufficient. As in other

*Report of Inspector of Schools of Carleton County, Ontario.

subjects, teachers have been brought up in nature-study largely upon a book diet, with possibly a little technical work in botany and zoology interspersed—work which has itself little value in helping the teacher to bring her children into intelligent and sympathetic contact with nature. As a result we have the feeble attempts that are now being made in most schools in the teaching of this subject.

Those instrumental in shaping the Macdonald School Movement were clear-sighted enough to see that the essential condition of ultimate success in their work was better provision for the training of teachers in nature-study, domestic science and manual training. Imprest by this thought, Professor Robertson turned for help to the agricultural colleges, which had stood in such close relation to his past activities, and which from their very nature should be organically related to work in these subjects. Since the agricultural college, however, as it is at present organized, does not possess all the equipment necessary for the training of teachers, it was decided to use the Ontario Agricultural College at Guelph, Ontario, as a starting point for this work, and to enlarge its plant by the addition of buildings specially equipt for the training of teachers. Accordingly two new bildings were erected on the college campus for this purpose. In addition to the training given in this new department, the regular work of the college, which is a well equipt institution, comparable to our best state agricultural colleges, naturally provides a great incentiv to the study of these subjects. Arrangements were made that students from all the provinces of Canada might have the opportun-

ity of taking instruction in this institution at a nominal cost.

While, however, the work at Guelph has been a valuable stimulus to the better preparation of teachers, the Macdonald School Movement has reached its climax in this respect by the erection and equipment of a magnificent new institution, to be known as the Macdonald College, at Ste. Anne de Bellevue, a little Canadian town a few miles from the city of Montreal. Beautifully situated on the left bank of the Ottawa river, housed in a splendid group of commodious college buildings just constructed at a cost of nearly a million and a half dollars and in accordance with the most approved scientific principles as regards durability, ventilation, light and heat, provided with ample grounds—five hundred and sixty acres in all—for campus, recreation fields, experimental plots, orchards, general farming and stock-raising, this new member of the collegiate institutions of America bids fair to be one of the most unique and, from the standpoint of educational progress, one of the most interesting, on the continent. It will consist of three main departments: (1) An agricultural college; (2) A college of household science; (3) A teachers' college. The work of all departments will be focust upon the one great idea of Professor Robertson—the enrichment of rural life. The college is to begin operations this month. While the teachers' department is designed to prepare teachers especially for the province of Quebec, it will no doubt be a great inspiration to the educational workers of the whole Dominion. Professor Robertson, who has given up his government position to devote himself solely to educational work, is the pres-

ident of the new institution. His splendid enthusiasm and his clear insight into the problems of rural education constitute the best guarantee of the success of this undertaking.

THE IMPROVEMENT OF RURAL SCHOOLS.*

The account of the Macdonald School Movement in Canada, which appeared last month in this department, was intended to stimulate an interest in the improvement of our rural schools. Our Canadian friends are making a praiseworthy effort in this direction. Among the things they are aiming at are (1) better facilities for the training of rural teachers; (2) the enrichment of the curriculum by the introduction of such studies as nature-study, including school gardening and elementary agriculture, domestic science and manual training; and (3) the organization of the consolidated school as a more effective instrument for educational work. These are all important reforms in rural education.

In this country, too, the need of improving our rural schools is coming to be more fully recognized. "The most important educational problem before America to-day is the rural school problem," declared Superintendent J. W. Olsen of Minnesota, before a section of the N. E. A. in 1902. While this is undoubtedly a strong statement, many facts may be found to support the assertion. A careful analysis of the situation shows that the district school of to-day makes very inadequate provision for the education of country boys and girls. Among the chief reasons of its educational limitations are the following:

*Reprinted by permission from the *Colorado School Journal*, October, 1907.

1. The drift of population in recent years from rural to urban communities has left many parts of the country with a smaller school population than before. The school attendance in such communities has consequently declined. This is most marked in the case of the older children, who now move to the city at an earlier age than formerly. The stimulus of larger numbers and of more mature students is thus lacking.

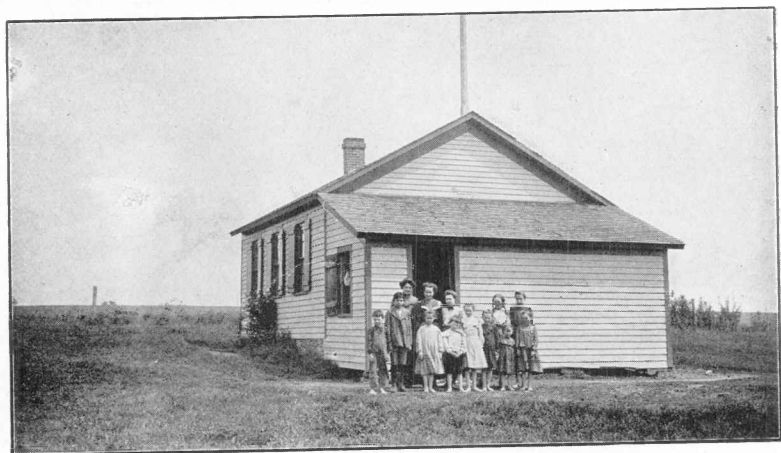
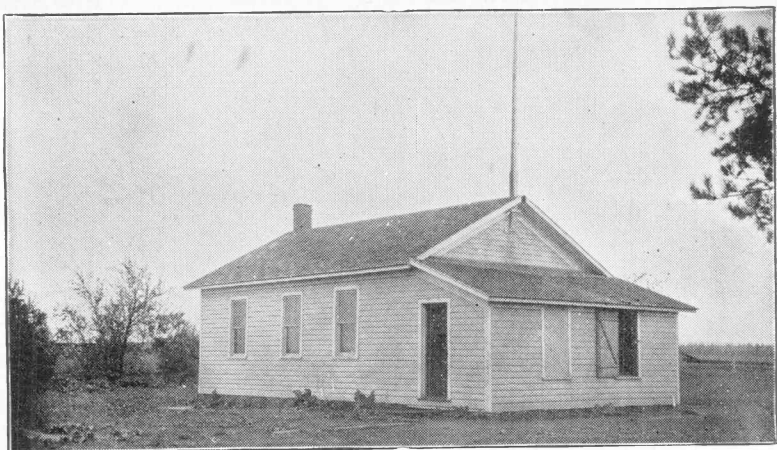
2. The change in the personnel of the district school teachers during the past generation has not always been for the better. Not many years ago it was customary for college students to spend a part of their time in teaching district schools. Some of the higher educational institutions even arranged their sessions to facilitate this arrangement. Tho, doubtless, it is not wise to have any class of people to adopt teaching as a makeshift, yet this plan did have the merit of securing for rural districts teachers with a reasonable degree of maturity of mind and academic training— young men in many cases with college culture and aspirations, whose presence in the school was a stimulus to the older children. But, owing to our changed economic conditions, few of this class are now found in the country schools, and their places have frequently been taken by immature young women with little academic and professional training.

3. The greater opportunities for educational service in the city schools tend not only to withdraw the best qualified teachers from the country districts, but also to focus the best educational thought of the times upon the improvement of the city, that is, of the graded schools. The programs of



The First Consolidated School Bilding in Illinois, for Which the Bildings Shown
on the Next Page Were Abandond.

(Curtesy of Supt. O. J. Kern.)



our larger educational gatherings bear abundant evidence of this fact.

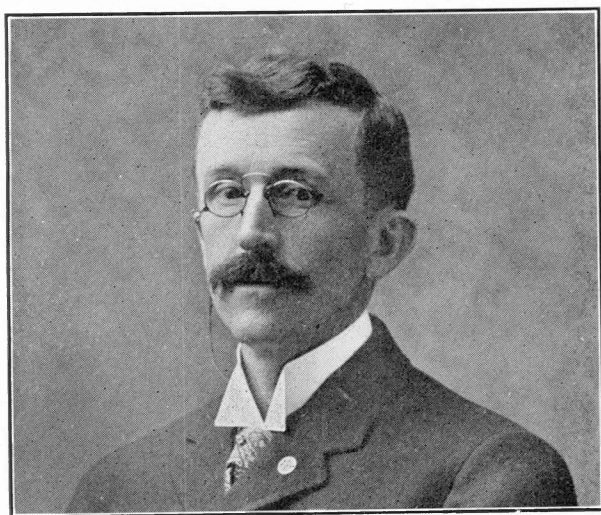
4. The movement towards the enrichment of the elementary school curriculum has affected the country schools to a much less degree than those of the city. The reasons for this are obvious. Even where the country teachers are ever so well qualified and enthusiastic about the newer educational movements the conditions under which they teach render almost impossible anything but the most formal kind of routine work. If the attendance is at all large, the number of classes a day practically limits the instruction to the teaching of the three R's. In fact the exigencies of the program are such that even this teaching must in most cases be of a perfunctory character. Little time is available for the discussion of the subject under consideration, for the communion of souls engaged in the same pursuit, which alone makes class-room instruction educational in the best sense of the term.

5. The district school lacks dignity and social prestige. The graduates of our colleges and large city high schools take pride in their *alma mater*, but apart from a weak sentimentality for the "little red schoolhouse" no one feels a similar satisfaction in thinking of his relation to the district school. The effect of this upon the adult is not such a serious matter, but it is a very serious consideration that country children at a very early age outgrow their respect for the district school and no longer wish to attend it. We need a school in the country districts that will appeal to the imagination of the country boys and girls and arouse their enthusiasm for greater intellectual attainments.

6. The district school tends to perpetuate the isolation of country life. One of the most marked manifestations of our times is the movement of the people towards larger centers of population, thus facilitating social intercourse in numerous ways. Of such beneficial influences country people have been largely deprived. Attempts are now being made to break down these social barriers by means of rural free delivery of mails, telephone service, electric railways, etc., but the district school tends to foster this spirit of isolation, as it offers very few opportunities for social gatherings.

7. The short tenure of office of the country school teacher, together with the small amount of supervision possible, makes difficult any permanent educational policy for rural communities. Any departure from the regular school routine, introduced by some enthusiastic teacher, is apt to be of short duration, as her successor may have no such interests.

Recognizing, then, the weakness of the district school system, how are we to remedy its defects? No one remedy is adequate. Improvements must be made in various directions, as is illustrated by the Macdonald Movement. But the one thing that promises to secure the greatest number of advantages is the organization of the consolidated school. By a consolidated school is meant a graded country school, usually of four or more rooms, formed by the unification of a number of ungraded country schools. The children from the outlying districts are commonly transported in vans to the centrally located school.



SUPT. O. J. KERN, Rockford, Ill.
An Enthusiastic Promoter of Better Country Schools.

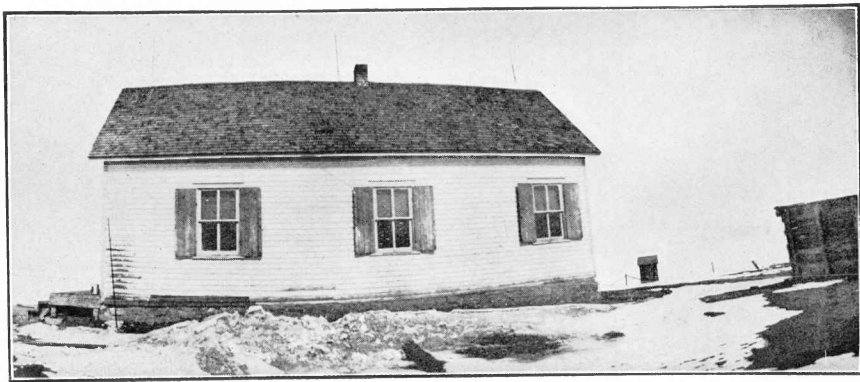
The pioneer State in the establishment of consolidated schools was Massachusetts. In the year 1869 the State legislature authorized any township to transport pupils to school at public expense. Tho the country districts did not take advantage of this opportunity at once to any great extent, the growth of the movement in the State is indicated by the fact that between the years 1888-9 and 1900-1 the amount of money expended in the transportation of school children increast approximately from \$20,000 to \$150,000. From Massachusetts the movement spred to adjoining states, until to-day the consolidated school is in operation, or at least has been authorized in over half of the states in the Union.

The results obtaind have as a rule been satisfactory to those concernd. As in the case of the inauguration and execution of any other educational policy there has, of course, been some room for diversity of views, but the consensus of opinion of those directly concernd with the work—parents, school directors and teachers—has been markedly favorable. The following are the most important advantages claimd for the plan:

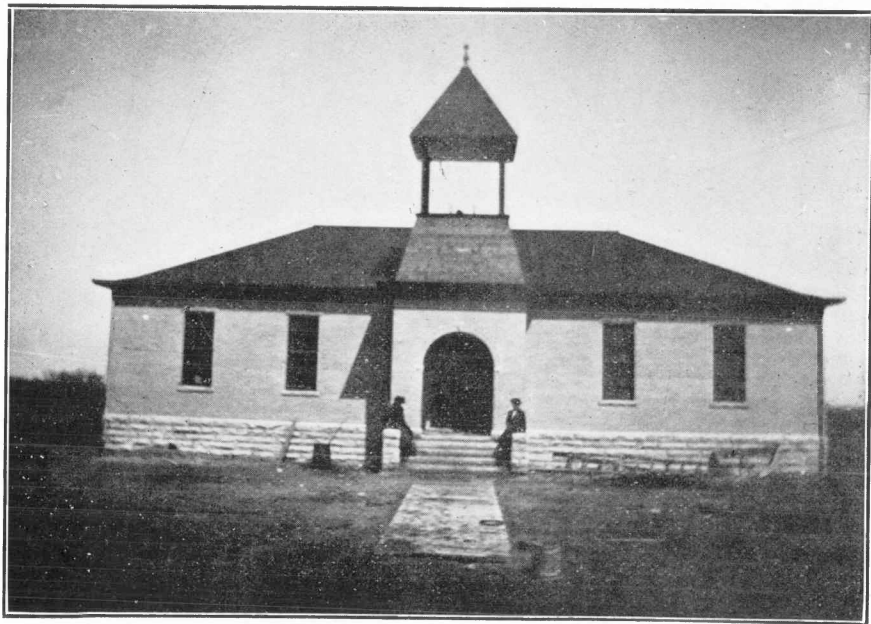
1. It raises the professional standard of district school teachers. This strikes at the root of the weakness of the country schools. The strongest argument adduced to-day in favor of a low standard of qualifications for teachers is the claim that many small country districts cannot afford to pay high salaries, and that consequently teachers cannot be expected to spend upon their education an amount of time and money incommensurate with the pecuniary returns to be secured from their work. Hence the standard of

professional training demanded of the rural teachers is pre-
vailingly low. I do not mean by this that many well-
trained and capable teachers are not to be found in the rural
schools—teachers who may in many cases prefer the free-
dom to be found in such a situation to the rigid supervision
of the city schools. But such teachers are exposed to the
competition of those with less training. This constitutes
the greatest menace to the teachers' profession. No body
of people can hope to have their vocation placed upon a pro-
fessional basis so long as their places can be supplied by the
relatively untrained. In the consolidated school, however,
higher salaries can be paid, as it usually employs fewer
teachers than the districts of which it was composed. Hence
better trained teachers will be demanded, and the larger ob-
ligations devolving upon the directors tend to make them
more careful about the qualifications of the teachers they
employ.

2. The consolidated school affords opportunity for
the enrichment of the curriculum. The rural school has
not secured its full share of advantages in this respect. This
is all the more to be regretted as the environment of the
country child is in many ways fuller of educational possi-
bilities than that of his city cousin. Along the lines of na-
ture-study, elementary agriculture, manual training and do-
mestic science the opportunities are unsurpassed. But these
subjects cannot be taught to advantage in the average dis-
trict school both on account of the program and the teacher's
training. A young city-bred girl in her teens is not com-
petent to give instruction in elementary agriculture to farm-



An Old Type of Weld County, Colorado, Country School Bilding.



A Newer Type of Weld County, Colorado, Country School Bilding.

ers' boys, who have ten times as much practical knowledge of the subject as herself. For this purpose we must have teachers with sufficient breadth of knowledge and maturity of judgment to command the respect of the older children. This can be accomplished in the consolidated school, as a special teacher may be secured in this or other branches at little greater expense *per capita* than is required for the ungraded school.

3. The consolidated school can make provision for the higher education of country children. If a high school is not available in the neighborhood, a year or more of advanced instruction can be furnished, at least during the winter months, for the older children.

4. This type of school combines many of the advantages of city and country life. The children are members of a larger social world and benefit from the association with others. At the same time they live amid healthful country surroundings. What is true of the children is also, to a certain extent, true of the parents. Being a larger center of interest, the consolidated schoolhouse may be utilized for various social gatherings, lectures, entertainments, etc. The consolidated school thus becomes a means of breaking down, rather than of perpetuating, the isolation of country life.

5. The tendency of this school, moreover, is to educate for the farm and rural occupations rather than for the city, which, notwithstanding its social advantages, surrounds young people with vitiating influences to which they too often yield. Students of social problems deprecate the

present congestion of population in the large cities. While this movement of the masses towards the cities is in part inevitable, owing to our changed economic conditions, yet in many cases the country could support in comparative comfort a larger population than it now possesses. The glamor of city life and the monotonous character of agricultural occupations have induced too many of our young people to throw in their lot with the city. Some counter attraction is, therefore, needed to make the inducements greater for the boys and girls to remain on the farm. This, in part at least, the consolidated school is able to supply. By its richer curriculum, giving insight into the scientific aspects of farm and household work, it creates a new interest in these activities, and helps the farmers' boys and girls to see new possibilities in their home environment.

6. A longer tenure of office is secured for the country teacher, especially for the principal. This tends to give greater steadiness and permanence to educational effort. The ideal no doubt would be to have for the principal a married man who would become a permanent resident of the community, as in some European countries. In this way the school could become a center for the social and educational activity of the whole community.

7. A better system of grading is made possible. The larger number of children and teachers makes a more rational classification practicable.

8. The health of the children is not endangered, as they are less exposed to bad weather on their way to and from school.

9. The attendance is considerably increased. Tardiness is done away with, at least for the children conveyed in vans.

10. Better schoolhouses are secured, constructed on more scientific principles as regards light, heat, and ventilation.

11. The school year is lengthened.

12. The cost of instruction has in most cases been reduced by the organization of the consolidated school. This is not one of the most important results, tho it may appeal most strongly to the taxpayer, as the money saved by the employment of fewer teachers for the regular subjects had doubtless best be spent in paying higher salaries to better prepared teachers or for teachers of special subjects.

In conclusion a word may be said in regard to the relation of this subject to our own local conditions. In many parts of Colorado the consolidated school is not feasible. But there are many other places in which it can be organized as easily as in any other State. The larger agricultural regions offer splendid opportunities for this type of school. Why should not Colorado make a special study of this problem now? It is at least well worthy of study. Colorado in this as in other matters should be a leader in educational progress.

BIBLIOGRAPHY.

(Prepared by E. D. Randolph, State Normal School.)

1. *The Consolidation of Schools, etc.*—University of Illinois Bulletin, Vol. 1, No. 10, Urbana, Illinois, 1904, 48 pp.
2. *The Consolidation of School Districts, etc.*—W. K. Flower, State Superintendent of Public Instruction, Lincoln, Nebraska, 1903, 32 pp.
3. *Consolidation of Districts and Transportation of Children*—R. C. Barrett, State Superintendent of Public Instruction, Des Moines, Iowa, 1901 (School Report), 69 pp.
4. Iowa School Report for the period ending Sep. 30, 1901, 38 pp.
5. *Conditions and Needs of Iowa Rural Schools*—J. F. Rigg, Des Moines, Iowa, 1905, 81 pp.
6. *Consolidation of Rural Schools and Transportation of Pupils at Public Expense*—Reprint from Minnesota Biennial School Report for 1902, with Additions—J. W. Olsen, 34 pp.
7. *The Consolidation of Rural Schools With and Without Transportation*—Bulletin of the University of Texas, 1904, Austin, Texas, Bedichek and Baskett, 38 pp.
8. Western Journal of Education, June, 1903, San Francisco.
9. Report of the U. S. Commissioner of Education, 1902, Vol. II, pp. 2353-2339.
10. Proceedings and Addresses of the National Educational Association, 1903, pp. 919-935.
11. *An Inquiry Concerning Conveyance of Scholars in New Hampshire*, from the 51st N. H. School Report, 1899-1900, pp. 271-292, Channing Folsom, State Superintendent of Public Instruction, 21 pp.
12. *Transportation of School Children at Public Expense*—Educational Review, Vol. XX, pp. 241 seq., A. A. Upham.
13. *Report of the Committee of Twelve*, p. 61.

14. *Consolidation of Schools in South Dakota in 1908*—H. A. Ustrud, State Superintendent of Public Instruction, 17 pp.
15. *Bulletin of Information Regarding Consolidation of Rural Schools*—E. T. Fairchild, State Superintendent of Public Instruction, Topeka, Kansas, 1908, 48 pp.
16. *Consolidation of School Districts in Michigan*—Bulletin No. 19, Patrick H. Kelley, State Superintendent of Public Instruction, Lansing, Michigan, 1906, 23 pp.
17. *Consolidation of School Districts and Transportation of Rural School Pupils at Public Expense*—L. D. Harvey, State Superintendent of Public Instruction, Bulletin No. 7, Madison, Michigan, 1902, 20 pp.
18. *Consolidation of School Districts*—W. R. Robinson, County Superintendent of Schools, Pawnee County, Oklahoma, 18 pp.
19. *The Centralization of Rural Schools in Ohio*—Proceedings of the National Educational Association, 1908—E. A. Jones, State Commissioner of Common Schools, Columbus, Ohio, 7 pp.
20. *The Consolidation of School Districts, the Centralization of Rural Schools, and the Transportation of Pupils at Public Expense*—James B. Aswell, State Superintendent of Public Instruction, Baton Rouge, Louisiana, 1906, 71 pp.
21. *The Consolidation of Schools and the Conveyance of Children*—G. T. Fletcher, agent of the Massachusetts Board of Education, 25 pp.
22. *The Town Management of Schools*—Connecticut School Document, No. 20, 1908, Howell Cheney, 19 pp.
23. *Consolidation and Transportation*—Department of Public Instruction of the State of New Hampshire, 12 pp.
24. Indiana School Report, 1901-2, pp. 725-63.
25. North Carolina School Report, 1901-2, pp. 365-73, and XVIII-XXVI.
26. Michigan School Report, 1901, pp. 6-34.
27. Connecticut School Report, 1902, pp. 186-190.
28. Kansas School Report, 1901-2, pp. 38-48.
29. Review of Reviews, Dec., 1902, pp. 702-710.
30. Georgia School Report, 1908, pp. 90-105.
31. Virginia School Report, 1900-01, p. XXVI: the Rural School; pp. XXVII-XXVIII: *Consolidation and Transportation*.

32. Washington School Report, 1902, pp. 183-184: *Consolidation of School Districts.*
33. West Virginia School Report, 1902, pp. 27-29: *The Centralization and Consolidation of Schools.*
34. Wisconsin School Report, 1902, pp. 41-62: *The Consolidation of School Districts and the Transportation of Rural School Pupils at Public Expense.*
35. North Carolina School Report, 1900-1901; 1901-1902, pp. XVIII-XXVI; *School Districts*; pp. LVIII-IX; *Rural Schools*; pp. 365-73: *Consolidation of Districts.*
36. Nova Scotia School Report, 1902, p. XI: *Consolidation of Sections.*
37. Ontario, Report of the Minister of Education, 1902, pp. XXII-XXVII: *Consolidation of Schools and the Transportation of Pupils.*
38. Oregon School Report, pp. 233-236: *General Survey of Educational Work.*
39. Pennsylvania School Report, 1901, pp. VI-VII: *Centralization of Schools*; pp. 2-4: *Consolidated Districts.*
40. Rhode Island School Report, 1901, pp. 27, 29, 33-5, 37, 64, 101, 129-31; *County Superintendents' Reports on Consolidation and Transportation.* (Appendix.)
41. Hawaii, Report of the Inspector of the Department of Public Instruction, 1902, p. 23: *Consolidated Schools.*
42. Idaho School Report, 1900: *Rural School Districts.*
43. Maryland School Report, 1902, p. XLIII: *Resolutions of the State Superintendent Commending the Consolidation of Rural Schools.*
44. Missouri School Report, 1902, pp. 4-11: *Rural School Problem.*
45. Montana School Report—Circular Letter of the State Superintendent on the Consolidation of Schools.
46. Nebraska School Report, 1901, pp. 40-42: *The Transportation of Pupils and Instruction in a Neighboring District.* See also pp. 400-409 in the Reports for 1903.
47. New Jersey School Reports, 1902, pp. 59, 84: *Reports of the County Superintendents on the Transportation of Pupils.*
48. Biennial Report of the U. S. Commissioner of Education, 1900; pp. 331, 341, 352, 379, 391, 412: summary on p. 19.

49. Reports of the U. S. Commissioner of Education, 1898-99, ch. XI: *Consolidation of Schools—The Kingsville, Ohio, Plan*, pp. 526-529.
50. Proceedings of the N. E. A., 1901, pp. 804-11: *The Centralization of Rural Schools*; 1902, pp. 224-30: *The Financial Phase of Consolidation of Rural Schools*.
51. Outlook, Dec. 27, 1902, pp. 981-84: *Country Schools, the New Plan*.
52. Proceedings of the N. E. A., 1895, pp. 132-133; *The County as the Unit of School Organization*; pp. 133-134: *Comparative Cost of the Township and District Systems*; pp. 135-140; *Transportation of Pupils*.
53. Forum, March, 1902, p. 103: *Consolidation of Country Schools and the Conveyance of Children*.
54. Educational Review, October, 1900, p. 241: *Transportation of Rural School Children at Public Expense*.
55. Western Teachers (Milwaukee, Wisconsin), June, 1907, pp. 354-355: *Two Views of Consolidation*.
56. Pennsylvania School Journal (Harrisburg), August, 1909, pp. 68-70: *Centralization of Township Schools*; pp. 452-455: *The Township High Schools*.
57. Moderator Topics (Lansing, Michigan), April 9, 1903, p. 524; *Report of Progress*; p. 625: *Procedure in Consolidating School Districts*.
58. Normal Instructor and Teachers' World (Danville, New York), p. 9: *Need of Secondary Instruction in Country Schools*.
59. American School Board Journal, (Milwaukee, Wis.), August, 1902, p. 6: *Progress in Consolidating Country Schools*; p. 375: *Arguments in Favor of Consolidating*.
60. World's Work (N. Y. City), May, 1903: *Teaching Farmers' Children on the Ground*.
61. Education (Boston), Vol XIX, pp. 261, 413: *The Rural School Problem*.
62. Educational News (Edinburgh, Scotland), July 4, 1903: *The Grouping of Our Rural Schools*.
63. Atlantic Educational Journal (Richmond, Va.), July, 1902: *Concentration of School Districts and the School Houses for Them*.

64. Ohio Teacher (Athens, Ohio), September, October, December, 1902; January, February, 1903: articles on Centralization of Schools.
65. School News (Independence, Mo.), June, 1902: *Central Schools and the Transportation of Pupils.*
66. Texas School Journal (Austin), Dec., 1902: *Rural Schools; Transfers*; Jan., 1903: *What We Want—Rural School Houses.*
67. The People (Cambridge, Mass.), July, 1899: *Natural School Units*; March-May, 1902: *Transportation.*
68. American Education (Albany, N. Y.), Feb., 1903: *Two Views.*
69. Farmers' Tribune (Des Moines, Ia.), June 17, 1903: *Is the Central School a Fad?*
70. Successful Farming (Des Moines), Feb., 1903: *Consolidation of Rural Schools.*
71. Prairie Farmers' Home Magazine (Chicago), March 26, 1903: *The Centralized School.*
72. Farm, Field and Fireside (Chicago), May 30, 1903: *Farming to be Taught in Rural Schools.*
73. Family Herald and Weekly Star (Montreal): *A Novel Experiment in Rural Education.*
74. Nebraska Farmer (Omaha), July 20, 1903: *Consolidation of Rural Schools.*
75. Farmers' Call (Quincy, Ill.), Jan. 22, 1903: *Consolidation of Country Schools.*
76. Ohio Farmer (Cleveland), 1902, Sept. 4: *Centralization of Schools*; April 23, 1903: *Centralize the Right Way.*
77. Herald (Wabash, Minnesota), May 30, 1901: *Centralization of Rural Schools.*
78. Register (Blue Earth, Minnesota), *Concentration of Schools.*
79. Advocate of Christian Education (Berrien Springs, Michigan), March, 1903: *Consolidation of Schools: Centralizing of Districts.*
80. Canadian Teacher (Toronto), September to May (except March), 1901-1902—A series of Articles on Consolidation.
81. World Review (Fine Arts Building, Chicago)—*The Passing of the District School*, by M. V. O'Shea.
82. School Education (Minneapolis, Minnesota), January, 1903: *Rural Schools Consolidation.*

83. Midland School (Des Moines, Ia.), March, 1902: *Consolidation in Pottawattamie County.*
84. Independent, Vol. 63, pp. 891-2: *Country Teachers and Consolidation.*
85. Elementary School Teacher, Vol. 7, pp. 16-19: *Macdonald and the Consolidated School at Guelph, Ontario.*
86. Education, Vol. 26, pp. 14-26: *Consolidation of Rural Schools.*
87. Chautauqua, Vol. 36, pp. 308-9: *Centralized Rural Schools.*
88. Annual American Academy, Vol. 22, pp. 257-60: *Concentration of Schools in Transportation of Pupils.*
89. Forum, Vol. 33, pp. 211-12: *Consolidation of Schools and Conveyance of Children.*
90. Review of Reviews, Vol. 26, pp. 702-10: *Consolidation of Rural Schools.*
91. Atlantic, Vol. 91, pp. 574-575: *The District School.*
92. Education, Vol. 22, pp. 373-377: *The Enrichment of Rural Life.*
93. School Review, Vol. 8, pp. 335-363: *Free High School for Rural Pupils.*
94. Independent, Vol. 56, pp. 416-22, C. W. Eliot: *Good Urban School Organization.*
95. Blackwood's Magazine, Vol. 168, pp. 487-510: *How an English Girl Taught a Pennsylvania Country School.*
96. Review of Reviews, Vol. 23, pp. 443-6: *Neighborhood Co-operation in School Life.*
97. New England Magazine, Vol. 23, pp. 694-7: *The Passing of the Old Red School House.*
98. Review of Reviews, Vol. 30, pp. 694-697: *The Remaking of a Rural Commonwealth.*
99. Independent, Vol. 52, pp. 1631-1632: *Rural Life and Education.*
100. School Review, Vol. 12, pp. 148-161: *The Rural Public High School in the South.*
101. World's Work, Vol. 7, pp. 4144-7: *Rural School Awakening.*
102. Outlook, Vol. 77, pp. 838-941: *School in the Woods.*
103. Chautauquan, Vol. 34, pp. 428-432: *The Successful Rural School.*
104. Educational Review, Vol. 24, pp. 471-483: *The Rural School in France.*

...COLORADO...
 STATE NORMAL SCHOOL
 GREELEY, COLORADO

105. School Review, Vol. 12, pp. 266-280: *A Township High School in Indiana*, by Fasset A. Cotton.
 106. The Teachers' World (Toronto), 1906-7—A series of Articles, especially in Dec., Feb., May and June Nos.
 107. *Among Country Schools*—O. J. Kern, Ginn & Co., pp. 240-81.
 108. *Chapters in Rural Progress*—K. L. Butterfield, University of Chicago Press, 251 pp.
 109. *The Rural School in the United States*—John C. Hockenberry, published by author, Westfield, Mass., 124 pp.
- (The last three numbers are books and contain excellent discussions of various aspects of the rural school problem.)

W. F. ROBINSON PTG. CO.
DENVER.

State Normal School of Colorado



A Bibliography OF THE Biological Aspects of Education

BULLETIN

SERIES IX. No. 5.

November, 1909.

A Bibliography
OF THE
Biological Aspects of Education

COLORADO
STATE NORMAL
SCHOOL

Prepared in the Department of Psychology
by Professor Will Grant Chambers
and his students.

NOVEMBER, 1909.

In all publications of this institution is employed the spelling
recommended by the Simplified Spelling Board.

Issued Quarterly by the Trustees of the State Normal
School of Colorado, Greeley, Colorado.

Entered at the postoffice, Greeley, Colorado, as second-class matter.

INTRODUCTION.

The preparation of this bibliography grows out of the fact that education is being interpreted in terms of life. The organism is the repository of all the experiences of the individual. His experiences are the material with which he interprets his environment. Education being an adjustment of the organism to its environment and the adjustment of environment to self, there is much biological literature that helps interpret this notion of education and life. Biological literature which is helpful to the teacher along this line is very much scattered. It is believed that this bibliography will save much time for teacher and pupil. This bibliography is not exhaustive, but it is sufficiently extensive for all purposes of the Normal School student who wants an interpretation of education from the biological standpoint.

State Normal School of Colorado



A Bibliography OF THE **Biological Aspects of Education**

BULLETIN

SERIES IX. No. 5.

November, 1909.

A Bibliography
OF THE
Biological Aspects of Education

COLORADO
STATE NORMAL
SCHOOL

Prepared in the Department of Psychology
by Professor Will Grant Chambers
and his students.

NOVEMBER, 1909.

In all publications of this institution is employd the spelling
recommended by the Simplified Spelling Board.

Issued Quarterly by the Trustees of the State Normal
School of Colorado, Greeley, Colorado.

Enterd at the postoffice, Greeley, Colorado, as second-class matter.

INTRODUCTION.

The preparation of this bibliography grows out of the fact that education is being interpreted in terms of life. The organism is the repository of all the experiences of the individual. His experiences are the material with which he interprets his environment. Education being an adjustment of the organism to its environment and the adjustment of environment to self, there is much biological literature that helps interpret this notion of education and life. Biological literature which is helpful to the teacher along this line is very much scattered. It is believed that this bibliography will save much time for teacher and pupil. This bibliography is not exhaustive, but it is sufficiently extensive for all purposes of the Normal School student who wants an interpretation of education from the biological standpoint.

RHYTHMIC AND INTERMITTENT ACTIVITY IN THE EXPENDITURE OF ENERGY.

I. RHYTHMS OF EFFICIENCY:

1. **Physiological Rhythms:** Donaldson, *Growth of the Brain*, chap. 15, pp. 293-308.
2. **Rhythm:** E. A. Pace: *Psych. Rev.*, vol. I, pp. 330-333.
3. **Studies in Rhythm:** Chas. H. Sears, *Ped. Sem.*, 1901, vol. VII, pp. 3-44.
4. **The Relation Between the Vaso-Motor Waves and Reaction Times:** Wm. R. Wright: *Psych. Rev.*, vol. XI, No. 3, May, 1904, pp. 179-185.
5. **The Traube-Hering Waves as Affected by Stimuli:** C. E. Galloway, *Am. Jr. of Psych.*, vol. XV, pp. 499-512, (1904).
6. **A Genetic Study of Rhythm:** C. R. Squire, *Am. Jr. of Psych.*, 1901, vol. XII, pp. 493-589.
7. **Studies of Rhythm and Meter:** Norman Triplett-Edmund C. Sanford, *Am. Jr. of Psych.*, 1901, vol. XII, pp. 361-387.
8. **Rhythm:** Scripture, *The New Psychology*, chap. 11, pp. 177-84.
9. **Rhythmic Action:** E. W. Scripture, *Thinking, Feeling and Doing*, chap. 19, pp. 253-263. (Illustrated—Describes Experiments.)
10. **Observations on Rhythmic Action:** E. W. Scripture, *Sci.*, vol X, pp. 807-812.
11. **Periodicity:** Hall, *Adolescence*, chap. 7, vol. I, pp. 472-512.
12. **Rhythm in Nature, Mind and Speech:** Raymond, *Rhythm and Harmony in Poetry and Music*, chap. 2, pp. 8-24.

II. GENIUS AS A PECULIAR FORM OF THE EXPENDITURE OF ENERGY:

1. **Genius and Stupidity:** L. M. Terman, *Ped. Sem.*, 1906, vol. XIII, pp. 307-373.
2. **Work and Rest, Genius and Stupidity:** A. F. Chamberlain, *Pop. Sci. Mon.*, vol. LX, pp. 413-423.
3. **Meteorological Influences on Genius (Rhythms or Cycles of Efficiency):** Lombroso, *The Man of Genius*, chap. 1, part II, pp. 100-116.
4. **Psychology of Genius:** W. Hirsch, *Pop. Sci. Mon.*, vol. L, pp. 389-395.
5. **The Genius—A Variation:** Baldwin, *Social and Ethical Interp.*, chap. 5, pp. 154-184.
6. **The Psychic Action of Genius:** F. Grierson, *Westminster Rev.*, vol. CLVI, pp. 278-82.
7. **Genius:** J. Brownlee Brown, *Atlantic Monthly*, vol. XIII, pp. 137-155.
8. **Recent Theories of Genius:** I. W. Riley, Jr., of *Phil., Psych. and Sci. Meth.*, vol. II, June 22, 1905, pp. 345-53.
9. **Genius and Talent:** Grant Allen, *Pop. Sci. Mon.*, vol. XXXIV, pp. 341-357.
10. **Genius and Precocity:** Jas. Sully, *Pop. Sci. Mon.*, vol. XXIX, pp. 469-82 and 594-604.
11. **Genius and Degeneration and Genius and Insanity:** Lombroso, *The Man of Genius*, Part, I, chaps. 2-4, pp. 5-99.
12. **Genius and Heredity:** M. E. Caro, *Pop. Sci. Mon.*, vol. XXIV, pp. 191-195.
13. **The Heredity of Genius and Insanity:** Lombroso, *The Man of Genius*, Part II, chap. 3, pp. 133-50.
14. **Study of British Genius:** Havelock Ellis, *Pop. Sci. Mon.*, vol. LVIII, pp. 372-81, 540-47, 595-603; vol. LIX, pp. 59-67, 209-216, 266-73, 373-79, 441-46.
15. **Genius in Children:** A. Lang, *N. A. Rev.*, vol. CLXIV, pp. 32-7.

16. **Child Development as Factor in Producing Genius or Defective:** Oppenheim, *Development of the Child*, chap. 9, pp. 207-240.
17. **Resemblances of the Young (Including Discussion of Genius):** Chamberlain, *The Child*, chap. 3, pp. 29-49.
18. **The Genius and His Environment:** Baldwin, *Pop. Sci. Mon.*, vol. XLIX, pp. 312-321 and 522-33.

III. INFLUENCE OF CLIMATE, WEATHER, ETC.:

1. **The Child and The Weather:** Edw. G. Dexter, *Ped. Sem.*, 1898, vol. VI, pp. 512-522.
2. **The Child and The Weather:** E. G. Dexter, Reprint from *Ped. Sem.*, April, 1898, vol. V, No. 4, pp. 512-522.
3. **Suicide and The Weather:** E. G. Dexter, *Pop. Sci. Mon.*, April, 1901, vol. LVIII, pp. 604-15; also Reprint 179.7 D. 254.
4. **Suicide and The Weather:** E. G. Dexter, bound in volume with *Conduct and The Weather*, p. 12.
5. **Suicide—Cosmico-Natural Influences Which Act On:** Marselli, *Suicide*, chap. 2, pp. 36-79.
6. **Mental Effects of The Weather:** E. G. Dexter, *Sci.*, vol. X, pp. 176-180, 377-378.
7. **Conduct and The Weather (Effect of Weather on Crime, Insanity, Schoolwork, Deportment, Etc.):** E. G. Dexter, Reprint of Thesis, p. 82.
8. **Drunkenness and The Weather:** E. G. Dexter, bound in volume with *Conduct and The Weather*, p. 14.

IV. LEARNING PROCESS IN ANIMALS.

1. **Modification by Experience—How Animals Learn:** Washburn, *The Animal Mind*, chaps. 10 and 11, pp. 205-46 and 247-269.
2. **Educability:** *Methods of Learning*, R. M. Yerkes, *The Dancing Mouse*, chap. 12, pp. 199-209.
3. **Efficiency of Training Methods:** R. M. Yerkes, *The Dancing Mouse*, chap. 15, pp. 239-250.

4. **Habit Formation—The Labyrinth Habit:** Yerkes, *The Dancing Mouse*, chap. 13, pp. 210-226.
5. **Habit Formation — Discrimination Method:** R. M. Yerkes, *The Dancing Mouse*, chap. 14, pp. 227-38.
6. **Duration of Habits—Memory and Relearning:** Yerkes, *The Dancing Mouse*, chap. 16, pp. 251-263.

V. RHYTHMIC PROGRESS IN THE LEARNING PROCESS:

1. **Studies on Telegraphic Language, The Acquisition of a Hierarchy of Habits:** W. L. Bryan and Noble Harter, *Psych. Rev.*, 1899, vol. VI, No. 4, pp. 345-75.
2. **General Practice Effect of Special Exercise:** Coover and Angell, *Am. Jr. of Psych.*, 1907, vol. XVIII, pp. 328-40.
3. **Psychology of Chess and of Learning to Play It:** A. A. Cleveland, *Am. Jr. of Psych.*, 1907, vol. XVIII, pp. 269-308.
4. **Studies in the Psychology and the Physiology of Learning:** E. F. Swift, *Am. Jr. of Psych.*, 1903, vol. XIV, pp. 201-251.
5. **Psychology of the Learning Process:** L. Boggs, Jr., *Phil., Psych. and Sci. Meth.*, Aug. 29, 1907, vol. IV, No. 18, pp. 477-482.
6. **The Psychology of Learning:**
 - a—Tossing and Catching Balls,
 - b—Typewriting,
 - c—Beginning a Language,Swift's *Mind in the Making*, chap. 6, pp. 169-218.
7. **Beginning a Language—A Contribution to the Psychology of Learning:** Jas. E. Swift, *Studies in Philosophy and Psychology*,—The German Commemorative Volume, paper X, pp. 297-314.
8. **The Question of the Learning Process:** L. Pearl Boggs, *Jr. of Phil., Psych. and Sci. Meth.*, April 23, 1908, vol. V, No. 9, pp. 239-244.
9. **Things Learnt Slowly:** *Atlantic Mon.*, vol. VII, pp. 697-712.

10. **Relation of the Processes of Acquisition and Memory to Elementary Teaching:** Geo. Brown, *Education*, vol. III, pp. 418-27.
11. **Studies from Bryn Mawr College Laboratory—An Experiment on Learning to Make Hand Movements:** *Psych. Rev.*, vol. XII, 1905, p. 351, by Jas. Leuba and Winifred Hyde.

VI. RHYTHM IN GROWTH OF CHILDREN.

1. **Child Growth in Education, A Plea for a More General Recognition of:** G. H. Hudson, *Education*, vol. XIV, pp. 466-77.
2. **Growth of Parts and Organs During Adolescence:** Hall, *Adolescence*, chap. 2, vol. I, pp. 51-128.
3. **Growth in Height and Weight:** Hall, *Adolescence*, chap. 1, vol. I, pp. 1-50.
4. **Growth of Motor Power and Function:** Hall, *Adolescence*, chap. 3, vol. I, pp. 129-174.
5. **Periods of Life:** Tyler, *Growth and Education*, chap. 8, pp. 104-14.
6. **The Periods of Childhood:** Chamberlain, *The Child*, chap. 4, pp. 51-105.
7. **Growth in Weight and Height:** Tyler, *Growth and Education*, chap. 4, pp. 63-68.
8. **Some Facts of Growth of Children, Physical Differences from Adults, etc., Nascent Periods, etc.:** Drummond, *Intro. to Child Study*, chap. 8, pp. 118-137.
9. **Growth of Children in Height and Weight:** *Am. Jr. of Psych.*, vol. IX, pp. 253-326, by Frederick Burk.
10. **Growth of the Body:** Tanner, *The Child*, chap. 2, pp. 15-28.
11. **Physical Growth of Children:** Thorndike, *Columbia Univ., Contribution to Phil., Psych. and Education*, vol. VIII, Nos. 3 and 4, pp. 21-30.
12. **Growth in Relation to Training:** H. H. Donaldson, *Trans. Ill. Soc. for Child Study*, vol. I, No. 1, p. 59.

13. **Order of Physical Growth in the Child:** Bayard Holmes, Trans, Ill. Soc. for Child Study, vol. II, No. 2, p. 201.
14. **Increase in Weight of the Body and of Its Parts, and Increase in Stature:** Donaldson, Growth of the Brain, chaps. 2 and 3, pp. 45-83.

VII. DAILY RHYTHMS:

1. **Diurnal Course of Efficiency in Vital, Sensory and Motor Activities:** Marsh, Diurnal Course of Efficiency (with accounts of experiments), part B, pp. 4-41.
2. **Diurnal Course of Mental Efficiency:** Marsh, Diurnal Course of Efficiency, Part C, pp. 42-70.
3. **Chief Causal Factors in Diurnal Efficiency Curve:** Marsh, Diurnal Course of Efficiency, Part D, pp. 71-92.

THE ORGANISM AS A LIVING MACHINE.

I. THE SOURCE AND ORIGIN OF ENERGY.

1. **What Are The Nerves:** Harper's, vol. XXIV, pp. 756-764.
2. **Beginning of Nerves in the Animal Kingdom:** G. J. Romanes, Pop. Sci. Mon., vol. XIV, pp. 303-320.
3. **Nature of Nerve Impulse:** A. P. Mathews, Century, March, 1902, p. 783.
4. **Vital Equilibrium and The Nervous System:** C. L. Her- rick, Science, vol. 7, pp. 813-818.
5. **A Contribution Towards the Determination of the Energy Developed by a Nerve Center:** Victor Horsley, Brain, 1897, vol. II, pp. 547-580.
6. **Source of Muscular Power:** Pop. Sci. Mon., vol. XII, pp. 729-736.
7. **Physiological Significance of Vital Force:** Wm. G. Stevenson, Pop. Sci. Mon., vol. XXIV, pp. 760-773.
8. **The Relation of Strength to Flexibility in the Hands of Men and Children:** Jno. A. Hancock, Ped. Sem., 1895, vol. III, pp. 308-313.
9. **Architectural Changes of Nervous System Due to Growth:** Donaldson, Growth of the Brain, chap. 13, pp. 230-248.
10. **Standards of Energy:** Scripture, The New Psychology, chap. 14, pp. 209-214.
11. **The Nature of the Nerve Impulse:** A. Mathews, Cen- tury, vol. XLI, pp. 783-792.
12. **Height, Weight, Strength, Vital Capacity, Investiga- tions in:** 1st Report of Dept. of Child Study and Ped. Investigation, Chicago Pub. Schools, 1898-99.
13. **Growth in Height and Weight, Development of Strength, Vital Capacity, Endurance, Etc.:** F. W. Smedley, 2d Report of Chicago Dept. of Child Study and Ped. Investigation, 1899-1900.

14. **Biological Aspect of Education:** Horne, Philosophy of Education, chap. 2, pp. 19-56.
15. **Excitability of Nervous Matter—With Special Reference to the Retina:** A. D. Waller, Brain, vol. XXIII pp. 1-39.
16. **On the Metabolism and Action of Nerve Cells:** F. H. Scott, Brain, 1905, vol. XXVIII, pp. 506-524.
17. **A Study of the Conductivity of the Nervous System:** Y. Matora, Am. Jr. of Psychol., vol. XIV, pp. 593-614.
18. **Action Upon the Isolated Nerve of Anaesthetics, Sedatives and Narcotics:** A. D. Waller, Brain, 1896, Parts 73-76, p. 567.
19. **Studies on the Lesions Produced by the Action of Certain Poisons on the Cortical Nerve Cell; I, Alcohol:** H. J. Berkley, Brain, 1895, Parts 69-72, pp. 473-497.
20. **Toxic Conditions of Nervous System:** F. E. Buzzard, Brain, 1907, vol. XXX, pp. 2-94.
21. **Two Cases of Arrested Development of the Nervous System in Children:** F. E. Batten, Brain, 1900, vol. XXIII, pp. 269-276.
22. **Origin of the Energy of Muscles and Brain:** Mosso, Fatigue, chap. 3, pp. 50-73.
23. **Human Body as an Engine:** E. B. Rose, Pop. Sci. Mon., vol. LVII, pp. 491-499.
24. **The Animal as a Machine:** Robt. Thurston, N. A. Rev., vol. 163, pp. 607-619.
25. **Animals not Automata:** R. Hazard, Pop. Sci. Mon., vol. VI, pp. 405-420.
26. **Old Age—Senile Conditions of Brain, etc.:** Donaldson, Growth of the Brain, chap. 17, pp. 324-335.
27. **Healing of Nerves:** By Chas. A. Ballance and Purves Stewart, Review by Wm. A. Turner, Brain, vol. XXV, Part I, pp. 172-3.
28. **Experiments on the Conductivity of the Spinal Cord, Rendered Anemic by Compression of the Aorta:** Max Loewenthal, M. D., Brain, vol. XXV, Part IV, pp. 274-285.

29. **Conductivity of Nervous System:** Y. Motora, *Am. Jr. of Psychol.*, vol. XIV, Nos. 3 and 4, July-Oct., 1903, pp. 329-350.
30. **The Story of the Living Machine:** H. W. Conn, *Dynamics of Life, Forces Operating in the Organism, etc.*
31. **Mind as a Machine:** Oppenheim, *Mental Growth and Control*, pp. 19-41, chap. 2.
32. **Studies in the Psychology of Alcohol:** G. E. Partridge, *Am. Jr. of Psych.*, 1900, vol. XI, p. 318.

II. ECONOMY IN THE EXPENDITURE OF ENERGY.

1. **The Conservation of Energy:** O'Shea, *Aspects of Mental Economy*, chap. 9, pp. 170-198.
2. **Mental Energy:** Edw. Atkinson, *Pop. Sci. Mon.*, vol. LVII, pp. 632-637.
3. **Energy of Voluntary Action:** Scripture, *The New Psychology*, chap. 15, pp. 215-227.
4. **Mental Efficiency and Health:** Robt. MacDougall, *Sci.*, vol. XIX, pp. 893-896.
5. **Cerebral Hygiene and Economy in Student Life:** O'Shea, *Aspects of Mental Economy*, chap. 2, pp. 64-72.
6. **The Energies of Men:** Wm. James, *Sci.*, March 1, 1907, vol. XXV, No. 635, pp. 321-332.

III. FOOD AND AIR IN THE PRODUCTION AND CONSERVATION OF ENERGY:

1. **Introductory Study of the Psychology of Foods:** Sanford Bell, *Ped. Sem.*, 1904, vol. XI, pp. 51-90.
2. **Relative Value of Foods in Production of Nervous Energy:** O'Shea, *Aspects of Mental Economy*, chap. 3, pp. 73-106.
3. **Fresh Air, Exercise and Rest in Production and Expenditure of Cerebral Energy:** O'Shea, *Aspects of Mental Economy*, chap. 8, pp. 153-169.
4. **Preparation of Foods and Meal Hours in Generation of Nervous Energy:** O'Shea, *Aspects of Mental Economy*, chap. 5, pp. 126-138.

5. **Relative Values of Foods in Production of Nervous Energy:** O'Shea, *Aspects of Mental Economy*, chap. 4, pp. 107-125.

IV. RECREATION AND EXERCISE AS ENERGETIC FACTORS:

1. **Physiology of Exercise:** Emile Du Bois-Reymond, *Pop. Sci. Mon.*, vol. XXI, pp. 317-328 and 433-444.
2. **Physiology of Exercise:** Du Bois-Reymond, *Pop. Sci. Mon.*, vol. XXI, pp. 306-316 and 668-676.
3. **Physiology of Strength and Endurance:** W. L. Howard, *Pop. Sci. Mon.*, vol. LIII, p. 187 (1898).
4. **Exercise and Longevity:** D. A. Sargent, *N. A. Review*, vol. CLXIV, pp. 556-565.
5. **Health and Recreation:** Benj. Richardson, *Pop. Sci. Mon.*, vol. XIV, pp. 780-794.
6. **Gospel of Recreation:** H. Spencer, *Pop. Sci. Mon.*, vol. XXII, pp. 354-359.

V. MENTAL HYGIENE IN SCHOOL WORK:

1. **The Hygiene and Psychology of Spelling:** W. H. Burnham, *Ped. Sem.*, vol. XIII, 1906, pp. 474-499.
2. **Economical Learning.** M. W. Meyerhardt, *Ped. Sem.*, vol. XIII, 1906, pp. 145-83.
3. **A Contribution to the Hygiene of Teaching:** W. H. Burnham, *Ped. Sem.*, 1904, vol. XI, pp. 488-497.
4. **Need School Be a Blight to Child Life?:** J. N. Rice, *Forum*, vol. XII, pp. 529-536.
5. **Study—Psychologically Considered:** P. J. Higgins, *Pop. Sci. Mon.*, vol. XXIV, pp. 639-645.
6. **Hygiene of the Educative Process:** Bagley, *The Educative Process*, chap. 23, pp. 335-350.
7. **Hygienic Requirements for the Printing of Books and Papers:** E. B. Huey, Reprint from *Pop. Sci. Mon.*, June, 1907, vol. LXX, pp. 542-548.
8. **The Cost of Mental Effort (Measured in Respiration, Circulation, etc.):** McMillan, *Early Childhood*, chap. 9, pp. 138-154.

9. **Motor Phenomena of Mental Effort:** E. H. Lindley, Am. Jr. of Psych., July, 1896, pp. 491-517.
10. **The Racial Brain and Education (Functional Development of the Nervous System and Application to Education):** Swift, *Mind in the Making*, chap. 7, pp. 219-238.

VI. SLEEP IN RELATION TO THE ENERGY OF THE ORGANISM:

1. **The Necessity for a New Standpoint in Sleep Theories:** H. H. Foster, Am. Jr. of Psych., 1901, vol XII, pp. 145-77.
2. **The Mind in Sleep:** Hoffman, *Psychol. and Common Life*, chap. 5, pp. 103-126.
3. **Sleep and Its Counterfeits:** A. DeWatteville, *Pop. Sci. Mon.*, vol. XXXI, pp. 597-608.
4. **Physiology of Sleep:** B. W. Richardson, *Pop. Sci. Mon.*, vol. I, pp. 411-419.
5. **Curiosities of Sleep:** Dr. Woods Hutchinson, *American Magazine*, October, 1908, pp. 572-578.
6. **Sleep of Children:** In *Rev. of Education*, Jan. 1902.
7. **The Baby's Sleep:** Oppenheim, *Care of the Child in Health*, chap. 6, pp. 128-145.
8. **The Effects of the Loss of Sleep:** G. T. W. Patrick and J. Allen Gilbert, *Psychol. Rev.*, 1896, vol. III, pp. 469-483.
9. **Amount of Sleep, Duration of Attention, Amount of School Work, by Ages:** Drummond, *Introd. to Child Study*, chap. 11, pp. 178-182.

VII. MEDICAL EXAMINATION OF SCHOOL CHILDREN:

1. **Health Inspection in the Schools:** W. H. Burnham, *Ped. Sem.*, 1900, vol. VII, pp. 70-93.
2. **American Childhood from a Medical Standpoint:** H. L. Taylor, M. D., *Pop. Sci. Mon.*, vol. XLI, pp. 721-732.
3. **Why We Study the Physical Nature of the Child:** F. W. Smedley, *Child Study Mon.*, Dec. 1900, p. 210.

4. **Care of Children in German Schools:** Report of Com. of Educ., 1898-99, vol. II, p. 1441.
5. **Growing Interest of Medical Journals in Educational Affairs:** Child Study Mon. and Jr. of Adolescence, Mch., 1901, p. 336.
6. **Physical Examinations as Related to Health Conditions in Schools and Home:** Dr. Thos. D. Wood, Teachers' College Record, Mch., 1904, vol. V, No. 2, pp. 20-26.

VIII. SCHOOL HYGIENE:

1. **Bacteriological Study of School Utensils:** Dr. Mary L. Arnold, Ped. Sem., 1899, vol. VI, p. 382.
2. **The Condition of the Teeth of Children in Public Schools:** Geo. E. Johnson, Ped. Sem., 1901, vol. VII, pp. 45-58.
3. **School Hygiene:** Report of the Com. on School Hygiene, Ped. Sem., 1906, vol. XIII, pp. 230-243.
4. **A Study in Personal Hygiene:** Thos. Scott Lowden, Ped. Sem., 1906, vol. XIII, pp. 1-59.
5. **The Hygiene of the Teeth:** Wm. H. Burnham, Ped. Sem., 1906, vol. XIII, pp. 293-305.
6. **Outlines of School Hygiene:** Wm. H. Burnham, Ped. Sem., 1892, vol. I, pp. 9-72.
7. **Hygiene for the School Boy and Girl:** H. Chapin, Outlook, vol. LX, pp. 1016-1019.
8. **Hygiene of the Kindergarten Child (N. E. A., 1904):** W. H. Burnham, Southern Educ. Rev., Sept., 1904, pp. 51-53.
9. **Hygiene of the Kindergarten Child:** W. H. Burnham, N. E. A., 1904, pp. 416-422.
10. **School Hygiene and Child Life:** Thos. D. Wood, M. D., Report N. E. A., 1903, pp. 778-784, Discussion 784-5.
11. **School Hygiene:** Ed. M. Hartwell, Science, vol. II, pp. 839-41.
12. **Certain Failures in School Hygiene:** R. Clark, Forum, vol. XXXI, pp. 619-626.
13. **School Hygiene in Modern Education:** Thos. D. Wood, Teachers' College Record, vol. VI, March, 1905, pp. 1-14.

14. **Higher Hygienic Education:** G. W. Linn, *Education*, vol. XVII, pp. 30-36.
15. **School Hygiene:** Wm. T. Harris, *Educ. Rev.*, vol. XVIII, pp. 1-8.

IX. SCHOOL ROOM VENTILATION, SANITATION, LIGHTING, CROWDING, ETC.:

1. **Schoolroom Ventilation as an Investment:** G. H. Knight, *Pop. Sci. Mon.*, vol. XLVI, pp. 393-397.
2. **Schoolroom Ventilation:** P. J. Higgins, *Pop. Sci. Mon.*, vol. XIV, pp. 531-539.
3. **Ventilation in the Public Schools:** Grant Smith, *Educ. Bi-Mon.*, vol. I, No. 2, Dec., 1906, pp. 149-167.
4. **Hygiene of Schools:** W. H. Burnham, *Ped. Sem.*, 1892, pp. 9-71.
5. **Unsanitary School and Public Indifference:** D. H. Stewart, *Forum*, vol. XX, p. 103.
6. **Need of Sanitary Schools:** Ellen Richards, *Outlook*, vol. LXXIV, pp. 807-808.
7. **Daylight in the Schoolroom:** M. Javal, *Pop. Sci. Mon.*, vol. XVI, pp. 517-519.
8. **Criminal Crowding of Public Schools:** Jas. H. Penniman, *Forum*, vol. XX, p. 547, (1st article in *Forum*, May, 1895).
9. **Criminal Crowding of Public Schools:** Jas. H. Penniman, *Forum*, vol. XIX, pp. 289-296.
10. **Crowded Schools as Promoters of Disease:** H. D. Chapin, *Forum*, vol. XIX, pp. 296-301.

X. SCHOOL AND SOCIETY IN RELATION TO HEALTH:

1. **Relation of the School and College to Public Health:** Annah May Soule, *School Rev.*, Dec., 1903, pp. 817-827.
2. **Utility of School Recesses:** Jos. Carter, *Pop. Sci. Mon.*, vol. XXIV, pp. 90-98.
3. **Home Conditions Affecting the Child's Physical Nature:** Rowe, *Physical Nature of the Child*, chap. 14, pp. 175-187.

XI. HEALTH OF CHILDREN:

1. **Health Factor in Its Social Aspect:** W. R. Bartlett, Educ., Sept., 1903, p. 38.
2. **Health of the Child:** Drummond, Intro. to Child Study, chap. 10, pp. 155-171.
3. **Health of School Children:** Report of Sec. of Interior, 1891, vol. II, p. 1042.
4. **A New Law of Health:** Eliz. Bisland, N. A. Rev., vol. CLXVIII, pp. 455-462.
5. **Handicaps (Effect on Life and Our Attitudes Toward Them):** Dr. L. H. Gulick, The American Mag., Sept., 1908, pp. 502-505.
6. **Health of School Children (N. Y.):** G. W. Wharton, Outlook, Nov. 17, 1906, vol. LXXXIV, No. 12, pp. 662-665.
7. **Physical Welfare of Our Children, Outlook for:** Drexia Morey-Errant, Jr. of Childhood and Adolescence, July, 1902, pp. 180-5.
8. **Infant Mortality and The Invironment:** J. M. French, M. D., Pop. Sci. Mon., vol. XXXIV, pp. 221-229.
9. **School Conditions Affecting Child's Physical Nature:** Rowe, Physical Nature of Child, chap. XIII, pp. 146-174.

XII. DISEASES OF CHILDREN:

1. **Mortality and Morbidity (At Different Stages of Growth):** Tyler, Growth and Education, chap. VII, pp. 92-103.
2. **Common Diseases of Children:** Oppenheim, Care of The Child in Health, chap. XIII, pp. 270-300.
3. **Diseases of Body and Mind:** Hall, Adolescence, vol. I, chap. 4, pp. 237-324.
4. **Diseases of Children:** Rowe, Physical Nature of Child, chap. 9, pp. 83-92.
5. **General Physical Conditions and Particular Physical Defects:** Ed. L. Thorndike, Columb. Univ., Contr. to Phil., Psych. and Educ., vol. VIII. Nos. 3 and 4, pp. 31-40.

6. **Bodily Deformities in Girlhood:** Chas. Roberts, Pop. Sci. Mon., vol. XXII, pp. 322-328.
7. **Methods of Recognizing Physical Fitness and Unfitness of School Children for School Work:** E. A. Kirkpatrick, N. E. A., 1905, pp. 760-766.
8. **Abnormal Bodily Conditions in Children:** Tanner, The Child, chap. 3, pp. 32-52.
9. **Child Study in the Hospital—600 Cases:** H. D. Chapin, Forum, vol. XVII, pp. 125-129.
10. **Physical Abnormalities in Boys Which Boy Club Leaders Should Understand:** W. T. Talbot, Education, Jan., 1903.

XIII. MALNUTRITION:

1. **Nutrition of School Children:** Dr. Chas. Kerley, Teachers' College Record, vol. VI, March, 1905, pp. 43-8.
2. **Malnutrition and How It May Show Itself in School Children:** Derexa Morey-Errant, M. D., Child Study Mon. and Jr. of Adolesc., May, 1901, p. 441.
3. **Food-Aided Education:** Rev. of Reviews, vol. III, pp. 618-621.

MOTOR ABILITY AND BODILY CONDITION IN RELATION TO INTELLIGENCE.

1. PSYCHOLOGICAL STUDIES OF MOVEMENT:

1. **Involuntary Movements:** M. A. Tucker, Amer. Jr. of Psych., vol. VIII, p. 394.
2. **A Study of Involuntary Movements, Muscle Reading, Involuntary Whisperings, etc.:** Jos. Jastrow, Fact and Fable in Psychology, pp. 307-336.
3. **Preliminary Study of Motor Ability:** J. A. Hancock, Ped. Sem., 1894, pp. 9-29.
4. **Origin of Motor Attitudes and Expressions:** chap. 8 of Baldwin's Ment. Development-Meth. and Processes, pp. 221-262.
5. **Pleasure of Motion:** M. P. Souriaon, Pop. Sci. Mon., vol. XXXV, pp. 824-831.
6. **Relation of Motor Power to Intelligence:** Prof. T. L. Bolton, Amer. Jr. of Psychol., vol. XIV, Nos. 3 and 4, July-Oct., 1903, pp. 357-367.
7. **Significance of Motor Activity in Primary Education:** Will Grant Chambers, Jr. of Ped., vol. XVIII, No. 3, March, 1906, pp. 166-184.
8. **From Fundamental to Accessory in Development of Nervous System and of Movement:** Ped. Sem., vol. VI, pp. 5-64, by Frederick Burk; also Report U. S. Com. of Educ., vol. I, 1900-1901, pp. 325-345.
9. **Motor Training, Survival of the Fittest in:** Edwin G. Dexter in Educational Review, Jan., 1902.
10. **The Active Side of Child Life:** E. L. Thorndike, Columbia Univ., Contr. to Phil., Psych. and Education, vol. VIII, Nos. 3 and 4, pp. 99-118.
11. **Studies in Genetic Psychology; III, A Typical Form of Motor Development:** Chas. H. Judd, Jr. of Ped., June, 1901.

12. **Motor Ability:** W. L. Bryon, with Notes and Discussions by Thorndike, Teachers' College Record, May, 1901, pp. 43-79.
13. **Development of Voluntary Motor Ability:** W. L. Bryan, Amer. Jr. of Psychology, Nov., 1892, pp. 125-204.
14. **A Study of Involuntary Movements:** Jos. Jastrow, Pop. Sci. Mon., vol. XLI, pp. 636-644.
15. **Involuntary Movements:** Jos. Jastrow, Pop. Sci. Mon., vol. XL, pp. 743-750.
16. **Cross Education:** Walter Davis, Science, vol. 10, pp. 20-21.
17. **Cross Education:** E. W. Scripture, Pop. Sci. Mon., vol. LVI, pp. 589-596.

II. RELATION BETWEEN STIMULUS AND RESPONSE:

1. **Reflex Arc Concept in Psychology:** Jno. Dewey, Contr. to Psychology, from the Chicago Laboratory, also Psychological Review.
2. **Knowledge and Practice:** Chas. S. Minot, Science, vol. X, pp. 1-11.
3. **Motor Power of Ideas:** Hugo Munsterberg and W. W. Campbell, Psychol. Review, vol. I, pp. 441-453.
4. **Stimulation, Interpretation, Expression:** chap 4, Bryon, Basis of Practical Teaching, pp. 32-42.
5. **Of Conscious Efficiency:** Henry R. Marshall, Jr. of Phil., Psychol. and Sci. Meth., vol. I, Aug. 18, 1904, pp. 454-460.
6. **Relation Between Magnitude of Stimulus and Time of Reaction:** Sven Froeberg, Reprint from the Archives of Psychology, No. 8.
7. **Reactions Learned and Unlearned:** E. L. Thorndike, Columbia Univ., Contr. to Phil., Psychology and Education, vol. VIII, Nos. 3 and 4, pp. 41-49.
8. **Expression:** Atlantic Monthly, vol. VI, pp. 572-577.
9. **Feet and Hands:** Mrs. N. Bernard, Pop. Sci. Mon., vol. LII, pp. 333-337 and 522-527.

10. **Reaction Time; A Study in Attention and Habit:** J. R. Angell and Addison W. Moore, *Contr. to Phil.*, from Psychological Lab. of Univ. of Chicago.
11. **Reaction Time of Counting:** H. C. Warren, Princeton, *Contr. to Psychology*, vol. II, pp. 99-121.
12. **Reaction Times and The Philosophy of the Nervous Impulse:** Chas. Dolley and J. McKeen Cattell, *Psych. Review*, vol. I, pp. 159-168.

III. MOTOR ABILITY AND EFFECTS IN RELATION TO THE SCHOOLS:

1. **Sensory and Motor Abilities of the Pupils of the Chicago University Primary School:** W. F. Smedley, *Trans. Ill. Soc. for Child Study*, vol. II, No. 2.
2. **Motor Ability and the School Standing:** F. W. Smedley, *Third Report of the Dept. of Child Study and Ped. Investigation of the Chicago Pub. Schools, 1900-1901*, pp. 40-42.
3. **Growth Abnormalities and Motor Defects:** F. W. Smedley, *Second Report of the Dept. of Child Study and Ped. Investigation of the Chicago Pub. Schools, 1899-1900*, pp. 15-et seq.
4. **A Case of Arrested Motor Development:** Mrs. Janette W. Hall, *Trans. Ill. Soc. for Child Study*, vol. II, No. 1, p. 8.
5. **Motor Education:** E. R. Shaw, *Pop. Sci. Mon.*, Nov., 1896.
6. **Motor Ability in Children:** Report of the U. S. Com. of Educ., 1897-8, vol. II, pp. 1291-4.
7. **Motor Ability of Children:** Chap. 5, Rowe, *Physical Nature of the Child*, pp. 42-51.
8. **Employment of Motor Activities in Teaching:** E. R. Shaw, *Pop. Sci. Mon.*, vol. L, pp. 56-67.
9. **Against Kindergartens:** Ruth Everett, *Child Study Monthly*, Sept., 1900, p. 106.

IV. MOTOR AND MENTAL CORRESPONDENCES:

1. **Were the Earliest Organic Movements Conscious or Unconscious:** E. B. Titchener, *Pop. Sci. Mon.*, vol. LX, March, 1902, pp. 458-469.
2. **Physical Education and Brain Building:** W. O. Krohn, *Proceedings of the N. E. A.*, 1903, pp. 818-823.
3. **Studies in Genetic Psychology; II, Bodily Reaction and Mental Development:** Chas. H. Judd, Jr. of *Ped.*, Jan., 1901.
4. **Mind and Body; Reaction of Handwork on the Mind:** E. L. Thorndike, *Teachers' College Record*, May, 1901, pp. 37-43.
5. **Influence of Hand Usage on Culture Growth:** *Amer. Jr. of Anthropology*, vol. V, pp. 289-317.
6. **Relation of Manual Training to Certain Mental Defects:** F. A. Walker, *Report of U. S. Com. of Educ.*, 1896-7, vol. I, p. 699.
7. **The Language of the Body:** Eliz. Harrison, *Trans. Ill. Soc. for Child Study*, Oct., 1899, p. 92.
8. **The Delsarte Philosophy of Expression:** M. T. Brown, *Education*, vol. III, pp. 271-279.

V. BRAIN DEVELOPMENT AND MIND DEVELOPMENT:

1. **The Physiological Basis of Mental Culture:** Nathan Allen, *Pop. Sci. Mon.*, vol. VI, pp. 183-85.
2. **Bodily Condition as Related to Mental States:** Chas. F. Taylor, *Pop. Sci. Mon.*, vol. XV, pp. 40-56.
3. **A Thinking Machine:** Grant Allen, *Pop. Sci. Mon.*, vol. XXVIII, pp. 596-605.
4. **Relationship of Physical and Mental Traits:** Chap. 13, Thorndike, *Educational Psychology*, pp. 142-151.
5. **The Nervous System and Education:** Jno. Ferguson, *Pop. Sci. Mon.*, vol. XLVII, pp. 528-538.
6. **Mental Physiology:** J. C. Bucknell, *Pop. Sci. Mon.*, vol. V, pp. 705-16.

7. **Biological Development of the Psycho-Physical Development:** Munsterberg, *Psychology and Life*, pp. 74-81.
8. **Nervous Health and Moral Health:** *Pop. Sci. Mon.*, vol. II, pp. 416-20.
9. **Evolution and Dissolution of the Nervous System:** J. H. Jackson, *Pop. Sci. Mon.*, vol. XXV, pp. 171-181.
10. **A Measure of Mental Capacity:** E. Kraepelin, *Pop. Sci. Mon.*, vol. XLIX, pp. 756-763.
11. **The Human Brain in Relation to Education:** N. C. Macnamara, *Westminster Review*, vol. CLIII, pp. 634-640.
12. **Is the Human Brain Stationary?:** W. I. Thomas, *Forum*, vol. XXXVI, pp. 305-320.
13. **Brain Weight and Brain Power:** J. P. Boileau, *Pop. Sci. Mon.*, vol. XXII, pp. 172-174.
14. **Measurement of Brain Work:** J. M. Greenwood, *Education*, vol. XIII, pp. 583-587.
15. **Care of the Brain:** A. L. Ranney, *Pop. Sci. Mon.*, vol. XXIX, pp. 386-92.
16. **On Brain Forcing:** Clifford Allbutt, *Pop. Sci. Mon.*, vol. XIII, pp. 217-230.

VI. PHYSICAL BASIS OF PRECOCITY, DULLNESS, ETC.:

1. **Brain Power in Education:** *Pop. Sci. Mon.*, vol. XXII, pp. 539-545.
2. **Relation of Physical Development to Intellectual Ability in School Children of Toronto:** G. M. West, *Science*, vol. IV, pp. 156-159.
3. **Physical Conditions in Education:** C. F. Carroll, *Education*, vol. XVIII, pp. 451-459.
4. **Physiological Aspect of Education:** Chap. 3, Horne, *Philosophy of Education*, pp. 57-96.
5. **Education and Physiology:** E. Jas. Swift, Jr. of *Ped.*, Jan., 1901.
6. **Parallelism Between Physical and Mental Development:** F. E. Bolton, Jr. of *Ped.*, June, 1901.

7. **Physical Concomitants of Dullness and Precocity:** F. W. Smedley, Second Report of the Dept. of Child Study and Ped. Investigation of the Chicago Public Schools, 1899-1900, pp. 35-et seq.
8. **Physiology of Childhood as Applied to Education:** R. O. Beard, Education, Oct., 1902, p. 65.
9. **Influence of Physiological Age on Scholarship:** D. Ward Crampton, Psych. Clinic, June, 1907, vol. I, pp. 115-121.
10. **A Comparison of Physical and Intellectual Capacity:** F. W. Smedley, First Report of the Dept. of Child Study and Ped. Investigation of the Chicago Pub. Schools, 1898-1899, pp. 14-et seq.
11. **Education as a Factor in Patho-Genesis:** Francis W. Parker, Child Study Monthly, Dec., 1900, p. 201.
12. **Relation of Physical Development to Intellectual Ability:** West, Science, N. S., vol. IV, pp. 156-59.
13. **Relation of Physical to Mental Defects in School Children:** Walter S. Cornell, Psychol. Clinic, Jan. 15, 1908, vol. I, pp. 231-235.
14. **The Physical Element in Education:** Eug. L. Richards, Pop. Sci. Mon., vol. XLVII, pp. 471-477.
15. **The Physical Basis of Precocity and Dullness:** W. S. Porter, Amer. Physical Educ. Rev., vol. II, pp. 155-173.
16. **Physiology of Childhood as Applied to Education:** R. O. Beard, Proceedings of the N. E. A., 1902, p. 720-et seq.
17. **Disease of the Body as a Mental Stimulant:** Pop. Sci. Mon., vol. XV, pp. 71-86.

VII. MIND AND BODY:

1. **Muscular Expression of Nervous Conditions:** Francis Warner, Pop. Sci. Mon., vol. XX, pp. 584-590.
2. **Muscular Tone and Inner Mood:** Wm. James, Child Study Mon., Dec., 1900, pp. 235-et seq.
3. **Brain Weights and Intellectual Capacity:** Jos. Sinns, Pop. Sci. Mon., vol. LIV, pp. 243-255.

4. **Brain and Its Relation to Intelligence:** Hoffman, Psychology and Common Life, chap. 1, pp. 1-26.
5. **The Mind and The Nervous System:** Wm. A. Hammond, Pop. Sci. Mon., vol. XXVI, pp. 1-20.
6. **The Relation of Mind and Body:** O'Shea, Aspects of Mental Economy, chap. 1, pp. 44-63.
7. **The Nervous System and Consciousness:** W. R. Benedict, Pop. Sci. Mon., vol. XXVI, pp. 731-750, and vol. XXVII, pp. 66-67 and 150-165.
8. **Psychology and Physiology (Relation of Mind and Brain):** Munsterberg, Psychology and Life, chap. 2, pp. 35-99.
9. **Correlation of Structure, Action and Thought:** T. Lauder Brunton, Pop. Sci. Mon., vol. XLII, pp. 749-764.
10. **The Physical Basis of Mental Life:** Bryon, Basis of Practical Teaching, chap. 3, pp. 24-32.
11. **The Physiological Basis of Mental Life:** Hugo Munsterberg, Science, vol. IX, pp. 442-447.
12. **The Physical Basis of Mind:** Henry Maudsley, Forum, vol. X, pp. 645-658.
13. **Influence of Stomach Upon Mind:** Walter Nathan, Westminster Rev., vol. CXLVI, pp. 185-190.
14. **Muscle and Mind:** Francis E. White, Pop. Sci. Mon., vol. XXXV, pp. 377-92.
15. **Of Neururgic and Noetic Correspondences:** Henry R. Marshall, Jr. of Phil., Psych. and Sci. Meth., vol. I, pp. 309-316.

VIII. RIGHT- AND LEFT-HANDEDNESS:

1. **Left-Handedness and Left-Sightedness:** Cesare Lombroso, N. A. Rev., vol. CLXXVII, pp. 440-444.
2. **Right-Eyedness and Left-Eyedness:** Geo. M. Gould, Science, April 8, 1904, vol. XIX, N. S., pp. 591-94.
3. **Left-Handedness:** Fred. Tracy, Trans. Ill. Soc. for Child Study, vol. II, No. 2.

4. **Origin of Right-Handedness:** Baldwin, *Mental Development; Methods and Processes*, chap. 4, pp. 59-80.
5. **Origin of Right-Handedness:** J. Mark Baldwin, *Pop. Sci. Mon.*, vol. 44, pp. 606-616.
6. **Why Are We Right-Handed?:** W. C. Cahall, *Pop. Sci. Mon.*, vol. XXIII, pp. 86-87.
7. **Standing on One Foot:** C. V. C., *Child Study Mon.*, Dec., 1900, p. 234.
8. **Right-Handedness and Peripheral Vision:** H. C. Stevens, *Science*, vol. XXVII, Feb. 14, 1908, pp. 272-3.
9. **Right and Left:** Burt G. Wilder, *Atl. Mon.*, vol. XXV, pp. 455-456.
10. **Right-Handedness:** F. W. Smedley, *Second Report Dept. of Child Study and Ped. Investigation Chicago Pub. Schools. 1899-1900*, pp. 48-et seq.
11. **Right-Handedness and School Standing.** F. W. Smedley, *Third Report Dept. Child Study and Ped. Invest. Chicago Pub. Schools, 1900-1901*, pp. 43-et seq.
12. **Unidexterity vs. Ambidexterity:** F. W. Smedley, Jr. of *Childhood and Adolescence*, Jan., 1902, pp. 42-43.
13. **Ambidexterity and Mental Life:** Samuel S. Maxwell, Jr. of *Ped.*, vol. XVI, Sept., 1903, pp. 64-7.

IX. TYPES OF MOVEMENTS:

1. **Types of Reaction:** Baldwin and Shaw, *Princeton, Contr. to Psychol.*, vol. I, pp. 68-82.
2. **The Child's Movements—Impulsive, Reflex, Instinct and Ideational:** Tracy, *Psychology of Childhood*, chap. 4, pp. 93-114.
3. **Children's Movements: Impulsive, Reflex, and Instinctive:** Tanner, *The Child*, chap. 13, pp. 252-272.
4. **Impulsive Movements:** Preyer, *The Senses and The Will*, chap. 9, pp. 201-210.
5. **Instinctive Movements in Young Animals and Child:** Preyer, *The Senses and The Will*, chap. 11, pp. 235-81.

6. **Imitative Movements:** Preyer, *The Senses and The Will*, chap. 12, pp. 282-292.
7. **Expressive Movements:** Preyer, *The Senses and The Will*, chap. 13, pp. 293-324.
8. **Reflex Movements:** Preyer, *The Senses and The Will*, chap. 10, pp. 211-234.
9. **Reflex Action and Disease:** Lauder Brunton, *Pop. Sci. Mon.*, vol. XIV, pp. 639-647.
10. **The Movements of the Child by His Expressions of Will:** Preyer, *The Senses and The Will*, chap. 8, pp. 188-200.
11. **Development of Deliberate Movements:** Preyer, *The Senses and The Will*, chap. XIV, pp. 325-333.
12. **Development of Voluntary Movements:** Tanner, *The Child*, chap. XIV, pp. 275-289.
13. **Voluntary Activity,—Walking and Play:** Compayre, *Later Infancy of the Child*, chap. 4, pp. 118-152.

X. HABIT AND HABIT FORMATION:

1. **Formation of Habits in Infancy:** Oppenheim, *Care of the Child and Health*, chap. 9, pp. 108-203.
2. **Habits of Movements in Children:** Rowe, *Physical Nature of the Child*, chap. 11, pp. 105-114.
3. **Habit in Relation to Instinct:** Drummond, *Intro. to Child Study*, pp. 223-234.
4. **Development of Hand and Arm Movements:** Major, *First Steps in Mental Growth*, chap. 2, pp. 16-46.
5. **Observations on Teaching Children to Write:** E. R. Shaw, *Child Study Mon.*, vol. I, p. 226-et seq.
6. **Some Experimental Observations on Practice and Habit:** Arthur Allin, Jr. of *Ped.*, March, 1902.
7. **Physiological Law of Habit:** Mabel T. Wellman, *Education*, vol. XVII, pp. 52-56.
8. **The Laws of Habit:** Wm. James, *Pop. Sci. Mon.*, vol. XXX, pp. 433-451.

9. **Habit; As Applicable to Kindergarten Training:** E. L. Thorndike, Teachers' College Record, Nov., 1903, vol. IV, pp. 54-61.
10. **The Bonds of Habit:** Oppenheim, Mental Growth and Control, chap. 7, pp. 139-166.
11. **Researches in Practice and Habit:** W. S. Johnson, Science, vol. X, pp. 527-29.

REFERENCES IN HEREDITY.

I. GENERAL:

1. **Heredity of Richard Rowe:** Jordan, Foot Notes to Evolution, chap. 5, pp. 118-190.
2. **Hereditary Transmission and Variation:** Huxley, On the Origin of Species, chap. 4, pp. 80-107.
3. **Inheritance of Mental Traits:** Thorndike, Educational Psychology, chap. 6, pp. 47-65.
4. **Heredity in Relation to Education:** Wesley Mills, Pop. Sci. Mon., vol. XLIV, pp. 472-81.
5. **Characters Congenital and Acquired:** Archdale Reide, Science, vol. VI, pp. 896-902 and 933-948.
6. **Heredity:** Thompson, Study of Animal Life, chap. 20.
7. **Heredity:** Jordan and Kellogg, Evolution and Animal Life, chap. 10, pp. 163-195.
8. **Heredity:** Davenport, Principles of Breeding, chaps. 14-15, pp. 473-575.

II. THE PHYSICAL BASIS OF HEREDITY:

1. **The Physical Basis of Heredity:** Carl H. Eigenmann, Pop. Sci. Mon., vol. LXI, pp. 33-44.
2. **The Mechanism of Heredity:** Edwin G. Conklin, Science, Jan. 17, 1908, vol. XXVII, pp. 81-99.
3. **Chemical Fertilization and The Theory of Life:** Jacques Loeb, Science, vol. XXVI, Oct. 4, 1907, pp. 425-437.
4. **Physical Basis of Heredity:** Jordan, Foot Notes to Evolution, chap. 6.
5. **The Minute Structure of Cells in Relation to Heredity:** Strasburger, Darwin and Modern Science, chap. 6, pp. 102-111.

III. HEREDITY OF MENTAL CHARACTERISTICS:

1. **Ribot, Heredity:** Especially Part I, chaps. 3, 4, 5, 6, 7, and 9; Part III, chap. 3, and Part IV, chap. 2.

IV. TRANSMISSION OF ACQUIRED CHARACTERS:

1. **Inheritance of Forms of Behavior:** Yerkes, *The Dancing Mouse*, chap. 18, pp. 278-284.
2. **Experimental Evidences in Favor of Inheritance of Acquired Characters:** Romanes, *Darwin and After Darwin*, vol. II, pp. 103-132.
3. **Indirect Evidence in Favor of Inheritance of Acquired Characters:** Romanes, *Darwin and After Darwin*, vol. II, pp. 60-95.
4. **Inheritance of Acquired Characteristics:** Jno. MacFarlane, *Science*, vol. V, pp. 935-945.
5. **Inheritance of Acquired Characteristics:** A. D. Cope, *Science*, vol. V, pp. 633-634.
6. **Hereditary Transmission of Acquired Physical Habits:** W. B. Carpenter, *Pop. Sci. Mon.*, vol. III, pp. 303-321.
7. **Heredity of Acquired Characteristics:** Cesare Lombroso, *Forum*, vol. XXIV, pp. 200-209.
8. **The Transmission of Culture (Weismann):** Lester F. Ward, *Forum*, vol. XI, pp. 312-320.
9. **Inherited Effect of Use and Disuse:** Romanes, *Darwin and After Darwin*, vol. II, pp. 95-102.
10. **Supposed Botanical Proofs of the Transmission of Acquired Characters:** Weismann, *On Heredity*; Translated by Polton and Shipley, vol. I, chap. 7, pp. 397-430.
11. **Supposed Transmission of Mutilations:** Weismann, *On Heredity*; Translated by Polton and Shipley, vol. I, chap. 8, pp. 431-461.
12. **Experimental Evidence Against Inheritance of Acquired Characters:** Romanes, *Darwin and After Darwin*, vol. II, pp. 142-158.
13. **Evidence Against Inheritance of Acquired Characters:** Romanes, *Darwin and After Darwin*, vol. II, pp. 133-141.
14. **Inheritance of Acquired Characters:** Lamarck and Darwin. *Theories, Morgan, Evolution and Adaptation*, chap. 7.

15. **Transmission of Acquired Characters:** Thompson, Heredity, chap. VII, pp. 164-249.
16. **Weismann, Argument Against the Inheritance of Acquired Characters:** Conn, The Method of Evolution, pp. 248-264.
17. **Inheritance of Acquired Characters:** Jordan and Kellogg, Evolution and Animal Life, chap. 11, pp. 196-210.
18. **Transmission of Modifications Due to External Influences:** Davenport, Principles of Breeding, chap. 11, pp. 348-418.

V. HEREDITY AND ENVIRONMENT:

1. **The Influence of Habits and Surroundings:** Thompson, Study of Animal Life, chap. 19, pp. 303-319.
2. **Heredity and Environic Forces:** D. T. McDougal, Science, Jan. 24, 1908, vol. XXVII, pp. 121-128.
3. **Heredity and Environment:** Galton, History of Twins, Teachers' College Record, May, 1901, pp. 96-110.
4. **Early Surroundings of Life:** A. C. Lane, Science, Aug. 2, 1907, vol. XXVI, pp. 129-143.
5. **The Influence of Environment:** Thorndike, Educational Psychology, chap. 7, pp. 66-79.
6. **Influence of Environment on Structure and Habits of Animals:** Lecture 2, Arthur N. Marshall, Biological Lectures and Addresses, pp. 27-40.
7. **Comparative Importance of Heredity and Environment:** Oppenheim, Development of The Child, chap. 4, pp. 66-92.
8. **Heredity and Environment:** Salsbury, Theory of Teaching, chap. 32, pp. 231-235.
9. **Adaptations:** Jordan and Kellogg, Evolution and Animal Life, chap. 16, pp. 327-346.

VI. THEORY OF HEREDITY:

1. **Weismann, Theory of Heredity:** Romanes, An Examination of Weismannism, chap. 3, pp. 48-85.

2. **Earl Pearson, Law Progress:** The Open Court, vol. XVIII, Feb., 1904, pp. 118-121.
3. **Weismann, Theories:** Herbert Spencer, Pop. Sci. Mon., vol. XLIII, pp. 473-490.
4. **Inheritance of Acquired Characters:** Lamarck and Darwin, Theories; Morgan, Evolution and Adaptation, chap. 7.
5. **Heredity:** Conn, The Method of Evolution, chaps. 5 and 6, pp. 157-279.
6. **Heredity and Variation in Modern Light:** Bateson, Darwin and Modern Science, chap. 5, pp. 85-101.

VII. MISCELLANEOUS:

1. **Problems of Variations and Heredity:** A. R. Wallace, Darwinism, chap. 14, pp. 410-444.
2. **Variation and Heredity:** Morgan, Evolution and Adaptation, chap. 8, pp. 201-299.

MENTAL EVOLUTION.

I. CONSCIOUSNESS AND EVOLUTION:

1. **Consciousness and Evolution:** J. Mark Baldwin, Princeton, Contr. to Psychology, vol. I, pp. 145-155.
2. **Consciousness and Evolution:** J. Mark Baldwin, Psychological Review, May, 1896.
3. **Consciousness and Evolution:** J. Mark Baldwin, Science, (N. Y.), Aug. 23, 1895; also Amer. Naturalist, April, 1896.
4. **Consciousness and The Origin of Species:** J. Mck. Cattell, Science, vol. I, pp. 99-100.
5. **Consciousness and Evolution:** J. Mark Baldwin, Science, vol. II, pp. 219-223.
6. **Place of Consciousness in Evolution:** T. U. Fowle, Pop. Sci. Mon., vol. XIII, pp. 513-529.
7. **Development:** L. and E. G. Seymour, Education, vol. XVII, pp. 295-299 and 350-357.
8. **Evolutionary Interpretation of Consciousness:** Miller, The Psychology of Thinking, chap. 1-4, pp. 1-45.

II. MIND OF LOWEST ANIMALS:

1. **Where Did Life Begin?:** G. Hilton Scribner, Pop. Sci. Mon., vol. XXV, pp. 73-78.
2. **Evidence of Mind in Animals:** Washburn, The Animal Mind, chap. 2, pp. 27-36.
3. **The Mind of the Simplest Animals:** Washburn, The Animal Mind, chap. 3, pp. 37-57.
4. **The Fundamental Difference Between Animals and Plants:** Chas. S. Minot, Science, vol. I, pp. 311-12.
5. **The Memory Idea—Evidence For and Against Ideas in Animals:** Washburn, The Animal Mind, chap. 12, pp. 270-284.

6. **Mind in Lower Animals:** Atlantic Mon., vol. XLVI, pp. 136-138.
7. **Progress in Lower Animals:** E. P. Evans, Pop. Sci. Mon., vol. XL, pp. 170-180.
8. **Animal Magnetism:** Jas. McK. Cattell, Science, vol. II, p. 13.
9. **Hearing in The Lower Animals:** M. Pierre Bonnier, Pop. Sci. Mon., vol. XXXIX, pp. 832-837.
10. **Behavior of Blind Animals:** Wesley Mills, Pop. Sci. Mon., vol. LXII, pp. 344-347.
11. **Queer Phases of Animal Life:** Felix Oswald, Pop. Sci. Mon., vol. XXII, pp. 589-606.

III. PSYCHOLOGY OF CATS AND DOGS:

1. **Intelligence of Cats:** W. H. Larrabee, Pop. Sci. Mon., vol. XXXVIII, pp. 368-380.
2. **Psychology of a Dog:** Jno. Monteith, Pop. Sci. Mon., vol. XLIV, pp. 514-520.
3. **Dogs and Their Affections:** Ouida, North Amer. Rev., vol. CLIII, pp. 312-321.
4. **Cats and Their Friendship:** W. H. Larrabee, Pop. Sci. Mon., vol. XXXVII, pp. 91-102.
5. **Dog Talk:** Atlantic Monthly, vol. IV, pp. 590-601.
6. **Canine Morals and Manners:** Louis Robinson, Pop. Sci. Mon., vol. XLII, pp. 171-187.

IV. PSYCHOLOGY OF MONKEYS AND ELEPHANTS:

1. **Mental Capacity of the Elephant:** Wm. Hornaday, Pop. Sci. Mon., vol. XXIII, pp. 497-509.
2. **Intelligence of Monkeys:** Ed. L. Thorndike, Pop. Sci. Mon., vol. LIX, pp. 273-279.
3. **Mental Faculties of Monkeys:** Mme. Clemence Royer, Pop. Sci. Mon., vol. XXX, pp. 17-24.
4. **Monkeys:** Alfred R. Wallace, Pop. Sci. Mon., vol. XXI, pp. 21-34.

V. PSYCHOLOGY OF BIRDS:

1. **Instinct in Birds:** B. A. Spalding, *Pop. Sci. Mon.*, vol. II, pp. 561-564.
2. **Relation of Instinct to Intelligence in Birds:** Francis H. Herrick, *Science*, vol. XXVII, May 29, 1908, pp. 847-850.
3. **Instinct and Education in Birds:** H. C. Bunpus, *Science*, vol. IV, pp. 213-217.
4. **Intellectual Powers of Birds:** *Pop. Sci. Mon.*, vol. III, pp. 614-617.
5. **Can a Bird Reason?:** T. M. Brewer, *Atl. Mon.*, vol. XXVIII, pp. 41-44.
6. **Mental Traits in the Poultry Yard:** Benj. Karr, *Pop. Sci. Mon.*, vol. XXXIII, pp. 625-633.

VI. PSYCHOLOGY OF INSECTS AND REPTILES:

1. **Psychology of Lizards:** M. J. Delboeuf, *Pop. Sci. Mon.*, vol. XLIII, pp. 682-88.
2. **Instinct in Insects:** Geo. Pouchet, *Pop. Sci. Mon.*, vol. III, pp. 12-21 and 149-159.
3. **Insect Psychology:** Review of Article by August Forel, Jr. of *Phil., Psych. and Sci. Meth.*, vol. I, Feb., 1904, p. 109.
4. **Intelligence of Ants:** Geo. J. Romanes, *Pop. Sci. Mon.*, Vol. XIX, pp. 495-510 and 816-829.
5. **Ants and Some Other Insects; Their Psychological Powers:** August Forel, *Monist*, vol. XIV, Oct., 1903, pp. 33-66.

VII. WILD ANIMALS VS. TAME ANIMALS:

1. **Wild Traits in Tame Animals: A Series of Articles by Dr. Louis Robinson, North Amer. Rev.:**
 - a—The Horse, vol. CLVIII, pp. 477-483,
 - b—The Donkey, vol. CLIX, pp. 722-727,
 - c—Sheep and Goats, vol. CLX, pp. 43-48,
 - d—The Pig, vol. CLX, pp. 735-739,
 - e—Domestic Cattle, vol. CLXII, pp. 607-611,
 - f—Dogs and Cats, vol. CLXIII, pp. 164-157.

VIII. ANIMAL REASONING AND SPEECH:

1. **Reasoning Animals:** Allen Pringle, *Pop. Sci. Mon.*, vol. XLII, pp. 71-75.
2. **Do Animals Reason?:** Ed. L. Thorndike, *Pop. Sci. Mon.*, vol. LV, pp. 480-491 and 843-845; also, Egerton Young, vol. LVI, pp. 105-116.
3. **How Much Animals Know:** F. A. Fernald, *Pop. Sci. Mon.*, vol. XXIII, pp. 39-46.
4. **Animal Experimentation:** Harold C. Earnest, *Educational Review*, vol. XXXVI, June, 1908, pp. 55-66.
5. **The Reasonable but Unreasoning Animals:** Jno. Burrows, *Outlook*, Dec. 14, 1907, pp. 809-815.
6. **Animal Arithmetic:** Mme. Clemmence Royer, *Pop. Sci. Mon.*, vol. XXXIV, pp. 252-262.
7. **Intelligence of Squirrels:** T. Wesley Mills, *Pop. Sci. Mon.*, vol. XXXVI, pp. 829-835.
8. **Animal Intelligence:** Geo. J. Romanes, *Pop. Sci. Mon.*, vol. XIV, pp. 214-231.
9. **Investigation of Psychical Faculties or Processes:** Ivan B. Pavlov, *Science*, vol. XXIV, Nov. 16, 1906, pp. 613-619.
10. **Experiments on Animal Intelligence:** E. L. Thorndike, *Science*, vol. VII, pp. 818-824.
11. **Language of Animals:** M. De Lacaze Duthiers, *Pop. Sci. Mon.*, vol. XL, 528-540.
12. **Studies of Animal Speech:** E. P. Evans, *Pop. Sci. Mon.*, vol. XLIII, pp. 433-440.
13. **Voice in Man and Animal:** *Pop. Sci. Mon.*, vol. IX, pp. 385-398 and 513-523.
14. **Reasoning of Animals:** Miller, *The Psychology of Thinking*, pp. 293-295.

IX. ESTHETIC SENSE OF ANIMALS:

1. **Musical Mice:** Sam Lockwood, *Pop. Sci. Mon.*, vol. I, pp. 323-327.
2. **Esthetic Sense in Animals:** Louis Viardot, *Pop. Sci. Mon.*, vol. IV, pp. 729-735.

3. **Esthetic Sense and Religious Sense in the Animal:** E. P. Evans, *Pop. Sci. Mon.*, vol. XLII, pp. 472-481.
4. **Esthetic Feeling in Birds:** Grant Allen, *Pop. Sci. Mon.*, vol. XVII, pp. 650-653.
5. **The Musical Sense in Animals and Man:** Weismann, *On Heredity*, Trans. by Poulton and Shipley, vol. II, chap. 10, pp. 81-70.

X. THE MORALS OF ANIMALS:

1. **Moral Sense in Lower Animals:** W. Lauder Lindsay, *Pop. Sci. Mon.*, vol. XVI, pp. 346-353.
2. **Conscience in Animals:** Geo. J. Romanes, *Pop. Sci. Mon.*, vol. IX, pp. 80-90.
3. **Have Animals Souls?:** Jas. F. Clark, *Atl. Mon.*, vol. XXXIV, pp. 412-422.
4. **Criminality in the Animal:** A. Lacassagne, *Pop. Sci. Mon.*, vol. XXII, pp. 244-255.
5. **Strange Animal Friendship:** *Pop. Sci. Mon.*, vol. XIV, pp. 182-186.
6. **Laws of Government Among the Lower Animals:** J. W. Slater, *Pop. Sci. Mon.*, vol. XXXVIII, pp. 677-685.

XI. EDUCABILITY OF ANIMALS:

1. **What Animals May Be Taught:** M. J. Delboeuf, *Pop. Sci. Mon.*, vol. XXIX, pp. 168-179.
2. **Education in the Animal Kingdom:** M. Chas. Letourneau, *Pop. Sci. Mon.*, vol. LII, pp. 527-534.

XII. ANIMAL DEFENSE:

1. **Animal Self-Defense:** H. L. Fairchild, *Pop. Sci. Mon.*, vol. XXI, pp. 595-610.
2. **Animal Powers of Offense and Defense:** *Pop. Sci. Mon.*, vol. IX, pp. 355-359.

XIII. THE NATURE OF MIND:

1. **The Nature of Mind:** J. M. Long, *Education*, vol. III, pp. 572-588.

2. **The Future of Mind:** Peter Bryce, *Pop. Sci. Mon.*, vol. XXI, pp. 239-244.

XIV. EVOLUTION OF MIND:

1. **Brain Development as Related to Evolution:** G. Hilton Scribner, *Pop. Sci. Mon.*, vol. XLVI, pp. 525-539.
2. **Evolution of the Human Intellect:** Ed. L. Thorndike, *Pop. Sci. Mon.*, vol. LX, Nov., 1901, pp. 58-65.
3. **Evolution and The Mind:** David Starr Jordan, *Pop. Sci. Mon.*, vol. LII, pp. 433-445.
4. **Evolution and Mind:** C. B. Radcliffe, *Pop. Sci. Mon.*, vol. III, pp. 359-363.
5. **Derivative Origin of the Human Mind:** G. J. Romanes, *Pop. Sci. Mon.*, vol. XXXIV, pp. 792-798.
6. **Evolution of the Mind:** Robt. G. Eccles, *Mod. Sci. Essayist*, No. 8 (Pamflet), pp. 180-196.

XV. MENTAL DEVELOPMENT OF THE CHILD:

1. **Psycho-Genesis in the Human Infant:** W. Pryer, *Pop. Sci. Mon.*, vol. XVII, pp. 625-635.
2. **Development of the Young Child:** W. F. Manton, *Education*, vol. XVII, pp. 138-148.
3. **Mind Building by Sense Development:** S. M. Miller, *Education*, vol. XVI, pp. 218-223.
4. **Conditions of Mental Development:** Pryer, *Infant Mind*, chap. 10.
5. **Principles of Mental Development as Illustrated in Early Infancy:** Jno. Dewey, *Trans. Ill. Soc. for Child Study*, Oct., 1899, p. 65.
6. **Some Aspects of Attention; Evolution of and Influence On Determining Reaction:** Washburn, *The Animal Mind*, chap. 13, pp. 285-294.
7. **The Mind of Primitive Man:** Franz Boas, *Science*, vol. XIII, pp. 281-289.

XVI. INSTINCTS:

1. **Instincts: Observations on Young Animals,** D. A. Spalding, *Pop. Sci. Mon.*, vol. LXI, pp. 126-142.

2. **Heredity and Instinct:** J. Mark Baldwin, Science, vol. III, pp. 438-441 and pp. 558-561.
3. **Heredity and Instinct:** Baldwin, Development and Evolution, chaps. 5 and 6, Part II, pp. 61-80.
4. **Instinct:** Wesley Mills, Science, vol. III, pp. 441-442.
5. **Instinct and Intelligence:** W. K. Brooks, Pop. Sci. Mon., vol. XI, pp. 585-599.
6. **The Darwinian Theory of Instinct:** Geo. J. Romanes, Pop. Sci. Mon., vol. XXVI, pp. 586-602.
7. **Instinct and Intelligence:** Jos. Le Conte, Pop. Sci. Mon., vol. VII, pp. 653-664.
8. **What is an Instinct?:** Wm. James, Scribner's, vol. I, pp. 355-365.
9. **Some Human Instincts:** Wm. James, Pop. Sci. Mon., vol. XXXI, pp. 160-170 and 666-681.
10. **Instinct in Man and Animals:** Wallace, On Natural Selection, chap. 5, pp. 201-210 and 211-230.
11. **Lloyd Morgan on Instinct:** Wesley Mills, vol. III, pp. 355-356.
12. **Lloyd Morgan on Instinct:** Henry Osborne, Science, vol. I, pp. 712-714.
13. **Instinct and Acquisition:** D. A. Spalding, Pop. Sci. Mon., vol. VIII, pp. 310-315.
14. **Heredity of Instincts:** Ribot, Heredity, Part I, chap. 1, pp. 13-35.
15. **Classification of Instincts:** Kirkpatrick, Fundamentals of Child Study, chap. 14, pp. 51-64.
16. **Instincts and Emotions (As Social Products):** Baldwin, Mental Development; Social and Ethical Interpretations, chap. 6, pp. 185-246.
17. **Uses of Instinct:** Oppenheim, Mental Growth and Control, chap. 5, pp. 89-114.
18. **Instincts of Children:** Drummond, Intro. to Child Study, chap. 12, pp. 194-222.

19. **Natural Tendencies; Their Guidance and Education:** E. L. Thorndike, *Teachers' College Record*, Nov., 1903, vol. IV, pp. 51-54.
20. **Instinct:** Jordan and Kellogg, *Evolution and Animal Life*, chap. 20, pp. 426-442.
21. **Adjustment on the Organic Level of Consciousness:** Miller, *Psychology of Thinking*, chap. 7, pp. 74-83.
22. **Relation Between Instinct and Intelligence:** Jordan and Kellogg, *Evolution and Animal Life*, chap. 20, pp. 443-450.

XVII. MISCELLANEOUS:

1. **Science and Mental Improvement:** Jos. Le Conte, *Pop. Sci. Mon.*, vol. XIII, pp. 96-101.
2. **Mind as a Measure of Nature:** Chas. Haviland, *Pop. Sci. Mon.*, vol. XVIII, pp. 681-691.
3. **A Problem in Human Evolution:** Grant Allen, *Pop. Sci. Mon.*, vol. XV., pp. 250-58.
4. **Animals as Modified by Environment:** J. P. Steere, *Pop. Sci. Mon.*, vol. XXXIII, pp. 243-249.
5. **Nearness of Animals to Men:** E. P. Evans, *Atl. Mon.*, vol. LXIX, pp. 171-184.
6. **Fetichism or Anthropomorphism:** Geo. Pellew, *Pop. Sci. Mon.*, vol. XXX, pp. 514-520.

NERVOUS WASTE AND LEAKAGE OF ENERGY.

I. FATIGUE: TESTS, THEORIES, CAUSES, SYMPTOMS, ETC.:

1. **Fatigue in Voluntary Action:** Scripture, *The New Psychology*, chap. 16, pp. 228-247.
2. **Fatigue:** F. B. Dressler, *Ped. Sem.*, 1892, vol. I, pp. 102-107.
3. **Fatigue:** C. R. Squire, *Psych. Rev.*, May, 1903, vol. X, No. 3, pp. 248-67.
4. **A Study of the Accuracy of the Present Methods of Testing Fatigue:** A. C. Ells and M. M. Shipe, *Amer. Jr. of Psych.*, vol. XIV, pp. 496-509 (1903).
5. **The Fatigue Problem:** T. L. Bolton, Jr. of *Ped.*, Dec., 1903, vol. XVI, No. 2, pp. 97-123.
6. **Accuracy of Present Methods of Testing Fatigue:** A. C. Ellis and M. M. Shipe, *Amer. Jr. of Psych.*, July-Oct., 1903, vol. XIV, Nos. 3 and 4, pp. 232-245.
7. **Fatigue and Feelings of Fatigue (Muscular and Mental):** Marsh, *Diurnal Course of Efficiency*, Part D, pp. 77-87.
8. **On the Validity of the Griesbach Method of Determining Fatigue:** J. H. Leuba, *Psych. Rev.*, 1899, vol. VI, No. 6, pp. 573-598.
9. **The Substances Produced in Fatigue:** Mosso, *Fatigue*, chap. 5, pp. 103-128.
10. **Attention, Fatigue and the Concept of Infancy:** R. Haynes, Jr. of *Phil., Psych. and Sci. Meth.*, Oct. 24, 1907, vol. IV, No. 22, pp. 601-606.
11. **Fatigue—Tests and Experiments—Necessary Amount of Sleep, etc.:** Drummond, *Intro. to Child Study*, chap. 11, pp. 172-193.

12. **Influences of Small Doses of Alcohol on Capacity for Muscular Work (5 Figures):** Rivers and Weber, *British Jr. of Psych.*, Jan., 1908, vol. II, Part 3, pp. 261-280.
13. **Fatigue, Normal and Abnormal:** McMillan, *Early Childhood*, chap. 10, pp. 155-180.
14. **General and Special Characteristics of Fatigue:** Mosso, *Fatigue*, chap. 4, pp. 74-102.
15. **Fatigue:** Donaldson, *Growth of the Brain*, chap. 16, pp. 309-323.
16. **Fatigue—Causes, Laws, Signs of, etc.:** Kirkpatrick, *Fundamentals of Child Study*, chap. 17, pp. 321-332.
17. **A New Type of Ergograph:** J. A. Bergstrom, *Am. Jr. of Psych.*, July-Oct., 1903, vol. XIV, Nos. 3 and 4, pp. 246-276.
18. **Attention Waves as a Means of Measuring Fatigue:** W. B. Pillsbury, *Amer. Jr. of Psych.*, 1903, vol. XIV, pp. 541-552.
19. **On the Invalidity of Aesthesiometric Method as a Measure of Mental Fatigue:** G. B. Germann, *Psych. Rev.*, 1899, vol. VI, No. 6, pp. 590-605.
20. **Some Effects of Incentives on Work and Fatigue:** W. R. Wright, *Psych. Rev.*, 1906, vol. XIII, 22-34.

II. FATIGUE IN ANIMALS:

1. **History of the Study of the Movements of Animals:** Mosso, *Fatigue*, chap. 2, pp. 30-49.
2. **Fatigue in Migration of Birds, etc.:** Mosso, *Fatigue*, chap. 1, pp. 1-29.

III. ARREST OF DEVELOPMENT DUE TO OVERPRESSURE IN SCHOOL WORK:

1. **Artificial Production of Stupidity in Schools:** *Pop. Sci. Mon.*, vol. I, pp. 129-143.
2. **The Insanity of the Overexertion of the Brain:** J. Batty Tuke, *The Brain*, 1896, Parts LXXIII-LXXVI, pp. 121-129.

3. **People of Whom More Might Have Been Made:** Atl. Mon., vol. VIII, pp. 425-440.
4. **Arrested Development:** Bryan, Basis of Pract. Teaching, chap. 8, pp. 73-81.
5. **Arrested Development in Children Produced by School:** Wm. T. Harris, Education, vol. XX, pp. 453-466.
6. **What Becomes of All the Clever Children:** Harper's, vol. I, pp. 402-404.
7. **Defective and Arrested Development in First Years of Life:** Ap. B. of Preyer, Development of the Intellect, pp. 272-285.
8. **Arrest of Development Considered in Two Kinds of Psychology:** Wm. T. Harris, Lecture I, of Psych., 4 Articles; pp. 3-10, Pamflet-Reprint from School and Home Educ.
9. **How to Kill Clever Children:** Harper's, vol. I, pp. 789-790.
10. **Minor Mental Abnormalities in Children as Occasioned by Certain Erroneous School Methods:** Report of U. S. Com. of Educ., 1898-99, vol. I, p. 471.

IV MUSCULAR FATIGUE:

1. **Muscular Construction and Rigidity (In Relation to Fatigue):** Mosso, Fatigue, chap. 6, pp. 129-149.
2. **Special Ergographic Work (Showing by Curves the Result of Fatigue, and Recovery During Noon Hour):** F. W. Smedley, 2nd Report of Chicago Dept. of Child Study and Ped. Invest., 1899-1900, pp. 64-et seq.
3. **Relation of Gymnastics to Mental Fatigue:** A. J. Smith, Individual Child, March, 1904, vol. I, pp. 150-156.

V. MENTAL FATIGUE AND SCHOOL WORK:

1. **Overpressure and Fatigue:** Mosso, Fatigue, chap. 12, pp. 315-334.
2. **Brain Forcing in Childhood:** Wm. Hammond, Pop. Sci. Mon., vol. XXX., pp. 721-732.

3. **The Law of Exhaustion:** Mosso, *Fatigue*, chap. 7, pp. 150-176.
4. **Methods of Intellectual Work (In Relation to Fatigue):** Mosso, *Fatigue*, chap. 11, pp. 291-314.
5. **Lectures and Examinations in Production of Fatigue:** Mosso, *Fatigue*, chap. 10, pp. 240-290.
6. **Intellectual Fatigue:** Mosso, *Fatigue*, chap. 9, pp. 209-239.
7. **Relative Effects of Fatigue and Practice Produced by Different Kinds of Mental Work:** J. H. Wimms, *British Jr. of Psych.*, May, 1907, vol. II, Part II, pp. 153-195.
8. **Mental Fatigue:** M. V. O'Shea, *Pop. Sci. Mon.*, vol. LV, pp. 511-524.
9. **Worry:** Dr. J. M. Graville, *Pop. Sci. Mon.*, vol. XX, pp. 102-109.
10. **Overwork in Schools—A French View:** G. C. Sawyer, *The Academy*, vol. III, pp. 154-162.
11. **Mental Fatigue in School (Summary of Work Done in Investigations):** Report of U. S. Com. of Educ., 1894-5, vol. I, pp. 449-460, and 1895-6, vol. II, pp. 1175-1198.
12. **Mental Fatigue from School Work—Investigation of:** A. T. S., *Educ.*, May, 1903, vol. XXIII, No. 9, pp. 573-578.
13. **Intemperance of Study:** H. Tuke, *Pop. Sci. Mon.*, vol. XVI, pp. 645-653.
14. **Mental Fatigue Due to School Work:** Thorndike, *Science*, vol. IX, pp. 862-864.
15. **Fatigue in Children:** Rowe, *Physical Nature of Child*, chap. 13, pp. 70-82.
16. **Fatigue in Relation to Consciousness:** W. X. Sudduth, *Child Study Mon.*, Feb., 1901, p. 312.
17. **Attention Waves as Means of Measuring Fatigue:** W. B. Pillsbury, *Amer. Jr. of Psych.*, July-Oct., 1903, vol. XIV, Nos. 3 and 4, pp. 277-288.
18. **Attention and Its Physical Conditions (in Relation to Fatigue):** Mosso, *Fatigue*, chap. 8, pp. 177-208.

19. **Fatigue from the Teacher's Point of View:** A. S. Williams, Jr. of *Ped.*, March, 1905, vol. XVII, pp. 199-214.
20. **On Conditions of Fatigue in Reading:** H. Griffing and S. T. Franz, *Psych. Rev.*, 1896, vol. III, pp. 513-530.
21. **Studies from the Psychological Laboratory of Leland Stanford, Jr., University:** Marion E. Holmes, *The Fatigue of the School Hour*, *Ped. Sem.*, 1895, vol. III, pp. 213-234.

VI. NERVOUS DISEASES OF CHILDREN:

1. **Nervousness in Children:** Rowe, *Physical Nature of Child*, chap. 7, pp. 62-69.
2. **Morbid Nervous Conditions Found in Children:** Mary Weyler Campbell, *Child Study Mon. and Jr. of Adol.*, May, 1901, p. 433.
3. **Nervous Condition of Children; Influence of Tenement House Life on:** J. B. Reynolds, *Trans. Ill. Soc. for Child Study*, vol. II, No. 1, p. 33.
4. **The Periods of Stress in Childhood:** J. G. Kurnan, *Trans. Ill. Soc. for Child Study*, July, 1898, p. 91.
5. **Mental Strain:** Chas. Richet, *Pop. Sci. Mon.*, vol. XXVII, pp. 485-9.
6. **Epidemics of Hysteria:** Wm. Hirsch, *Pop. Sci. Mon.*, vol. XLIX, pp. 544-550.
7. **Modern Nervousness and Its Cure:** Herr Dr. Bilsinger, *Pop. Sci. Mon.*, vol. XLII, pp. 90-94.
8. **Infirmities of Speech:** *Pop. Sci. Mon.*, vol. VII, pp. 463-468.
9. **Reflex Neuroses and Their Relation to Development (Far-reaching Effects of Eye Strain, Adenoids, etc.):** Swift, *Mind in the Making*, chap. 4, pp. 116-143.
10. **Some Nervous Disturbances of Development (Chorea, Tics, Migraine, Epilepsy):** Swift, *Mind in the Making*, chap. 5, pp. 144-168.
11. **The Re-education of an Aphasic Shepherd:** Franz, Jr. of *Phil.*, *Psych. and Sci. Meth.*, Oct. 26, 1905, vol. II, No. 22, pp. 589-96.

12. **On Heredity in Nervous Diseases:** E. Dupuy, *Pop. Sci. Mon.*, vol. XI, pp. 332-339.

VII. INSANITY, OR ENERGY RUN WILD:

1. **An Attempt at Analysis of the Neurotic Condition:** A. Meyer, *Amer. Jr. of Psych.*, 1903, vol. XIV, pp. 354-367.
2. **Diseases of Body and Mind:** Hall, *Adolescence*, vol. I, chap. 4, pp. 237-324.
3. **Theology and Insanity:** J. H. Girder, M. D., *N. A. Rev.*, vol. CLXVIII, pp. 77-83.
4. **Self-Control in Curing Insanity:** Wm. Hammond, *N. A. Rev.*, vol. CLII, pp. 310-319.
5. **Social Relations of the Insane:** Dr. H. S. Williams, *N. A. Rev.*, vol. CLVII, pp. 611-621.
6. **Wages of Sin; General Paresis of the Insane:** Henry Smith Williams, *N. A. Rev.*, vol. CLV, pp. 744-753.
7. **A Case of Amnesia or Double Consciousness:** Chas Dana, *Psych. Rev.*, vol. I, pp. 570-581.
8. **Hysteria, Alternating Personality, Paramnesia, Thought Transference:** Wm. James, *Psych. Rev.*, vol. I, pp. 315-318.
9. **Mental Health:** Sam. Osgood, *Harper's*, vol. XXVIII, pp. 494-500.
10. **Hysteria:** Wm. James, *Psych. Rev.*, vol. I, pp. 195-200.
11. **Loss of Personality:** Ethel Puffer, *Atl. Mon.*, vol. LXXXV, pp. 195-204.
12. **Genius and Insanity:** Jas. Sully, *Pop. Sci. Mon.*, vol. XXVII, pp. 447-468.
13. **Causes and Prevention of Insanity:** Smith Baker, *Pop. Sci. Mon.*, vol. LV, pp. 102-113.
14. **Genius and Mental Disease:** W. G. Stevenson, *Pop. Sci. Mon.*, vol. XXX, pp. 663-678.
15. **Law and Insanity:** H. Maudsley, *Pop. Sci. Mon.*, vol. V, pp. 77-89.
16. **Perceptual Insanities:** W. A. Hammond, *Pop. Sci. Mon.*, vol. XXII, pp. 760-767.

17. **Communicated Insanity:** Chas. Pilgrim, Pop. Sci. Mon., vol. XLVI, pp. 828-833.
18. **Analysis of Neurotic Constitution:** A. Meyer, Amer. Jr. of Psych., July-Oct., 1903, vol. XIV, Nos. 3 and 4, pp. 90-103.
19. **The Morbid Sense of Injury:** W. F. Becker, Pop. Sci. Mon., vol. LVI, pp. 596-603.
20. **Growth and Decay of Mind:** Pop. Sci. Mon., vol. IV, pp. 328-344.
21. **Insanity:** Pop. Sci. Mon., vol. XXIII, pp. 627-634.
22. **Hysteria and Demonism:** Chas. Richet, Pop. Sci. Mon., vol. XVII, pp. 86-93, 155-165 and 376-385.
23. **Strange Mental Faculties in Disease:** H. Butterworth, Pop. Sci. Mon., vol. VIII, pp. 177-180.
24. **Modern Form of Insanity:** Dr. H. S. Williams, N. A. Rev., vol. CLIV, pp. 719-728.
25. **Demonical Possession and Insanity:** A. D. White, Pop. Sci. Mon., vol. XXXIV, pp. 433-449 and 577-591.

VIII. DEFECTIVE CHILDREN AS ILLUSTRATING INSUFFICIENT OR WASTED ENERGY:

1. **On Psychology and Pedagogy of the Blind:** Arthur Wylie, Ped. Sem., 1902, vol. IX, pp. 127-160.
2. **Peculiar and Exceptional Children:** Report of U. S. Com. of Educ., 1897-8, vol. II, pp. 1318-1332.
3. **Backward Children in Public Schools:** Report of U. S. Com. of Educ., 1899-1900, vol. II, p. 1341.
4. **Mental Condition of Juvenile Delinquents:** Isador H. Coriat, M. D., Psych. Clinic, vol. I, No. 5, Oct., 1907, pp. 125-137
5. **The Feeble-Minded and Backward:** Dr. F. M. Powell, The Training School, Aug., 1908, vol. V, No. 6, pp. 12-14.
6. **Retardation Through Neglect in Children of the Rich:** L. Witmer, Psych. Clinic, Nov., 1907, vol. I, No. 6, pp. 157-175.

7. **Abnormalities of Childhood:** Kirkpatrick, *Fundamentals of Child Study*, chap. 17, pp. 321-343.
8. **Mentally Deficient Children—The Psychology of:** Naomi Norsworthy, *Archives of Psych.*, No. 1, Nov., 1906, p. 111. (With numerous tests and curves).
9. **Education of Neglected Rich:** N. M. Butler, *Educ. Rev.*, Nov. 1907, vol. XXXIV, No. 4, pp. 398-402.
10. **The Feeble-Minded Child:** McMillan, *Early Childhood*, chap. 8, pp. 113-137.
11. **Some Reasons for Mental Deficiency:** E. R. Johnstone, *The Supplement*, Dec., 1907, vol. I-XLVI, pp. 13-18.
12. **Sixty-Two Days' Training of a Backward Boy, I and II:** Margaret K. Smith, *Psych. Clinic*, March 15, and April 15, 1908, vol. II, Nos. 1 and 2.
13. **Mentally Defective Children in the Public School:** W. S. Cornell, M. D., *Psych. Clinic*, May 15, 1908, vol. II, No. 3, pp. 75-86.
14. **Exceptional Children:** Thorndike, *Educational Psych.*, chap. 12, pp. 121-141.
15. **Peculiar and Exceptional Children:** Drummond, *Intro. to Child Study*, chap. 18, pp. 317-344.
16. **Education of Backward Children:** Jean L. DeForest, *Educ.*, March, 1904, vol. XXIV, No. 7, pp. 401-407.
17. **Defective Children:** Oppenheim, *Care of the Child in Health*, chap. 12, pp. 251-269.
18. **Fifteen Months' Training of a Feeble-Minded Child:** L. Witmer, *Psych. Clinic*, vol. I, No. 3, May 15, 1907, pp. 69-80.
19. **Feeble-Minded Children, Their Number Concept:** H. H. Goddard, *The Supplement*, No. 2, March, 1908, pp. 1-17.
20. **Limitations in Educating Mentally Deficient Children:** Mary Pogue, N. E. A., 1905, pp. 895-900.
21. **Education of Atypical Children:** M. P. E. Groszmann, N. E. A., 1904, pp. 754-759.
22. **The Physical Betterment of the Mentally Deficient:** Dr. J. H. McKee, N. E. A., 1905, pp. 885-895.

23. **Insanity and Preventive Mental Hygiene During School Life:** Dr. A. Meyer, *Psych. Clinic*, June 15, 1908, vol. II, No. 4, pp. 89-102.
24. **Responsibility in Mental Disease:** Sir Jas. Crichton Browne, *Pop. Sci. Mon.*, vol. XXXVI, pp. 81-89.
25. **The Training of Mentally Deficient Children:** Dr. M. W. Barr, *Pop. Sci. Mon.*, vol. LIII, pp. 531-535.
26. **Psychological Notes on Helen Keller:** *Psych. Rev.*, 1894, pp. 356-362.
27. **Mental Abnormalities in Children During Primary Education:** A. Meyer, *Trans. Ill. Soc. for Child Study*, vol. I, No. 1. p. 48.
28. **Neuroses et Idees Fixes, etc.:** J. Janet and F. Raymond, W. L. McKenzie, *N. S.*, vol. IX, 1900, pp. 94-103.
29. **Investigations of Subnormal Children:** Mary Campbell, *N. E. A.*, 1904, pp. 744-754.
30. **Anatomical Observations of the Brain and Several Sense-Organs of the Blind, Deaf-Mute, Laura Dewey Bridgman:** Henry H. Donaldson, *Amer. Jr. of Psych.*, 1891, vol. IV, pp. 248-294.
31. **Some of the Present Problems of Abnormal Psychology:** Morton Prince, *Psych. Rev.*, March to May, 1905, vol. XII, pp. 118-143.

PLAY AND WORK AS COMPLEMENTARY FORMS OF EXPENDITURE OF ENERGY IN NORMAL DEVELOPMENT.

I. ETHICS, PSYCHOLOGY AND PEDAGOGY OF PLAY:

1. **Education by Plays and Games:** G. E. Johnson, *Ped. Sem.*, 1904, vol. III, pp. 97-134.
2. **History of Games:** Ed. B. Tylar, *Pop. Sci. Mon.*, vol. XV, pp. 225-237.
3. **The Surplus Energy Theory:** Karl Groos, *The Play of Animals*, chap. 1, pp. 1-24.
4. **Work and Rest, Genius and Stupidity:** Dr. Alex. F. Chamberlain, *Pop. Sci. Mon.*, March, 1902, p. 413.
5. **Psychology of Animal Play:** Karl Groos, *The Play of Animals*, chap. 5, pp. 287-328.
6. **The Meaning of Youth and Play (with Theories of Play):** Chamberlain, *The Child*, chap. 2, pp. 10-27.
7. **The Meaning of Play:** Johnson, *Education by Plays and Games*, Part I, chap. 1, pp. 3-25.
8. **Play as an Educational Factor:** Levi Seeley, Jr. of *Ped.*, Dec., 1905, vol. XVIII, No. 2, pp. 100-102.
9. **Place of Play in Education:** Tyler, *Growth and Education*, chap. XIV, pp. 198-217.
10. **Play (Brief Summary):** Drummond, *Intro. to Child Study*, chap. 12, pp. 217-222.
11. **The Theory of Play:** Karl Groos, *The Play of Man*, Part III, pp. 361-406.
12. **Play—Theory of—Relation to Work, etc.:** Kirkpatrick, *Fundamentals of Child Study*, chap. 9, pp. 147-162.
13. **Educational Value of Play:** Dr. Jno. E. Bradley, *Rev. of Rev.*, Jan., 1902.
14. **Plays and Games—Psychology and Pedagogy of:** Hall, *Adolescence*, vol. 1, part of chap. 3, pp. 202-236.

15. **Educational Value of Play:** Dr. J. E. Bradley, *Rev. of Educ.*, Jan., 1902.
16. **Play in Education:** Johnson, *Education by Plays and Games*, Part I, chap. 2, pp. 26-64.
17. **The Survival Values of Play:** *Univer. of Colo. Investigations in Psychol. and Educ.*, vol. I, No. 2, pp. 3-44.
18. **Playground Education:** Jos. Lee, *Educ. Rev.*, Dec., 1901.
19. **Relation of Play to Character:** J. E. Bradley, *Education*, vol. XIX, pp. 406-413.
20. **Play as an Aid to Invention:** Baldwin, *Social and Ethical, Interp.*, chap. 4, pp. 139-146.
21. **The Art of Play:** Harriette T. Treadwell, *Educ. Bi-Mon.*, vol. II, No. 2, Dec. 1907, pp. 182-186.

II. RELATION OF PLAY AND WORK:

1. **Work and Play:** Alice H. Putman, *Rev. of Educ.*, April, 1902.
2. **Work and Play—Its Necessity for Human Life:** Paulsen, *System of Ethics*, pp. 519-528.
3. **Work and Play:** Jno. A. Hancock, *Education*, vol. XXV, No. 5, Jan., 1905, pp. 257-269.
4. **Work and Play in Youth:** M. V. O'Shea, *N. E. A. Rep.*, 1901, p. 513.
5. **Necessary Elements in Work and Play:** Geraldine O'Grady, *N. E. A. Rep.*, 1901, p. 527.
6. **Work and Play in Grades:** Charlotte H. Powe, *Rev. of Educ.*, Oct., 1901.
7. **Work and Play in Primary and Grammer Grades:** Charlotte H. Powe, *N. E. A. Rep.*, 1901, p. 507.
8. **Work and Play in the Kindergarten:** Alice J. Putman, *N. E. A. Rep.*, 1901, p. 502.
9. **Work and Play in the Public Schools:** Winifred Buck, *Outlook*, July 22, 1905, vol. LXXX, No. 12, pp. 725-732.
10. **Work and Play and Practical Consequences; Necessary Elements in:** Geraldine O'Grady, *Rev. of Educ.*, Sept., 1901.

III. PLAY AND IMAGERY:

1. **Relation of Play to Imagery—Method of the Recitation:** Jno. Dewey, Handbook for Use of Students in the Theory of Teaching, Oshkosh Normal School, pp. 11-14.
2. **Imagery and Play:** Sully, Studies of Childhood, chap. 2, pp. 35-50.
3. **Imaginative Side of Play:** Jas. Sully, Pop. Sci. Mon., vol. XLV, pp. 577-588.
4. **Children's Dramatic Games Ancient and Modern:** Florence Pray, Education, vol. XXV, No. 6, Feb., 1905, pp. 356-366.

IV. WORK IN EDUCATION:

1. **Psychology of Occupation:** Jno. Dewey, Elementary School Record, No. 3, pp. 82-85.
2. **General Principles of Work Educationally Considered:** Jno. Dewey, Elem. School Record, No. 1, pp. 12-15.
3. **The Gospel of Work:** Edw. G. Cooley, N. E. A. Rep., 1901, p. 197.
4. **Psychology of Work:** Bryan, Basis of Pract. Teaching, chap. 6, pp. 52-62.
5. **Children's Occupations Out of School:** Sarah Considine, Individual Child, vol. I, June, 1904, pp. 180-184.
6. **The Spirit of the Game:** L. H. Gulick, Outlook, March 16, 1907, vol. LXXXV, No. 11, pp. 613-616.
7. **The Natural Activities of Children as Determining the Industries in Early Education:** Kath. E. Dopp. N. E. A., 1904, pp. 437-452 (Stanley Hall).

V. TYPES OF PLAY:

1. **Play and Instinct:** K. Gross, The Play of Animals, chap. 2, pp. 25-81.
2. **The Play of Animals—Experimentation, Movement, Hunting, Fighting, Construction, Nursing, Imitative, Curiosity, and Love and Courtship Plays:** K. Groos, The Play of Animals, chap. 4, pp. 82-286.

3. **Love Play:** K. Groos, *The Play of Man*, Part II, pp. 252-279.
4. **Playful Use of the Motor Apparatus:** K. Groos, *The Play of Man*, Part I, pp. 74-120.
5. **Playful Activity of the Sensory Apparatus:** K. Groos, *The Play of Man*, Part I, pp. 7-73.
6. **Social Play:** K. Groos, *The Play of Man*, Part II, pp. 334-360.
7. **Imitative Play:** K. Groos, *The Play of Man*, Part II, pp. 280-333.
8. **Fighting Play:** K. Groos, *The Play of Man*, Part II, pp. 173-251.
9. **The System of Play:** Intro. of K. Groos, *The Play of Man*, pp. 1-6.

VI. CHILDREN'S PLAY:

1. **A Study of the Play Life of Some South Carolina Children:** Zach. McGhee, *Ped. Sem.*, vol. VII, pp. 459-478, (1900).
2. **A Course of Plays and Games Up to Age of Fifteen:** Johnson, *Education by Plays and Games*, Part II, pp. 83-222.
3. **A Little Boy's Game With a Ball:** Henry Philpott, *Pop. Sci. Mon.*, vol. XXXVII, pp. 650-657.
4. **Play—Record of One Child's:** Major, *First Steps in Mental Growth*, chap. 12, pp. 239-249.
5. **Play of a One-Year-Old Baby:** Major, *First Steps in Mental Growth*, Appendix 6, pp. 351-356.
6. **Play of Children:** Tanner, *The Child*, chap. 19, pp. 393-413.
7. **Play of the Child:** Compayre, *Later Infancy of Child*, chap. 4, pp. 141-152.
8. **Children's Plays:** Sully, *Children's Ways*, chap. 2, pp. 13-28.
9. **Play Interests of Children:** W. S. Monroe, *Trans. Ill. Soc. for Child Study*, April-July, 1899, p. 1.

10. **Children's Plays:** Geneva Sisson, *Studies in Education*, vol. I, pp. 171-174.
11. **Amusements of Worcester School Children:** T. R. Crosswell, *Ped. Sem.*, 1899, vol. VI, p. 314.

VII. EXERCISE—PHYSICAL TRAINING:

1. **Periods of Childhood and Their Relation to a Course of Plays and Games:** Johnson, *Education by Plays and Games*, Part I, chap. 3, pp. 65-82.
2. **Physical Growth Periods and Appropriate Physical Exercises:** Wm. O. Krohn, *Forum*, vol. XXVII, pp. 445-452.
3. **School Life in Relation to Growth and Health:** Alex. Key, *Pop. Sci. Mon.*, vol. XXXVIII, pp. 107-112.
4. **Importance of the School Yard for the Physical Well-Being of Children:** E. H. Arnold, *N. E. A.*, 1905, pp. 756-760.
5. **Influence of Exercise on Growth:** H. G. Boyer, *Amer. Phys. Educ. Rev.*, Sept.-Dec., 1896.
6. **Exercise for the Baby:** Oppenheim, *Care of the Child in Health*, chap. 7, pp. 146-163.
7. **Physical Training in Public Schools:** Laura W. Sanborn, *Child Study Mon.*, Dec., 1900, p. 213.
8. **Christianity and Physical Culture:** G. Stanley Hall, *Ped. Sem.*, vol. IX, No. 3, Sept., 1902, pp. 374-378.

VIII. CHILD LABOR:

1. **Counting Room and Cradle:** Marian Harland, *N. A. Rev.*, vol. CLVII, pp. 334-340.
2. **The Factory Child:** Lawton Evans, *N. E. A.*, 1904, pp. 244-249.
3. **Child Labor in Pennsylvania:** Peter Roberts, *Outlook*, Dec. 17, 1904, vol. LXXVIII, No. 16, pp. 982-985.
4. **School House or Coal Breaker?:** Owen R. Lovejoy, *Outlook*, vol. LXXX, No. 17, Aug. 25, 1905, pp. 1011-1020.
5. **Child Labor (Abstract):** Jane Addams, *Proc. Dept. of Superintendents*, Milwaukee Meeting, pp. 109-111.

6. **Give the Children a Chance:** N. Coe Stewart, Rev. of Educ., Sept., 1901.
7. **Children in Factory and Commercial Life:** Haryot H. Cahoon, New Eng. Mag., vol. XXV, pp. 498-511.

IX. CHILDREN'S POSTURES:

1. **Posture and Its Indications:** J. B. Lander, Pop. Sci. Mon., vol. XLII, pp. 26-34.
2. **Habitual Postures of School Children:** Eliza M. Mosher, Educ. Rev., vol. IV, pp. 339-349.
3. **Habits of Postures in Children:** Rowe, Physical Nature of Child, chap. X, pp. 93-104.
4. **Posture and Its Indications:** Lander Prunton, Pop. Sci. Mon., vol. XLII, pp. 26-35.

X. SCHOOL DESKS AND SEATS:

1. **The School Desk:** Van Evrie Kilpatrick, Amer. Educ., Feb., 1906, vol. IX, No. 6, pp. 338-341.
2. **School Desks (Investigation and Recommendations):** Fred W. Smedley, Third Child-Study Report of Chicago Dept. of Child Study and Ped. Investigation, 1900-1901, pp. 3-6.
3. **Desks That Fit:** C. Victor Campbell, Child Study Mon., Oct., 1900, p. 141.
4. **Hygienic Desks for School Children:** Eliza Mosher, Educ. Rev., vol. XVIII, pp. 9-14.
5. **School Seats:** Report of U. S. Com. of Educ., 1898-9, vol. I, p. 611.

EVOLUTION.

I. GENERAL ARGUMENTS FOR AND OBJECTION TO EVOLUTION:

1. **Evolution; What It is Not and What It is:** Pop. Sci. Mon., vol. XXXII, pp. 636-648.
2. **General Arguments for Evolution:** Romanes, Scientific Evidences of Organic Evolution, pp. 70-88.
3. **The Theory of Evolution:** Morgan, Experimental Zoology, chap. 14, pp. 213-238.
4. **Scientific Evidences of Organic Evolution:** Romanes, Amer. Digest, chap. 1, pp. 1-26.
5. **Doctrine of Evolution; Its Scope and Influence:** Jno. Fiske, Pop. Sci. Mon., vol. XXXIX, pp. 577-600.
6. **Evolution:** Jordan, Footnotes to Evolution, chaps. 1-3, pp. 1-99.
7. **Evidences of Evolution; Psysiological, Morphological, Historical:** Thompson, Study of Animal Life, chap. 17, pp. 273-281.
8. **Evidence of Evolution:** Hugo De Vries, Science, vol. XX, No. 508, pp. 395-401.
9. **What is Evolution?:** Jos. Le Conte, Pop. Sci. Mon., vol. XXXI, pp. 721-735.
10. **Darwinism and Evolution Defined:** Kellogg, Darwinism Today, chap. 2, pp. 10-24.
11. **The Darwinian Hypothesis:** Huxley, Darwiniana, chap. 1, pp. 1-21.
12. **Statistical Study of Evolution:** C. B. Davenport, Pop. Sci. Mon., vol. LIX, pp. 447-460.
13. **Systematic Work and Evolution:** L. H. Bailey, Science, vol. XXI, pp. 532-35.

14. **I, Darwin, Explanation of Evolution; II, More Recent Explanation of Evolution:** Conn, *Evolution of Today*, chaps. 6 and 7, pp. 203-287.
15. **The Other Side of Evolution:** Carl H. Eigenmann, *Science*, vol. XXIII, No. 589, pp. 576-579, April 13, 1906. A review of Rev. Alexander Patterson's book which attempts a refutation of Evolution and advances some absurd considerations.
16. **Darwinism Attacked:** Kellogg, *Darwinism To-day*, chaps. 3, 4 and 5, pp. 25-57, 70-96 and 106-125.
17. **Darwinism Defended:** Kellogg, *Darwinism To-day*, chaps. 6 and 7, pp. 164-182 and 187-212.
18. **Objections to Darwinian Theory:** Lect. 6 of Marshall's *Lectures on the Darwinian Theory*, pp. 151-172.
19. **Alleged Arguments Against Evolution:** Editor *Pop. Sci. Mon.*, vol. XXXII, pp. 267-270.
20. **Objections Against and Proofs of the Truth of the Theory of Descent:** Hæckel, *History of Creation*, vol. II, chap. 4, pp. 344-370.
21. **Reply to Fallacies of Evolution:** Geo. J. Romanes, *Pop. Sci. Mon.*, vol. XVI, pp. 101-114.
22. **The Question of Method:** Conn, *The Method of Evolution*, chaps. 1-2, pp. 1-50.
23. **Evolution Defined:** Jordan and Kellogg, *Evolution and Animal Life*, chap. 1, pp. 1-11.
24. **What Evolution is; The Evidence Upon Which It Rests:** Lacy, *Biology and Its Makers*, chap. 16, pp. 345-367.

II. ARGUMENTS FROM EMBRYOLOGY:

1. **Arguments for Evolution from Embryology:** Lecture 4 of Marshall's *Lectures on the Darwinian Theory*, pp. 78-115.
2. **Embryology and Evolution:** Jordan, *Footnotes to Evolution*, chap. 4, pp. 105-117.
3. **Evidences of Evolution from Embryology:** Romanes, *Darwin and After Darwin*, chap. 4, pp. 98-155.

4. **Embryology:** Conn, *Evolution of To-day*, chap. 4, pp. 120-160.
5. **Evidence of Evolution from Embryology:** Morgan, *Evolution and Adaptation*, pp. 58-90.
6. **Theory of Descent; From Embryology:** Claus, *Elementary Text Book of Zoology*, p. 157.
7. **Embryology:** Duckworth, *Morphology and Anthropology*, chaps. 7 and 8, pp. 155-216.
8. **Embryology and Race History of the Nervous System:** Forel, *Nervous and Mental Hygiene*, chap. 8, pp. 111-138.
9. **Argument for Evolution from Embryology:** Romanes, *Scientific Evidences of Organic Evolution*, pp. 63-69.
10. **Influence of Darwin on the Study of Animal Embryology:** Sedgwick, *Darwin and Modern Science*, chap. 10, pp. 171-184.
11. **Embryology:** Metcalf, *Organic Evolution*, pp. 96-103.

III. ARGUMENTS FROM GEOLOGY AND PALEONTOLOGY:

1. **Geological Evidences of Evolution:** A. R. Wallace, *Darwinism*, chap. 13, pp. 375-409.
2. **Geology and Evolution:** Andrew Wilson, *Chapters of Evolution*, chap. 16, pp. 366-376.
3. **Geological Evidence of Evolution:** Morgan, *Evolution and Adaptation*, pp. 39-43.
4. **Arguments for Evolution from Geology:** Romanes, *Scientific Evidences of Organic Evolution*, pp. 46-7.
5. **Half a Century of Evolution with Special Reference to the Effects of Geological Changes on Animal Life:** A. S. Packard, *Science*, vol. VIII, pp. 243-257, 285-294 and 316-323.
6. **Evidences of Evolution—Paleontology — Life During Geological Ages:** Conn, *Evolution of Today*, chap. 3, pp. 89-119.
7. **Evidences of Evolution from Paleontology:** Romanes, *Darwin and After Darwin*, chap. 5, pp. 156-203.

8. **Argument for Evolution from Paleontology:** Lecture 3 of Marshall's Lectures on the Darwinian Theory, pp. 53-77.
9. **Evolution as It Appears to the Paleontologist:** Henry Fairfield Osborn, Science, vol. XXVI, No. 674, pp. 744-749.
10. **Paleontology:** Duckworth, Morphology and Anthropology, chap. 17, pp. 496-542.
11. **Theory of Descent; from Paleontology:** Claus, Elementary Text Book of Zoology. pp. 163-177.
12. **Paleontology:** Jordan and Kellogg, Evolution and Animal Life, chap. 14, pp. 289-308.
13. **The Paleontological Record:** Scott, Darwin and Modern Science, chap. 11, pp. 185-199; Plants, chap. 12, pp. 200-222.
14. **Darwin and Geology:** Judd, Darwin and Modern Science, chap. 18, pp. 337-384.
15. **Paleontology:** Metcalf, Organic Evolution, pp. 103-111.

IV. ARGUMENTS FROM GEOGRAPHICAL DISTRIBUTION:

1. **Argument for Evolution from Geographical Distribution:** Romanes, Scientific Evidences of Organic Evolution, pp. 48-62.
2. **Theory of Descent; from Geographic Distribution:** Claus, Elementary Text Book of Zoology, p. 159.
3. **Evolution; Geographical Distribution of Evolution:** Wallace, Darwinism, chap. 12, pp. 338-374.
4. **Geographical Distribution:** Conn, Evolution of To-day, chap. 5, pp. 165-202.
5. **Evolution and Geographical Distribution:** Oscar Schmidt, Doctrine of Descent and Darwinism, chap. 10, pp. 222-247.
6. **Evidence of Evolution from Geographical Distribution:** Romanes, Darwin and After Darwin, chap. 6, pp. 204-250.

7. **Evolution and Distribution of Animals:** D. S. Jordan, Pop. Sci. Mon., vol. XXXVII, pp. 313-322 and 505-513.
8. **Geographical Distribution:** Jordan and Kellogg, Evolution and Animal Life, chap. 15, pp. 309-326.
9. **Geographical Distribution of Plants:** Thistleton-Dyer, Darwin and Modern Science, chap. 16, pp. 298-318.
10. **Geographical Distribution of Animals:** Gadow, Darwin and Modern Science, chap. 17, pp. 319-336.
11. **Geographical Distribution:** Metcalf, Organic Evolution, pp. 111-116.

V. ARGUMENTS FROM MORPHOLOGY AND COMPARATIVE ANATOMY:

1. **Theory of Descent; From Morphology:** Claus, Elementary Text Book of Zoology, pp. 151-155.
2. **Evidences of Evolution from Morphology:** Romanes, Darwin and After Darwin, chap. 3, pp. 50-97.
3. **Comparative Anatomy and Morphology:** Duckworth, Morphology and Anthropology, chaps. 2-6, pp. 13-154.
4. **Evidence of Evolution from Comparative Anatomy and Classification:** Morgan, Evolution and Adaptation, pp. 32-39.
5. **Argument for Evolution from Morphology:** Romanes, Scientific Evidences of Organic Evolution, pp. 26-45.
6. **Comparative Anatomy:** Metcalf, Organic Evolution, pp. 88-96.

VI. ARGUMENTS FROM RUDIMENTARY ORGANS, REVERSIONS, DEGENERATION, ETC.:

1. **Evidences of Evolution from Tails, Limbs, and Lungs:** A. Wilson, Chapters on Evolution, chap. 6, pp. 97-120.
2. **Theory of Descent; From Rudimentary Organs:** Claus, Elementary Text Book of Zoology, pp. 156.
3. **Evidences of Evolution from Missing Links:** A. Wilson, Chapters on Evolution, chap. 8, pp. 143-166.
4. **Evidences of Evolution from Rudimentary Organs:** A. Wilson, Chapters of Evolution, chap. 5, pp. 80-96.

5. **Tail-Like Formations in Men:** Dr. Bartels, Prof. Ecker, Dr. Mohnike, Dr. Ornstein, Pop. Sci. Mon., vol. XL, pp. 347-361.
6. **Evidences of Evolution from Degeneration:** A. Wilson, Chapters on Evolution, chap. 15, pp. 342-65.
7. **Parasitism and Degeneration:** Jordan and Kellogg, Evolution and Animal Life, chap. 17, pp. 347-368.

VII. EVOLUTION AND MAN:

1. **Evolution of Man:** Conn, Evolution of To-day, chap. 8, pp. 228-338.
2. **Evolution of Man:** A. R. Wallace, Darwinism, chap. 15, pp. 445-478.
3. **Babies and Monkeys:** S. S. Buckman, Pop. Sci. Mon., vol. XLVI, pp. 371-388.
4. **Man in Relation to Lower Animals:** Edw. Emerson, Pop. Sci. Mon., vol. XXXIII, pp. 751-755.
5. **Human Selection:** A. R. Wallace, Pop. Sci. Mon., vol. XXXVIII, pp. 93-106.
6. **Differentiation of Human Species:** Prof. L. M. Keasbey, Pop. Sci. Mon., vol. LX, p. 448.
7. **Man and the Vertebrate Series:** Chas. Morris, Pop. Sci. Mon., vol. XVIII, pp. 783-797.
8. **Unity of Human Species:** A. DeQuatrefages, Pop. Sci. Mon., vol. I, pp. 61-75.
9. **Difficulties of Development as Applied to Man:** A. R. Wallace, Pop. Sci. Mon., vol. X, pp. 60-72.
10. **Evolution and the Destiny of Man:** W. A. LeSueur, Pop. Sci. Mon., vol. XXVI, pp. 456-68.
11. **Varieties of the Human Species:** W. H. Flower, Pop. Sci. Mon., vol. XXVII, pp. 315-324.
12. **Differentiation of the Human Species:** L. M. Keasbey, Pop. Sci. Mon., vol. LX, pp. 448-457.
13. **From Moner to Man:** Francis E. White, Pop. Sci. Mon., vol. XXIV, pp. 577-587.

14. **Aesthetic Evolution in Man:** Grant Allen, *Pop. Sci. Mon.*, vol. XVIII, pp. 339-356.
15. **Derivation of Man from Monkey:** *Atl. Mon.*, vol. IX, pp. 300-305.
16. **Relation of Man to the Lower Animals:** Huxley, *Man's Place in Nature*, chap. 2, pp. 71-132.
17. **Man in the Light of Evolution:** Tyler, *Growth and Education*, pp. 25-48.
18. **Darwinism in Human Affairs (Physical Evolution and Psychical Evolution):** Hutton, *Darwinism and Lamarckism*, pp. 144-176.
19. **Education as a Factor in Evolution:** *Pop. Sci. Mon.*, vol. LIV, p. 554.
20. **Evolution; Search for the Missing Link; Pictures of Hæckel, Darwin, Huxley and Wallace:** R. S. Baker, *McClure's*, Aug., 1901, pp. 328-337.
21. **The Descent of Man:** L. M. Keasbey, *Pop. Sci. Mon.*, vol. LX, pp. 365-376.
22. **Development of Human Races Under Law of Natural Selection:** Wallace, *On Natural Selection*, chaps. 8 and 9, pp. 167-214.
23. **Evolution and Man:** Metcalf, *Organic Evolution*, pp. 163-183.
24. **Man's Place in Nature:** Jordan and Kellogg, *Evolution and Animal Life*, chap. 21, pp. 452-467.
25. **Man in the Light of Evolution:** Tyler.
26. **The Descent of Man:** Schwalbe, *Darwin and Modern Science*, chap. 7, pp. 112-136.
27. **Charles Darwin as an Anthropologist:** Hæckel, *Darwin and Modern Science*, chap. 8, pp. 137-151.
28. **Some Primitive Theories of the Origin of Man:** Frazer, *Darwin and Modern Science*, chap. 9, pp. 153-170.

VIII. FACTORS IN EVOLUTION:

1. **Factors and Mechanism of Evolution:** Jordan and Kellogg, *Evolution and Animal Life*, chap. 4, pp. 48-56.

2. **Factors of Organic Evolution:** H. Spencer, Pop. Sci. Mon., vol. XXIX, pp. 54-63, and 192-203.
3. **Factors of Organic Evolution:** H. Spencer, Pop. Sci. Mon., vol. XXVIII, pp. 754-779.
4. **The Elements of Organic Evolution:** Jordan, Footnotes to Evolution, chap. 3, pp. 75-99.
5. **External and Internal Factors in Evolution:** Morgan, Evolution and Adaptation, chap. 9, pp. 300-339.
6. **The Influence of Environment on the Forms of Plants:** Klebs, Darwin and Modern Science, chap. 13, pp. 223-246.
7. **Experimental Study of the Influence of Environment on Animals:** Loeb, Darwin and Modern Science, chap. 14, pp. 247-270.
8. **Mental Factors in Evolution:** Morgan, Darwin and Modern Science, chap. 21, pp. 424-445.
9. **The Theory of Organic Evolution:** Metcalf, Organic Evolution, Part I, pp. 3-83.

IX. SELECTION—NATURAL, ORGANIC, SEXUAL, ETC.:

1. **Theory of Sexual Selection:** Romanes, Darwin and After Darwin, chap. 10, pp. 379-420.
2. **Significance of Sexual Reproduction in Theory of Natural Selection:** Weismann, On Heredity, vol. I, chaps. 5 and 6, pp. 257-342; 'Translated by Poulton and Shipley.
3. **Theories of Evolution Alternative to Selection:** Kellogg, Darwinism To-day, chaps. 9-10-11, pp. 232-253, 262-290 and 327-356.
4. **Theory of Natural Selection:** G. W. Bulman, Westminster Rev., vol. CL, pp. 688-696.
5. **Inadequacy of Natural Selection:** H. Spencer, Pop. Sci. Mon., vol. XLII, pp. 799-812.
6. **Organic Selection:** J. Mark Baldwin, Science, vol. V, pp. 634-636.

7. **Theory of Natural Selection; Evidences and Criticism:** Romanes, Darwin and After Darwin, chaps. 7 and 9, pp. 251-378.
8. **An Inherent Error in the Views of Galton and Weismann on Variation:** W. K. Brooks, Science, vol. I, pp. 121-126.
9. **The Inadequacy of Natural Selection:** H. Spencer, Pop. Sci. Mon., vol. XLIII, pp. 21-29 and 162-173.
10. **Mimicry:** Jordan and Kellogg, Evolution and Animal Life, chap. 19, pp. 398-425.
11. **Natural Selection:** Conn, The Method of Evolution, chap. 3, pp. 51-100.
12. **Natural Selection and the Struggle for Existence:** Jordan and Kellogg, Evolution and Animal Life, chap. 5, pp. 57-70.
13. **Sexual Selection:** Jordan and Kellogg, chap. 6, pp. 71-79.
14. **Artificial Selection:** Jordan and Kellogg, chap. 6, pp. 80-107.
15. **Organic Selection:** Conn, The Method of Evolution, pp. 303-320.
16. **Artificial Selection:** Plumb, Types and Breeds of Farm Animals, pp. 1-553.
17. **Artificial Selection:** Davenport, Principles of Breeding, chaps. 16-20, pp. 577-676.
18. **The Selection Theory:** Weismann, Darwin and Modern Science, chap. 3, pp. 18-65.
19. **The Value of Color in the Struggle for Life:** Poulton, Darwin and Modern Science, chap. 15, pp. 271-297.

X. VARIATIONS AND MUTATIONS:

1. **Discontinuous Variation and Origin of Species:** D. T. MacDougal, Science, vol. XXI, pp. 540-543.
2. **Modification and Variation:** C. L. Morgan, Science, vol. 4, pp. 733-740.

3. **Is Mutation a Factor in Evolution of Higher Vertebrates?:** C. H. Merriam, Proc. of 59th Meeting of A. A. A. S., Dec., 1905, Jan., 1906; pp. 383-408.
4. **Organic Variation:** H. S. Williams, Science, vol. 6, pp. 73-85.
5. **Mutations:** Thos. Dwight, Science, vol. XXI, pp. 529-532.
6. **The Mutation Theory of Organic Evolution from the Standpoint of Animal Breeding:** W. E. Castle, Science, vol. XXI, pp. 521-525.
7. **Ethology and the Mutation Theory:** W. M. Wheeler, Science, vol. XXI, pp. 535-540.
8. **Causes of Variation:** C. V. Riley, Pop. Sci. Mon., vol. XXXIV, pp. 484-496 and 809-820.
9. **Mutation Theory of Organic Evolution from the Standpoint of Cytology:** Ed. G. Conklin, Science, vol. XXI, pp. 525-529.
10. **Variation; General Treatment:** Conn, The Method of Evolution, chap. 4, pp. 101-156.
11. **New Lines of Investigation:** Conn, The Method of Evolution, chap. 8, pp. 334-373.
12. **Variety and Unity in Life:** Jordan and Kellogg, Evolution and Animal Life, chap. 9, pp. 131-162.
13. **Variations and Mutation:** Jordan and Kellogg, Evolution and Animal Life, chap. 19, pp. 131-162.
14. **Kinds of Variation:** Davenport, Principles of Breeding, chaps. 1-6, pp. 7-140.
15. **Causes of Variation:** Davenport, Principles of Breeding, chaps. 7-10, pp. 141-345.
16. **Mutations:** Davenport, Principles of Breeding, chap. 6, pp. 110-139.
17. **Variation:** DeVries, Darwin and Modern Science, chap. 4, pp. 66-84.
18. **Heredity and Variation in Modern Lights:** Bateson, Darwin and Modern Science, chap. 5, pp. 85-101.

19. **Theory of Mutations:** DeVries, *Species and Varieties*, chaps. 16-24, pp. 459-714.
20. **Organic Selection:** Baldwin, *Development and Evolution*, chaps. 8-11-13.
21. **Color in Animals:** Metcalf, *Organic Evolution*, pp. 116-151.

XI. EVOLUTION AND LIFE:

1. **Evolution and the Origin of Life:** Charlton Bastin, *Pop. Sci. Mon.*, vol. IV, pp. 713-728.
2. **I, Origin of Life; II, Evolution of Life:** Hæckel, *The Wonders of Life*, chaps. 15-16, pp. 336-385.
3. **The Duration of Life:** Weismann, *On Heredity*, vol. I, chap. 1, pp. 1-66; Translated by Poulton and Shipley.
4. **Life and Death:** Weismann, *On Heredity*, vol. I, chap. 3, pp. 107-162; Trans. by Poulton and Shipley.
5. **Discontinuity in Evolution:** F. Galton, *Ped. Sem.*, Jan., 1894, pp. 362-372.

XII. EVOLUTION AND THEOLOGY:

1. **Darwinism and the Christian Faith:** *Pop. Sci. Mon.*, vol. XXXIII, pp. 108-120, 209-216 and 322-332.
2. **Evolution and Religious Thought:** Jos. LeConte, *Pop. Sci. Mon.*, vol. XXXII, pp. 311-315.
3. **Evolution Bounded by Theology:** W. D. LeSueur, *Pop. Sci. Mon.*, vol. XXIX, pp. 145-153.
4. **Evolution and the After Life:** Osgood Mason, *Pop. Sci. Mon.*, vol. VII, pp. 46-62.
5. **Creation or Evolution:** W. D. LeSueur, *Pop. Sci. Mon.*, vol. XXXI, pp. 29-39.
6. **From Creation to Evolution:** A. D. White, *Pop. Sci. Mon.*, vol. XLIV, pp. 434-448 and 721-740.
7. **From Creation to Evolution:** A. D. White, *Pop. Sci. Mon.*, vol. XLV, pp. 1-17 and 145-160.
8. **Prof. Huxley and the Swine Miracle:** W. E. Gladstone, *Pop. Sci. Mon.*, vol. XXXIX, pp. 502-521.

9. **The Inevitable Surrender of Orthodoxy:** Rev. M. J. Savage, *N. A. Rev.*, vol. CXLVIII, pp. 711-726.
10. **About Separate Creation:** W. T. Freeman, *Westminster Rev.*, vol. CXLVIII, pp. 580-589.
11. **Darwinism and Divinity:** *Pop. Sci. Mon.*, vol. I, pp. 188-202.
12. **Evolution and the Faith:** T. T. Munger, vol. X, pp. 108-118.
13. **Relation of Evolution to Materialism:** Jos. LeConte, *Pop. Sci. Mon.*, vol. XXXIII, pp. 79-86.
14. **Chapters in the Warfare of Science—Retreat of Theology in Galileo Case:** A. D. White, *Pop. Sci. Mon.*, vol. XLI, pp. 145-155 and 446-455 (geography).
15. **The Influence of Darwinism on the Study of Religions:** Harrison, *Darwin and Modern Science*, chap. 25, pp. 494-511.
16. **Adjustment of Theology to Evolution:** Jordan and Kellogg, *Evolution and Animal Life*, pp. 467-469.
17. **Evolution and Faith:** Tyler, *Man in the Light of Evolution*, chaps. 6 and 7, pp. 115-162.
18. **The Influence of Darwin upon Religious Thought:** Waggett, *Darwin and Modern Science*, chap. 24, pp. 477-493.

XIII. DIFFERENT MEN'S THEORIES OF EVOLUTION:

1. **Lucretius and the Evolution Idea:** W. L. Poteat, *Pop. Sci. Mon.*, vol. LX, pp. 166-173.
2. **An Early American Evolutionist:** Chas. M. Blackford, *Pop. Sci. Mon.*, vol. LII, pp. 224-228.
3. **Darwin on the Origin of Species:** *Atl. Mon.*, vol. VI, pp. 109-116 and 229-239.
4. **The Darwin Theory:** Chas. Sprague, *Atl. Mon.*, vol. XVIII, pp. 415-425.
5. **Present Standing of Darwinism:** Kellogg, *Darwinism To-day*, chap. 12, pp. 374-396.

6. **Agassiz and Darwinism:** Jno. Fiske, Pop. Sci. Mon., vol. III, pp. 692-704.
7. **Spencer and Evolution:** E. L. Youmans, Pop. Sci. Mon., vol. VI, pp. 20-48.
8. **Evolution in Prof. Huxley:** St. Geo. Mivart, Pop. Sci. Mon., vol. XLIV, pp. 319-334.
9. **Agassiz and Evolution:** Jos. LeConte, Pop. Sci. Mon., vol. XXXII, pp. 17-26.
10. **Weismann's Theory of Evolution:** Romanes, An Examination of Weismannism, chap. 4, pp. 86-116.
11. **Ex-President Porter on Evolution:** W. D. LeSueur, Pop. Sci. Mon., vol. XXIX, pp. 577-594.
12. **Martineu on Evolution:** H. Spencer, Pop. Sci. Mon., vol. I, pp. 313-323.
13. **Virchow and Evolution:** Jno. Tyndall, Pop. Sci. Mon., vol. XIV, pp. 266-291.
14. **Dr. Draper's Lecture on Evolution:** Pop. Sci. Mon., vol. XII, pp. 175-192.
15. **Mozley on Evolution:** H. Spencer, Pop. Sci. Mon., vol. XXI, pp. 767-774.
16. **Work of Hugo DeVries in Study of Problems of Evolution:** T. Wayland Vaughn, Science, vol. XXIII, pp. 681-691.
17. **American Zoologists and Evolution:** Edw. Morse, Pop. Sci. Mon., vol. XXXII, pp. 100-114 and 492-504, vol. XXXI, pp. 804-813.
18. **What American Zoologists Have Done for Evolution:** E. Morse, Pop. Sci. Mon., vol. X, pp. 1-16, 181-198 and 207.
19. **Various Theories of Species Forming and Descent Control:** Jordan and Kellogg, Evolution and Animal Life, chaps. 7 and 8, pp. 108-130.
20. **Lamarck and Darwin:** Locy, Biology and Its Makers, chap. 17, pp. 368-391.
21. **Weismann and DeVries:** Locy, Biology and Its Makers, chap. 18, pp. 3-17.

22. **Darwin's Predecessors:** Thompson, Darwin and Modern Science, chap. 2, pp. 3-17.
23. **Lamarck, His Life and Work:** Packard.

XIV. SOCIAL ASPECT OF EVOLUTION:

1. **Mutual Aid and Communal Life Among Animals:** Jordan and Kellogg, chap. 18, pp. 369-397.
2. **Family and Society:** Tyler, Man in the Light of Evolution, chap. 3, pp. 41-60.
3. **Social Environment:** Tyler, Man in the Light of Evolution, chap. 9, pp. 184-209.
4. **Social Factor in Evolution:** Topinard, Science and Faith.
5. **Darwinism and Sociology:** Bougle, Darwin and Modern Science, chap. 23, pp. 465-476.
6. **Mutual Aid; A Factor in Evolution:** Kropotkin.

XV. GENERAL AND MISCELLANEOUS:

1. **Evidences of Evolution from Classification:** Romanes, Darwin and After Darwin, chap. 2, pp. 23-49.
2. **Evidences of Evolution from Development:** A. Wilson, Chapters on Evolution, chaps. 9-12, pp. 167-257.
3. **Problem of Development:** Thos. H. Morgan. International Mon., vol. II, pp. 274-313.
4. **The Struggle for Existence:** Huxley, Pop. Sci. Mon., vol. XXXII, pp. 732-750.
5. **Progress of the Backboned Family:** Arabella Buckley, Pop. Sci. Mon., vol. XXII, pp. 739-753.
6. **The Rate of Animal Development:** J. W. Slater, Pop. Sci. Mon., vol. XVII, pp. 254-259.
7. **Evolution of Organic Form:** Chas. Morris, Pop. Sci. Mon., vol. XVIII, pp. 80-96.
8. **Some Unsolved Problems of Organic Adaptation:** C. W. Hargitt, Science, Jan. 2, 1904, pp. 132-145.
9. **Animal Transformations:** Edmond Perrier, Pop. Sci. Mon., vol. XVI, pp. 625-640.

10. **Curiosities of Evolution:** Mrs. Alice Bodington, Pop. Sci. Mon., vol. XXXIII, pp. 783-87.
11. **Theory of Descent—from Mimicry:** Claus, Elementary Text Book of Zoology, pp. 154-155.
12. **Theory of Descent—from Progressive Perfection:** Claus, Elementary Text Book of Zoology, pp. 177-179.
13. **Cosmic and Organic Evolution:** L. Ward, Pop. Sci. Mon., vol. XI, pp. 672-682.
14. **Logic of Organic Evolution:** F. Cramer, Pop. Sci. Mon., vol. XLII, pp. 384-391.
15. **Evolution and Permanence of Type:** L. Agassiz, Atl. Mon., vol. XXXIII, pp. 92-101.
16. **Evolution of Animal Behavior:** L. Morgan, Animal Behavior, chap. 7, pp. 295-337.
17. **Coming Age of the Origin of Species:** Huxley, Pop. Sci. Mon., vol. XVII, pp. 337-344.
18. **The Rise of Evolutionary Thought:** Locy, Biology and Its Makers, chap. 19, pp. 407-433.
19. **Life—Its Physical Basis and Simplest Expression:** Jordan and Kellogg, chap. 3, pp. 25-47.

State Normal School of Colorado



Announcement of Summer Term Courses for Rural Teachers.

In all publications of this institution is employed the spelling recommended by the Simplified Spelling Board.

Bulletin Series IX. No. 6.

Published Quarterly by the Trustees of the State Normal
School of Colorado, Greeley, Colorado.

Entered at the Postoffice, Greeley, Colorado, as Second-class matter.

INTRODUCTORY NOTE.

The function of the State Normal School is to prepare teachers for the public service. To prepare rural teachers is a part of its work. To this end, that the Normal School may become more useful to the country schools and the country school teachers, courses of study will be given during the summer term, which will especially fit these teachers for the particular work of the rural or country schools. Courses will be given in subject matter and in teaching the subjects; in the organization of a country school; in making a program and putting it into execution; in living with the patrons; in relating the efforts of the school with the community; in the management and organization of the school; and in ways to cooperate with the county superintendent.

The work of the rural teacher is in a sense different from that of the city teacher,—

1. The city teacher has one grade; the rural teacher usually has eight.
2. The children of the city have a different set of experiences from the country children.
3. The country teacher has no one to supervise his work—he is teacher, principal and superintendent.
4. He has not the opportunity to attend teachers' meetings, nor has he the opportunity to be inspired by other teachers.
5. He is isolated—isolation tends to arrest growth along scholastic and professional lines.
6. His salary will not permit him to buy books, attend associations and teachers' meetings.

The rural schools are largely taught by persons who have had no special training, either academic or profes-

sional—they are taught by high school graduates, or even persons who have finished only the elementary school. They know of no other way whatever to teach than the way in which they have been taught. The city schools they have attended differs very materially from the country schools in which they are to teach.

Courses of Work.

Course 1.

A. Elementary Psychology. The psychology which determines methods and materials of instruction will be given in this course. A significant feature of the course will be observation in the ungraded room where principles discovered in the psychology class may be seen in actual use. Two periods a week. Dr. I. E. Miller.

B. Organization, Government, Management and Teaching of a Country School. The simple and elementary, yet fundamental, principles involved in the above topics will be considered in this course. Much time will be given to observation of the ungraded room as it is being taught by the expert who will be in charge of it. Two periods a week. State Superintendent Katherine M. Cook.

C. Hand Work. In this class the teachers will be given instruction in keeping the smaller children profitably busy while the teacher is giving her attention to the older children of the school.

The work will consist of—

1. Rug weaving.
 2. Story telling with scissors.
 3. Story telling with clay.
 4. Basketry.
 5. Paste board modeling.
 6. Stained glass work with paste board and paper.
- One period a week. Mrs. Sibley.

Course 2.

English, Grammar and Reading, and How to Teach Them. Five periods a week. Mr. Mooney.

Course 3.

History and Geografy, and How to Teach Them.
Five periods a week. Mr. Mooney.

Course 4.

Number and Arithmetic, and How to Teach Them.
Five periods a week. Mr. Mooney.

The above courses will be given having in view the conditions under which the rural teacher must work. The aim will be to give a rapid review of such parts of the subjects as appear to be the least understood by those who take the work. Individual aid will be given students in these classes. A significant purpose of the work will be to give instruction in presenting subjects most effectively in the limited space of time at the disposal of the teacher in most country schools.

Course 5.**A. Manual Training.**

1. Art Metal. A course dealing with simple sheet metals, such as copper, brass, sheet iron, German silver and bronze.

The course consists of—

(a) Designing, laying out, and assembling various useful and decorative pieces of metal work, such as brass or sheet iron picture frames, copper belt pins, German silver tie pins, etc.

(b) The artistic development of arts-craft jewelry, using a very limited number of tools costing not more than two dollars for the entire equipment.

2. Woodwork. A course to suit the needs of the country children, covering things useful in the children's home and school life, for home

decoration and school aid, such as the making of mounts for specimens in science, etc.

Equipment can be collected gradually. A school can start very well with five to seven dollars' worth of tools. Material can always be found around a country home. In fact, most of the tools may be borrowed. Five periods a week, three weeks. Mr. Hadden.

B. Domestic Science in the Rural Schools.

This course aims to give training in the study of foods, food preparation, housekeeping, and sewing, when there is but little equipment, and no room other than the regular school room for the work. Some of the problems to be considered in such a course are: how to interest the parents so as to secure their sympathy and co-operation; the kind of simple equipment needed, and how this can be obtained with little or no expense to teacher or community; how the work may be done in the ordinary school room; what proportion of time shall be given this work, and how can this work be correlated with the regular studies. The purpose of this course is to give such help to the country school teacher as shall enable her to go out into the rural school districts and do something toward improving the home life of the community. To do this, the work done in the school must be of the character most helpful in solving the practical problems of these particular homes. Home conditions being known, the materials used for the work in the school should be those in use in the average home of the community. Five periods a week, three weeks. Miss Wilkinson.

Course 6.

Home Geograpy, Elementary Agriculture and Nature Study.

This course is designed to train teachers to look to the country and to country life for material in teaching. There is an ever growing tendency to make the rural

school more efficient, to revitalize it, by teaching rural children in terms of their environment,—by bringing them into closer personal contact with the everyday world in which they live. All too often the teaching of the rural school is entirely unrelated to the lives of the people. Geographies treat of the industries, customs, and natural features of foreign countries; agricultural textbooks, of crops and methods strange to the community; and nature books deal with strange animals and stranger birds and plants. These lead away from the country, and the country child grows up in ignorance of the commonest things of the region in which he lives. Education should grow out of the lives and back into the lives of people, and we must, therefore, look more to the country and to country life in rural school teaching. Five periods a week, six weeks. Mr. Hochbaum.

Course 7.

Art for the Rural Schools.

A. **Free Hand Drawing**, illustrating things related to the interests of rural life.

B. **Structural Drawing**, leading to a full comprehension of its relation to life on the farm—the building and constructing of homes, barns, etc., the preservation of tools and machinery thru proper outbuildings, the survey and construction in plan of interesting surroundings of rural homes and schools.

C. **Design**, as related to the rural home, school, and inhabitants, including self-help in school room decoration, house decoration, the planning of interior color schemes, and simple and proper furnishings, based upon self-help. Five periods a week, six weeks. Mr. Ernesti.

Course 8.

Music for the Rural Schools.

Songs that represent the different moods and experiences of child life,—games, animals, holidays, seasons,

work, lullabys, opening and closing of school, ethics, patriotism, the different aspects of nature and so on, are taught and interpreted from a pedagogical and psychological standpoint. Material suitable for every day and occasion of the school year is suggested and studied.

Five periods a week, six weeks. Mr. Fitz.

Course 9.

County Supervision of Schools.

The State Normal School, at the suggestion of several county superintendents, will offer a course for county superintendents in the summer session. There will be three distinct units of the work, each unit to receive two weeks' time. Any county superintendent who can be here for the entire six weeks, and who elects this course, may take three units as they are given in the school. If, however, a county superintendent cannot attend the entire session he may take one or two of the topics in residence and the remainder of the course in non-residence. Full credit will be given for this course, which will be under the direction of Mrs. Katherine M. Cook, State Superintendent of Public Instruction. In this course the following subjects will be considered:

1. **An Investigation of the Systems of Supervision of Rural and Village Schools in the United States.** Five periods a week, two weeks.
2. **An Investigation of the Systems of Rural School Supervision in Foren Countries.** Five periods a week, two weeks.
3. **A Consideration of the Problems of the Rural and Village Schools and the Means of Their Solution.** Five periods a week, two weeks.

Full credit toward graduation will be given for any work taken in these courses. County superintendents and all school officers who have an interest in the improve-

ment of the rural schools are askt to cooperate with the State Normal School in its effort to offer courses which will aid in such improvement. City superintendents are urged to call the attention of members of their graduating classes, who intend to begin teaching as soon as they graduate from the high school, to the above courses offerd by the State Normal School during the summer term.

Persons who have never taught and who are not high school graduates but who intend to take the county examinations for a certificate are urgd to enroll for the summer term, where they will find opportunity to do work which will make them more efficient teachers.

Persons who are experienced teachers but who have not graduated from a high school will find courses offerd in the summer term especially adapted to their needs.

The coming summer session of the Colorado State Normal School will be one of the most attractiv sessions ever offerd by the institution. Mrs. Katherine M. Cook, State Superintendent of Public Instruction, will give courses as indicated in this bulletin. Supt. J. F. Keating, of Pueblo, Supt. M. F. Miller, of Fort Collins and Supt. Wilson M. Shafer, of Cripple Creek will give courses in other departments of the summer school. In addition to the work given by the above persons, special courses will be given by G. Stanley Hall, President of Clark University; M. V. O'Shea, Head of the Department of Education, University of Wisconsin; Henry Suzzallo, Professor of Social Education, Columbia University; S. C. Schmucker, Professor of Nature Study and Biology, Westchester (Pa.) Normal School; and W. M. R. French, Director of the Chicago Art Institute. These people stand for what is best in educational thought and practis. It will be a rare opportunity of which the Normal School hopes a large number of superintendents, principals and teachers in Colorado will take advantage.

SUMMER TERM
1910

State Normal School of Colorado



Greeley, Colorado



NINTH
ANNOUNCEMENT
OF THE
SUMMER TERM
OF THE
STATE NORMAL SCHOOL
OF COLORADO
GREELEY, COLORADO

In all publications of this institution is employd the spelling
recommended by the Simplified Spelling Board

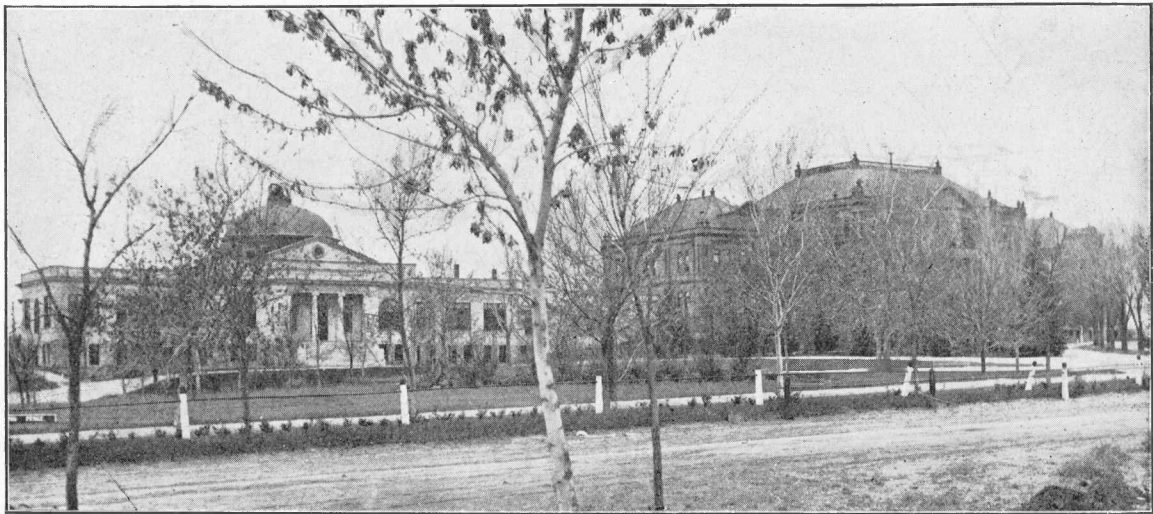
1910

SERIES IX

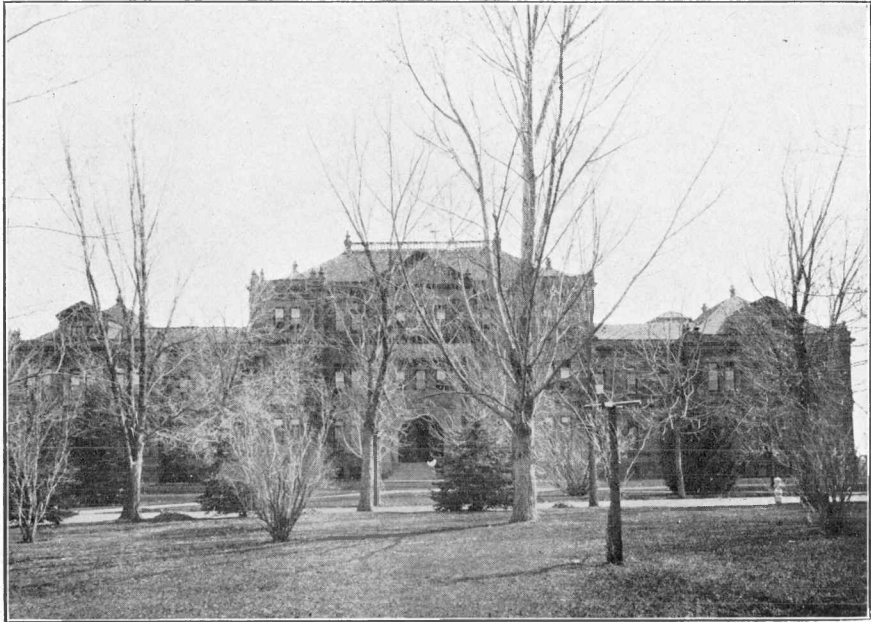
NO. 7

Publisht Quarterly by the Trustees of the State Normal School
of Colorado, Greeley, Colorado

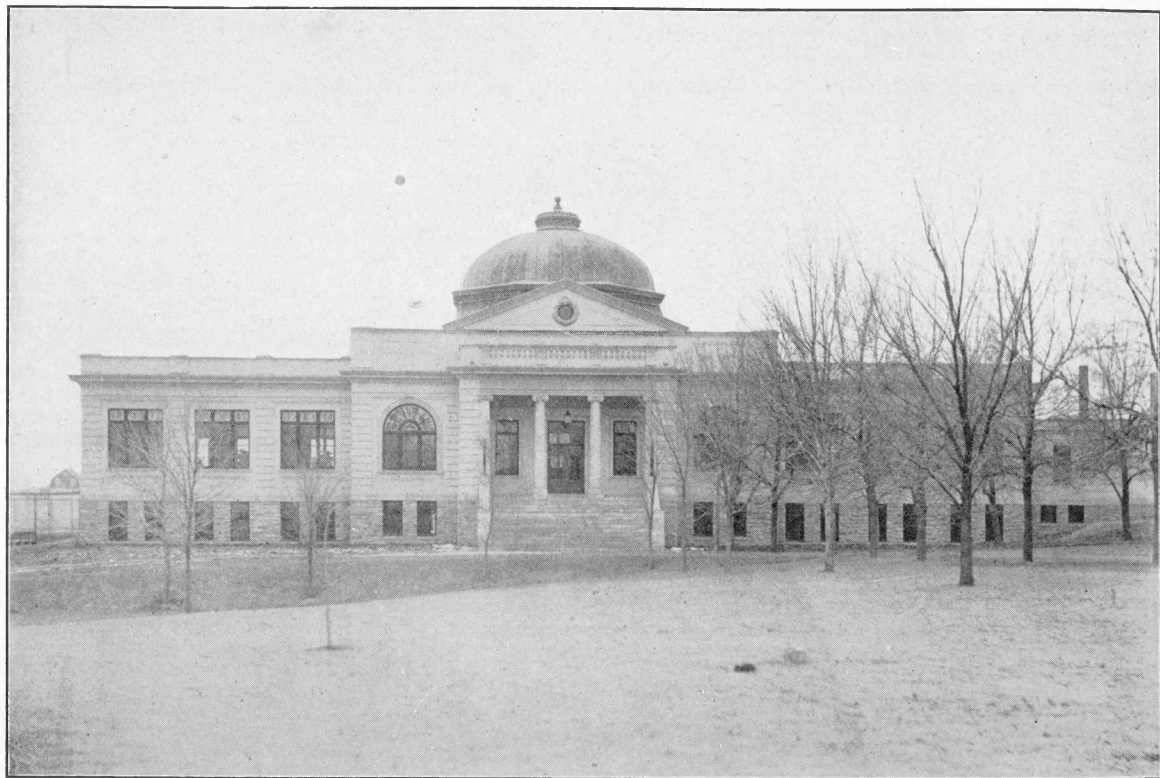
Entered at the Postoffice, Greeley, Colorado, as second-class matter



North Side Quadrangle.



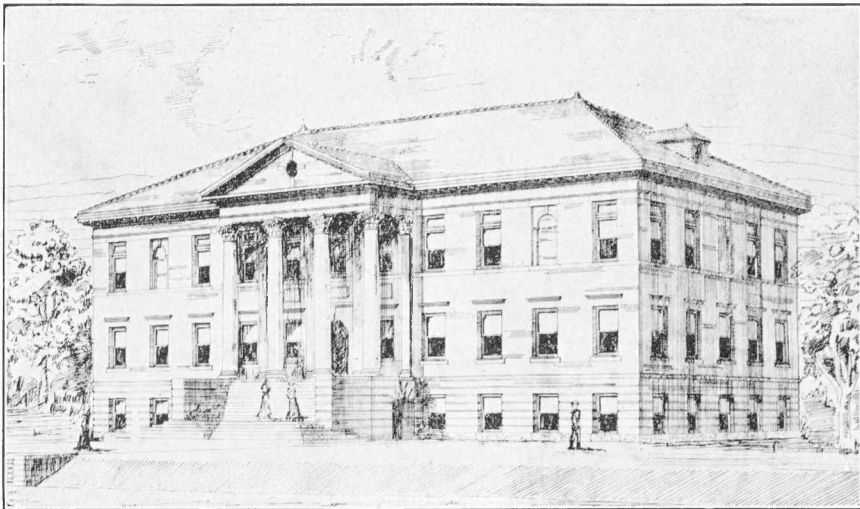
Administration Building.



Library.



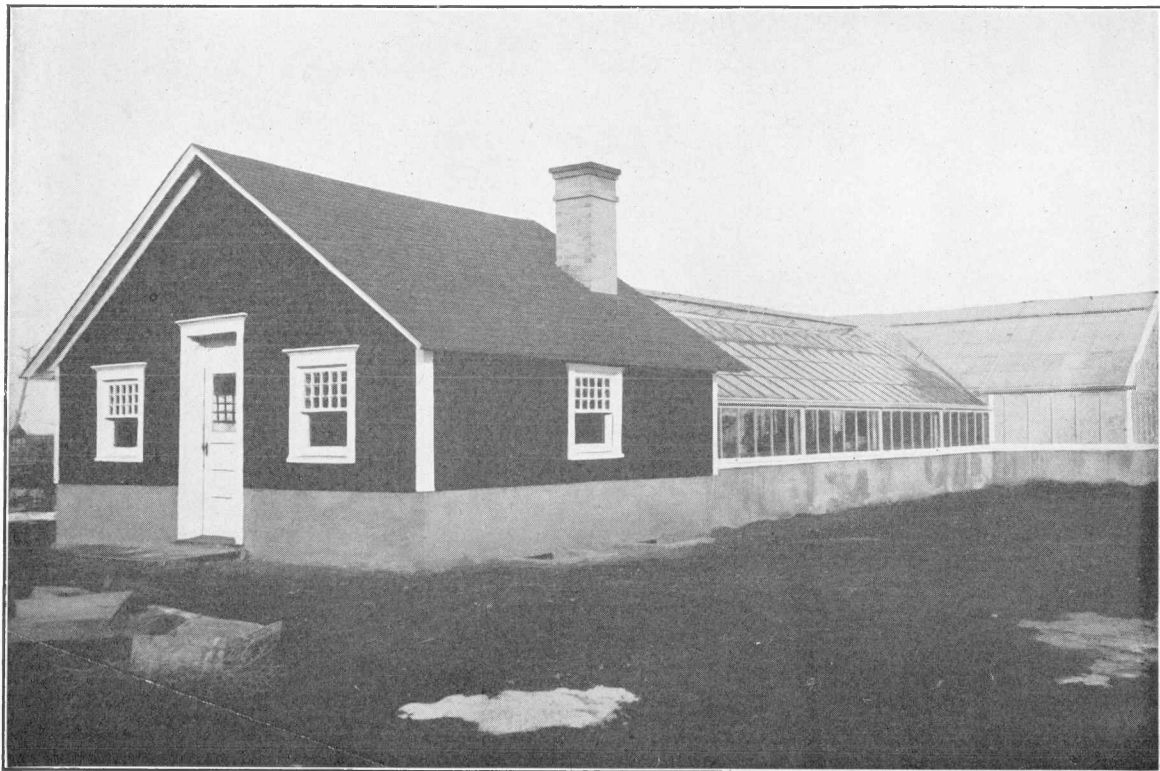
Training School Building.



Simon Guggenheim Industrial Arts Hall.



President's Residence and Italian Garden.



Green House.

THE SUMMER TERM, 1910.

The Summer Term of the State Normal School of Colorado will open Tuesday, June 21, and continue for six weeks, closing Friday, July 29. Credit is given for work in any of the courses.

THE FACULTY.

SUMMER TERM, 1910.

ZACHARIAH XENOPHON SNYDER, Ph. D., President,
Professor of the Philosophy of Education.

JAMES HARVEY HAYS, A. M., Vice-President,
Dean of the School, and Professor of Latin and Mythology.

ARTHUR EUGENE BEARDSLEY, M. S.,
Professor of Biology and Economic Biology.

ELIZABETH HAYS KENDEL, Pd. M.,
Training Teacher and Professor of Intermediate Education.

SAMUEL MILO HADDEN, A. M.,
Professor of Manual Training.

FRANCIS LORENZO ABBOTT, A. M.,
Professor of Physical Sciences and Physiography.

ROYAL WESLEY BULLOCK, Ph. B.,
Principal of the High School, and Professor of Secondary Education.

BELLA BRUCE SIBLEY, Pd. M.,
Training Teacher and Professor of Primary Education.

ABRAM GIDEON, Ph. D.,
Professor of Modern Foren Languages.

ELEANOR WILKINSON,
Professor of Domestic Sciences.

GURDON RANSOM MILLER, A. M.,
Professor of History and Sociology.

CHARLES WILKIN WADDLE, Ph. D.,
Professor of Psychology and Child Study.

GEORGE BRUCE HALSTED, Ph. D.,
Professor of Mathematics.

FRANCES TOBEY, B. S.,
Professor of Reading and Literary Interpretation.

ETHAN ALLEN CROSS, Ph. M.,
Associate Professor of English Language and Literature.

H. W. HOCHBAUM, B. S. A.,
*Associate Professor of Nature Study, School Gardening,
and Elementary Agriculture.*

LEVERETT ALLEN ADAMS, A. M.,
*Associate Professor of Biology, and Curator of the
Zoological Museum.*

ALBERT FRANK CARTER, M. S.,
Librarian, and Professor of Bibliografy.

JOHN THOMAS LISTER, A. B.,
*Professor of Physiology, and Director of Physical
Education.*

WILLIAM BARNARD MOONEY, Pd. M.,
School Visitor, and Professor of School Administration.

THEOPHILUS FITZ,
*Professor of Vocal Music, Harmony, and the History of
Music.*

J. D. HEILMAN, Ph. D.,
Associate Professor of Psychology.

MARSHALL PANCOAST, B. L.,
Assistant in Reading.

IRVING ELGAR MILLER, Ph. D.,
*Professor of the Science of Education, and Dean of
Research and Professional Work.*

JOYSA GAINES, Pd. M.,
Assistant in Art.

CECILIA M. TYLER, Pd. B.,
Assistant in Kindergarten.

VERNON MCKELVEY,
Secretary to the President.

NON-RESIDENT TEACHERS ASSOCIATED
WITH THE FACULTY OF THE STATE
NORMAL SCHOOL OF COLORADO.

SUMMER, 1910.

G. STANLEY HALL, Ph. D., LL. D., President of Clark
University.

M. V. O'SHEA, B. L., Professor of Education, University
of Wisconsin.

HENRY SUZZALLO, Ph. D., Professor of the Philosophy of
Education, Columbia University.

SAMUEL C. SCHMUCKER, Ph. D., Professor of Biological
Sciences, State Normal School, Westchester, Pa.

W. M. R. FRENCH, Director of the Art Institute of
Chicago.

KATHERINE M. COOK, Superintendent of Public Instruc-
tion, State of Colorado.

JOHN FRANCIS KEATING, A. M., Superintendent of
Schools, Pueblo.

MINER F. MILLER, A. M., Superintendent of Schools,
Fort Collins.

WILSON M. SHAFER, A. B., Superintendent of Schools,
Cripple Creek.

OTTO F. DUBACH, Ph. M., Colorado Springs High School.

SPECIAL ANNOUNCEMENTS.

This year the Normal School presents a continuous series of daily lectures extending thruout the six weeks, which are sure to prove of unusual value to the teachers of Colorado. The lecturers and their subjects are as follows:

1. G. Stanley Hall, Ph. D., President of Clark University, Educational Methods and Materials Now in Use in the Public Schools.

2. M. V. O'Shea, B. L., Professor of Education, University of Wisconsin, General Problems of Education.

3. Henry Suzzallo, Ph. D., Professor of the Philosophy of Education, Columbia University, Sociological Aspects of Education.

4. Samuel C. Schmucker, Ph. D., Westchester, Pa., Normal School, Ideals and Materials in Nature Study.

5. W. M. R. French, Director of the Art Institute of Chicago, Art in the Educativ Process.

One credit will be allowd for this course.

Special courses will be offerd for teachers of rural schools. These will deal with both materials and methods. Teachers thoroly familiar with the problems of rural school work will have charge of these courses.

Special courses for county superintendents will be offerd this summer for the first time.

Credits toward graduation are given for all regular and special courses.

The department of Music will offer attractive evening recitals from time to time during the term.

Following the already popular custom of previous summer terms the department of Reading and Interpretation will present one of Shakespeare's comedies upon the campus. This year the play will be "A Midsummer Night's Dream."

No charge is made for these evening entertainments.

From one to five credits toward graduation may be made in the summer term.

THE OPPORTUNITY.

The holding of this summer term at the Normal School offers an excellent opportunity to those who have to teach. It enables one who teaches a full year to attend the Normal during the summer term, get credit for work done, and when sufficient credits are secured, to graduate from the school, receiving a diploma which licenses to teach in the public schools of Colorado for life, and confers upon the holder the degree of Bachelor of Pedagogy.

Work may also be done toward securing the advanced degrees, Master of Pedagogy, and Bachelor of Arts in Education.

ADMISSION.

1. All who enter must give evidence of good moral character.

2. An applicant for entrance must be free from any contagious disease that might endanger the students of the school.

3. High school graduates, or those having an equivalent education, enter the Junior year for the Normal Course, or the Freshman year for the Normal College Course without examination.

4. Graduates of approved Normal Schools or Colleges may enter the Normal Graduate course without examination.

5. Graduates of approved Normal Schools may enter the Junior year of the Normal College course without examination.

6. Graduates of approved Colleges may enter the Senior year of the Normal College course without examination.

7. Practical teachers who have not had high school training may enter, and such work may be taken as will prepare them for the regular course.

SCHOOL YEAR IN TERMS.

There are four terms in the school year: the fall, the winter, the spring, and the summer terms.

The fall, winter, and spring terms average twelve weeks; the summer term is six weeks long, but the time in

recitation is increased, enabling the student to get a term course credit for each course taken.

UNIT OF CREDITS.

A *term course* is five recitations a week, or its equivalent, for twelve weeks.

COURSES OF STUDY.

I. *Regular Courses leading to licenses to teach and degrees in the Colorado State Normal School are of three kinds:*

1. Normal course.
2. Normal Graduate course.
3. Normal College course.

II. *Degrees and Diplomas:*

1. The Normal course leads to the degree of Bachelor of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

2. The Normal Graduate course leads to the degree of Master of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

3. The Normal College course leads to the degree of Bachelor of Arts in Education and a diploma, which is a license to teach for life in the public schools of the state.

III. *The work of the courses:*

A. The Normal Course.

1. Thirty term courses are required for graduation. Eleven of these are required in professional work, viz.:
Three term courses in Psychology and Pedagogy.
Three term courses in Education.

Three term courses in Teaching.

One term course, in the Junior year, in observation and preparation for teaching.

One term course for conference, etc., in the Training School in the Senior year.

2. Nineteen of these thirty courses are elective, selected from the following subjects:

a. Art—Drawing, water color, oil, pottery.

b. Manual Training—Carving, joinery, metal work, foundry work, basketry, etc.

c. Domestic Science—Cooking, sewing, chemistry, sanitation.

d. Vocal music.

e. Modern Foreign Languages—German, French, Italian.

f. Ancient Classics—Latin.

g. History—Greek, Roman, Medieval and Modern, American.

h. Literature and English.

i. Physical Sciences—Physics, chemistry, geology, geography.

j. Sociology.

k. Kindergarten.

l. Biology—Nature study, histology, botany, zoology, elementary agriculture.

m. Mathematics—Arithmetic, algebra, geometry, trigonometry, analytics, calculus.

n. Interpretation—Reading, dramatic art.

o. Psychology—Experimental pedagogy, child study.

p. Education—Philosophy of, science of, art of, history of.

q. Physical Education — Physiology, gymnasium, field, play grounds.

B. Normal Graduate Course.

The requirements for the Normal Graduate course shall be twelve term courses in addition to what is required for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

C. Normal College Course.

Requirements for the Normal College course are twenty-four term courses in addition to what is required for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

D. Normal Special Courses.

Beside the above regular Normal courses, there are Normal Special courses leading to graduation and diplomas in Kindergarten, Physical Education, Manual Training, Domestic Science, Art, Music, and Modern Foreign Languages. These diplomas are licenses to teach.

1. The work required for the special diplomas shall be selected by the heads of the departments offering such diplomas, subject to the approval of the Executive Committee, provided that this work, including electives, is equivalent to nineteen term courses in addition to the professional work required in the Normal course, of which at least six term courses shall be given by the department offering the diploma.

2. No student shall receive two diplomas until he shall have completed at least ten term courses in addition to what is required for either diploma, and has done sufficient teaching to satisfy the training department in regard to his ability to teach both kinds of work acceptably.

3. When these special courses are fully completed, the individual receives a degree and a diploma of the same value and standing as in the other courses.

REQUIRED AND ELECTIV WORK.

1. The professional work is required; viz: Psychology, pedagogy, education, teaching, observation, and conferences—in all, eleven term courses.

2. All other work is elective—in all, nineteen courses.

3. No student may, without the approval of the proper faculty committee, take less than one term course nor more than three term courses in any subject, nor more than six term courses in any department.

4. Two-thirds of the courses for advanced degrees shall consist of advanced courses.

SCOPE OF THE WORK.

The work done during the summer term is: (1) The regular Normal work arranged in courses, for which credit is given when completed, enabling teachers who cannot attend at any other time than during the summer terms, to complete the Normal Course, get the diploma, which is a license to teach in the state for life, and receive the pro-

fessional degree of Bachelor of Pedagogy. (2) The work is arranged to enable graduates of the State Normal School of Colorado, and others prepared to do so, to take up graduate work, whereby they may, during the summer terms, earn the higher degrees. (3) The work is so arranged that persons who wish to pursue special lines of study may have the opportunity to do so. (4) An opportunity is given to high school teachers to study from the pedagogical standpoint the subjects they are to teach. (5) An opportunity is given to principals and superintendents to study the educational problems which confront them in their daily work. (6) An opportunity is given the rural teacher to study the problems peculiar to these schools. (7) An opportunity is given to regular Normal students to make up their work when, thru sickness or otherwise, they have not been able to complete it satisfactorily during the regular year.

EDUCATION.

IRVING E. MILLER, Ph. D., Dean.

The courses in Education are designed to meet the needs of all classes of teachers from the kindergarten to the high school. Special attention is called to the fact that there are professional courses for high school teachers, county superintendents and other supervising officers, and for rural school teachers. School administration will be discussed by practical experts straight from the field of actual supervision. A strong feature of the work in Education

this summer will be a course of lectures by prominent educators from other states. For this see Course 27. A statement of the courses in Education offered for the Summer Term of 1910 follows.

PRINCIPLES AND METHODS OF TEACHING.

Course 1. Methods of Elementary Education. Required of Juniors.

The purpose of this course is to suggest in the light of the broader meaning of education the methods of instruction best adapted to call forth the activities of the child and to lead to his highest development. Among the topics included in this work will be the teacher's preparation for the lesson, the right line of approach to the teaching of the subject, different methods of presenting knowledge, the art of questioning, the assignment of the lesson, the use of the study period, etc. Lesson organization will receive careful attention and will be illustrated in connection with the teaching of the different subjects of the curriculum, such as History, Geography, etc. Among the books used in this course will be Charters' Methods of Teaching, Bagley's Educational Process, and McMurry's How to Study.

This course and Course 7 are intended primarily to help students not closely identified with the Training Department of the school to become familiar with the spirit and methods of its work.

DR. WADDLE.

Course 4. Educational Psychology. Required of Juniors.

Given in the Department of Psychology as Course 3.

DR. WADDLE.

Course 7. Methods of Primary Education. Electiv.

This course consists in the application of psychological principles to child development in the first years of school life. To this end the following lines of work will be taken up: (1) a brief comparison of the elementary courses of study of several of our largest, most prominent, and educationally most progressiv cities; (2) a brief synopsis of the lower grade work in our own Training School; (3) the reading of late books and magazine articles on pedagogy; (4) constructiv, functional work in beginning reading, phonics, writing, rythm, number, and hand work.

MRS. SIBLEY.

Course 9. Problems of the Rural School. Electiv.

This is the same as Course 1 in the special bulletin of Summer Courses for Rural School Teachers. Tho taught by three persons, it constitutes a single unit of work. An outline of the work follows.

A. Elementary Psychology. The psychology which determines methods and materials of instruction will be given in this course. A significant feature of the course will be observation in the ungraded room where principles discovered in the psychology class may be seen in actual use. Two periods a week.

DR. IRVING E. MILLER.

B. Organization, Government, Management and Teaching of a Country School. The simple and elementary, yet fundamental, principles involvd in the above topics will be considered in this course. Much time will be given to observation of the ungraded room as it is being taught

by the expert who will be in charge of it. Two periods a week. STATE SUPERINTENDENT KATHERINE M. COOK.

C. Hand Work. In this class the teachers will be given instruction in keeping the smaller children profitably busy while the teacher is giving her attention to the older children of the school.

The work will consist of—

1. Rug weaving.
2. Story telling with sissors.
3. Story telling with clay.
4. Basketry.
5. Pasteboard modeling.
6. Stained glass work with pasteboard and paper.

One period a week.

MRS. SIBLEY.

SCIENCE OF EDUCATION.

Course 12. Sociological Aspect of Education. Required of Seniors.

This course will consist of lectures, discussions, library readings and reports, all centering in the thought of education as a phase of the social process. It will take up topics such as the following: the school and society; the school as a social center; relation of the teacher to the community; the social origin and function of knowledge; the social interpretation of the curriculum, with evaluation and functional significance of the various subjects of study; the process of socializing the individual; recent and contemporary scientific and social tendencies, with their bearing on education; current criticism of the schools; various problems of child welfare; the problem of religious and moral educa-

tion; the rural school in its relation to rural life; the new spirit of social service in the high school and the university; the playground movement; industrial, vocational, and special schools, etc.

DR. IRVING E. MILLER.

PROFESSIONAL COURSES IN HIGH SCHOOL EDUCATION.

These courses are all primarily for normal graduate and college students who are preparing to teach in high schools.

Course 18. Biotics in Education. Required of normal graduate and college students. Three hours a week.

An outline of the principal topics of the course follows:

I. *The Meaning of Education.*

1. From the standpoint of the individual.—An involution of possibilities; his education an evolution of the possibilities in relation to life; his expansion into health, strength, power, and skill to function in relation to his environment.

2. From the standpoint of society.—His adjustment to society in efficiency; his obligation to society, and the obligation of society to him; his relation to the state, and the relation of the state to him.

II. *The importance of heredity in education.*

1. Heredity and inheritance; facts and laws; growth and suppression of elements of inheritance in education.

2. Racial, national, parental, and individual heredity—elements influencing education.

3. Hereditary versus somatic transmissions in the individual and his education.

4. Hereditary and environmental variations in the education of the individual.

5. Theories of heredity—Lamarck, Darwin, Weismann, DeVries, and their relation to education.

III. *Evolution as a basis for education.*

1. Universal evolution as a working hypothesis.

2. The evolution of life, mind, society and the state, in its relation to civilization.

3. Universal recapitulations.

4. Recapitulation and the "culture epochs."

5. Religious recapitulation.

6. Its value to education.

IV. *Functional Education.*

1. Education is functional—dynamic—pragmatic.

2. All activities of the individual are the result of cell structure.

3. Education is motorization—doing—realization.

4. The maturation of truth.

V. *The evolution of truth.*

1. The potential value of a truth—anticipation.

2. The actual value of a truth—realization.

3. The efficient value of a truth—servis.

4. The making of truth—relation of facts.

5. The genesis of truth.

VI. *Life and its evolution.*

1. The creation of life values in relation to education.

2. Relativity of life values in the process of education.

VII. *The serial theory of life as growing out of the doctrine of evolution.*

1. The unity of all organic action.
2. The variations of the cross sections of a series.
3. The serial determination of the unity of the neuroses.

VIII. *Education is motorization.*

1. Education is the functioning of cells.
2. Education, a natural science.
3. Application of the foregoing in the process of education.
4. Principles of education growing out of the above.

PRESIDENT SNYDER.

Course 19. Advanced Educational Psychology. Electiv.

Given in the Department of Psychology as Course 6.

DR. IRVING E. MILLER.

Course 20. Secondary School Problems. Electiv.

1. Aims of Secondary Education (Cultural, vocational). 2. The curriculum (Evaluation of subjects, apportionment of time, length of course, etc.). 3. Discipline (as affected by adolescence, public sentiment, social spirit, etc.). 4. Organization (Interdependence of departments, electiv system, the program, etc.). 5. The Recitation (Its purpose, spirit, method, etc., so far as peculiar to secondary schools).

DeGarmo's "Principles of Secondary Education" will be used quite largely.

MR. BULLOCK.

Course 21. Institutions and Organizations of the Secondary School. Electiv.

1. Social organizations (Classes, fraternities, sororities, clubs, societies, etc.). 2. Athletics (Purpose, principles, methods, competitiv games, etc.). 3. Morning Exercises (Purpose, principles involvd, dominant character, as religious, educational, ethical, moral, inspirational, social, civic, etc.). 4. Literary Work (Literary societies and various equivalents). MR. BULLOCK.

Dr. Hall's large work on "Adolescence" will be a general reference.

Course 22. Evolution of the Secondary School System. Electiv.

This course takes up the history and comparativ study of secondary education. Special attention will be given to the study of the American high school in relation to the life and needs of the American people. The new spirit of social servis which is coming to dominate the high school will be interpreted in the light of the evolution of American social and industrial life. The historical study will prepare the way for the analysis of present conditions and this will be used as the basis for the determination of the function and significance of the high school at the present time and its responsibility for new adjustments to present social needs. MR. BULLOCK.

Course 23. Special Research Course. Electiv.

[For College Students and High School Teachers.]

SCHOOL ADMINISTRATION.

Course 24. School Administration. Electiv.

Sanitation. Sources and symptoms of infection and disease. The means of preventing infection. Architect-

ure. Buildings and grounds; heating and ventilating, etc.
Five periods a week, two weeks. MR. MOONEY.

The Country and Village School. The problems and their solution. The ideal country school. Five periods a week, one week.

STATE SUPERINTENDENT KATHERINE M. COOK.

The Relation of the Community to the School. Five periods a week, one week.

SUPERINTENDENT M. F. MILLER.

The Duties of a Superintendent. Five periods a week, one week.

SUPERINTENDENT J. F. KEATING.

Directing the Work of Teachers. Five periods a week, one week. SUPERINTENDENT WILSON M. SHAFER.

Course 25. County Supervision of Schools. Electiv.

This is Course 9 in the special bulletin of Summer Courses for Rural School Teachers.

The State Normal School, at the suggestion of several county superintendents, will offer a course for county superintendents in the Summer session. There will be three distinct topics, each topic to receive two weeks' time. Any county superintendent who can be here for the entire six weeks, and who elects this course, may take three topics as they are given in the school. If, however, a county superintendent cannot attend the entire session he may take one or two of the topics in residence and the remainder of the course in non-residence. Full credit will be given for this course, which will be under the direction of Mrs. Kath-

erine M. Cook, State Superintendent of Public Instruction. In this course the following subjects will be considered:

1. An Investigation of the Systems of Supervision of Rural and Village Schools in the United States. Five periods a week, two weeks.

2. An Investigation of the Systems of Rural School Supervision in Foren Countries. Five periods a week, two weeks.

3. A Consideration of the Problems of the Rural and Village Schools and the Means of Their Solution. Five periods a week, two weeks.

Course 26. Bacteria, Prophylaxis, and Hygiene. Electiv.

The helth of the students is an important and vital factor in school efficiency. Many superintendents, principals, and teachers would be glad to work more consciously and expertly for the maintenance of helth and the prevention of disease in their schools, if they knew how. This course aims to give specific instruction in the causes of disease and the methods of its prevention. Pains will be taken to throw the stress upon those things which it is possible for any intelligent person to do in the matter of prevention of disease without the aid of a physician. Some of the topics for special consideration are as follows: (1) Bacteria—what they are, how they live and grow, where found; bacteria of the air, of water, and of soils; bacteria of foods; useful bacteria; injurious bacteria; parasites and saphrophytes; bacteria which produce diseases (pathogenic bacteria). (2) Prophylaxis—prevention of disease; how disease germs are carried; how they gain entrance to the

body; means by which they may be avoided. (3) Personal hygiene—hygiene of the schoolroom and of the home.

MR. BEARDSLEY.

WORK OF NON-RESIDENT TEACHERS.

Course 27. Lecture Course. Electiv.

A course of lessons will be given by Dr. G. Stanley Hall, President of Clark University; by Dr. Henry Suzalo, Teachers' College, Columbia University; by Prof. M. V. O'Shea, Professor of Education, Wisconsin University; by Dr. S. C. Schmucker, Professor of Biology, Westchester State Normal School, Pa., and by Dr. W. M. R. French, Director of the Art Institute, Chicago. A course given by these men will run thruout the term, and also a course of conferences will be given by them during the entire term.

They will cover the work of all grades from the kindergarten to the high school, inclusive.

Below are general outlines of their work:

DR. M. V. O'SHEA, Professor of Education, Wisconsin University.

There are but few men in the country who are masters of their subjects as Prof. O'Shea is master of his. He is particularly able to show the application of modern theory. His "Education as Adjustment" is one of the rare bits of

pedagogical literature. His work will be centered about the following:

1. Suggestion in Education.
2. Education and Changing Social Conditions.
3. Education for Efficiency.
4. Mental Discipline in Education.
5. Values in School Education.
6. Adolescence.
7. The Development of Self Control in the Individual.
8. Social Development and Education.
9. Highways of Mental Growth.
10. The Problems of Contemporary Education.

DR. HENRY SUZZALO, Professor of Education, Teachers' College, Columbia University.

Dr. Henry Suzzalo is one of the most accurate and brilliant educational men in the country. He is a powerful and interesting teacher. He teaches. His work will grow out of the following subjects. The child in life is the central thought. He follows the child into the kindergarten, through the elementary and high schools, and into life as a social participating citizen:

1. Education and Life.
2. Social Service.
3. The School and Social Institutions.
4. Individualize and Socialize the child.
5. Our Institutional Life—Home, School, State, Church.

6. The Course of Study and Life--Elementary and Secondary.
7. The relation of secondary and elementary schools.
8. The High School Curriculum.
9. Industrial Education.
10. The Teacher.
11. The Solution of Problems that vex Teachers (in conference.)

G. STANLEY HALL, President of Clark University.

Dr. Hall's work will center about the child and life. His work is easily the greatest work done by any one along these lines. He is a great inspiration and uplift.

1. New Light on the Kindergarten.
2. The Present Status of Religious Education.
3. Moral Education (in France, Japan—the various schemes including pupil self-government, juvenile court.)
4. Children's Lies—What they mean and how to deal with them.
5. Dancing, Gesture, Pantomime—Their educational place and value.
6. The Present Problem of Education in Sex—What has been done in this country and others.
7. The National Organization for Child Welfare (organized at the Clark University last summer on a national basis, now including more than two-score child welfare organizations.)
8. The Social Survey—Its development and meaning.

9. The Child Study Institute (for collecting, diffusing and increasing the scientific knowledge concerning childhood.)
10. The Budding Girl, and the Boy in the Teens.
11. Story Telling and the Juvenile Theatre.
12. Some defects in our Educational System.
13. Sex in Education.
14. The Education of the Heart.
15. Science, Mathematics, English Literature, Language, Industrial Education and Art in the Schools.

DR. S. C. SCHMUCKER, Professor Biological Sciences,
Westchester State Normal School, Pa.

The work by Dr. Schmucker will center about the general subject of the gradual development of the higher animals and plants out of the lower. Illustrations will be largely chosen from the familiar forms, and a subject usually considered abstruse will be made clear, and, it is hoped, convincing. The subjects will be:

1. A Naturalist in the Making.
2. The Finished Scientist.
3. His Master Idea.
4. Down Through the Past.
5. A Glorified Reptile.
6. What a Chicken can Teach Us.
7. Life History and Race History.
8. The Humming Bird's Story.
9. The Mind of the Apes.
10. Science and the Book.

DR. W. M. R. FRENCH, Director of the Art Institute,
Chicago.

The inspiring work of Mr. French will be made concrete, so as to be most helpful to the every-day teacher.

1. Truth, Beauty and Expression.
2. Formal Composition or Arrangement.
3. Analogy Between Literary Composition and the Painters' Composition.
4. Pictorial Composition.
5. Light and Shade.
6. Color and Expression.
7. A Knack of Drawing, Natural or Acquired.
8. The Value of a Line.
9. The Caricaturist.
10. Conventional Art in Pictures and Decoration.

ADDITIONAL COURSES IN EDUCATION.

For courses in *Special Methods* of teaching the various elementary and high school subjects, see the various academic departments, such as History, English, Manual Training, etc.

Courses in *Child Study* are given in the Department of Psychology.

For courses in *Kindergarten Theory and Practis*, see the Kindergarten Department.

Special courses for *Rural School Teachers* are announced in the special bulletin of Summer Courses for Rural School Teachers. These include Courses 9 and 25, mentioned above, and seven others, which deal with the various rural school subjects and methods of teaching them.

PSYCHOLOGY.

CHARLES WILKIN WADDLE, Ph. D.

J. D. HEILMAN, Ph. D.

Course 1. Physiological and Experimental Psychology.

Thru lectures, readings, discussions, dissections, and examination of many models and casts, a thoro study is made of the brain and central nervous system, of the sense organs, and of the relation of mind and brain. Physical growth, precocity and dullness, motor ability, and certain phases of the hygiene of instruction, attention, perception and apperception, illusions, and memory are studied in detail with numerous laboratory experiments, personal observations, and exercises in introspection. Constant use is made of a well-stocked library, and themes and note-books give evidence of work done by students.

DR. HEILMAN.

Course 2. Descriptiv and Analytical Psychology.

Using Course 1 as a foundation, this course procedes with a study of the higher types of mental processes, such as emotion, action, thinking, self-consciousness, suggestion and imitation, and related topics. Laboratory methods are still used wherever possible, but more emfasis is placed on introspectiv analysis than in Course 1. The derivation of pedagogical principles from the natural laws of mental activity is a prominent feature of the course, and illustrations are drawn daily from school-room and playground.

DR. HEILMAN.

Course 3. Educational Psychology.

This is an attempt to put the main conclusions of psychology into a more usable form for application in the school-room. Starting with Dr. Dewey's conception of education as a "reconstruction of experience," it proceeds to show how all the sound principles of pedagogy are but aids to the mind's natural processes of reconstructing itself. From the view point of functional psychology the Herbartian formal steps are criticised and interpreted, and the culture epoch theory discusst. From a study of the nature and origin of knowledge as reveald in the development of the sciences in primitiv society, the constructiv activities are found to be the true center of correlation for the studies of the curriculum, and the methods of differentiating these studies from the pupil's social-industrial activities are suggested. Formal disciplin, inductiv and deductiv reasoning, receive adequate notice.

The school as a social institution naturally comes to be a conspicuous thought of the course. The psychology and pedagogy of drawing, writing, reading and other school subjects are considerd in their broader aspects.

DR. WADDLE.

Course 4. Systematic Child Study.

By means of lectures, discussions, reports, and readings, this course presents the history of the child study movement, its relation to the scientific, industrial, and educational development of the past quarter century, and familiarizes the students with the present aims, methods, and trend of the study of child life. The best book and monograph literature on the growth and development of the

physical, mental, moral, social, and religious life of children and adolescents is read and discussed. An inductive study of some important topic is usually conducted by the class as a part of the work of the term. One term. Prerequisite: Psychology 1, 2, and 3. DR. WADDLE.

Course 6. Advanced Educational Psychology.

[For College Students and High School Teachers.]

Course 7. Experimental Pedagogy.

[For College Students and High School Teachers.]

This course will treat those phases of Psychology which are of especial significance in helping to understand the developing life of the pupil of high school age. It is not possible for teachers to make the same adjustment to the needs of high school pupils in all respects as to those of the grades. While the life of the child is regarded as functionally continuous, there are some special problems which confront the high school teacher because certain characteristics of the child's mental, moral, and social life stand out more prominently than in the preceding period. These characteristics will be studied in detail in this course in their relation to the problems of discipline, of the learning process, of organization of the curriculum, of moral development, etc. The results of research and experiments in this field will be drawn upon as fully as possible. Considerable attention will be paid to the higher psychical processes, particularly thinking, in their relation to teaching.

DR. IRVING E. MILLER.

BIOLOGICAL SCIENCE AND NATURE STUDY.

A. E. BEARDSLEY, M. S.
H. W. HOCHBAUM, B. S. A.
L. A. ADAMS, A. M.

BOTANY.

Course 1. Elementary Botany.

Elementary course in botany based upon laboratory and field work with common plants.

Ecological botany. The study of plants in their relations to the environment. The different forms of plant societies which are to be found in the vicinity are studied with a view to the determination of the laws which govern them.

MR. BEARDSLEY.

Course 3. Comparative Morphology and Physiology of Plants.

[For College Students and High School Teachers.]

ZOOLOGY.

Course 1. Elementary Zoology.

An elementary course in zoology, including laboratory and field work.

MR. BEARDSLEY.

Course 5. Bird Study.

This course is a combination of field and class-room work. At least half of the time will be spent out of doors, in order to become familiar with the forms studied in the classroom. This is rather a comprehensive course and is

pland for those who desire an intimate knowledge of bird life. It combines the technical with the popular, as they are complementary to each other, for without one, the other loses its value.

MR. ADAMS.

Course 2. Invertebrate Morphology.

[For College Students and High School Teachers.]

Course 6. The Study of Mammals.

The study of the mammals taken up in the same manner as in the course above. Much time will be spent out of doors, investigating the forms that are common in the vicinity. This is also a comprehensiv course and will take up the group of mammals and their gross structure. The habits of the different types will also be carefully studied.

MR. ADAMS.

The large museum collections, which are especially rich in Colorado forms, are available for purposes of instruction in all the courses.

NATURE STUDY.

Course 1. The Theory, Practis, and Material of Nature Study.

A course designd to fit teachers for teaching nature study in the elementary school. In this course we consider:

1. The Nature Study Idea.—A review of the writings of Professors L. H. Bailey, S. C. Schmucker, C. F. Hodge and others, on the aims and ideals of nature study teaching. The significance and importance of the nature study movement. The theory and practis of nature study teaching.

2. The Material of Nature Study.—First hand acquaintanceship with the good and common things of the outdoor world, thru actual, first-hand observation in garden and laboratory, field and plain. MR. HOCHBAUM.

Course 2. School Gardening; Outdoor Art; Elementary Agriculture.

The principles of landscape improvement applied to school and home grounds. How to beautify the school and home grounds. A review of best native and introduced decorative plants. The laboratory garden idea. Practis in garden handicraft. Planning and planting the laboratory garden. Soil studies. Plants in relation to soils. The principles of soil and plant management.

MR. HOCHBAUM.

Course 4. Elementary Agriculture.

[For College Students and High School Teachers.]

Greeley is an ideal place in summer, in which to begin the study of nature. The campus of the Colorado State Normal School is the most beautiful one in the state. Here may be found hundreds of different kinds of flowers, shrubs, and trees, and the homes of many birds of different species. Garden and field, farm and plain afford opportunity for the study of animal and plant life. In the greenhouse and school-garden that form part of the equipment of the school, gardening and elementary agriculture may be studied. Here earth may be dug over, seeds sown, plants planted, and that practis in handicraft gained that is essential in teaching school gardening and elementary agriculture.

In the nature study work, the aim is to bring before the teacher the true nature study ideal; namely, that nature

study should be taught, not for the mere accumulation of facts about nature, but rather as a means to a greater end, i. e., to instil in the heart of every child a greater love and appreciation of nature. Too many teachers still believe nature study to be a kind of elementary science, something to be studied for the facts that may be gained. It is not facts we are after, but a greater sympathy and enthusiasm for nature. Nature study is not facts, but spirit.

PHYSICS, CHEMISTRY, AND GEOGRAPHY.

FRANCIS LORENZO ABBOTT, A. M.

PHYSICS.

Course 1. General Course in Physics.

This course is so planned that many of the fundamental experiments can be taken into the grade work of the schools, where they can be performed by the pupils with much interest and profit. From an ordinary bicycle pump, an air pump, compression pump, water pump, etc., are made, by which we can perform many of the experiments in studying the properties of fluids.

Course 2. Advanced Physics.

[For High School Teachers.]

Course 3. Methods in Physics.

[For High School Teachers.]

CHEMISTRY.

Course 1. Elementary Chemistry.

Note: Either Physics or Chemistry will be given, but not both.

GEOGRAPHY.

Course 1. Methods in Geography.

The object of this course is two-fold: to increase the student's geographical knowledge of the industries and commerce of the world, and to show the relations between the physiographical features of the country and the various industries. Never before has there been so strong a demand for bringing the child into close touch with industrial and commercial activities. Therefore, the second object of this course is to present the subject of geography so that industries and commerce may be unifying ideas in the whole subject. The following are a few of the subjects treated:

1. Cattle Industry.
2. Sheep Industry.
3. Cotton.
4. Mining, etc.

Course 2. Physiography.

In this course special emphasis is put upon climatology. Connected with the department of geography is a geographical field 150 by 125 feet, in which are located all the modern instruments of making observations on climate, and in which the continents are molded on a large scale.

[For High School Teachers and Advanced Students.]

MATHEMATICS.

GEORGE BRUCE HALSTED, Ph. D.

Course 7. Arithmetic.

The new methods for all the operations of arithmetic, the simplifications which are the outcome of the recent remarkable advances in mathematics. The new methods of verification. The best methods of presentation to classes. This course gives to each individual a mastery of modern practical and technical arithmetic, an equipment not only for examination-passing, but for personally using this instrument of science as well as teaching it.

Course 1. Elementary Algebra.

The usual high school work, including quadratics. Especial emphasis on interpretations of meaning, on the principles of permanence and the fundamental laws of freedom. Effort to develop independent thinking. Mechanical manipulation explained and utilized.

Course 4. Plane Geometry.

The equivalent of high school work. Especial emphasis on original and inventiv work. The new simplifications utilized. The errors of the books still current taken as dissectional material. Halsted's Rational Geometry.

Courses 8 and 9. College Algebra.

[For College Students and High School Teachers.]

Course 10. Trigonometry.

[For College Students and High School Teachers.]

Course 11. Analytical Geometry.

[For College Students and High School Teachers.]

Course 12. Differential and Integral Calculus.

[For College Students and High School Teachers.]

Course 13. The Foundations and New Methods of Teaching Synthetic Geometry.

[For College Students and High School Teachers.]

HISTORY AND SOCIOLOGY.

GURDON RANSOM MILLER, A. M.

Course 1. European History.

Mediæval European history, from the fall of Rome to 1520 A. D. The Teutonic invasions; growth of the Church and Empire; early European civilization, its social and economic evolution; Saracen civilization, and its relation to European civilization; the Crusades, and economic results; the Renaissance; and the Reformation.

Lectures and discussion of the aims, purposes, and possibilities of history teaching.

Course 4. American History.

European background of American History; Colonial history, Spanish, French, Dutch, and English Colonies in America, inter-colonial relations; social life, industries, commerce; change of boundaries; and evolution of national ideas in English colonies.

SOCIOLOGY.

Course 1. Anthropology.

Comprizing zoogenic, anthropogenic, and ethnogenic association; invention and growth of language; evolution of habitations, clothing, tools; evolution of ornament, and beginnings of art; tribal organization, the family, and early evolution of law.

Special attention given to the industrial activities of primitiv peoples, and the possible relation of these activities to the elementary school curriculum.

Course 2. Principles of Sociology.

Including a study of modern social organization; the historical evolution of institutions; laws of social progress; lectures and discussion of modern social problems.

A special emfasis is given to the modern school as a social organization.

Course 3. Economics.

Comprizing the elements of modern economic theory; industrial organization; government ownership and control of industries; theory of socialism; trusts and monopolies; and discussions of method in high school economics and industrial history.

Note—Courses 1, 2 and 3 in Sociology are conducted as one class during the Summer term.

LATIN AND MYTHOLOGY.

JAMES HARVEY HAYS, A. M.

LATIN.

Course 1.

An elementary course, consisting of careful study and practis in pronunciation, a mastery of the inflections, syntax, and readings suitable to beginners. The texts red are selections from Cæsar, Cicero, and other writers of the classic period. Much attention is given to the contributions made by Rome to modern life and civilization.

Course 2.

An intermediate course, comprizing grammar reviews, including the more difficult constructions, Latin versification, and prose composition, criticism of Roman life and customs. The texts used are readings from Cicero, Virgil, and Sallust.

Course 3.

An advanced course, consisting of discussions on the art of teaching Latin, instruction in the art of reading Latin, drills in *sight* reading and "*ear*" reading, and reviews of such parts of the grammar as seem necessary. Much attention is given to the mastery of idiomatic expressions, and to the history and literature of the Roman people. The literature red consists of poetry, history, and essays, taken from Horace, Cicero, Sallust, Livy and Tacitus. This course is intended for those fitting themselves

for positions as teachers of Latin, and it presupposes at least as much Latin as is offered in our best high schools.

MYTHOLOGY.

Course 1. Mythology.

An acquaintance with the body of ancient mythology being necessary to the understanding of the most ordinary literature, as well as being the most primitive literature itself, this course has been planned to assist not only in the mastery of these myths as stories and the development of power and skill in their telling, but also to give to each myth such an interpretation as is readily apparent in the story.

An attempt at the classification of the origins and values of these child-age stories will be made. Practice, under careful criticism in effective telling of myths, is a leading feature of this course. A comparison of the classic myths will be made with Norse and Hebrew myths, where such comparisons are apparent.

MODERN FOREIGN LANGUAGES.

ABRAM GIDEON, Ph. D.

Course 1. Elementary German.

For beginners. According to the method of instruction employed, the language-facts are studied both as an introduction to the living language and as a gateway to the literature. Pronunciation, grammar, oral practice, reading.

Course 4 or 7. German Reading.

For students whose previous knowledge of the language will enable them to appreciate texts of literary merit. The subject matter red is determined by the constitution of the class.

Courses in French.

Courses in French, analogous to those offered in German, are given, provided classes can be organized.

ENGLISH LANGUAGE AND LITERATURE.

ETHAN ALLEN CROSS, Ph. M.

Course 5.

Introduction to the epic and the drama; careful reading of the Iliad and of Hamlet (A foundation course needed as preparation for both pedagogical courses and courses in literature).

Course 3.

Oral literature and constructive work for the grades from the first to the fifth inclusive.

Course 10.

Nineteenth Century poetry; the great elements of the Romantic Period as expressed in Wordsworth, Shelley, Byron, and Keats.

Course 16. Materials and Methods for a High School Course in English.

[For College Students and High School Teachers.]

READING AND LITERARY INTER- PRETATION.

FRANCES TOBEY, B. S.
MARSHALL PANCOAST, B. L.

Course 1. The Evolution of Expression; Interpretation.

1. Analysis of short literary units, with regard to motif and to organic structure.
2. Drill for (a) rapid and accurate visualization and realization of pictures and thought units, (b) differentiation of dramatic characters and sympathetic insight into their experiences and motifs, and (c) spontaneity, life, vigor, and variety of expression.
3. Critical analysis and interpretation of scenes from *A Midsummer Night's Dream*.
 - (a) Study of structural plan and theme of play, and of function of each scene.
 - (b) Study and impersonation of characters.
 - (c) Presentation of scenes.

Course 2. Methods; Interpretation.

1. Selection of material for the grades.
2. Study of the Psychology and Pedagogy of Reading.
3. Discussion of various problems of interest to the grade teacher.
4. Study of *A Midsummer Night's Dream*. (Both courses direct a study of the same drama, uniting in pre-

senting it before the school. A different drama is studied each year.)

KINDERGARTEN.

ELIZABETH MAUD CANNELL.

CECILIA M. TYLER, Pd. B.

Course 2.

This is the work of the second quarter of the junior kindergarten course. It includes a study of the third and fourth gifts, the practical working out of the occupations of folding and free and needle weaving, a continuation of Froebel. Mother Play, the review of some assigned book on kindergarten methods, and practis in the playing of kindergarten and traditional street games.

Course 10.

This is the regular work for the third term of the one-year course for primary teachers. It includes a brief study of kindergarten theories through selected readings in the education of man, a comparison of these with those of school men of to-day, reports on assigned library reading, a study of the significance of the play impulses, together with the actual playing of games suited to grade work and of folk dances, and hand work in cutting, folding and other materials suited to the lower grades.

MUSIC.

THEOPHILUS E. FITZ.

Course 1. Solfeggio.

This course consists of singing while naming the notes and beating the time. It is thus that pupils learn to read in all the keys, both the major and minor modes, with equal facility—an indispensable matter for those who wish to teach vocal music in the grades.

Course 2. Methods.

a. This course is devoted to the detailed consideration of the sequential steps necessary to the presentation of the subject to classes. It outlines the logical unfolding of the subject, regards it in its correlation with the school curriculum, and further, as a subject leading to such mastery as makes it a culture study from the beginning.

b. The order of procedure in the lesson, the system necessary to follow in order to make the most of the limited time given daily in the school, the application of school music to festival occasions, the conduct of the teachers' classes, how to encourage music in the home and in the community, and, in general, all that relates to the direct application of the pedagogy of the subject is discussed in this course.

Course 11. Rural School Music.

In this course songs are suggested and studied that tend to develop the child mind in musical thought and ap-

preciation of the beauty in life in all its phases. A song for every day and occasion of the school year.

Course 12. High School Music.

[For College Students and High School Teachers.]

ART.

RICHARD ERNESTI.

JOYSA GAINES, Pd. M.

Course 1. Elementary Drawing.

The theory and practice of drawing in all its branches and media relating to public school work as it is seen in the best elementary schools of the United States.

Constructional drawing needed in connection with public school art.

Clay building and the making of artistic pottery.

Course 2. Applied Design.

A course in applied design planned to correlate with manual training and domestic science.

Course 10. Advanced.

[For College Students and High School Teachers.]

MANUAL TRAINING.

SAMUEL MILO HADDEN, A. M.

BELLA BRUCE SIBLEY, Pd. M.

Course 1. Elementary Course in Woodwork.

This course is designed to give a general knowledge of woods, a fair degree of skill in using wood-working tools,

and an acquaintance with the underlying principles of manual training. It also includes mechanical and free-hand drawing in their application to constructiv design and decoration.

MR. HADDEN.

Course 2. Advanced Joinery.

[For College Students and High School Teachers.]

Course 6. Textils.

The object of this course is to fit students to teach textils in the grades. The course consists of play-house, rug-weaving and basketry. The latter subject is studied under the following topics: The place of basketry in the history of art; its relation to pottery, its symbolism, its colors, its materials; braids, raffia embroidery, coil work and rattan models—all leading up to original plans, patterns, forms and combinations, and culminating in the preparation of a course of study for the grades.

MRS. SIBLEY.

Course 7. History of Industrial Education.

[For College Students and High School Teachers.]

Course 8. Sheet Metal Working—Elementary.

This course is a laboratory course, and deals entirely with the simple processes—those suitable for the elementary school. It will include work with Venetian iron and sheet metal, and aims to create objects of artistic worth. The purpose of this course is to make evident those qualities characteristic of good design, as fine proportion, elegance of form, and correct construction.

MR. HADDEN.

PHYSICAL EDUCATION.

JOHN THOMAS LISTER, A. B.

The Physical Education Department aims to present two opportunities to students taking the summer courses of the Normal School: first, the opportunity to secure for himself that recreation and enjoyment which are the rightful portion of every individual in the summer months following an arduous year; second, the opportunity to gain a knowledge of the most recent methods of satisfying the play impulse in children and to acquire insight into the large principles upon which such methods are based. These opportunities aim to lead to widened avenues of pleasure and enlarged views of purpose.

Falling in with both aims the following course is offered: Tennis, baseball, basketball, golf, gymnastic games, Swedish and German gymnastics. About half of the recitation period will be devoted to each aim. In the routine gymnasium work especial stress will be placed upon the Swedish system, for the reason that in the majority of instances, because of the scarcity of apparatus provided, teachers are required to devise their own forms of exercise. To meet the demand for pure play, games for field and gymnasium, drills, marches, folk dances, and field day sports will be presented. Considerable time will be given to talks on playground apparatus, and designs will be given for inexpensive apparatus.

In order that the student may have an intelligent grasp of the principles underlying all physical education

he will be referred to the latest books and magazines on the subject.

Course 3. Outdoor Games and Playground.

Tennis, basketball, baseball, field day sports, playground apparatus.

Course 6. Remedial Gymnastics.

To correct faulty posture and other physical defects. This course is required of all students whose physical examination shows that they need it.

Course 7. Sports and Games.

Athletic sports and play-ground games. Outdoor work entirely.

DOMESTIC SCIENCE.

ELEANOR WILKINSON.

Course 3. Courses in Cooking for the Elementary Schools.

The purpose of this course is to plan and work out courses suitable for the elementary and high schools in cooking and the study of food stuffs. The aim is to prepare such courses as shall meet the requirements of the city schools, the schools of the smaller towns, and the rural schools. Methods in teaching are given special attention, while the economic side of the work is carefully considered for the purpose of securing such training as is necessary to teach the work effectively when there is but a small sum

available. Training is given in what equipment to buy for a given sum, as \$15 to \$25, \$100 to \$150, \$200 to \$300, \$400 to \$600, while convenient and sanitary school kitchens and kitchen furnishings, and good desk accommodations are duly considered.

DOMESTIC ART.

Course 2. Elementary Dressmaking.

The work of this course is a continuation of Course 1, taking up the planning, cutting, fitting, and making of simple shirt-waist suits. The purpose is to teach the designing of plain garments, suitability of materials for such garments, good color combinations, and the use of line and proportion. In all the work it is designed to encourage originality, based upon good judgment and to strengthen self-reliance.

COURSES FOR RURAL SCHOOL TEACHERS AND COUNTY SUPERINTENDENTS.

Course 1.

A. Elementary Psychology. The psychology which determines methods and materials of instruction will be given in this course. A significant feature of the course will be observation in the ungraded room where principles discovered in the psychology class may be seen in actual use. Two periods a week. DR. IRVING E. MILLER.

B. Organization, Government, Management and Teaching of a Country School. The simple and element-

ary, yet fundamental, principles involvd in the above topics will be considered in this course. Much time will be given to observation of the ungraded room as it is being taught by the expert who will be in charge of it. Two periods a week. STATE SUPERINTENDENT KATHERINE M. COOK.

C. Hand Work. In this class the teachers will be given instruction in keeping the smaller children profitably busy while the teacher is giving her attention to the older children of the school.

The work will consist of—

1. Rug weaving.
 2. Story telling with sissors.
 3. Story telling with clay.
 4. Basketry.
 5. Pasteboard modeling.
 6. Staind glass work with pasteboard and paper.
- One period a week. MRS. SIBLEY.

Course 2.

English, Grammar and Reading, and How to Teach Them. Five periods a week. MR. DUBACH.

Course 3.

History and Geograpy, and How to Teach Them. Five periods a week. MR. DUBACH.

Course 4.

Number and Arithmetic, and How to Teach Them. Five periods a week. MR. DUBACH.

The above courses will be given having in view the conditions under which the rural teacher must work. The

aim will be to give a rapid review of such parts of the subjects as appear to be the least understood by those who take the work. Individual aid will be given students in these classes. A significant purpose of the work will be to give instruction in presenting subjects most effectively in the limited space of time at the disposal of the teacher in most country schools.

Course 5.

A. Manual Training.

1. Art Metal. A course dealing with simple sheet metals, such as copper, brass, sheet iron, German silver and bronze.

The course consists of—

(a) Designing, laying out, and assembling various useful and decorative pieces of metal work, such as brass or sheet iron picture frames, copper belt pins, German silver tie pins, etc.

(b) The artistic development of arts-craft jewelry, using a very limited number of tools costing not more than two dollars for the entire equipment.

2. Woodwork. A course to suit the needs of the country children, covering things useful in the children's home and school life, for home decoration and school aid, such as the making of mounts for specimens in science, etc.

Equipment can be collected gradually. A school can start very well with five to seven dollars' worth of tools. Material can always be found around a country home. In fact, most of the tools may be borrowed. Five periods a week, three weeks.

MR. HADDEN.

B. Domestic Science in the Rural Schools.

This course aims to give training in the study of foods, food preparation, housekeeping, and sewing, when there is but little equipment, and no room other than the regular school room for the work. Some of the problems to be considered in such a course are: how to interest the parents so as to secure their sympathy and co-operation; the kind of simple equipment needed, and how this can be obtained with little or no expense to teacher or community; how the work may be done in the ordinary school room; what proportion of time shall be given this work, and how can this work be correlated with the regular studies. The purpose of this course is to give such help to the country school teacher as shall enable her to go out into the rural school districts and do something toward improving the home life of the community. To do this, the work done in the school must be of the character most helpful in solving the practical problems of these particular homes. Home conditions being known, the materials used for the work in the school should be those in use in the average home of the community. Five periods a week, three weeks. MISS WILKINSON.

Course 6.

Home Geography, Elementary Agriculture and Nature Study.

This course is designed to train teachers to look to the country and to country life for material in teaching. There is an ever growing tendency to make the rural school more efficient, to revitalize it, by teaching rural children in terms of their environment,—by bringing them into closer per-

sonal contact with the everyday world in which they live. All too often the teaching of the rural school is entirely unrelated to the lives of the people. Geographies treat of the industries, customs, and natural features of foren countries; agricultural text-books, of crops and methods strange to the community; and nature books deal with strange animals and stranger birds and plants. These lead away from the country, and the country child grows up in ignorance of the commonest things of the region in which he lives. Education should grow out of the lives and back into the lives of people, and we must, therefore, look more to the country and to country life in rural school teaching. Five periods a week, six weeks.

MR. HOCHBAUM.

Course 7. Art for the Rural Schools.

A. *Free-Hand Drawing*, illustrating things related to the interests of rural life.

B. *Structural Drawing*, leading to a full comprehension of its relation to life on the farm—the building and constructing of homes, barns, etc., the preservation of tools and machinery thru proper outbuildings, the survey and construction in plan of interesting surroundings of rural homes and schools.

C. *Design*, as related to the rural home, school, and inhabitants, including self-help in school room decoration, house decoration, the planning of interior color schemes, and simple and proper furnishings, based upon self-help. Five periods a week, six weeks.

MR. ERNESTI.

Course 8. Music for the Rural Schools.

Songs that represent the different moods and experiences of child life,—games, animals, holidays, seasons, work, lullabys, opening and closing of school, ethics, patriotism, the different aspects of nature and so on, are taught and interpreted from a pedagogical and psychological standpoint. Material suitable for every day and occasion of the school year is suggested and studied. Five periods a week, six weeks.

MR. FITZ.

Course 9. County Supervision of Schools.

The State Normal School, at the suggestion of several county superintendents, will offer a course for county superintendents in the summer session. There will be three distinct units of the work, each unit to receive two weeks' time. Any county superintendent who can be here for the entire six weeks, and who elects this course, may take three units as they are given in the school. If, however, a county superintendent cannot attend the entire session he may take one or two of the topics in residence and the remainder of the course in non-residence. Full credit will be given for this course, which will be under the direction of Mrs. Katherine M. Cook, State Superintendent of Public Instruction. In this course the following subjects will be considered:

1. *An Investigation of the Systems of Supervision of Rural and Village Schools in the United States.* Five periods a week, two weeks.

2. *An Investigation of the Systems of Rural School Supervision in Foren Countries.* Five periods a week, two weeks.

3. *A Consideration of the Problems of the Rural and Village Schools and the Means of Their Solution.* Five periods a week, two weeks.

Full credit toward graduation will be given for any work taken in these courses. County superintendents and all school officers who have an interest in the improvement of the rural schools are askt to co-operate with the State Normal School in its effort to offer courses which will aid in such improvement. City superintendents are urged to call the attention of members of their graduating classes, who intend to begin teaching as soon as they graduate from the high school, to the above courses offerd by the State Normal School during the summer term.

Persons who have never taught and who are not high school graduates but who intend to take the county examinations for a certificate are urged to enroll for the summer term, where they will find opportunity to do work which will make them more efficient teachers.

Persons who are experienced teachers but who have not graduated from a high school will find courses offerd in the summer term especially adapted to their needs.

The coming summer session of the Colorado State Normal School will be one of the most attractiv sessions ever offerd by the institution. Mrs. Katherine M. Cook, State Superintendent of Public Instruction, Superintendent J. F. Keating, of Pueblo, Superintendent M. F. Miller, of Fort Collins, and Superintendent Wilson M. Shafer, of Cripple Creek, and Mr. Otto F. Dubach, of Colorado Springs, will give courses in other departments of

the summer school. In addition to the work given by the above persons, special courses will be given by G. Stanley Hall, President of Clark University; M. V. O'Shea, Head of the Department of Education, University of Wisconsin; Henry Suzzallo, Professor of Social Education, Columbia University; S. C. Schmucker, Professor of Nature Study and Biology, Westchester (Pa.) Normal School; and W. M. R. French, Director of the Chicago Art Institute. These people stand for what is best in educational thought and practice. It will be a rare opportunity, of which the Normal School hopes a large number of superintendents, principals and teachers in Colorado will take advantage.

EXPENSES.

1. Board and room costs from \$4.00 to \$5.00 a week, two students in a room. There are opportunities for students to board themselves or to earn a part or all of their expenses for board and room.

2. *Tuition.* There is no tuition charge for citizens of Colorado.

3. *Incidental Fees.* All students pay incidental fees as follows:

For one course.....	\$ 8.00
For two courses.....	10.00
For three courses.....	12.00
For four courses.....	15.00
For five courses.....	20.00

A course is five recitation periods a week for the term of six weeks. The periods during the summer school are a full hour in length with ten-minutes intermissions.

4. All fees for special courses have been discontinued for the summer term.

5. Citizens of other states in addition to the regular incidental fees pay a tuition fee of \$5.00 for the term.

HISTORY OF THE SCHOOL.

The State Normal School of Colorado was established by an act of the legislature in 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 makes the institution a professional school in the strictest sense.

LOCATION.

The Normal School is located at Greeley, in Weld county, on the Union Pacific and Colorado & Southern

railways, fifty-two miles north of Denver. The 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 about 10,000 inhabitants.

EQUIPMENT.

The institution is well equipt in the way of laboratories, libraries, gymnasiums, playgrounds, an athletic field, art collection, museums, and a school garden.

There are specially equipt separate laboratories for the following sciences: biology, physics, chemistry, taxidermy, and physical education. They are all fitted up with the very best apparatus and furniture.

There are special industrial laboratories for sloyd, carving, weaving, basketry, cooking, sewing, and children's room. All these are well fitted up in every way.

The library has 40,000 volumes bearing on the work of the Normal School. There is ample opportunity to work out subjects requiring library research. There is a handicraft department connected with the library whereby a student may learn how to run a library, as well as many other things.

The gymnasium is well equipt with modern apparatus. Games of all sorts suitable for schools are taught.

BILDINGS.

The bildings which are completed at the present time consist of the administration bilding, the library bilding, and the residence of the President. The main, or administration bilding, is two hundred forty feet long and eighty feet wide. It has in it the executiv offices, class rooms, class museums, manual training, domestic science and art departments. 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 bilding. The first floor is entirely occupied by the library, consisting of more than forty 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, ceramic museum, and sewing rooms.

The President's house is on the campus among the trees, as shown in the picture. In this beautiful home are held many social gatherings for students during the school year.

Two new bildings will be erected upon the campus within the next eighteen months. The first of these is to be the training school bilding, provided for by an appropriation of the last legislature. The second is a bilding

for the manual arts presented to the school by Senator Simon Guggenheim. Both of these will be so constructed as to meet the requirements of the most modern ideals in the kind of work for which they are intended.

GREELEY.

Greeley is a city of homes. It is in the center of the great agricultural district of Colorado. It has a population of ten thousand and is fast becoming the commercial center of Northern Colorado.

CLIMATE.

This is an ideal location for a summer school. The altitude of the city is near five thousand feet, hence the nights are decidedly cool and the days are seldom uncomfortably warm.

WATER.

The water supply of Greeley is obtained from the canon of the Cache la Poudre, forty miles from Greeley, in the mountains. From the canon it is taken into the settling basin (a cut of which is given here), where the rougher foren material is eliminated; from the settling basin it is taken into the filter basin, where it is freed from all foren matter; from the filter basin it is taken to the distributing basin, from which it is distributed over the town. This water system cost the city of Greeley about four hundred thousand dollars.

ADVANTAGES.

Some of the advantages of the school are: A strong faculty especially trained, both by education and experience; a library of 40,000 volumes; well equipped laboratories of biology, physics, chemistry, manual training and physical education; a first-class athletic field, gymnasium, etc., all under the direction of specialists; a strong department of art; field and garden work in nature study; a model and training school; a kindergarten; and all other departments belonging to an ideal school.

CAMPUS.

In front of the building is a beautiful campus of several 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 homes, thus increasing its value as a place of rest, recreation or study.

During the summer and fall terms 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 arc lights and Japanese lanterns.

In the rear of the building 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 playground next the building there is a complete outdoor gymnasium. To the east of the building are located the tennis courts.

This is one of the most complete playgrounds west of the Mississippi, and when the present plans are fully realized it will be one of the best equipped and arranged grounds in the United States.

During the summer, courses on the organization of playgrounds will be given, and demonstrations of how to carry out these courses in the public schools will be made on the campus.

SCHOOL GARDEN.

One of the pleasing features of the spring, summer and fall sessions 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 CONSERVATORY.

The green-house, pictures of which are given on the following pages, is one of the best equipt 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.

The bilding is of cement, iron and glass. It is one hundred and sixteen feet long by twenty feet wide, and has connected with it a servis room where the students of the Normal department and children of the Training department are taught to care for plants they may wish, now and in the future, to have in their homes.

EXCURSIONS.

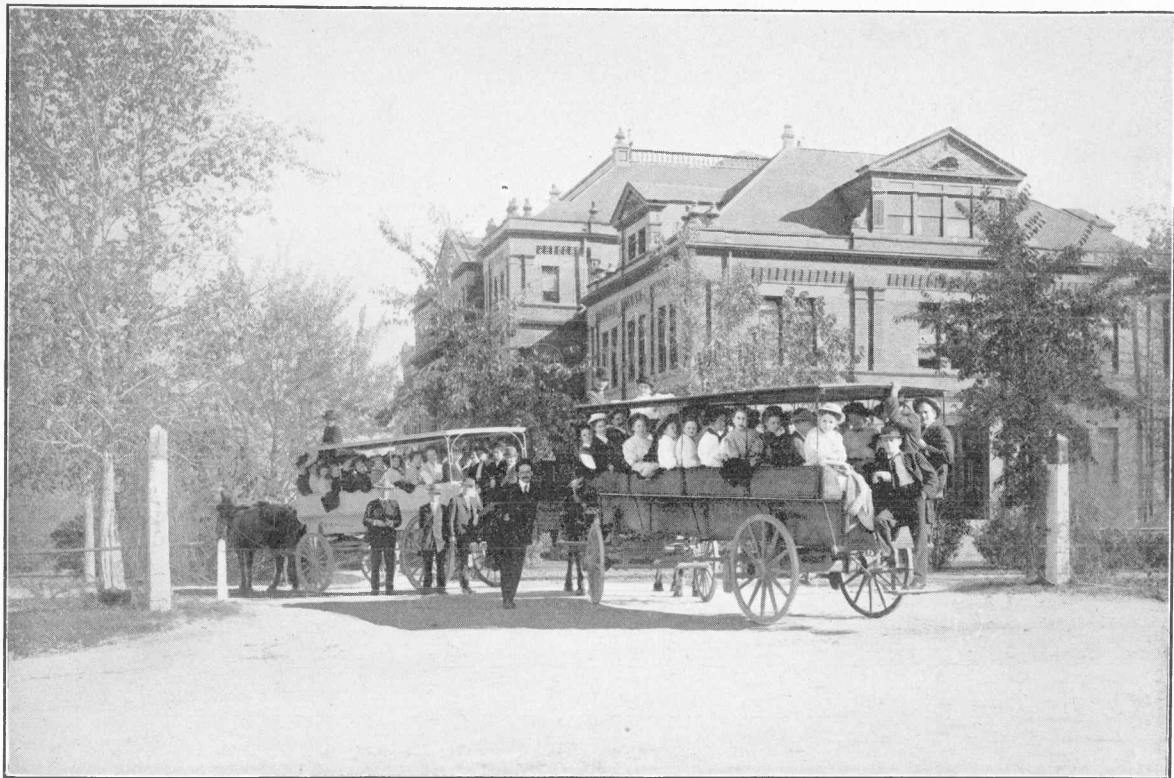
One of the prominent features of the summer session of the Normal School is the many excursions taken by students under the direction of members of the faculty. These excursions are conducted primarily for the purpose of gain-

ing information concerning objects which the student should know about; but they furnish a means of many pleasant outings, which are thoroly enjoyd by students and members of the faculty participating in them.

A few pictures giving typical scenes incident to the excursions are given in the following illustrations.



Library in Distance—Ninth Avenue.



Industrial History—Leaving for an Excursion.



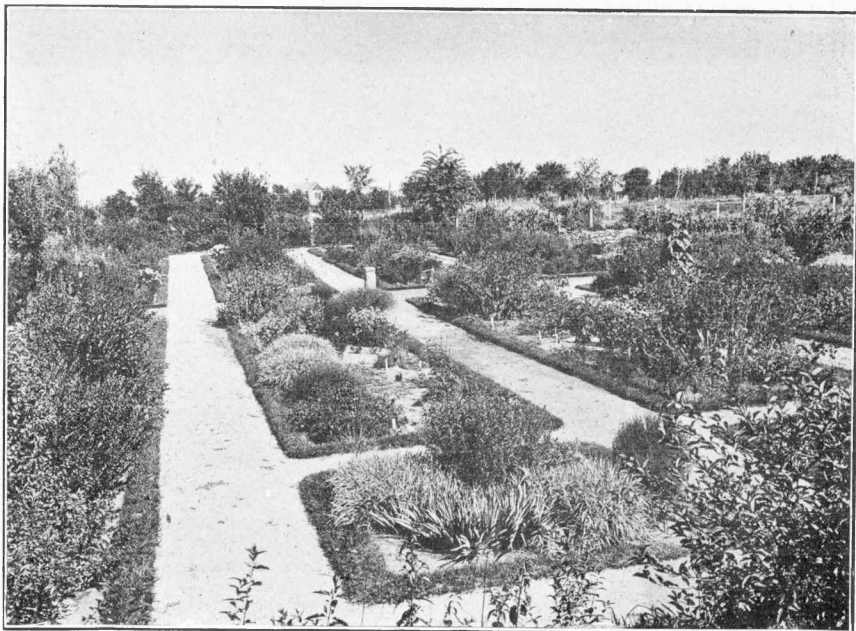
Kindergarten Class on Campus.



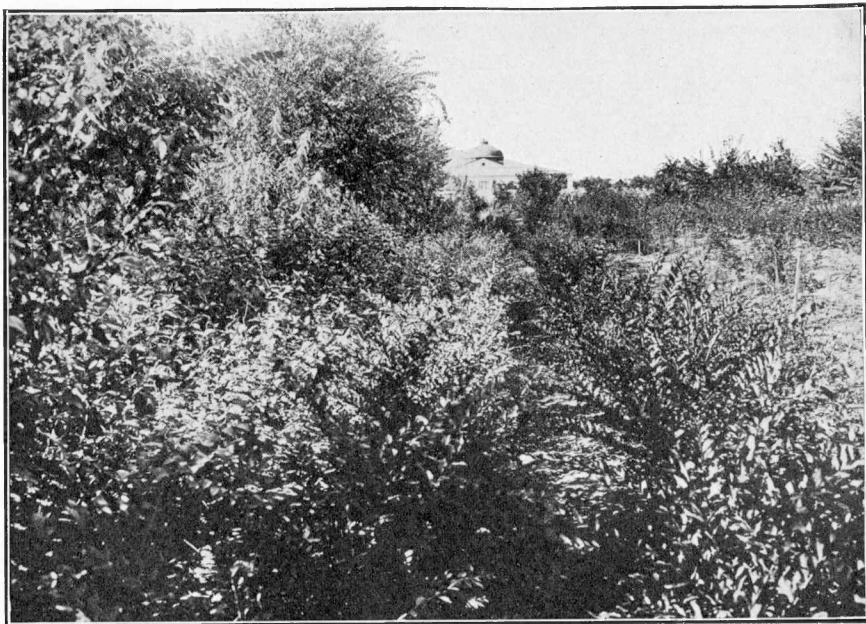
Playgrounds.



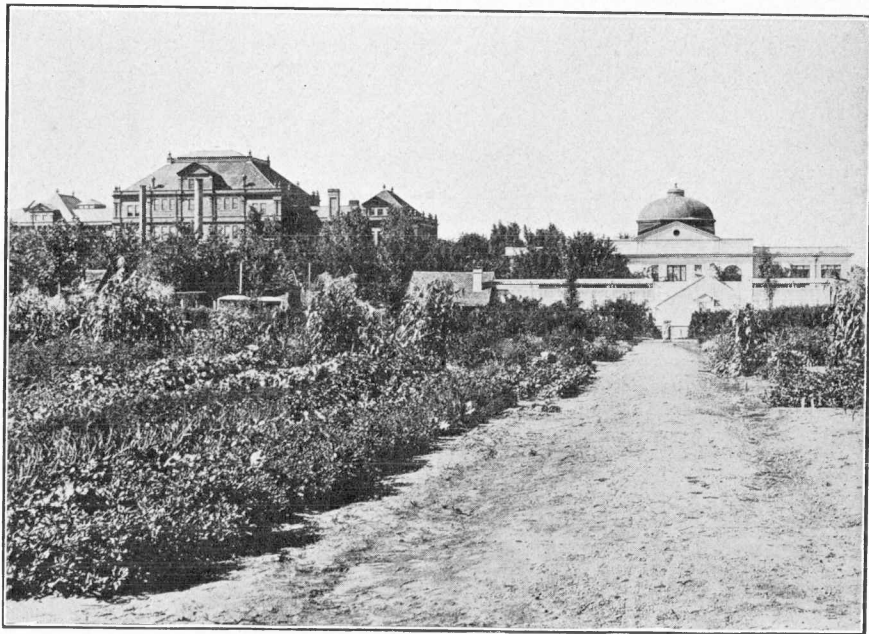
Italian Garden on Campus.



Formal Garden.



Nursery and Library.



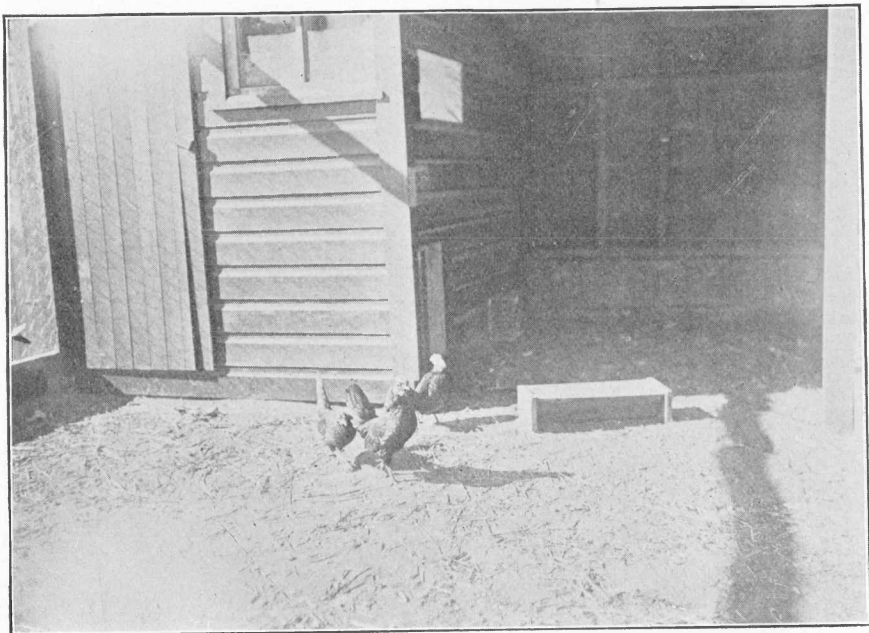
South View—Showing Green House and School Gardens.



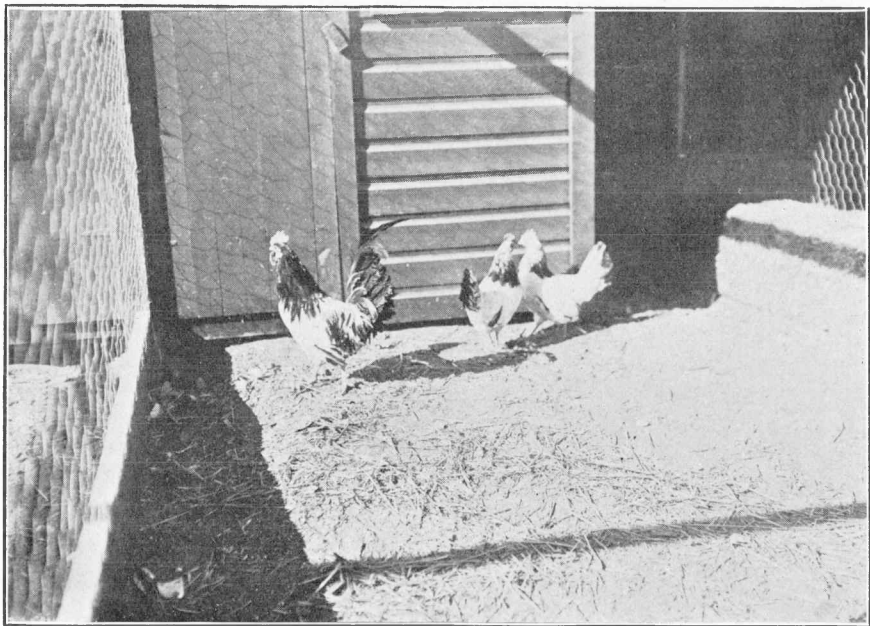
Italian Garden.



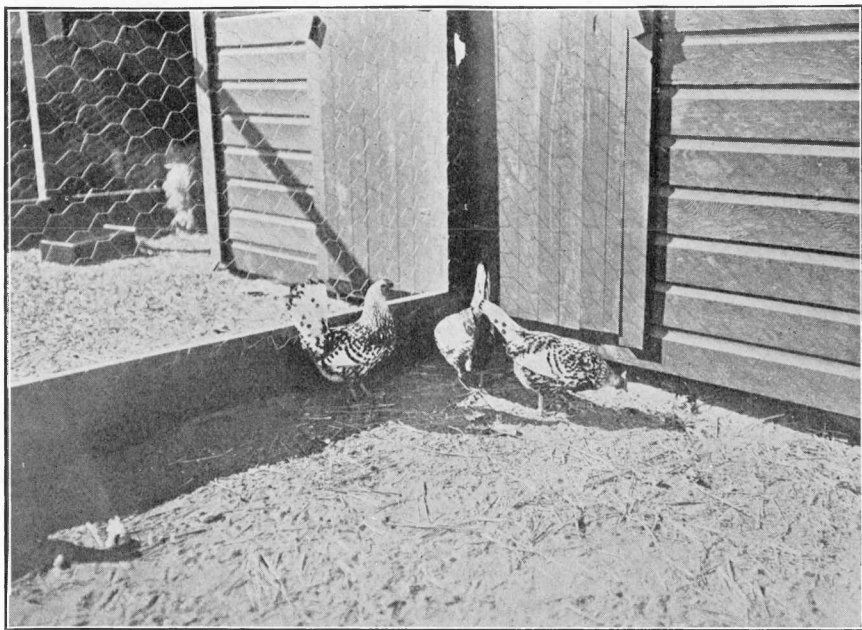
Basket Ball.



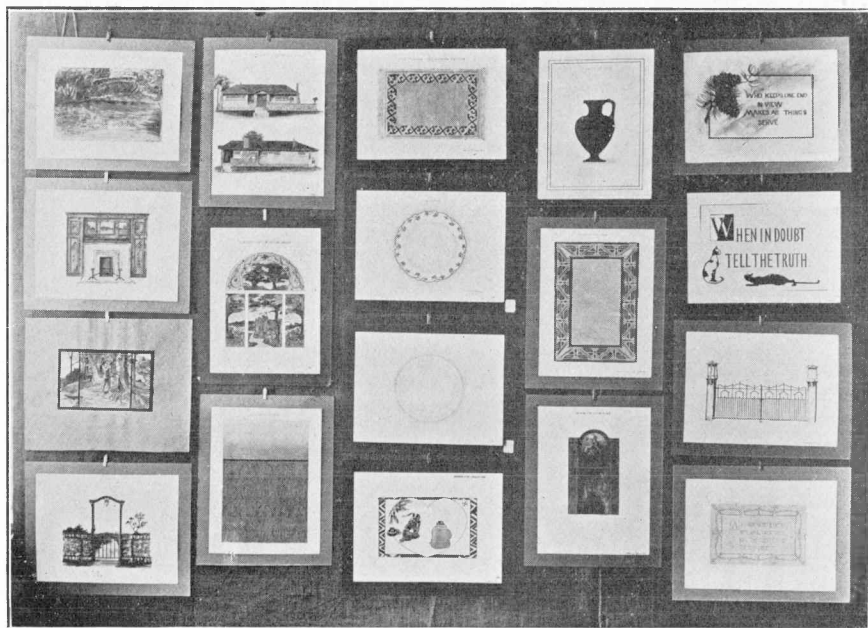
Elementary Agriculture—Poultry.
Golden Sebright Bantam.



Elementary Agriculture—Poultry,
Lakenvelders.



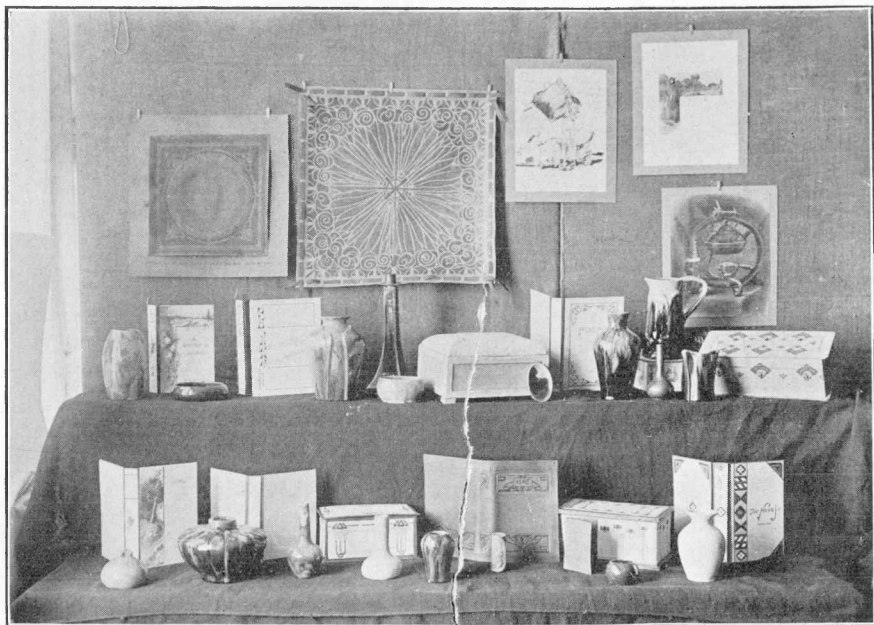
Elementary Agriculture—Poultry.
Silver Spangled Hamburgs.



Art Work.



Structural Work—Art Department.



Leather Work—Art Department.



State Normal
School
OF
Colorado



SUMMER TERM
1910

GREELEY, COLORADO



Summer
School
Bulletin

For

HIGH SCHOOL
TEACHERS



State Normal School of Colorado



**Announcement of Summer Term
Courses for High School Teachers**

Bulletin Series IX. No. 8.

**Publisht Quarterly by the Trustees of the State
Normal School of Colorado, Greeley, Colorado**

**In all publications of this institution is employd the spelling
recommended by the Simplified Spelling Board**

Enterd at the Postoffice Greeley, Colorado, as Second-class matter

ANNOUNCEMENT
TO
HIGH SCHOOL TEACHERS
OF
COLORADO

The Colorado State Normal School announces its Summer College Courses, leading to the degree Bachelor of Arts in Education.

Strong courses in Education for high school teachers or those preparing to teach in high schools will be given. They will include the following lines of work:—Advanced Educational Psychology with special reference to the high school child, Biotics in Education, Secondary School Problems and High School Administration, Modern Tendencies in Secondary Education, History and Comparativ Study of Secondary Education, Industrial Education in High Schools, and Educational Sociology.

Instruction will be given in all high school subjects: English and Literature, History, Latin, Modern Foren Languages, Sociology and Economics, Art, Mathematics, Chemistry, Physics, Biology, and other subjects.

All college classes will be conducted with special reference to the functioning of the particular subject in the high school.

The following educators of national reputation are now under contract for a series of lectures to continue thruout our summer session: G. Stanley Hall, Clark Universiry; M. V. O'Shea, Wisconsin University; Henry Suzzallo, Teacher's College, Columbia University; S. C. Schmucker, Westchester, Pa. Normal School; and W. M. R. French, Chicago Art Institut.

In addition to the lectures, class conferences will be given daily under the direction of these celebrated men.

We are offering at this summer session one of the richest opportunities ever presented to the high school teachers of the West.

All our regular Normal courses will be given in addition to these new college courses.

Our summer session opens June 21, and continues six weeks.

From one to five credits may be earned during the summer term.

Write now for our summer bulletin giving details.

Address,

THE STATE NORMAL SCHOOL,

Greeley, Colorado.

In the following pages we present a brief outline of Special Courses for High School Teachers and College Students. This is a brief summary of *special courses only*, and makes no mention of the great body of our summer school work.

Our regular Summer School Bulletin is an extended description of all courses and opportunities offered at our summer session. It will be a pleasure to mail you a complete bulletin at your request.

A Brief Outline of Special Courses for High School Teachers and College Students

Education

Course 18. *Biotics in Education.* Required of candidates for a college degree. This course deals with the facts of biological science, such as heredity and evolution, in their relation to the meaning, function, and aim of education.—President Snyder.

Course 19. *Advanced Educational Psychology.* Required of college students seeking recommendation for high school positions. Given in the Department of Psychology.—Dr. Irving E. Miller.

Course 20. *Secondary School Problems.* Required of college students seeking recommendation for high school positions. This course treats of the aims, curriculum organization, and the methods of instruction of secondary education.—Mr. Bullock.

Course 21. *Institutions and Organizations of the Secondary School.* Required of college students seeking recommendation for high school positions. This

course treats of the function and right conduct of the social organizations, literary Societies, general exercises and athletics of a well organized high school.—Mr. Bullock.

Course 22. *Evolution of the Secondary School System.* The history and comparative study of secondary education, with special reference to the interpretation of the function of the high school in the life of today.—Mr. Bullock.

Course 23. *Special Research Course.* Educational problems of special interest to the individual student may be investigated in the field of any department and be given credit in the Department of Education, if in the judgment of the head of the department concerned and the dean of professional work, the student is qualified to pursue original investigation with profit.—Dr Irving E. Miller.

Course 24. *School Administration* The various problems of administration will be discussed by superintendents actually engaged in the work of supervision.

Course 25. *County Supervision of School.* A course for county superintendents. It will discuss systems of supervision in foreign countries and in America, take up a consideration of the problems of the rural and village schools of the West, and suggest means of solving them.—State Superintendent, Mrs. Katherine M. Cook.

Course 26. *Bacteria, Prophylaxis and Hygiene.* This is a course explaining the causes and the methods of preventing diseases, with special reference to the life and interests of this school.—Mr. Beardsley.

Course 27. A Lecture Course by Prominent Educators. A course of lectures by G. Stanley Hall, M. V. O'Shea, Henry Suzzallo, S. C. Schmucker, and W. M. R. French. For particulars see our Summer School Bulletin.

Psychology

Course 3. Pedagogical Psychology. The aim of this course is to facilitate the application of psychological principles already familiar to the student to the definite and practical situations of the school-room. An effort is made to interpret various school subjects and methods from the standpoint of functional psychology and to consider in as many different ways as possible the helps which come to the teacher from psychology and experimental pedagogy.

Recommended to those college students who have never had courses in psychology designed especially for teachers, or whose work in psychology has not familiarized them with the literature of the past few years.—Dr. Waddle.

Course 6. Advanced Educational Psychology. This course treats of those aspects of psychology which throw more light upon the problems of high school teaching which grow out of the special characteristics of the mental, moral, and social life of the students of high school age.

Required of college students seeking recommendation for high school positions.—Dr. Irving E. Miller.

Course 7. Experimental Pedagogy. Those who have the requisit training are encouraged to take up special problems for investigation in connection with their teaching. The work can be done in part or wholly in non-residence. For a more detailed statement of the work required consult the regular annual catalog.

Biological Science

Botany

Course 3. Comparativ morphology and physiology of plants. A study of representativ plants of various groups, and of the fundamental principles of plant life and relationship.—Mr. Beardsley.

Course 2. Zoology. Invertebrate morphology.—Mr. Beardsley.

These courses are open to candidates for graduation in the Normal Graduate and Normal College courses and to high school teachers.

Birds and Mammals

Course 6. This course is adapted to the needs of the high school and treats of the birds and mammals in a popular way, with very little of the technical and more of their habits, environment economic value and activities. The common forms are studied carefully, especially those which are seen every day on the school yards and in the towns. The work gives a general knowledge of birds and mammals and something of their relationship. Lectures on evolution, protection, distribution, and other topics of interest.—Mr. Adams.

Agriculture

Course 4. Elementary Agriculture. This course is designed to fit teachers for teaching elementary agriculture in the high schools where the students have had some study of the sciences, as botany, zoology, chemistry, and physics. In addition to the consideration of the principles of agriculture, the principles of soil, plant and animal management, a brief study is also made of rural conditions as well, and a study of business and life of the country. Here the following topics are considered, viz: Agricultural economics, rural sociology, rural education, and agricultural education. Some practical work is given in greenhouse and field, and a few excursions are made.—Mr. Hochbaum.

Physics and Geography

Course 2. Advanced Physics. The work of this course consists of a study of electricity and radioactivity.—Mr. Abbott.

Course 3. Methods in Physics. Physics teaching has suffered greatly because Physics has been presented as so much ready-made knowledge and law.

In this course an attempt is made to show how Physics teaching may be made an efficient method of inquiry into the subject-matter.—Mr. Abbott.

Geography

Course 2. Physiography. The special emphasis of this course is put upon climatology.—Mr. Abbott.

Mathematics

Course 7. *Methods in Arithmetic.* New modes of presentation for the high school. The outcome of the application of higher mathematics to traditional material.—Dr. Halsted.

Courses 8 and 9. *College Algebra.* The usual work given in the first year of college and a treatment of the modern view-points for teaching algebra in high schools.—Dr. Halsted.

Course 10. *Trigonometry.* A college course with the late developments of graphics.—Dr. Halsted.

Course 11. *Analytical Geometry.* The Yale Course.—Dr. Halsted.

Course 12. *Differential and Integral Calculus.* The Oxford Course of Professor A. E. H. Love.—Dr. Halsted.

Course 13. *The Foundations and New Methods of Teaching Synthetic Geometry.*—Dr. Halsted.

History and Sociology

Course 1. *European History.* Medieval, social, economic, and political changes from 476 A. D. to 1520 A. D; Renaissance and Reformation.—Mr. Miller.

Course 4. *American History.* European background of American History; the Spanish and French in America; the English Colonies.—Mr. Miller.

Course 1. *Sociology, Anthropology, Primitiv Social Evolution.*

Course 2. *Principles of Sociology.* Modern Social Evolution.

Course 3. *Economic Changes.* Resultant adjustment in schools and society; Modern social reforms.

In the summer term, courses 1, 2 and 3 in Sociology are organized as seminar courses.—Mr. Miller.

Latin and Mythology

Course 1. *The Teaching of Latin.* This course is planned for high school teachers who desire help in securing a greater interest in their classes. The problems of the high school teachers will be thoroughly considered, and such helps will be offered as have been tested and found efficient.—Mr. Hays.

Course 2. *Readings from Horace, Cicero, Tacitus or Livy.*—Mr. Hays.

Course 1. *Mythology.* Reading and systematic study of Greek, Latin, and Norse mythology.—Mr. Hays.

Modern Foreign Languages

Course 1. *Elementary German.* For beginners. An introduction to the living language. Pronunciation, grammar, oral practice, reading—Dr. Gideon.

Course 4 or 7. German Reading. For students whose previous knowledge of the language will enable them to appreciate texts of literary merit.—Dr. Gideon.

Courses in French. Courses in French, analogous to those offered in German, are given, provided classes can be organized.—Dr. Gideon.

Literature and English

Course 10. Nineteenth Century Poetry. From Wordsworth to Tennyson.—Mr. Cross.

Course 16. Materials and Methods for a High School Course in English. This includes also a study of some of the more difficult pieces given in the last year of the high school course, applying modern methods.—Mr. Cross.

Reading and Literary Interpretation

Course 1. The Evolution of Expression. The ends of this course are: (a) discipline in constructive reading, in the discerning analysis of a piece of literature as an art unit; (b) personal culture through an approximately adequate response (vocal, bodily, imaginative, emotional, and volitional) to a wide range of beauty and truth in literature.—Miss Tobey.

Music

Course 12. High School Music. The aim of this course is to acquaint the teacher with the best

material for high school choruses, glee clubs, chapel exercises, and class work.

The different phases of music in its relation to secondary education and the college curriculum, with reference to present-day problems.—Mr. Fitz.

Art

Course 10. A course in planning and executing in art and handcrafts for teachers in high schools, consisting of advanced pictorial art. The principles of scientific perspective and constructive drawing as correlated with applied and industrial design. Its concrete application in cardboard construction, leather-tooling, clay-modeling.

Manual Training

Course 2. Advanced Joinery. This course deals with the problems that would enter into a course designed for high school classes.

The following problems are discussed: the relation of wood work to the curriculum; the general practice in high school courses; the fundamentals that underlie the organization of such courses; and finally the testing of the suggested plans by means of actual bench work.—Mr. Hadden.

Course 7. History of Industrial Education. This course deals with the history of industrial education, including the general movement, beginning, the relation of hand work to the elementary and high school

curricula, the vocational schools, and studies in their relation to our secondary schools.

A general discussion of the best practices of the leading countries of the world in elementary, high, and industrial schools.—Mr. Hadden.

Physical Education

Every high school teacher is familiar with those faults in posture which young people who are growing rapidly develop. In order that such teachers may be able to present intelligent remedies for these conditions a course in the methods of Correctiv Gymnastics will be given. Since Kinesiology affords a scientific basis for all work in Swedish Gymnastics it will be given in connection with the correctiv work.

Course 6. Correctiv Gymnastics and Kinesiology.—Mr. Lister.

Work of Non-resident Teachers

A course of lessons will be given by Dr. G. Stanley Hall, President of Clark University; by Dr. Henry Suzzallo, Teacher's College, Columbia University; by Prof. M. V. O'Shea, Professor of Education, Wisconsin University; by Dr. S. C. Schmucker, Professor of Biology, Westchester, Pa., State Normal School, and by Dr. W. M. R. French, Director of Art Institute, Chicago. A course given by these men will run throughout the term, and also a course of conferences will be given by them during the entire term.

They will cover the work of all grades from the kindergarten to the high school inclusiv.

Below are general outlines of their work:

DR. W. M. R. FRENCH,
Director of the Art Institute, Chicago

The inspiring work of Mr. French will be made concrete so as to be most helpful to the every-day teacher.

1. Truth, Beauty, and Expression.
2. Formal Composition or Arrangement.
3. Analogy between Literary composition and
4. Pictorial Composition.
5. Light and Shade.
6. Color and Expression.
7. A knack of Drawing, Natural or Acquired.
8. The Value of a Line.
9. The Caricaturist.
10. Conventional Art in Pictures and Decoration.

DR. S. C. SCHMUCKER,
Professor of Biological Science, Westchester, (Pa.) State
Normal School

The work by Doctor Schmucker will center about the general subject of the gradual development of the higher animals and plants out of the lower. Illustrations will be largely chosen from familiar forms, and a subject usually considered abstruse will be made clear and, it is hoped, convincing. The subjects will be

1. A Naturalist in the Making.
2. The Finishd Scientist.
3. His Master Idea.
4. Down through the Past.
5. A Glorified Reptil.
6. What a Chicken can teach us.
7. Life History and Race History.
8. The Humming Bird's Story.
9. The Mind of the Apes.
10. Science and the Book.

G. STANLEY HALL,

President of Clark University

Dr. Hall's work will center about the child and life. His work is easily the greatest work done by any one in these subjects. He is a great inspiration and uplift.

1. New light on the Kindergarten.
2. The Present Status of Religious Education.
3. Moral Education (in France, Japan—the various schemes, including pupil self-government, and the juvenil court.)
4. Children Lies—What they mean and how to deal with them.
5. Dancing, Gesture, Pantomime—Their educational place and value.
6. The Present Problem of Education in Sex—What has been done in this country and others.
7. The National organization for Child Welfare (organized at the Clark University last summer on a national basis, now including more than two score child welfare organizations.)

8. The Social Survey—Its development and meaning.

9. The Child Study Institute (for collecting, diffusing and increasing the scientific knowledge concerning childhood.)

10. The Budding Girl and the Boy in the Teens.

11. Story Telling and the Juvenile Theatre.

12. Some defects in our Education System.

13. Sex in Education.

14. The Education of the Heart.

15. Science, Mathematics, English and Literature, Language, Industrial Education, and Art in the Schools.

DR. HENRY SUZZALLO,

Professor of Education, Teacher's College, Columbia University

Dr. Henry Suzzallo is one of the most accurate and brilliant educational men in the country. He is a powerful and interesting teacher. He teaches. His work will grow out of the following subject. The child in life is the central thought. He follows the child into the kindergarten, thru the elementary and high schools, and into life as a social participating citizen.

1. Education and Life.

2. Social Service.

3. The School and Social Institutions.

4. Individualize and Socialize the Child.

5. Our Institutional Life, Home, School, State, Church.

6. The course of Study and Life—Elementary and Secondary.

7. The relation of secondary and elementary schools.
8. The High School Curriculum.
9. Industrial Education.
10. The Teacher.
11. The Solution of Problems that vex Teachers, (in conference.)

DR. M. V. O'SHEA,

Professor of Education in Wisconsin University

There are but few men in the country who are masters of their subjects as Prof. O'Shea is master of his. He is a leader in his line. He is particularly able to show the application of modern theory. His "Education as Adjustment" is one of the rare bits of pedagogical literature. His work will be centered about the following:

1. Suggestion in Education.
2. Education and Changing Social Conditions.
3. Education for Efficiency.
4. Mental Disciplin in Education.
5. Values in School Education.
6. Adolescence.
7. The Development of Self Control in the Individual.
8. Social Development and Education.
9. Highways of Mental Growth.
10. The Problems of Contemporary Education.

Write for Our Complete Summer School Bulletin.

Address
THE STATE NORMAL SCHOOL
Greeley, Colorado

THE STANDARD



PRINTING CO.

GREELEY, COLORADO

State Normal School of Colorado

GREELEY, COLORADO



Preliminary Announcement of the Fall Term

In all publications of this institution is employed the spelling
recommended by the Simplified Spelling Board

Bulletin Series IX. No. 9.

Published Quarterly by the Trustees of the State Normal
School of Colorado, Greeley, Colorado.

Entered at the Postoffice, Greeley, Colorado, as Second-class matter

OPENING.

The fall term of the State Normal School of Colorado, Greeley, Colorado, opens September 13, 1910.

FUNCTION

The State Normal School of Colorado is a school for the preparation of teachers for the public service. It prepares teachers for the kindergarten, elementary school, high school, and all the various special teachers, such as manual training, art, music, kindergarten, physical education, elementary agriculture, domestic science, modern languages, etc.

ADMISSION

1. All who enter must give evidence of good moral character.
2. An applicant for entrance must be free from any contagious disease that might endanger the students of the school.
3. High school graduates, or those having an equivalent education, enter the Junior year for the Normal Course, or the Freshman year for the Normal College Course without examination.
4. Graduates of Normal Schools or Colleges may enter the Normal Graduate course without examination.
5. Graduates of Normal Schools may enter the Junior year of the Normal College course without examination.
6. Graduates of Colleges may enter the Senior

year of the Normal College course without examination.

7. Practical teachers who have not had high school training may enter, and such work be taken as will prepare them for the regular course.

SCHOOL YEAR IN TERMS.

There are four terms in the school year: the fall, the winter, the spring, and the summer terms.

The fall, winter, and spring terms average twelve weeks; the summer term is six weeks long, but the time in recitation is doubled, enabling the student to get term course credits.

UNIT OF CREDITS.

A *term course* is five recitations a week, or its equivalent, for twelve weeks.

COURSES OF STUDY

I. *Regular Courses leading to licenses to teach and degrees in the Colorado State Normal School are of three kinds:*

1. Normal course.
2. Normal Graduate course.
3. Normal College course.

II. *Degrees and Diplomas:*

1. The Normal course leads to the degree of Bachelor of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

2. The Normal Graduate course leads to the degree of Master of Pedagogy and a diploma, which is a license to teach for life in the public schools of the state.

The Normal College Course leads to the degree of Bachelor of Arts in education and a diploma, which is a license to teach for life in the public schools of the state.

III. *The work of the courses:*

A THE NORMAL COURSE.

1. Thirty term courses are required for graduation. Eleven of these are required in professional work, viz.:

Three term courses in Psychology and Pedagogy.

Three term courses in Education.

Three term courses in Teaching.

One term course, in the Junior year, in observation and preparation for teaching.

One term course for conference, etc., in the Training School in the Senior year.

2. Nineteen of these thirty courses are elective, selected from the following subjects:

a. Art—Drawing, water color, oil, pottery.
work, foundry work, basketry, etc.

c. Domestic Science—Cooking, sewing, chemistry, sanitation.

d. Vocal music.

e. Modern Foreign Languages—German, French, Italian.

f. Ancient Classics—Latin.

g. History—Greek, Roman, Medieval and Modern, American.

h. Literature and English.

i. Physical Sciences—Physics, chemistry, geology, geography.

j. Sociology.

- k.* Kindergarten.
- l.* Biology—Nature study, histology, botany, zoology, elementary agriculture.
- m.* Mathematics—Arithmetic, algebra, geometry, trigonometry, analytics, calculus.
- n.* Interpretation—Reading, dramatic art.
- o.* Psychology—Experimental pedagogy, child study.
- p.* Education—Philosophy of, science of, art of, history of.
- q.* Physical Education—Physiology, gymnasium, field, play grounds.

B. NORMAL GRADUATE COURSE

The requirements for the Normal Graduate course shall be twelve term courses in addition to what is required for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

C. NORMAL COLLEGE COURSE.

Requirements for the Normal College course are twenty-four term courses in addition to what is required for the Normal course, beside any additional work assigned in the training school. The work of this course is elective.

D. NORMAL SPECIAL COURSES.

Beside the above regular Normal courses, there are Normal Special courses leading to graduation and diplomas in Kindergarten, Physical Education, Manual Training, Domestic Science, Art, Music, Modern Foreign Languages, and Elementary Agriculture. These diplomas are licenses to teach.

1. The work required for the special diplomas

shall be selected by the heads of the departments offering such diplomas, subject to the approval of the Executive Committee, provided that this work, including electives, is equivalent to nineteen term courses in addition to the professional work required in the Normal course, of which at least six term courses shall be given by the department offering the diploma.

2. No student shall receive two diplomas until he shall have completed at least ten term courses in addition to what is required for either diploma, and has done sufficient teaching to satisfy the training department in regard to his ability to teach both kinds of work acceptably.

3. When these special courses are fully completed, the student receives a degree and a diploma of the same value and standing as in the other courses.

REQUIRED AND ELECTIVE WORK

1. The professional work is required; viz: Psychology, pedagogy, education, teaching, observation, and conferences—in all, eleven term courses.

2. All other work is elective—in all, nineteen courses.

3. No student may, without the approval of the proper faculty committee, take less than one term course nor more than three term courses in any subject, nor more than six term courses in any department.

4. Two-thirds of the courses for advanced degrees shall consist of advanced courses. Advanced courses are indicated in the catalog by a *.

5. Candidates for advanced degrees select at least three courses a year in some one department in

which they are specializing. They may select as many as six courses a year in that department.

VALUE OF GRADUATION

The institution trains one to do his work better, to get more joy out of the teaching life, to live his individual life better and more profitably, and, above all, to render better service.

It also grants diplomas and educational degrees. These diplomas are licenses to teach in the public schools of Colorado for life.

No person is prepared to teach school intelligently who has not had the training in the Normal.

ADVANTAGES OF THE NORMAL

1. An able and well trained faculty of experts.
2. A first class equipment in the way of library, museums, laboratories and other apparatus such as is needed to do first class work.
3. A thoroughly organized training school from the kindergarten to the high school inclusive, where teaching is done by all who graduate.
4. The teacher's professional training school for his work. The teacher gains his scholarship, his professional training, his teaching spirit and his educational spirit here.
5. It is the only teacher's school that gives professional standing.
6. It is valuable because more can be earned. The person who is trained is in demand at a higher salary than the one who is not trained.

7. The school is located at Greeley, Colorado, a beautiful town of about 10,000 people.
8. About two thousand have graduated from the State Normal School of Colorado; they are in demand. There are more calls for teachers than can be filled.

BUILDINGS

The buildings are large, commodious and up to date. Two new buildings are under construction; a training school and a building for industrial arts.

CAMPUS

There is a most beautiful campus, forty acres of it. There are formal gardens,—forestry gardens, landscape architecture, vegetable gardens and green houses.

The school opens September 13, 1910. Write for catalog if interested.

Address

THE STATE NORMAL SCHOOL,
Greeley, Colorado.









STATE NORMAL SCHOOL
BREEFEY

