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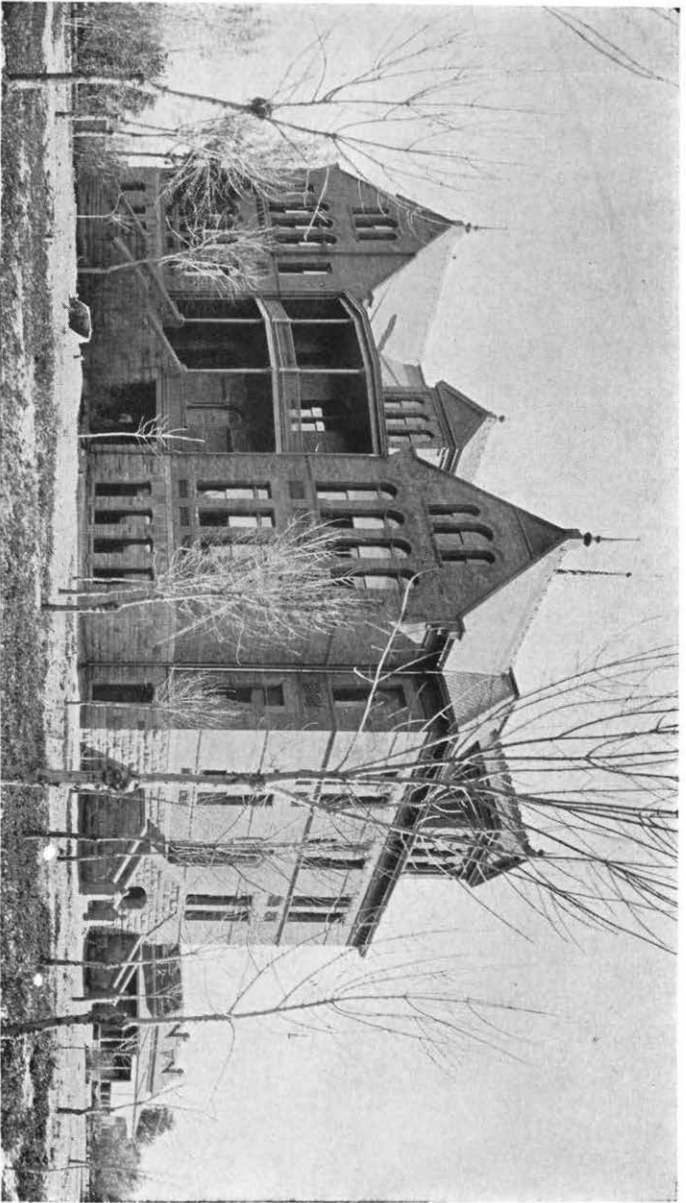
NORMAL SCHOOL OF ARIZONA



1900



ARIZONA NORMAL SCHOOL.



THE NORMAL SCHOOL OF ARIZONA.

ANNUAL CATALOGUE
OF
THE NORMAL SCHOOL OF
ARIZONA
AT
TEMPE, ARIZONA,
FOR THE
SCHOLASTIC YEAR 1899-1900,
WITH
ANNOUNCEMENTS FOR 1900-1901.

PRESS OF THE REPUBLICAN,
PHOENIX, ARIZONA.

CALENDAR FOR 1900-1901.

1900.

First Semester begins	September 4
Entrance Examinations	September 4, 5
Registration Day.....	September 6
First Quarter ends	November 9
Second Quarter begins.....	November 12
Thanksgiving Vacation	November 29, 30
Holiday Vacation begins	December 22

1901.

Holiday Vacation ends.....	January 1
First Semester ends.....	January 25
Second Semester begins.....	January 28
Washington's Birthday	February 22
Third Quarter ends.....	April 4
Fourth Quarter begins.....	April 8
Memorial Day	May 30
Anniversary and Commencement Exercises	June 10, 14

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MANUAL ARTS, CIVICS AND BOOK-KEEPING.

THE NORMAL SCHOOL OF ARIZONA.

TEMPE.

LOCATION.

The Normal School of Arizona owes its existence to an act of the Territorial Legislature, approved March 10, 1885. It is located at Tempe, a city of 1200 inhabitants, nine miles from Phoenix, the capital of the Territory. It has railroad connections with the Southern Pacific and the Santa Fe systems by the Maricopa and Phoenix and Salt River Valley R. R.

The climate during the whole school year is delightful. The school is located in the midst of an intelligent and moral community, engaged in farming and fruit raising. The buildings are of the latest design, provided with all the modern conveniences, well adapted to school purposes and pleasantly situated. Six church societies hold services in this city.

DEPARTMENTS.

The school is organized in three divisions, the Normal, the Sub-Normal and the Training. The Sub-Normal course consists of two years, and only those are admitted to it who have done an amount of work equivalent to that taken in the first seven grades of the Public Schools. The Normal department consists of a three years' course, one-third of which is devoted to strictly professional instruction. The Training department is an adjunct to the Normal proper, and is designed to give the members of the senior class actual practice in teaching.

DESIGN.

The legislative enactment which established this Normal School (Chap. III, Par. 2515, Sec. 1, Code of Arizona) provides that instruction shall be given in the "art of teaching," and also "in all the various branches that pertain to a good common school education;" also "in the fundamental laws of the United States. and in what regards the rights and duties of citizens." An examination of the present course of study will show that the legislative intent has been carefully observed.

COURSE OF STUDY—TABULAR VIEW.

SUB-NORMAL COURSE.

FIRST YEAR		SECOND YEAR			
SEMESTER B	SEMESTER A	SEMESTER B	SEMESTER A		
Arithmetic 5	Arithmetic 5	Arithmetic or Algebra 5	Algebra 3		
U. S. History 3	Civics 3	General History 4	General History 3		
Geography 2	Geography 2	Book-Keeping 5			
Grammar 3	Grammar 3	Rhetoric 3	Rhetoric 3		
Composition 2	Composition 2	Composition 2	Composition 2		
Word-Work 1	Word-Work 1	Word-Work 1	Elocution 1		
Reading 3	Reading 3	Elocution 1	Physical Geography and Geology 5		
	Elocution 1	Zoology 3			
	Drawing 2	Drawing 2	Drawing 2		

NORMAL COURSE.

JUNIOR YEAR		MIDDLE YEAR		SENIOR YEAR	
SEMESTER B	SEMESTER A	SEMESTER B	SEMESTER A	SEMESTER B	SEMESTER A
Arithmetic 5	Algebra 5	Algebra 3	Geometry 5	Geometry 5	Methods in Mathematics 5
English History 3	U. S. History 5 (Seminary)	Science of Government (Seminary) 2		Practice Teaching 5	English Criticism 5
General History 2	English Literature 3	English Literature 3	American Literature 3	History and Philosophy of Education 5	Methods in History 2½
Advanced Rhetoric 3	Grammar 2	Grammatical Analysis 2	Master-pieces 2	Logic and Ethics 3	Reading 2½
Grammar 3	Grammar 2	Chemistry 5	Physics 5	Advanced Psychology 3	Geography 2½
Elocution 2	Physiology 5	Psychology 5	Pedagogy 5	Drawing 2	Grammar 2½
Botany 5	Drawing 2	Drawing 2	Drawing 2	School Law and School Economy 5	School Law and School Economy 5
Drawing 2	Drawing 2	Drawing 2	Drawing 2	Practice Teaching 5	Practice Teaching 5

Music, Physical Culture and Military Drill throughout the Course.

The figures show the number of recitation periods.

ANALYSIS OF COURSES OF STUDY.

DEPARTMENT OF ENGLISH.

AIM.

The general aim in the instruction in English is to secure accuracy and facility in the expression of thought. It is of fundamental importance that those who are to teach others the correct use of English should themselves have acquired sufficient skill to enable them to set the example. And this skill applies not only to spoken language, but to written discourse as well. To be able to speak correctly one must be logical in his thought, skillful in his selection of words, correct in his pronunciation, grammatical in the construction of his sentences, and should possess a well trained voice. To be able to write correctly one must have in addition a thorough knowledge of the forms of words, of their derivation, of their idiomatic use, and of those niceties of expression which add force and beauty to his composition. It is recognized that even a reasonable degree of perfection in all these respects cannot be attained, except by constant drill, extending not over a single year, but over a series of years; and while each particular division of this subject may emphasize some one phase of the work, yet the general aim is not lost sight of in the methods employed at any point in the course.

READING AND ELOCUTION.

In order to become a good reader three things are necessary, viz.—a mental preparation, a knowledge of the mechanism of the printed page and an elocutionary training that will enable the reader to express the thoughts of the author when they have once been grasped. In the formal reading class of the first year in the Sub-Normal the first two of these objects are made especially prominent. The instructor takes note of the pupil's stock of ideas, available in the study of the selection; adds such other and further information as may be found necessary; sees to it that the pupil can pronounce the words correctly; calls attention to the grammatical and rhetorical pauses; and, the ground being thus prepared, endeavors to secure a proper and an adequate expression to the thoughts of the author.

The elocutionary aim of reading is to lead the student to grasp the thoughts symbolized on the printed page as real entities

and living truths ; to intensify mental pictures by exercising the imagination ; to cultivate the voice by proper drills designed to give it greater power, scope and accuracy of modulation ; to train the ear to a nice discrimination of tones ; to render the muscles submissive to the mind in expressing thought and feeling by attitude, gesture and facial movements ; and by thus rendering the thought and sentiment of the selections, to cultivate a taste for the best literature.

One hundred and twenty periods are devoted to reading as above described and sixty to elocution. Besides this, as general rhetoricals, each pupil will be required, at some time during the year, to deliver in the presence of the whole school, a selection, either original or otherwise as the case may be, and which must have been carefully rehearsed under the supervision of the special teacher of elocution.

TOPICS FOR STUDY IN ACADEMIC WORK.

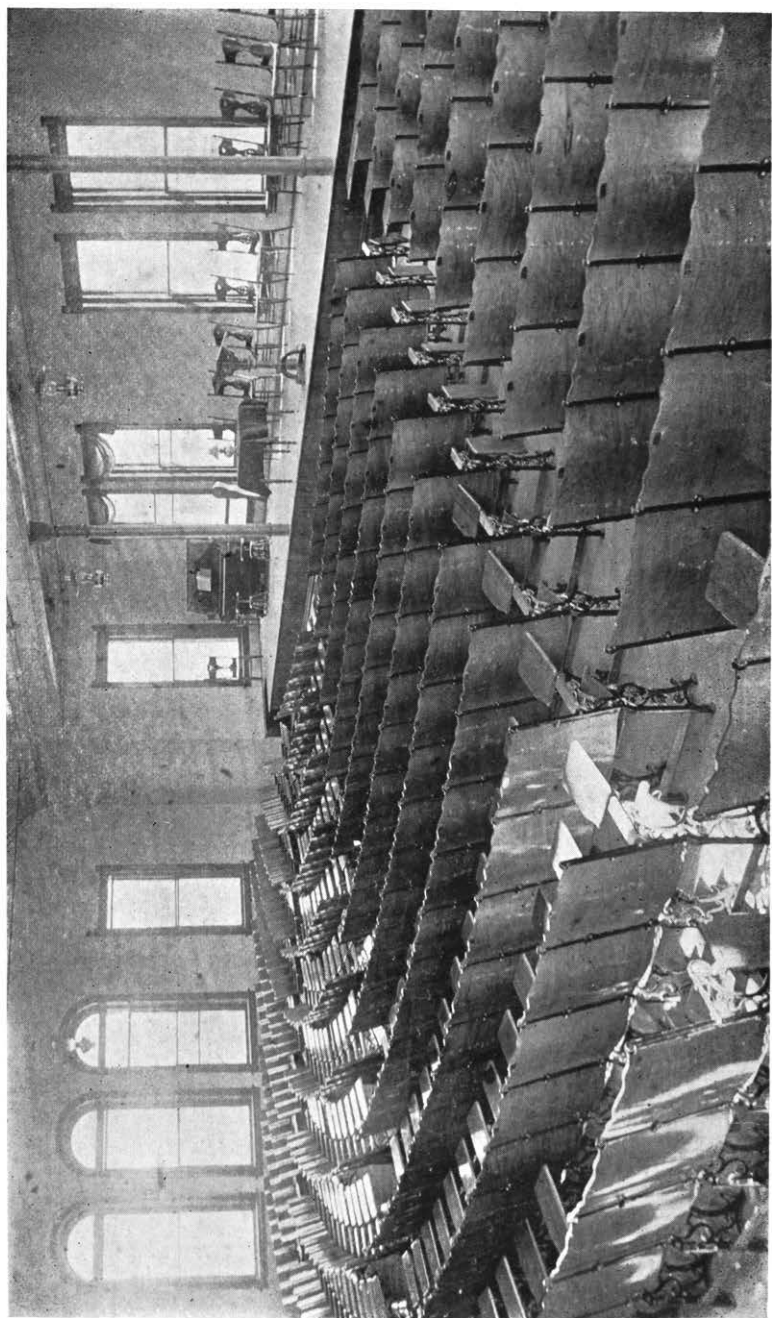
Carriage and attitude of the body ; breathing exercises ; vocal elements of language ; articulation ; enunciation ; pronunciation ; force ; pitch ; quality of tones ; effect of imagination on expression ; effect of mental states on expression ; cultivation of mental states ; relation of voice and gesture ; expressive use of body.

TOPICS FOR DISCUSSION IN METHODS FOR PRIMARY GRADES.

Primary reading methods—phonic, phonetic, alphabetic, synthetic sound, word, sentence ; selection of the available features of all these methods, and the proper combination of them to produce the best results in first reading ; what words to present first to the child ; how to present new words ; how to impress them ; what a primary reading lesson ought to comprise, and what not ; how to remedy drawing, lisping and repeating ; how to secure natural tones, fluency and correct expression ; sense reading ; use of objects and pictures ; use of blackboard and charts ; hunting exercises ; seat work ; manner of teacher ; connection between reading and spelling, between reading and writing.

FOR HIGHER GRADES.

Kind of reading suitable for the different grades ; assignment of lesson ; preliminary exercises ; preparation of lesson by teacher, by pupil ; illustrative reading by teacher ; sight reading ; things to be avoided ; correction of errors, time for, manner of ; correct vocal expression—what it consists of, how it may be obtained ; illustration of muscular movements to intensify expression ; application of psychological principals.



AUDITORIUM.

SPELLING AND WORD ANALYSIS.

To be able to spell correctly those English words which are in common use is one of the marks of good scholarship. This ability, desirable in every case, is, however, an indispensable requisite on the part of a teacher. Doubtless much of the knowledge of the forms of words must be gained by that particular kind of memory training called visualization, still even this process can be greatly assisted by frequent written exercises, by the analysis and synthesis of words and by the study of their meanings as revealed by their derivation and history. The amount of time assigned to class-room work in spelling and word analysis is sixty recitations; but it is not intended that any paper, even if but a written lesson, shall be accepted until all errors in spelling shall have been corrected.

TOPICS FOR DISCUSSION IN METHODS.

Forms of words; power of letters; accent; syllabication; capitalization; diacritical marks; roots and affixes—Latin, Greek, French, Italian, Spanish, Anglo-Saxon, miscellaneous; rules for spelling.

TOPICS FOR DISCUSSION IN METHODS.

Spelling—phonic, alphabetic, written, oral; the selection of words; the spelling book; development and use of rules for spelling; the written lesson; spelling in the several grades of the common school, manner of conducting it in each, time devoted; the spelling reform; use of the dictionary; analytic process; use of the laws of memory; visualization; plans for awakening and sustaining interest.

GRAMMAR.

The course of study with reference to grammar has been arranged with a view to the needs of two classes of pupils—first, those who have no sufficient knowledge of the framework of the language; and, second, those who have mastered the elementary principals. In the first case the fact side of the subject is emphasized. Words, phrases, clauses and sentences are classified and arranged into closely defined groups, after which each group receives its proper name as determined by its characteristics. The method of presentation will be inductive in the first instance, and then deductive. This class of work will be confined principally to the first year and 120 lessons will be devoted to it.

The grammar of the Junior year, which will consist of 80 lessons, will deal mainly with the relation side of the subject.

Grammar as a science will be differentiated from other and kindred language sciences. The sentence as the unit of the science, the parts of the unit, the combination of the units into different kinds of sentences, as determined by their form and meaning, and the logical interdependence of sentences will be carefully considered.

In the Middle year 40 lessons will be devoted to the application of the principles of grammar to the various forms of English composition. It is expected that the student, from a careful study of authorities, will be able to reconcile statements apparently inharmonious; to construe idiomatic expressions; to discover the laws governing the participial and infinitive constructions; and to discuss the nature and application of the relative pronoun, and the relative and conjunctive adverb. It is intended that this course in grammatical analysis shall form a thorough test of the student's knowledge of the science of grammar.

TOPICS FOR STUDY IN ACADEMIC WORK.

The sentence considered—(a) as composed of elements, the symbols of ideas and relations; (b) as to the number of propositions and the rank of clauses. The elements of the sentence classified as to use and as to number of parts; modifications of the parts of speech; proper use of tense forms; application of the principles and rules of etymology and syntax to sentences in connected discourse; sentences in discourse treated as to their logical relations.

TOPICS FOR DISCUSSION IN METHODS.

Development of ideas of parts of speech and of their accidents; development of rules; graphic representation of relations of parts of speech in the sentence; value and limitation of parsing, of oral analysis, of diagrams; relation of grammar to logic.

COMPOSITION.

The ability to read and write the English language with facility and accuracy is so important to the future teacher that its proper use, both in oral and written discourse, should at all times and everywhere be insisted upon. Accordingly written exercises, whether they come in the form of examination papers or as a regular essay, are carefully criticised with reference to the use of English. It is the office of composition to present the principles and rules by which the different forms of discourse are constructed from sentences. In grammar, the sentence is the integral unit which is to be separated into its elements; in composition, the sentence is but a component element of discourse. In the one we seek to discover the rules by which we may test the correctness of

construction; in the other we seek to use language correctly. In the Sub-Normal 160 lessons are devoted to the direct study of composition in its more elementary form; in the Normal department the subject is pursued in connection with rhetoric and grammar and in the higher forms of English criticism.

TOPICS FOR STUDY IN ACADEMIC WORK.

Sentences of each class treated as capitalization, punctuation, arrangement of elements; as to their logical relations, and as to their use in the paragraph. The paragraph considered as the type of written discourse, with special reference to unity of subject matter, variety in the use and construction of sentences, and clearness of style.

TOPICS FOR DISCUSSION IN METHODS.

Language lessons—object of, time devoted to, kinds, material from nature, material from literature; lesson-giving plans for, preparation for; use of pictures, connection of language lessons with primary reading; proper form of written work, its illustration, method of securing it; object of composition; awakening and sustaining interest; correcting errors; text-books, first use, manner of using; connection of composition with literature.

RHETORIC.

Rhetoric is the science which treats of those principles that underlie connected discourse. It is both an art and a science. Considered as an art, its more elementary principles form the basis of composition; as a science, rhetoric seeks to classify and arrange the laws of discourse. The pupil is first assisted in finding a subject of thought, and is then shown how to accumulate, arrange and express the ideas connected with the theme. The learner is conducted, step by step, through the entire work of writing a composition, including the selection of a subject, the accumulation of materials, the arrangement of materials, the choice of words, the use of figures, the variation of expression, the preparation of the manuscript, the criticism of the complete production, and the classification of it as a specific form of composition. The point of view kept in this branch throughout is, that the study of rhetoric is the constructive study of literature, and the examples adduced at every point aim to show the usages of the best writers. To cultivate observation, ease of expression, and regular habits of work, many themes will be given, advancing by easy steps and from simple description to exposition and the construction of argument.

TOPICS FOR STUDY IN ACADEMIC WORK.

Choice and use of words as to purity, propriety, precision; the

sentence; the paragraph; the theme; variety of expression in prose, in poetry; figures of speech; properties of style; kinds of discourse; versification.

TOPICS FOR DISCUSSION IN METHODS.

Relation of rhetoric to grammar, to literature; object of study of rhetoric; development of principles and formation of rules; application of principles; selection of illustration; correction of errors in style; use of text-books; supplementary work.

ENGLISH AND AMERICAN LITERATURE.

The aim of the instruction in this subject is to direct and assist the students to read with appreciation the master pieces of the great authors and to guide him rationally and sympathetically into their thought and feeling. It is recognized that, in order to accomplish this, the environment of the author must be made familiar. This environment must include not only the personal incidents in the life of the author, but also the history of his times, and as a back ground, a good knowledge of world history, and of the history of the English people. For this reason the study of English literature is placed after the historical work of the course.

In a similar way, it is intended that the knowledge of the principles of grammar and rhetoric, gained earlier in the course, shall be applied to the study of selections taken from the works of the great authors. The application of these principles will not be allowed to usurp the art side of the study, to be pursued in accordance with literary methods; but their knowledge will form a rational basis upon which the pupil will found his judgments. A good text-book will be used as a basis, to be supplemented by an examination of the works of the more important authors found in the library, after the seminary method. In all 270 lessons are devoted to this subject, which includes the theme work of the senior year.

TOPICS FOR STUDY IN ACADEMIC WORK.

Beginings of English literature; effects of Norman conquest; early modern English; renaissance influence; Italian influence; characteristics of Elizabethan age; Puritan influence; revival of poetry; chief characteristics of American literature; the study of classic selections.

TOPICS FOR DISCUSSION IN METHODS.

Selection of classics suitable for the different grades in common school work, and manner of presentation in each; characterization and criticism, both oral and written; awakening interest, comparison of styles; connection of literature with geography, with history.

DEPARTMENT OF MATHEMATICS.

Mathematics always has formed, and always must form, an essential element in every course of study. It will hardly be disputed that those qualities of mind which contribute to success in any occupation are the alertness which enables one to take advantage of opportunities as they present themselves, the accuracy which prevents falling into error, and that consecutiveness of thought which enables us to see clearly from the beginning the end to be obtained, as well as the individual steps which renders its attainment possible. But these qualities of mind are just the ones which mathematical processes, developed according to psychological laws, are best calculated to produce. It is our aim to so present each lesson in mathematics as to develop accuracy, rapidity and the power of logical analysis. While it is intended that the students shall be made familiar with all those topics in arithmetic, algebra and geometry usually taught in schools of this rank, nevertheless no more topics will be undertaken than can be thoroughly mastered. In all 850 recitations are devoted to this subject, 340 of which are in the Sub-Normal.

ARITHMETIC.

The knowledge to be gained from the study of arithmetic has been classified into knowledge for use, for discipline and as a foundation for future work. In the first year the aim is to ground the pupils thoroughly in principles of arithmetic as laid down in a good text-book. The fundamental facts are reviewed and impressed upon the memory, clearness of statement, neatness and orderly arrangement in written work are insisted upon and logical demonstrations are always required. Fractions, percentage, measurements, interest and discount, especially valuable for their use, will be emphasized during the first year. Supplementary work will be sought for in the various text-books, and in original examples by the class. In the junior year, after an elementary knowledge of algebra has been gained, the subject is again resumed, algebraic principles are applied in the solution of examples, and both accuracy and rapidity of thought are cultivated by frequent drills in Stoddard's Mental Arithmetic.

TOPICS FOR STUDY IN ACADEMIC WORK.

Fractions; percentage; ratio; proportion; discount; involution; mensuration; series progression.

TOPICS FOR DISCUSSION IN METHODS.

The child's first notion of number; the use of objects in teach-

ing numbers, in the decimal system, and in developing the fundamental operations; relative relations of magnitude; the Grube Method; analysis and synthesis; oral expressions of analysis; form and variety of written analysis; numbers for the first year; when text-books shall be first used; how text-books should be used; when fractions should be introduced; when concrete exercises should be superseded by abstract; correlation with other subjects; educational value; to what extent drill for rapidity is profitable; the logical and pedagogical order of presentation for each topic; when and how definitions and rules should be taught; arrangement of topics in text-books.

ALGEBRA.

Following a plan similar to that taken in arithmetic, algebra is begun in the second year, the elementary processes are learned and the equation is carefully studied to the end that it may become an instrument in the solution of examples in arithmetic. The distinction between an arithmetical and algebraical solution is pointed out, and a foundation is thus laid for a more extended study of both algebra and arithmetic. The algebra in the middle year is mainly valuable for the ability which it develops to follow a connected chain of reasoning, and this purpose is there made prominent.

TOPICS FOR STUDY IN ACADEMIC WORK.

Notations and definitions; fundamental operations; factoring; fractions; simple equations; simultaneous equations; negative results; involution; evolution; theory of exponents; radicals; quadratic equations; arithmetical series; geometrical series; proportion; maxima and minima; inequalities; indeterminate equations; logarithms.

TOPICS FOR DISCUSSION IN METHODS.

Suitable illustrations of the significance and use of symbols of operation, of relations, of quantities, of axioms, apt illustrations of the meaning of the terms addition, subtraction, coefficient, exponent, and of all other technical terms used; geometric and graphic representation of the simpler expressions; concise and convenient forms for expressions and relations; transformations of equations; formations of equations; expression of formulas in oral language; interpretation of results; utility and power of algebraic investigations.

GEOMETRY.

The course in geometry includes both concrete and demonstrative, the former being taught in connection with drawing. De-

monstrative geometry will embrace both plane and solid. Size-relations will be considered, first, by immediate comparison of magnitudes, and afterwards by means of their numerical measure; abundant exercise in oral demonstration will be given, to secure elegance and conciseness of expression; and, when this art of rigorous demonstration shall have been acquired, the student will be required to devise his own solutions. In the second semester geometry is correlated with logic.

TOPICS FOR STUDY IN ACADEMIC WORK.

Logico-mathematical terms; geometrical concept; straight lines and angles; triangles, quadrilaterals; other polygons; circles, proportions; mensuration of plane figures; similar plane figures; original demonstrations of theorems; planes; solids with plane surfaces; solids with curved surfaces.

TOPICS FOR DISCUSSION IN METHODS.

Basis and value of geometrical investigation; illustration of logical and mathematical terms; of geometrical concepts; formation of them; forms of deductive reasoning; stages in a demonstration; practical application of principles demonstrated; value of the scilium; demonstration by superposition, by reduction ad absurdum; by theory of limits, by method of exhaustion; history of geometry.

BOOK-KEEPING AND COMMERCIAL LAW.

A short course, consisting of 20 lessons, is given in book-keeping, the object being to render familiar the method of keeping accounts both by single and double entry, especially the latter. The student is required to write out carefully a set of blanks, to study the meaning of common terms used in business life and, in addition, to acquire such knowledge of actual business as the circumstances of the case will allow.

In connection with the book-keeping 20 lessons are given in commercial law. The method pursued is the combined text-book and lecture, the former being used for definitions and frame work while the latter consists largely of the application of the principles set forth in the text-book to actual business experience.

TOPICS FOR STUDY IN ACADEMIC WORK.

BOOK-KEEPING—Abbreviations; signs; classification of accounts; double entry; day-book; journal; posting; closing ledger; commercial forms; bill-books; invoice-book; shipments; account sales; partnership; farm accounts; balance sheet.

COMMERCIAL LAW.—Principal and agent; contracts; effect of statute frauds on contracts; partnership; sales; guaranty and en-

dorsements; commercial paper; warranty; insurance; real property; transfers of real property; title by gift, devise and descent; wills.

DEPARTMENT OF NATURAL SCIENCE.

The aim of the work in this department is, not so much the collection of a large store of facts, as the thorough training of the student in systematic methods of scientific study, and the inculcation of habits of close and accurate observation, orderly thought and logical expression. The student is required to obtain a working knowledge of the fundamental principles of the sciences, and is led to recognize their practical application. The laboratory courses offered both in the physical and natural sciences afford abundant opportunity for acquiring facility in the manipulation of apparatus and in the handling of material. The instruction is chiefly academic, its application to nature work in the elementary schools being reserved for the practice department, where each subject receives especial attention. However, in selecting the exercises, and in conducting the recitations, the attention of the future teacher is frequently directed to the availability in his chosen calling of the knowledge he is here acquiring. The laboratories for work in physics, chemistry and biology are commodious, well-lighted and suitably equipped with apparatus of the latest design, new pieces being added from time to time as new discoveries in the scientific world and the progress in methods demand. There is a large and growing collection of material for illustration in biology and geology, which during the last year has been increased by many specimens, contributed by individuals. Such contributions are always acceptable, as by this means it is often possible to obtain valuable and useful material for illustration and study.*

BOTANY.

The study of botany is peculiarly adapted to cultivate the powers of observation, and to arouse an interest in, and a love for,

* The value of specimens of all kinds is greatly enhanced by attaching to them a label, bearing the date of collection, locality, name of donor, remarks as to scarcity, abundance, utility, etc. During the past year specimens have been received from Mr. Chas. Houston, Mr. T. L. Schultz, Mr. Chas. Taylor, Mr. Jos. Culver, Miss Madge Richmond and others.

the beauties of nature. For this reason a knowledge of plant life is especially valuable to the teacher, as furnishing a basis for attractive and interesting courses of nature study for all grades of the elementary schools. The underlying principles of vegetable anatomy and physiology are dealt with in as thorough a manner as practicable, but the fact is recognized that the life relations of plants are of more interest and importance to mankind in general. The student is, therefore, not allowed to restrict his horizon to the limits of the vegetable cell, but is lead to study the relation of the plant to the conditions under which it lives, and to the effects of soil, climate and other factors of environment upon its form, structure and habits.

The work begins in the spring, with a laboratory study of the conditions affecting the germination and growth of the seed, followed by an investigation of the morphology, structure and functions of root, stem, leaf and flower. The subject of plant relations, to which the attention has heretofore frequently been called, is now treated more fully, and the course closes with a study of typical plants illustrating the leading types of vegetable life, thus giving the student an introduction to systematic botany. The entire course is illustrated by experiments performed by the individual student in the laboratory, and by field trips at frequent intervals. Each student is required to keep a neat and systematic record of all his observations and investigations, and to illustrate the same by careful drawings and sketches. The laboratory is well supplied with dissecting microscopes and apparatus for the preparation and study of such material as is required in the course, and the student is constantly referred to standard works in the library.

The varied and interesting flora of the Salt River Valley, and of the surrounding mountains, is amply sufficient to furnish abundant material, and to arouse a desire for original research.

TOPICS FOR STUDY IN ACADEMIC WORK.

The seed and its germination; the parts of the seedling; its development; storage of nourishment in the seed; roots; stems; structure and work of the stem; buds; leaves, their arrangement, movements; leaves of peculiar forms and uses; structure and functions of leaves; inflorescence; study of typical flowers; the flower and its organs; fertilization; the fruit; plant relations; the struggle for existence and the survival of the fittest; classification; types.

TOPICS FOR DISCUSSION IN METHODS.

Purpose of and plans for nature study; value of plant lessons—

(a) formative value, (b) content value ; awakening and sustaining interest ; cultivating powers of observation ; obtaining suitable material ; graded lessons for common schools ; time to be allotted to study of plant life ; work for different seasons and localities ; introduction and use of technical terms ; cultivation of aesthetic taste ; appreciation of harmony of color and form ; procedure, value and limitation of representation by modeling and painting ; use of text-book.

ZOOLOGY.

This course consists of a laboratory study of types of the more important groups, supplemented by discussions of fundamental principals. Here, as in the botany work, the powers of observation are strengthened, and habits of careful systematic thought are developed. The student is required to do a large amount of study out of doors, field trips by the class as a whole, or in groups, being an important feature. The student keeps a careful record of his laboratory work, and of the supplementary lectures, illustrating his notes by drawing. The life relations of animals, as well as their structure in physiology are studied, and attention is called to progressive development of types leading up to the theories of organic evolution.

TOPICS FOR STUDY IN ACADEMIC WORK.

The moeba ; the hydra ; the grasshopper ; the butterfly ; the dragon fly ; the honey bee ; wasps ; flies ; beetles ; lessons in classification illustrated by the insects previously studied ; spiders ; the scorpion ; the centipede ; the millipede ; the crawfish ; classification extended ; the earth worm ; the pond snail ; a fish ; the frog ; birds ; the rabbit ; excepted theories of evolution.

TOPICS FOR DISCUSSION IN METHODS.

Kind and amount of direction by teacher ; graded lessons for elementary schools ; procedure, value and limitation of representation by drawing and painting ; purpose of, procedure in presenting and time devoted to nature study lessons in the several grades of elementary schools ; use of text-books.

PHYSIOLOGY.

The general ideas of life processes which the student has acquired in the course in zoology are here worked out in detail in

their application to human physiology. The subject of anatomy is made subordinate to a clear understanding of physiology and hygiene. The entire course is illustrated by class experiments and by dissections performed upon small animals. The compound microscope and the solar projection microscope are used in demonstrating the minute details of structure, an excellent series of histological slides being available for this purpose.

TOPICS FOR STUDY IN ACADEMIC WORK.

Living bodies and cells; proximate principles; oxidation; fermentation: alcohol; salivary digestion; stomach digestion; intestinal digestion; absorption and assimilation; alcohol and digestion; digestion in lower animals; animal food; vegetable food; quantity of food required; drinking water; narcotics; drugs and poisons; the blood; the heart; circulation of the blood; regulation of the flow of blood; the lungs; respiration of the tissues; the air and ventilation; heat and clothing; excretion and sewage; the skin and bathing; nerves; the sympathetic nervous system; the brain; influences which affect the mind; effects of narcotics on the mind; taste, smell and hearing; the eye; the voice; bones; joints; muscles; bacteria and disease; repair of injuries.

TOPICS FOR DISCUSSION IN METHODS.

Method of observing the form of organs and their structure; illustrations of functions of organs; dissection of small animals and drawings and descriptions of parts dissected; use and value of blackboard drawings; use of skeleton, manikin, casts, models; use of text-books.

PHYSICAL GEOGRAPHY.

This course presupposes a thorough knowledge of elementary geography in all its aspects. The scope of the work includes a consideration of the earth's place in the universe, and a brief discussion of its form, size, motion and of its relation to the other members of the solar system. The earth is considered as being surrounded by two great envelopes, the atmosphere and the ocean. The atmosphere is first discussed, and in this connection the students are required to make and record daily observations of the condition of the weather, the height of the barometer (reduced to a sea-level), the temperature, dew point and relative humidity. From these records curves are constructed showing graphically

the conditions which prevail from month to month during the course. The observations made by the students are compared with the daily bulletins furnished by the government weather service, thus impressing upon the mind an idea of the practical nature of the work. The subject of storms is illustrated by a carefully selected series of weather maps, placed in the hands of the student for study. Climatology is given a prominent place in its bearing on the geographical distribution of animals and plants. The study of the land is taken up as a half-term course in dynamical and structural geology, enough time being devoted to historical geology to enable the students to become familiar with the leading principles of the development of life upon the earth, and to understand something of the methods of geological research.

TOPICS FOR STUDY AND ACADEMIC WORK.

The earth, its form, general condition, surface and movement; the solar system; the universe; the nebular hypothesis; the air—composition, height and changes; nature of light and heat; the sun's heat—effect on the land, on the ocean, on the air; temperature of the earth's surface; daily rains illustrated by observation; conditions affecting daily and seasonable range; climatic zones; isotherms; air pressure, changes and measurement; use of the barometer; planetary winds; periodical winds; weather changes; weather maps; cyclonic and anti-cyclonic areas; vapor in the atmosphere; precipitation; distribution of rain fall; climate; distribution of life; the ocean—area, depth, methods of studying its bed; wind waves; tides; ocean currents; the earth's crust, minerals and rocks; movements of the crust; geological ages; erosion; river valleys; glaciers; glacial period; sea and lake shores; planes, plateaus and mountains; volcanoes, earthquakes and geysers; historical geology.

TOPICS FOR DISCUSSION IN METHODS.

Development of ideas of place, position, distance and direction; ideas and physical features of home location, occupation of people, product of locality, representation by maps of school districts, precinct, county, territory; how to proceed from home geography of state; value of vivid description and graphic representation; appeals to the imagination; presentation of the study of the earth as a whole; subdivision of the earth's surface; use of text-book—time of, extent of, manner of; map drawing—place of, value of, manner of conducting; exhibition of products—natural, artificial; construction and use of simple apparatus; value of experiment; sand and clay models; use of maps, charts; graphic method of illustration as applied to comparative areas, wealth,

industries, production, temperature, rainfall; explanation of phenomena—day and night, change of seasons, weather; collection and use of specimens; kind and amount of additional reading; supplementary material; outlines; field observation; excursions; original notes on geology, geography and familiar weather phenomena.

PHYSICS.

The aim of the work in physics is two-fold—first, to give the student a knowledge of the theory of the constitution of matter and of the physical laws governing its phenomena, and second, to acquaint him with the use of experimental methods in scientific study and investigation. The laboratory method is used, the student being required to perform a series of selected experiments, both qualitative and quantitative. The experiments used are largely chosen from the Harvard preparatory course. An improved method of note-taking is used, the notes being written up at first hand directly from the experimental work, upon separate sheets of paper which, after examination by the instructor, are bound into a cover for preservation and reference. The student is taught to control the inevitable errors of measurement and to understand the value of the mean of a series of observations. He also learns to plot his results in graphic form by means of curves. Loss of time is prevented by providing each individual student with a complete set of the instruments and pieces of apparatus most frequently used. The field of view is broadened by constant reference to standard works by different authors in the library. The course is amplified by frequent quizzes upon the laboratory work, and by lectures upon the underlying laws and principles.

TOPICS FOR STUDY IN ACADEMIC WORK.

Density; weight of unit volume of a substance; weight and mass; lifting effect of water; specific gravity of solids; flotation; specific gravity of liquids; fluid pressure; atmospheric pressure; barometer; Boyle's law; graphic method of representing results; pumps; syphon; density of air; the lever; center of gravity; errors of a spring balance; parallelogram of forces; inclined plane; wedge; screw; friction between solid bodies; coefficient of friction; pendulum; nature of light; photometry; reflection; mirrors; refraction; index of refraction of glass; lenses; the eye; sight and color; optical instruments; breaking strength of wires; elasticity by stretching; liquids and gases; surface tension; capillary action; Pascal's principle; hydrostatic press; specific

gravity of a liquid by balancing column; matter, force and motion; velocity; inertia; comparison of masses by acceleration test; work and energy; heat, temperature and conveyance of heat; testing a mercury thermometer; linear expansion of a solid; air thermometer; specific heat of shot; latent heat of melting ice; vaporization and condensation; determination of the dew point; distillation; latent heat of vaporization; mechanical equivalent of heat; the steam engine; radiant energy; sound; velocity of sound in open air; wave-length of sound; number of vibrations per second of a tuning fork; harmony and discord; magnetism; lines of force near a bar magnet; theory of magnetism; electricity; electrification by friction; potential; capacity; Leyden jar; lightning; galvanic cell and electric circuit; current strength; electromotive force; electrical work; resistance; Ohm's law; resistance of wires; Wheatstone bridge; change of resistance with change of temperature; battery resistance; telegraph; telephone; electric motor; dynamo; electric lamps; induction coil; Roentgen rays; experiments of Hertz; wireless telegraphy; electromagnetic nature of light.

TOPICS FOR DISCUSSION IN METHODS.

Preparation, presentation of, and time devoted to nature-study lessons for the grades of common schools; illustrations of the principles of the simple laws of physical science; simple devices for illustration; aid and direction from teacher, kind of, amount of; text-book, when and how used; note book; use of representation, by drawing, by formula.

CHEMISTRY.

The course in chemistry is intended to precede immediately that in physics. The student thus begins the latter study with a knowledge of the atomic theory, and the chemical constitution of matter, and has already acquired considerable facility in the handling of apparatus. The course consists of laboratory work, supplemented by lectures and recitations. The method of note-taking is similar to that used in the course in physics. The laboratory is provided with work tables of approved design, and the equipment, both apparatus and chemicals, is excellent.

TOPICS FOR STUDY IN ACADEMIC WORK.

Elements and compounds; oxygen; nitrogen; hydrogen; union by weight; carbon; oxidation; combustion; flame: electrochemical relation of the elements; valence; chemical equations;

acids, bases, salts; hydrochloric and hydrofluoric acids; nitric acid; sulphuric acid; ammonium hydroxide and ammonia; hydroxides of sodium, potassium and calcium; union by volume; oxides of hydrogen and of oxygen; oxides of carbon; oxides of nitrogen; the atmosphere; laws of combination; the periodic law; the halogens; vapor density; molecular weight; atomic weight; condensation and diffusion of gases; sulphur and its compounds; phosphorus and its compounds; boron and silicon; a study of the more important metals with special reference to reactions useful in qualitative analysis.

TOPICS FOR DISCUSSION IN METHODS.

Amount and kind of direction by teacher in experimentation; preparation and use of simple appliances for illustration and investigation; selection of matter suitable to nature-study lessons in the grades of the common schools; use of text-book; use of note book; value and use of representation, by drawing, by symbols, by equations.

DEPARTMENT OF HISTORY AND CIVICS.

As one of the avowed purposes for which this Normal School was founded was to give instruction "in the fundamental laws of the United States, and in what regards the rights and duties of citizens," it follows that the study of history, and of civics, its cognate subject, must be given an important place in the course. Nor could the legislative intent be properly carried out by confining the attention to the history and government of the United States. Our laws and our institutions are not alone the creations of a people native to this continent; but their origin must be sought in the records of nations who flourished and passed away before this country was known to our ancestors. All good citizenship must rest upon knowledge, and especially upon an acquaintance with those causes which have led to national prosperity or decay.

Believing, then, that an appreciative knowledge of the history of our own country must have for a background a good knowledge of world-history, the courses in this department have been so arranged as to lead up to a careful study of United States history in the middle year. In the earlier part of the course it is sought to impress the leading facts of history upon the memory, and to make them vivid by the use of the imagination. As the subject progresses, however, the disciplinary side is emphasized, and finds its culmination in the seminary work, which is pursued by the

pupil in the library, under the direction and the advice of the instructor. A total of 360 recitations are devoted to history, and 100 to civics and civil government.

UNITED STATES HISTORY.

The course in United States history is divided into two parts, one of which comes in the first year, and the other in the middle year. The object in the first is to make the pupil acquainted with those leading facts of our national history which every intelligent citizen should know. The text-book is made the basis of the instruction, but it is supplemented by the reading of biographical and other works connected with the events studied.

After an interval of two years, when the mind of the student has become more mature, and the horizon widened by the study of other nations, this subject is again taken up for one semester. A rapid review of modern history is given, and topics are then assigned to be developed by the student. Each one of these topics is given to a particular student but the whole class is held responsible for such an acquaintance with each as may be had from the reading of the references to be had in the library. When the day arrives for the presentation of any particular topic the student having it especially in charge will conduct the recitation.

TOPICS FOR STUDY IN ACADEMIC WORK.

Religious persecution as an element in the settlement of America; influence of America upon the nations of Europe; the employment of Indians in warfare; the aristocratic element in the settlement of America; the influences of the middle classes upon American life; the American revolution but one step in the development of constitutional liberty; the influence of the French element upon the American institutions; the effect of the slavery agitation upon our national character; political ideals as modified by the spoils system; the Monroe doctrine and territorial expansion; English and American parties; the public domain; England's attitude towards America in the crisis of her history; the proper exercise of the power of taxation essential to national prosperity.

GENERAL HISTORY.

In the elementary course in United States history the facts learned are chiefly valuable for guidance; but hereafter the instruction is increasingly devoted to the disciplinary side. Facts are to be learned, but more attention is paid to their proper con-

mation and the importance is tested by the consequences which flowed from them. The aim is to lead the pupil to discover the facts and to trace the consequences. This course in general history is pursued during two semesters. In the first, 60 lessons are devoted to the ancient monarchies in Greece; in the second, 80 lessons are given to Roman, medieval, and modern history. There are frequent references to the library, which are intended to supplement the work in text-books.

TOPICS FOR STUDY IN ACADEMIC WORK.

ANCIENT HISTORY IN GREECE.—Aids to history; origin of nations; the world as known to the ancients; the seven ancient monarchies; the Hebrews; the Phoenicians; Greece—its geography, its people, their religion, heroic age, early growth of Sparta and Athens; the battle of Marathon; battle of Syracuse; Peloponesian wars; the conquest of Alexander; battle of Arbela; Grecian art and architecture; education, social life, and civil institutions.

ROMAN HISTORY.—Early Roman history; development from a kingdom to a republic; from republic to empire; decline and fall; the campaigns of Hannibal; the battle of the Metaurus; campaigns of Caesar; the administrations of Augustus; Constantine; the Eastern and Western empires; the battle of Chalons; the civil institutions, social life, laws and literature.

MEDIEVAL HISTORY.—Migration of the Teutonic tribes; origin and spread of christianity; rise of the papacy; influence of the church during the middle ages; Justinian; conquest of the Saracens; triumph of Christianity over Mohammedanism at the battle of Tours; Charlemagne; feudalism; Norman conquest of England; crusades; growth of towns; city republics; development of modern civil institutions.

MODERN HISTORY.—Reformation under Luther; the English reformation; Charles V. and the Spanish inquisition; France under Louis XIV; religious persecutions—their influence upon continental and American history; development of civil liberty in England; rise of Russia, of Prussia; French revolution; Napoleon; the struggle for liberty in Italy; the German empire; present state of European nations.

TOPICS FOR DISCUSSION AND METHODS.

Correlation of history and geography, of history and literature; selection of matter suited to the several grades of common school work; methods of presentation; fairy tales, bible stories, stories of adventure, biographies; use of text-book; historical novels and poems; the influence of climate and physical features;

advantages of following chronological order; criticism of text-books; educational value of historical study; history as a foundation of patriotism; use of historical cards, charts, maps, pictures and topical outlines.

CIVICS.

In the first year of the Sub-Normal course, civics is pursued for one semester, three times each week. The object here is three-fold—to make the student acquainted with the elementary principles of law necessary for his protection in the enjoyment of his absolute rights; to render him familiar with the means adopted by society to preserve order, and to redress civil wrongs in his locality; and to lay a foundation for the study in detail of the essential features of our state and national government. Elementary law is taught from the text-book, and illustrated, as far as possible, by examples taken from the experiences or observations of the pupils. The frame work of local government is taught by witnessing the trials in justice's court, by mock trials, by visits to the polls on election days, by attending the sessions of the common council and by comparing the results of these observations with the directions given in the revised statutes of Arizona. After a study of local conditions, the horizon is broadened to include those features of the state and national government which correspond to the local institutions.

TOPICS FOR STUDY IN ACADEMIC WORK.

Principles and definitions; absolute rights; citizenship; the home; the school; from infancy to manhood; the congressional township; the civil township; the machinery of the civil township; political machinery; how to vote; private property, real and personal; protection of person and property; the township court; a civil case in justice's court; formative influences; villages and cities; the county; county elections; county officers; the state government; national government.

CIVIL GOVERNMENT.

After the completion of the courses in history, the study of our government is resumed. An elementary knowledge of the subject will be assumed, and the attention will now be directed to the study of the national constitution, to the relation which the nation bears to the state and to the territories, and vice versa. The method will be by lectures, supplemented by individual work in the library, the efficiency of which will be tested by special

reports from the individual students, and by quizzes in the class.

TOPICS FOR STUDY AND ACADEMIC WORK.

INTER-COLONIAL RELATIONS.— Revolutionary war, causes and consequences; weakness of the confederation; colonial charters; early state constitutions; the critical period; the constitutional convention; effect of its adoption; express grants and reservation of power by the states; implied power; state sovereignty; organization of the three branches of government; the electoral system; acquisition and government of new territory; political party.

TOPICS FOR DISCUSSION IN METHODS.

Correlation with history; method of study by observation; use of text-books; criticism of text-books; the synthetic method; political machinery; value for cultivating patriotism; organization of child's fund of knowledge; value of illustrative trials and elections by the class; method of conducting each; how the study contributes to good citizenship; comparison of our own with other forms of government.

DEPARTMENT OF THE MANUAL ARTS.

Training in the manual arts in this school is limited, at present, to a study of penmanship, drawing, clay modeling, and some constructive paper and cardboard work—all indispensable forms of expression in the lower school. These subjects are closely allied, skill in each branch involving an automatic control of hand, eye and brain in harmonious action; therefore exercises leading to this end in one branch will constitute valuable preparation for all the work which is to follow.

The general aims of this department may be summarized as follows: to make the hand spontaneously obedient to the mind through the education and co-ordination of the motor centers of the hand; to train the perceptive faculties; to develop organic skill in the delineation of simple objects and original or historical designs in several mediums, such as chalk, pencil, charcoal, inks and clay; to cultivate artistic taste and feeling; to develop ambidexterity; to secure a clear, rapid and individual hand writing; and to give an insight into the pedagogical value of all forms of manual training, especially drawing.

ARRANGEMENT OF THE COURSE.

SUB-NORMAL.—The 40 lessons of the first year are devoted chiefly to large movement exercises of both the right and the left

hand and arm, the hands working some times together, some times alone. They involve many combinations of the circle and other geometric forms, as well as some of the usual drill exercises for writing. The time is divided between work at the board and at the desk, the aim being to develop boldness and rapidity of movement, muscular control, ambidexterity, accurate perceptive judgment, and an ability to co-ordinate movements skillfully.

In the second year the previous course is continued, the movements becoming gradually smaller and more difficult. Attention is directed principally to penmanship, and it is expected that each student will have acquired a good, free, vertical hand writing by the close of the second semester.

NORMAL DEPARTMENT.—The first 40 lessons of the junior year are devoted to making working or mechanical drawings of geometric solids (including the principle type forms) and simple objects, and to their construction, from the drawings, in paper or card board. This work necessarily includes a study of the geometrical facts and principles involved in the form constructed, which makes it a valuable preliminary to the study of geometry in the middle year. The second semester is given to designing, and to a study of historic ornament. An effort is made to make this work thoroughly practical. All designs are prepared for specific use, such as wall paper, oil cloth, fabrics, panels, carving designs for articles of furniture, etc., and are finished as nearly as possible in the form adopted by the practical designer.

In the middle year the 80 lessons are devoted to free hand drawing and modeling. An effort is made to develop in the students a love for the beautiful in art and nature, through a study of artistic objects, casts and pictures; as well as to give skill in the delineation of simple subjects, including natural forms.

In the senior year 40 lessons are given to the study of the value of drawing as a mode of expression in childhood, and as a means of educating the mind. Children's drawing are collected, studied and classified, and the conclusions drawn from such study compared with those put forth in the best literature on the subject. A comparative study of the best drawing and manual training systems and courses of study is also made, with a view to determining the best methods for teaching the manual arts, and for employing them as a means of expression in the various lines of school work.

TOPICS FOR STUDY IN ACADEMIC WORK.

Sources of ornament; materials; symmetric arrangement; elements of design; conventionalization; units or motives; order; fitness; proportion.

DEPARTMENT OF MUSIC.

Music is a science, and its performance, whether upon an instrument or through the medium of the human voice, is an art. It is our aim to teach the elements of the science, and to secure as great a degree of efficiency in the art as the circumstances will allow. The value of vocal music in the school room can not be questioned. It brightens the life, refines the taste, cultivates the ear and confers upon the child the power of giving pleasure to himself and to others.

Our course provides vocal practice that will insure pure intonation, good enunciation and the ability to read at sight from the staff in the commonly used keys. Particular attention is given to proper tone production, especially as applying to the care and development of children's voices. Chorus drill in part singing is also an important feature. The course may be considered under two aspects, chorus drill and class instruction. The former begins with the first year and continues throughout the five years; the second consists of one recitation per week for both the junior and middle years.

TOPICS FOR STUDY IN ACADEMIC WORK.

JUNIOR YEAR.—Sight reading; characteristic sound of each tone taught by syllable with the modulator and applied to staff-reading; staff reading by auricular exercises, numbers and letters of intervals; class voice culture.

MIDDLE YEAR.—Sight reading and elementary harmony; tone quality as produced under proper breath control; fluency of vocal expression with good enunciation; artistic phrasing in part singing.

TOPICS FOR DISCUSSION IN METHODS.

Vocal economy; expression; physiology of the vocal organs; the voice as a musical instrument; registers; the voice and its mission; mutation or change of voice.

DEPARTMENT OF PHYSICAL TRAINING,

While the primary object of a school of this kind is the training of the mind, we must recognize the fact that it is impossible to obtain satisfactory mental work if the physical condition of the student is neglected. The maxim "A sound mind in a sound body" should carry the same force today that it did with the ancient Greeks. Students away from home and occupied with

their studies are prone to neglect the matter of muscular exercise. For this reason, if for no other, some form of physical drill is a necessary adjunct to a normal school course. The ordinary track athletics and field games furnish an excellent means of muscular development, and these are encouraged among the students in so far as they do not conflict with the school work. However, the fact remains that such exercises can be of benefit to comparatively few of the students and those for the most part of the male sex. In order, therefore, that every member of the student body, regardless of sex, may have opportunity for physical drill of the proper amount and kind, there have been provided a course in physical culture work for the young women and military drill for the young men. The work in each course is outlined below.

MILITARY DRILL.

By the placing of military drill in the school course, several important objects are gained. In the first place, it is a valuable means of physical culture and training of the muscular sense. The exercise attendant upon a lively drill in the open air is of a nature well calculated to overcome the effects of close application to study, to promote a healthy circulation and to prepare the mind for more vigorous effort. Again, daily attention, even for short periods, to correct position in standing and walking gives a springy step, an erect carriage and a soldierly bearing that can scarcely be attained by any other means. Moreover, the strict discipline which is inseparable from properly conducted military work is eminently conducive to the acquiring of orderly and systematic habits, personal neatness, prompt response to direction and self-control. At the same time, the gradation of authority and division of responsibility from private to captain, furnish a valuable object lesson in government, while the actual military knowledge gained makes the student a more valuable citizen, preparing him, as it does, the better to take upon himself the work of his country's defense in time of need. The objection which has sometimes been opposed to military drill because of its one-sided character is entirely met and overcome by the use of the setting-up exercises, the bayonet drill and the calisthenic exercises with and without the piece; while the attractive nature of the work gives to it that spontaneous character without which exercise is valueless.

The course which is required of all male students who are free from physical disability, includes the "setting-up exercises" as prescribed for the United States army, the school of the soldier, the school of the company, the bayonet exercises, calisthenic and

bar-bell exercises, extended order work and battle formation for the company acting alone, the ceremonies of parade and guard mounting and the duties of sentinels. The principles of batallion movements are explained and outlined in order to illustrate the relation of the company to larger bodies of troops.

The drill is conducted in strict accordance with the latest regulations of the United States army, and the company is annually inspected by the officers of the National Guard of Arizona.

The uniform adopted, and which is required to be worn at all drills, is of cadet grey, neat in style, serviceable and comfortable.

Drills occur four times per week during the year.

The equipment includes a stand of Springfield rifles, caliber .45.

PHYSICAL CULTURE.

The series of exercises prescribed for the young ladies of the school consists of a system of free gymnastics, that is, of movements performed without apparatus. The course comprises six sets of movements, about one hundred in all. These are arranged on the same general plan in each set, the first being intended to give control of the muscles used in standing and to give the power of maintaining perfect immobility of body without rigidity. Then follow movements specially designed to develop certain muscles, beginning with those of the feet and ankles and taking in order those of the limbs, trunk, shoulders, neck and arms. These movements are graduated, beginning with the more simple and gradually increasing in difficulty as the power and flexibility of the muscles is developed. When sufficient grace and ease has been attained, drill movements in unison are introduced, bringing the spirit of play into the work with the attendant benefits derived from the healthy interest aroused. All movements are performed to the accompaniment of music, the inspiration of which insures interest and spontaneity.

Four hours per week are devoted to these exercises.

DEPARTMENT OF PROFESSIONAL INSTRUCTION.

A normal school is neither a high school nor a college. To a certain extent it partakes of the nature of both; but in its ultimate aim it differs from each, and this fact gives a distinctive character to the methods of instruction employed. The end in the high school is the subject and its value to the student; in the college, the point of view is the same, only the scope is more enlarged;

in the normal school it is the value of the subject as a basis for its presentation to others. If the normal school could exclude all students who have not completed a college or at least a high school course, then this "art of presentation" would be the sole aim of its instruction. But as this is not the condition, at least here, the "basis" must be supplied. To a certain extent the giving of this preparation in our own school is an advantage, for in the selection of the topics under each subject a choice can be made to fall upon those that will more certainly be of value to the coming teacher.

When, however, this academic knowledge has been supplied, the whole attention is turned to the professional side of the school. The basis is psychology, upon which a superstructure of child study, methodology, history and science of education, and practice teaching is reared. The training school, as a matter of course, forms a very important feature in the professional course; but it is expected that the instruction therein given will be in harmony with the methods employed by the respective members of the normal faculty. To accomplish this frequent joint meetings of the faculty and of the senior class will be held, at each of which some member of the faculty will present methods in his or her specialty.

PSYCHOLOGY.

The instruction in psychology may be classified as elementary and advanced. The elementary course consists of one hundred lessons, given in the first semester of the middle year. It precedes pedagogy and follows physiology, where special attention is given to the study of the nervous mechanism. It deals with the elements of psychology, comprising investigation of the general nature of the mind, the basis of physice life, stages of knowing, characteristics of feeling, conditions and modes of consciousness, and elements of volition. The aim in the elementary course is to aid the student in developing the power and fixing the habit of observing, and of analyzing and interpreting the physical phenomena attendant upon the mental activities and states. This study is pursued, as far as practicable, inductively. The observation of the manifestation of mental powers and conditions is directed both to the child and to the ego.

The work of the advanced course is a more comprehensive investigation and discussion of the whole subject, and is intended to give the student such a knowledge of the states, powers and activities of the mind, their inter-relations and the laws governing



ASSEMBLY ROOM.

their growth as will enable him to pursue a rational course of procedure in his professional work.

TOPICS FOR STUDY.

The senses—cephalic and somatic; nervous organisms; psycho-physics; consciousness—its conditions, limits, facts and modes; immediate knowledge—perception, self-perception, intuition; mediate knowledge—representation, thought; feeling—emotion, desire; volition—elements of, freedom of.

LOGIC AND ETHICS.

The science of logic, which treats of cognition on its objective side, is taught in connection with the advanced course in psychology. It is also correlated with geometry. Since teachers are expected to train their pupils in the art of reasoning, a knowledge of the laws and principles of logic are a necessity.

The science of ethics is also studied in this connection. The purpose is to give the student clear ideas of the principles which should govern human action and the moral duties of right conduct, so that he may be able to practice them and impress them upon his pupils.

TOPICS FOR STUDY IN LOGIC,

Terms; fundamental axioms; genus; species; differentia; abstraction; generalization; proposition; arguments; syllogism; figure; modes; fallacies.

TOPICS FOR STUDY IN ETHICS.

The Socratic, the Pauline and the Herbartian; influence of home, church, school; instruction; government; discipline; feeling; reason; will.

PEDAGOGY.

The course in pedagogy occupies 20 weeks, five recitations per week, and consists of two more or less distinct lines of work, viz.—child study, and general educational theory.

CHILD STUDY.—The aim here is to arouse in the student a sympathetic interest in children and in child life; to show the value of rightly conducted child study, and the need of a trained judgment in determining the work of particular studies; to introduce the students to the best literature in this field of research; and to prepare the way for all the professional work which is to follow. The course is introduced by a reminiscent study of self, based on some biographical sketch, such as Pierre Lotti's "The

Romance of a Child.' This is followed by a comparison of the methods employed in child study, and the consideration of its present status. Each student is required to present a carefully prepared detailed report of some special study on children; and when feasible, the class will undertake, in connection with one of the professional courses, an original investigation of some psychological educational problem, thus becoming familiar with the methods employed through actual participation in such work. It is intended that this original research shall be of such a nature, and so carefully conducted, as to lead to results of real educational value.

EDUCATIONAL THEORY.—In this part of the course the aim will be to give first, a comprehensive view of the whole educational theory; second, a clear understanding of the fundamental principles involving education; and third, as an extensive acquaintance with the best literature of the subject as the time devoted to this work will allow. The application of the principles studied to actual teaching is kept constantly before the students. Regular observation in the training and other schools is carried on, reports on the work observed are presented in class, and opportunity given for their discussion.

TOPICS FOR DISCUSSION.

The chief aim in education; relative value of studies; the nature of interest; concentration; culture epochs; nascent periods; the school as a social unit; the school as a social factor.

TOPICS FOR THESES.

During the semester a thesis upon one of the following subjects will be required. Each one will be read before the class, the student presenting it conducting the discussion. Discipline; the ideal school environment; the relation of teacher to parents and patrons; education by plays and games; the school library; unhygienic features of modern school life; manual training; school entertainments—their use and abuse; school life a social education; the ideal teacher; recesses—their social, hygienic and educational value; educational value of habit; children's rights; educational value of imitation; educational value of the emotions; physiological rhythms; fatigue.

HISTORY AND PHILOSOPHY OF EDUCATION.

In a general sense, the history of education is the story of the growth and development of the human race; but in this course of study the term will be restricted to a brief sketch of the ancient

systems of education ; the schools of medieval and modern times ; a study of the lives of the most noted educational reformers, and the principles advocated by them ; a comparison of the school systems of the present time ; a special study of the schools of some state in the union.

In presenting the philosophy of education the aim is to define the nature, aim and limits, and the fundamental principles of education ; to discuss the problems of physical, intellectual and moral development and training ; to make each student a teacher who will not accept formula as method, but shall be able to be governed by method in adopting formula. The student will be constantly encouraged to test all conclusions, now generally received in regard to teaching, in the light of present knowledge of psychological principles, to state clearly the principle that his investigation verifies, and to work out plans for the application of these principles to teaching all the common school branches of study.

The combined seminary and text-book methods will be employed. The individual investigations of the student will also be supplemented by occasional lectures from the instructor.

SCHOOL LAW AND SCHOOL ECONOMY.

Instruction in this branch is given mostly by lectures, forty periods being devoted to it. In school economy the discussions will cover the whole field of organizing, governing, and conducting primary schools. Its aim is to develop a system of control that shall be in harmony with the principles set forth by the modern methods of education ; and to make the student skillful in the performance of the various duties of the school room, by plain, practical, and suggestive lessons.

In school law the object will be to make the student familiar with the course of school legislation in the territory of Arizona ; to compare the system of our own territory with that of some leading state of the union ; and to make familiar the leading decisions of the courts of justice upon important school problems.

METHODOLOGY.

Methodology consists, first, of a body of principles drawn from psychology that are applicable to all teaching ; and second, of special plans and devices for the presentation of particular branches of knowledge.

Since no one can produce the best quality of teaching without having first made a study, from the educational point of view, of

the subjects he is to use as instruments in unfolding the life of the pupil, the academic work in the normal is so conducted as to associate with the subject matter of the several studies the proper method to be employed in teaching it. Hence it is assumed in this course that, in addition to having acquired an adequate knowledge of the subject matter of the various branches entering into the curriculum, each student has gained a fair knowledge of the special method of each branch. Therefore the general aim of the course in methodology is to enlarge, organize, and unify the knowledge of method already possessed by the student.

The course will be conducted by the training teacher with the co-operative assistance of the entire normal faculty. Each special teacher is expected to map out in a series of lecture and type lessons the scope of his particular branch of study, and to indicate in a general way the best methods to be employed in presenting it in the different grades. The training teacher will have charge of that part of the work having to do with general principles of teaching, and with the relational features involved in a proper concentration of study. Particular attention will be directed to the principles underlying teaching in primary grades, where the child himself, rather than the subject matter, is the chief interest.

The course occupies forty weeks, five periods per week, and is about equally divided among the five branches: general principles; mathematics; history, including grammar and allied subjects; science, including science and nature studies considered in the broadest sense; and expression, including writing, drawing, painting, etc.

In the discussions, each subject is considered philosophically, to determine why it has a place in the course of study; scientifically, to give the systematic arrangement of the principles involved, and their relations to other subjects; and pedagogically, in order to know its relation to the pupil, what parts are to be used and emphasized in teaching, and the best methods of using them.

TOPICS FOR DISCUSSION.

Individual notions—how acquired, how distinguished from general notions; general notions—why the goal of instruction; generalization; art of questioning; value of types; text-books—their use and abuse; formal steps of instruction; their application to the various subjects.

THE TRAINING DEPARTMENT.

In the professional work heretofore outlined the attention has been directed almost exclusively to the theoretical side. It is

recognized, however, that, to enable to arrive at a direct understanding of educational theories, an opportunity for observing their practical application, and for assisting in it, is essential. To supply this opportunity, a model school of forty-eight pupils is provided, being twelve pupils in each of the first four grades of the territorial common school course. This school occupies a building adjoining the normal, is under the control of the normal school board, is equipped with all the aids employed in the best schools, and is under the charge of a skilled instructor, called a training teacher, who is held responsible for the educational progress of the pupils, and accomplishes this mainly by the aid of the members of the senior class, who act as assistants. The training teacher also has charge of the work in methodology, instructs the class in pedagogy, and renders such other services as the interest of this department may demand.

The length of the school year for the model school is eight months, the number of pupils is limited to twelve in each grade, and the tuition is free. Application for admission to the model school must be made in the month of September and each application will be acted upon in the order in which it is received. The same method will be observed in filling any vacancies that may occur during the year. The places of all pupils that are not present at the opening of the model school year will be filled by those next upon the list.

It is expected that the training teacher will be responsible for the psychological and relational features of the methods employed in the model school; but that the individual members of the faculty will prescribe the scope of the work in their respective fields, and will be required to assist the training teacher by keeping her informed as to the latest phases of educational thought in their department.

The amount of time to be devoted by each student in the model school is equivalent to five periods per week for thirty-two weeks.

GENERAL INFORMATION.

ADMISSION.

1. **THE SUB-NORMAL.**—No one will be admitted to the sub-normal department who has not completed the first seven grades of the territorial common school course. Students will find it to their advantage to have completed the eighth grade.

2. **THE NORMAL.**—Candidates for admission to the normal

department will be required to pass an examination upon all the subjects in the sub-normal course. Certificates from an accredited school will be accepted in lieu of an examination.

3. **ADVANCED STANDING.**—Candidates for advanced standing in the normal department must convince the faculty that their preparation for any particular subject has been sufficiently thorough to enable them to pursue it profitably. This preparation may be shown either by an examination, by class records in the normal, or by the certificates of accredited schools.

4. **TIME OF ADMISSION.**—Students will find it greatly to their advantage to enter the normal at the beginning of each semester; but they will be admitted at any time, subject to the above restriction.

GRADUATION.

In order to receive a diploma, a student must have attained the age of eighteen years, must have taken in this school all the subjects in the professional department, and also the following academic studies: arithmetic 3, algebra 5, advanced rhetoric, grammatical analysis, United States history 2, or science of government, and either physics or chemistry. Upon all the other subjects of the course the student must have passed a satisfactory examination, to be conducted by one of the faculty, provided, however, that the certificates of accredited schools may be accepted in lieu of an examination. If it shall appear from the records of examinations and daily recitations that the applicant shall have completed the course of study as heretofore set forth, and if no other qualification be lacking, such applicant shall receive a diploma which will entitle the holder to teach a primary or grammar school in any county of the Territory during life.

ACCREDITED SCHOOLS.

For the academic work of the course credit will be given to the certificate of other schools as follows:

1. University of Arizona at Tucson and Los Angeles Normal School, full credit for all the academic work. To this list others will probably be added in the near future. To the certificate of any regular chartered state or territorial schools, and to any high school in any state or territory whose pupils are admitted to college upon presentation of their diplomas, credit will be given for all the subjects not mentioned under the heading "Graduation."

2. To the certificates of any high school in this territory,

representing a four year's course of study, the same credit as in the preceding paragraph.

APPOINTMENTS.

The right to nominate a pupil, biennially, is secured to each member of the House and Council of the Legislative Assembly of Arizona, preference to be given for the space of sixty days next after the qualification of said member, to pupils of the county from which said member is elected, after which time (no pupil excepting) he may nominate a pupil from any other County of this Territory. No tuition is charged the pupils receiving the nomination, but each one pays an annual incidental fee of \$5.00.

It is greatly desired that the members of the Legislature, respectively, appoint students to the Normal School, as authorized by law; and the County Superintendents and all others interested in supplying the schools of this territory with well educated and properly trained teachers should recommend to this school persons who desire to become teachers and who give promise of usefulness in that profession.

TUITION AND INCIDENTAL FEE.

The rates of tuition are as follows:

1. Those nominated by members of the Legislature are entitled to free tuition in both the sub-normal and normal courses.
2. Tuition is also free to students in the normal course who will sign a declaration of intention to teach in the public schools of Arizona after having completed the prescribed course of study in the normal school. This obligation will have been considered to have been discharged when the length of time taught after graduation shall equal the number of months spent in the normal. No student is classified in the normal course who has not received credit upon the records of this school for at least three and one-half semesters work in the sub-normal course.
3. All students not classified as above are charged a tuition fee of twenty dollars payable quarterly in advance. This includes the incidental fee.
4. All students entitled to free tuition as above are charged an annual incidental fee of \$5.00.

BUILDINGS AND GROUNDS.

The campus includes 20 acres, the north half of which is set with shade and ornamental trees and shrubs. On this part of the campus the buildings are situated.

The building first used for school purposes was erected in 1886, is a one-story brick structure, 70 feet long and 60 feet wide, with a broad veranda entirely surrounding it, and is now used for the model school.

The new normal school building was erected in 1894. It is a commodious structure, 136 feet long, 80 feet wide, and three stories high; the lower story is of brown sandstone, the other two of red pressed brick with sandstone trimmings. This edifice is beautiful in architectural design, convenient in arrangement, and substantial in construction.

EXPENSES.

Board can be obtained in good families at from \$15 to \$20 per month; in clubs for much less. By hiring rooms and doing their own cooking, the expense of living can be still further reduced. It should be borne in mind in this connection that fruit, garden vegetables, and other supplies are cheaper in this vicinity than in any other part of the territory. Little fuel is needed. Rooms can be rented at a cost, per pupil, of from \$.25 to \$.50 per week, provided that two persons occupy one room. The cost of books and stationery ranges from \$10 to \$15 a year. Examination papers, pens, and ink are furnished to the school free of cost.

REGULATIONS.

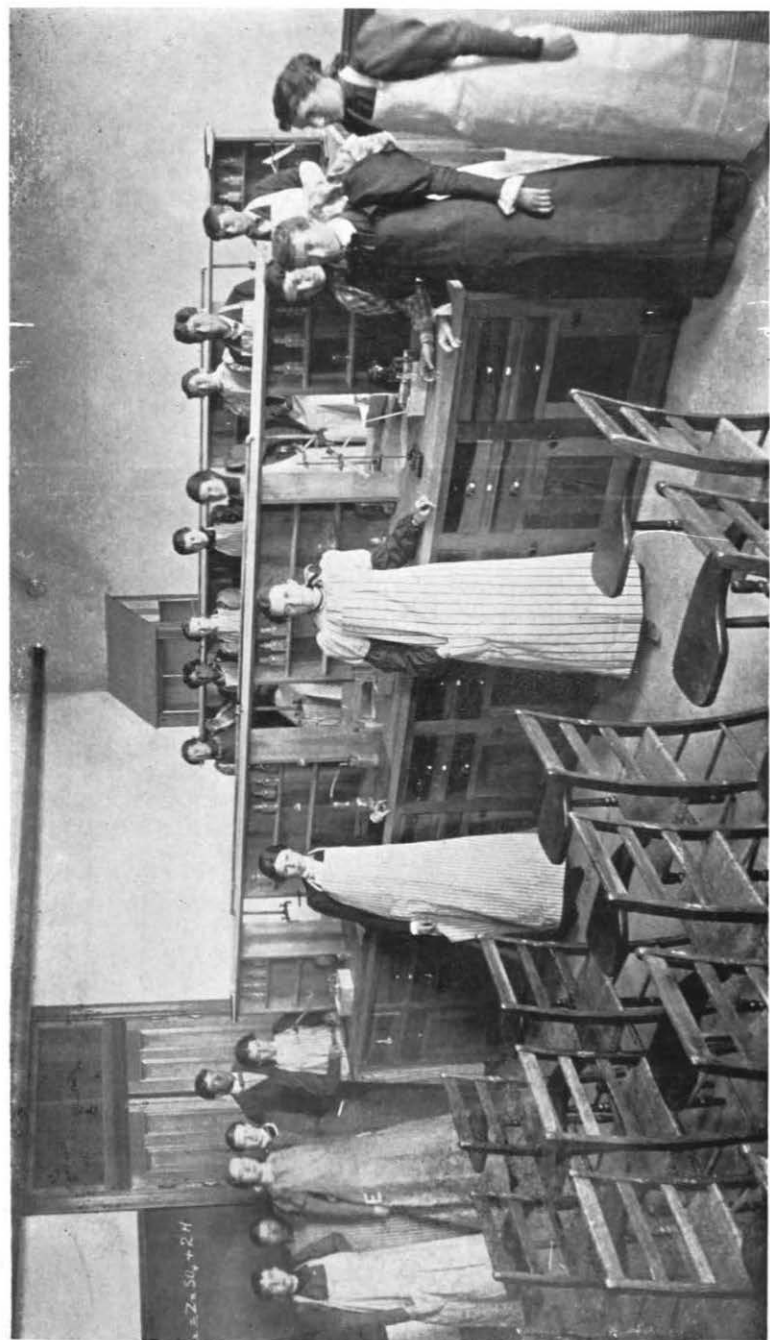
Self government, guided by a strict regard for the rights of others and a delicate appreciation of the proprieties of the environment is the only kind of government capable of developing and fostering the conduct and character requisite to the making of a successful teacher.

Absence from any required exercise must be accounted for before a student can be permitted to enter a succeeding recitation.

Students will not be permitted to take work outside of their regular classes, or any study outside of its regular order, without the permission of the principal.

LABORATORIES.

The normal is equipped with two laboratories, one for physics and chemistry and one for biological studies. Each is provided with excellent apparatus for illustrating the principles taught, and additions are being constantly made as the advancement of science and the needs of the school demand. By means of individual sets an opportunity is given for much individual experimental work on the part of the student.



LABORATORY.

LIBRARY.

The school is in possession of a conveniently arranged and well lighted library and reading room. The library now contains more than 1200 volumes, covering the fields of history, science, education, and general literature. It also has a generous supply of encyclopedias and other reference works. The professional and historical departments are especially well equipped, making it possible to conduct the work upon the seminary plan very satisfactorily. It is expected that large additions will be made to the library during the ensuing year.

The advantages of a reading room for young men and women, especially for those soon to become teachers, is not easily overestimated. Our tables are well supplied with the most important magazines of a literary, educational, or scientific character, thus giving the students an opportunity to keep well informed upon recent progress.

LECTURES.

In addition to lectures given by the faculty, a series of entertainments of high order, mostly lectures, is arranged each year. They have been a source of great profit and pleasure to the students. This year among others we have had lectures from A. J. McClatchie of the University of Arizona, Hon. F. X. Schoonmaker, Joaquin Miller, Dr. C. L. Thomas, and a musical recital from Elmore Rice.

The frequent appearance of prominent people upon the rostrum at the opening exercises, most of whom favor the students with short, eloquent, and instructive addresses, is a pleasant feature of the school.

MUSEUM.

The museum already contains many valuable pieces of archaeological relics, and a large number of interesting specimens of animals, plants, and minerals characteristic of Arizona, such as copper, silver, gold, and lead ores, native insects, birds, small animals, and plants; in fact, a valuable nucleus of a museum of such a wide range of interesting specimens as Arizona alone can produce.

The Arizona Antiquarian Society placed in custody of this school its collection of antiquarian relics, including the fine collection of Dr. J. Miller, worth several thousand dollars. This collection will be put in place as soon as suitable cases can be provided for it.

During the past years many friends of the institution have contributed many valuable articles. Their generosity and interest in the museum are appreciated and hereby acknowledged. Contributions are solicited. Transportation on articles donated will be paid by the school. All packages should be addressed "Territorial Normal School, Tempe, Arizona."

LITERARY SOCIETIES.

There is now one literary society, the Excelsior, which holds its meetings on each alternate Friday evening. These meetings are conducted according to parliamentary usages, and are designed to acquaint their members with the customs and practices of deliberate bodies, to give an impetus to literary investigation and to develop a talent for literary work, public speaking, and extemporaneous speaking. The members of the faculty are honorary members of the society. Students who creditably perform their duties in this society are excused from a part of the regular exercises of the school.

ORATORICAL CONTEST.

For the further encouragement of skill in extemporaneous speaking, an oratorical contest is held at the close of the year, and is participated in by both young men and women. Two medals are given, one to the most successful gentleman and the other to the most successful lady. These medals are made of gold, beautifully engraved and are contributed by Broadway & Moeur and by the Arizona Mercantile Co.

THE ALUMNI.

It is confidently believed that all graduates of this school will manifest a lively interest in its welfare. Their influence on the schools of the territory is already plainly seen, and will doubtless increase. The faculty desires to be informed of the success of the graduates, and also to render them professional assistance, as far as possible.

The Arizona Normal Alumni Association, as its name indicates, is composed of graduates of this normal school. It holds two regular meetings each year, and an annual banquet the day after commencement.

TEACHERS' BUREAU.

The faculty do not wish to be understood as agreeing to furnish employment for their students upon graduation; but feel war-

ranted in saying that they have many opportunities of recommending teachers to good positions, and they are pleased to do so, thereby rendering a service mutually helpful to their students and to school officers.

The principal of this school, when requested, will take pleasure in furnishing to school officers accurate information in regard to the fitness of students and alumni of this school to teach; also, when desired, will put them in communication with teachers seeking employment. In order to be able intelligently to recommend a teacher to a position, it is necessary that the principal be in possession of a full, detailed statement of the requirements of that position and of its surroundings.

CORRESPONDENCE.

All correspondence in regard to the management of the school, expense of living, conditions of admission, etc., and all applications for catalogues and announcements should be addressed to the Principal of the Normal School of Arizona, Tempe, Arizona.

TEXT BOOKS USED IN 1899-1900.

Algebra	Wentworth
Arithmetic	White
Arithmetic	Walsh's Higher
Botany (Elements of Botany)	Bergen
Book-keeping	Williams and Rogers
Commercial Law	Clark
Chemistry (Elements)	Williams
Civics	Peterman
English Literature	Shaw and Backus
Geography	Redway and Hinman
Geography (First Book in Physical)	Tarr
Geometry	Wentworth
Grammar	Reed and Kellogg
Grammatical Analysis	
History, United States	Fiske
History, General	Myers
Physiology	Overton
Physics	Hall and Bergen
Psychology	Halleck
Psychology	James
Reading	Cumnock
Rhetoric	Waddy
Word Analysis	Swinton
Zoology	Colton

REGISTER FOR 1899-1900.

UNDERGRADUATE STUDENTS.

Appleby, Alice Beatrice.....	Tempe	Jones, Guy	Lehi
Bartleson, Mary	Florence	Jones, Cloyd	Lehi
Brady, Erma	Mesa	Kimball, Para Lee.....	Mesa
Brady, Lulu.....	Mesa	Laney, Lynn Meade.....	Tempe
Brady, Rachel.....	Mesa	Laney, Joseph Clarence	Tempe
Brown, Earl	Tempe	Listenbarger, Ina Lucinda	Tempe
Bland, Nettie.....	Cochise	Laird, Hugh Edward	Tempe
Cartledge, Annie	Tempe	Laird, Minnie Elvira	Tempe
Cartledge, Cranz.....	Tempe	Lindsey, John.....	Oakdale
Cummings, William.....	Tempe	Laidlaw, Harry	Phoenix
Cummings, Clara.....	Tempe	Laidlaw, Edna	Phoenix
Cummings, Lucy	Tempe	Miller, Albert James	Tempe
Carrol, Katherine Alice.....	Tempe	Miller, Andrew	Tempe
Corbell, Ernest	Tempe	Martin, Permelia Ermina	Tempe
Crocker, Nellie	Tempe	Millett, Mary Delila.....	Tempe
Coughran, John W.....	Tempe	McQueen, Donald	Mesa
Cosner, Lizzie.....	Tempe	Merriman, Eleanor	Phoenix
Curnow, Murry	Mesa	McNulty, May.....	Phoenix
Curnow, Alice	Mesa	Odell, Otho C.	Tempe
Cartwright, Royden	Mesa	Priest, John.....	Tempe
Carter, Noble.....	Howard, Kansas	Poole, Frank	Tempe
Dean, Wilbur H.....	Tempe	Perry, Grace.....	Cordes
Drew, Arthur.....	Tempe	Reed, Gertrude	Tempe
Dowdle, Mary Isabell.....	Safford	Reed, Lillian	Florence
Dowdle, Anna.....	Safford	Robbins, Burt.....	Tempe
Davis, Alma.....	Lehi	Robbins, Pansy	Tempe
Davis, Louie	Lehi	Ross, Stella	Mesa
Ford, Florence.....	Prescott	Reynolds, Carrie Valerie	Phoenix
Gibson, Leona.....	Lehi	Ruse, Elmer Franklin.....	Tempe
Griffin, Frank Webb.....	Tempe	Root, Glen Gladner	Tempe
Guthrie, Mrs. S. E.	Tempe	Rush, Oscar.....	Tempe
Green, Hattie.....	Tempe	Richards, Robert Oral.....	Tempe
Green, Charles E.	Scottsdale	Stone, Nevada.....	Mesa
Greenleaf, Edna	Yuma	Stewart, Helen Marion.....	Tempe
Goodwin, Dean Ely	Tempe	Stewart, Edith Frances	Tempe
Goodwin, Grace Morris.....	Tempe	Schoshusen, Emma.....	Tempe
Greer, Laura	St. Johns	Schwarz, Elizabeth	Lehi
Greer, Margaret Ellen	Concho	Saylor, Susan.....	Tempe
Hughes, Thomas J.....	Tempe	Standage, Orrin Lewis	Mesa
Hobson, Lydia	Mesa	Standage, Orpha Caroline.....	Mesa
Hill, Minnie	Phoenix	Spain, Lydia	Mesa
Hough, Bessie	Tempe	Sirrine, Roy	Mesa
Hough, Frank A.....	Tempe	Sirrine, Serretta	Mesa
Haigler, Charles	Tempe	Stauffer, Charles Albert	Glendale
Haigler, Chester.....	Tempe	Sweeney, Marie Louise	Lehi
Haulot, Leona	Tempe	Shute, George Walton	Globe
Hicks, Lelia	Globe	Spinas, Katie	Florence
Hanna, Herbert.	Tempe	Spinas, Nellie.....	Florence
Hedgpeth, Elizabeth India.....	Phoenix	Stelzreide, John A. W.	Tempe
Hottinger, Josephine	California	Trusler, Harry Raymond.....	Tempe

Thomas, Charlotte Lucile.....Phoenix	Wilbur, Ethel MayMesa
Underhill, Margaret Elsie.....Phoenix	Wallace, James.....Tempe
Wilson, Clara.....Tempe	Woodward, StanleyPhoenix
Wilson, MaudeTempe	Wagnon, Harvey.... Comanche, Texas
White, NellieMesa	Woolf, William HenryTempe
Westover, Clarence.....Mesa	Woolf, James Oscar Tempe
Westover, JessieMesa	Woolf, Arthur Tempe
Weaver, Helen Ruth.....Casa Grande	Webb, Lyla Grace.....Cline
Whitaker, Robert Burdette..... Tempe	Walker, Levi Tempe
Wilbur, Everett.....Mesa	

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ALUMNI REGISTER.

CLASS OF 1887.

NAME	TIME DEVOTED TO TEACHING	P. O. ADDRESS
Etta Broomell..... (Mrs. J. Webster Johnson)	Four years.....	Tempe
Georgia A. Holmesley..... (Student, Stanford University)	Nine years.....	Tempe
Reese M. Ling..... (District Attorney, Yavapai County)	Two years.....	Prescott
Major James H. McClintock.....	Five years.....	Phoenix
Gertrude Pomeroy †.....	Five years.....	

CLASS OF 1888.

Kate Cummings..... (Mrs. Fisher Bailey)	Five years.....	Tempe
Martha Sears †.....	Five years.....	Globe
Henry Q. Robertson.....	Eleven years.....	Globe

CLASS OF 1890.

Nanna Brown..... (Mrs. John Knight)	Three years.....	Tempe
Lena Coughran..... (Mrs. J. M. Sears)	One year.....	Tempe

CLASS OF 1891.

Lee Gray, LL. B. (Yale, 1893)..... (Attorney)		Phoenix
Josephine Frankenberg..... (Student, Cook County Hospital)	Five years.....	Chicago, Ill.

CLASS OF 1892.

Lillian J. McAllister..... (Mrs. L. J. King)		Los Angeles, Cal.
Victoria B. Shaw..... (Mrs. Geo. K. Smith)	One term.....	Tucson

CLASS OF 1893.

Manie Anderson.....	Four years.....	Gila Bend
Agnes Halbert †.....		
W. I. Melton.....	Five years.....	Phoenix
Idia Rembert.....	One year.....	Los Angeles, Cal.
Mary Wingar.....	Seven years.....	Tempe
Chas. C. Woolf, LL. B. (Univ. of Colo.)..... (Attorney)		Tempe

CLASS OF 1894.

Myrtle Aplin.....	One year.....	East Highlands Cal.
Joseph T. Birchett.....	One year.....	Tempe
Addie Bury.....	Six years.....	Phoenix
Nettie Clay..... (Mrs. Ashby Hawes)	One year.....	Tempe
Agnes Dobbie..... (Mrs. J. D. Loper)	Six years.....	Mesa
Allie Gray.....	Six years.....	Phoenix
Leroy F. Hill..... (Secretary Tempe Canal Co.)		Tempe
Mary E. McNeill.....	Six years.....	Tempe
John Metz.....	Six years.....	Mesa
Blanche Newell.....	Six years.....	Mesa
Rosina Pomeroy.....	Six years.....	Mesa
Ella Saunders..... (Mrs. Louis Cordon)	Two years.....	Shumway
Anna R. Stewart.....	Five years.....	Tempe
Ida W. Woolf.....	Five years.....	Tempe

† Deceased.

CLASS OF 1895.

Miriam Anderson.....	One year	Los Angeles, Cal.
(Mrs. M. A. Davenport)		
John R. Birchett	Two years	Tempe
John J. Carroll		Tempe
Carrie Culver	Four years	Harrisburg
Lottie Gibson	Two years	Tempe
Allie Holmesley	Five years	Tempe
J. Wallace Morse	Two years	Tempe
Chas. P. Mullen		Tempe
Roscoe Walsworth		Tempe
(Student, Harvard University)		
Maude J. Welcome	Four years	Tucson
Bertha Wilson	Four years	Tempe
E. Stanley Windes.....	Five years	Prescott

CLASS OF 1896.

J. Lawrence Abell.....	One year	Benson
Nellie E. Culver.....	Four years	Harrisburg
Don J. Frankenberg.....	One year	Columbus, O.
Nott E. Guild		Tucson
Florence G. Hanna.....	Four years	Tempe
(Mrs. J. B. Flummerfeldt)		
Carl T. Hayden.....		Tempe
Jane M. Hedgpeth.....	Two years	Phoenix
Lewis G. Hedgpeth.....	One year	Phoenix
Georgia A. Hendrix.....	Three years	Tempe
(Mrs. L. C. Austin)		
Anina W. McNaughton, A. B. 1898.....	One year	San Jose, Cal.
Deborah I. Morris.....	Two years	Jerome
(Mrs. Doane Merrill)		
Julia R. Nichols.....	Two years	Tempe
Bertha M. White	Four years	Tempe

CLASS OF 1897.

May A. Austin	Two years	Tempe
(Mrs. William M. Goodwin)		
Julius G. Hansen		Los Angeles, Cal.
Adele Hauxhurst.....	Two years	Phoenix
May C. Huffer.....	Two years	Tonto
Jane P. Martin.....	Two years	Tempe
(Mrs. Verner A. Vanderhoof)		
Ana M. Miller.....	Three years	Tempe
Clara M. Miller.....	Three years	Tempe
Flora L. Mills	One year	Phoenix
J. Oscar Mullen	One year	Tempe
Ada M. Peyton.....	One year	Phoenix
(Mrs. William Doderhoff)		
Mary C. Robinson.....	Two years	Mesa
(Mrs. W. J. Bowen)		
Lucy M. Schwarz	Three years	Lehi
Addie Serrine	Three years	Mesa
Verner A. Vanderhoff	Three years	Tempe
Walter S. Wilson.....		Phoenix
(Student, Oxford, Ga., Univ.)		
Alice B. Windes.....	Three years	Cottonwood

CLASS OF 1898.

Edith R. Abell.....		Benson
Mary C. Bosbyshell.....	One year	Los Angeles, Cal.
Flora N. Cohn	One year	Phoenix
Elizabeth W. England	Two years	Tempe
Louie V. Gage	Two years	Tempe
Una B. Hanna.....	Two years	Tempe
J. Wesley Hill	Two years	Washington
Olive J. Maxwell.....	Two years	Phoenix
Florence A. McKee	One year	Santa Ana, Cal.
Julia E. Melton	Two years	Santa Barbara, Cal.
Mary R. Moore	One year	Willcox
Ethel M. Orme.....	Two years	Phoenix

Charlotte E. Perry	Phoenix
(Mrs. Homer Redden)	
William R. Price	Phoenix
Clyde A. Stewart	Mesa
Ida Warren Swiggett	Phoenix
Walter H. Willbur	Mesa

CLASS OF 1899.

Garnet Allison	Mesa
Bessie Frances Archbald	Tempe
Eva L. Bowyer	Phoenix
Lutie Marion Carlyle	Westminster, Cal.
Nellie E. Clark	Mesa
Robert O. Duncan	Phoenix
Inez B. Fisher	Tempe
Jessica Frazier	Phoenix
Martha Garnett	Phoenix
Gardfield A. Goodwin	Tempe
Lena Rivers Hartsfield	Tempe
Ella Leota Hauxhurst	Phoenix
Harry G. Hendrix	Tempe
Benjamin E. Hicks	Globe
Margaret Beatrice Hughs	Fuller, Kansas
Frank R. Kellner	Phoenix
D. Maude Lincoln	Jerome
Alice A. Morse	Tempe
Lillian M. Murray	Phoenix
(Mrs. Andrews)	
Grace Newell	Jerome
(Mrs. Guy Collins)	
Edna A. Ozanne	Tempe
L. Clay Henshaw	Phoenix
Zebulon Pearce	Mesa
Minnie A. Perry	Cordes
Madge P. Richmond	Phoenix
Gilbert States	Delta, Colo.
Ida Wheatley Temple	Bowie
Ruby M. Tucker	Tempe
Lillian A. Vaughn	Benson
Enma Peyton	Florence
(Mrs. Wm. Narron)	
Mary Malvina Wallace	Mesa
Veronica White	Tempe
Lulu Belle Wingar	Tempe

Owing to the action of the Board in extending the course of study no class was graduated in 1900.