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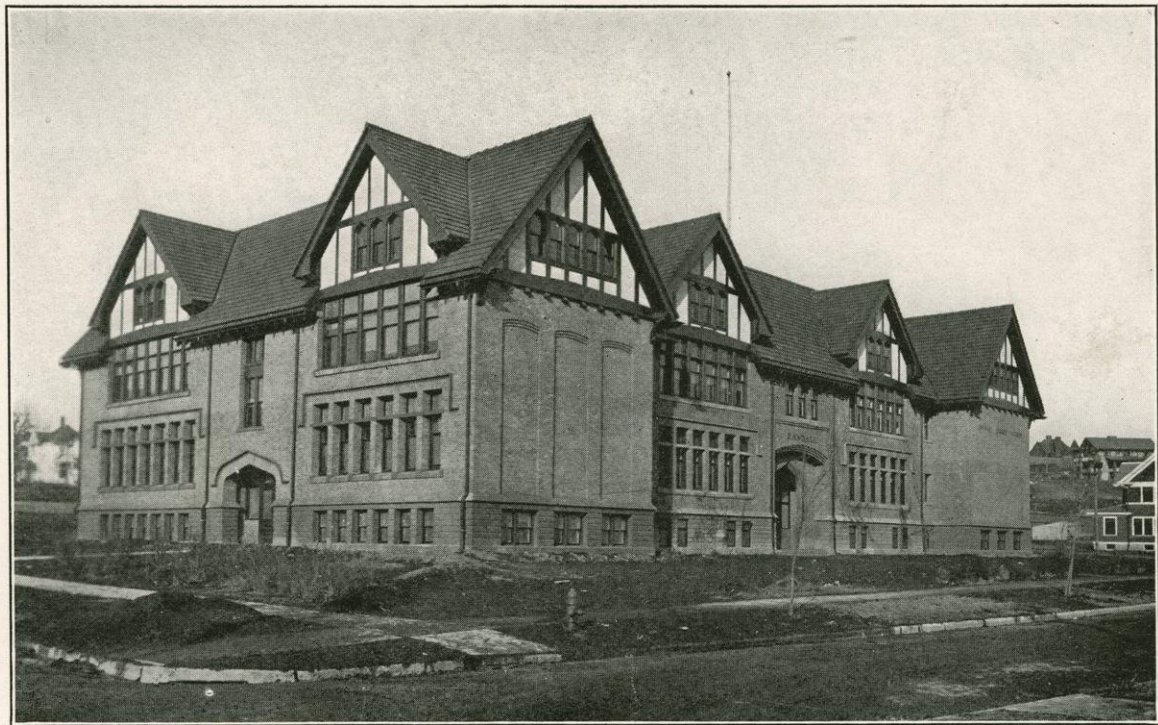
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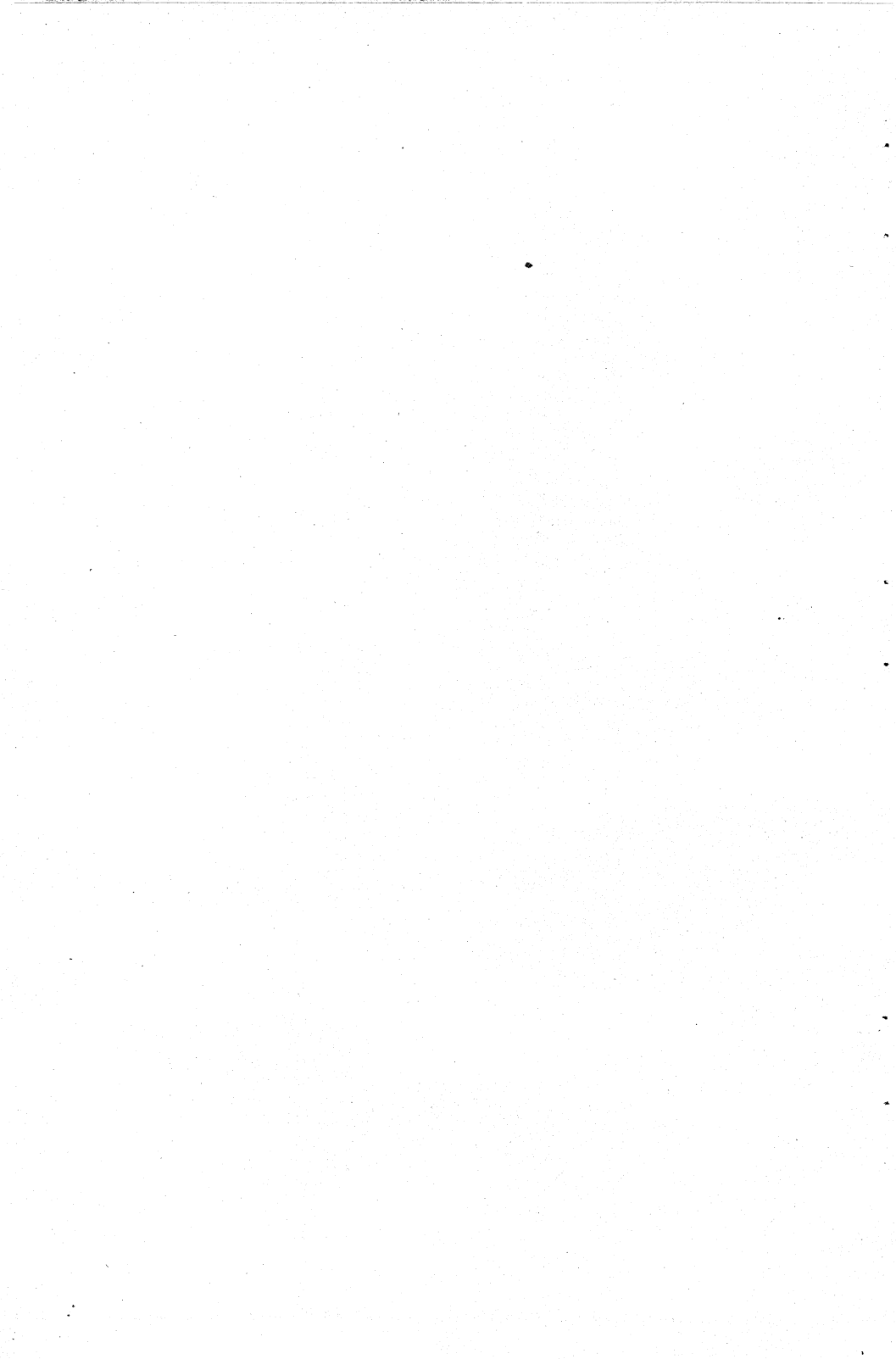
Randall School

THE
PUBLIC SCHOOLS

CITY OF MADISON

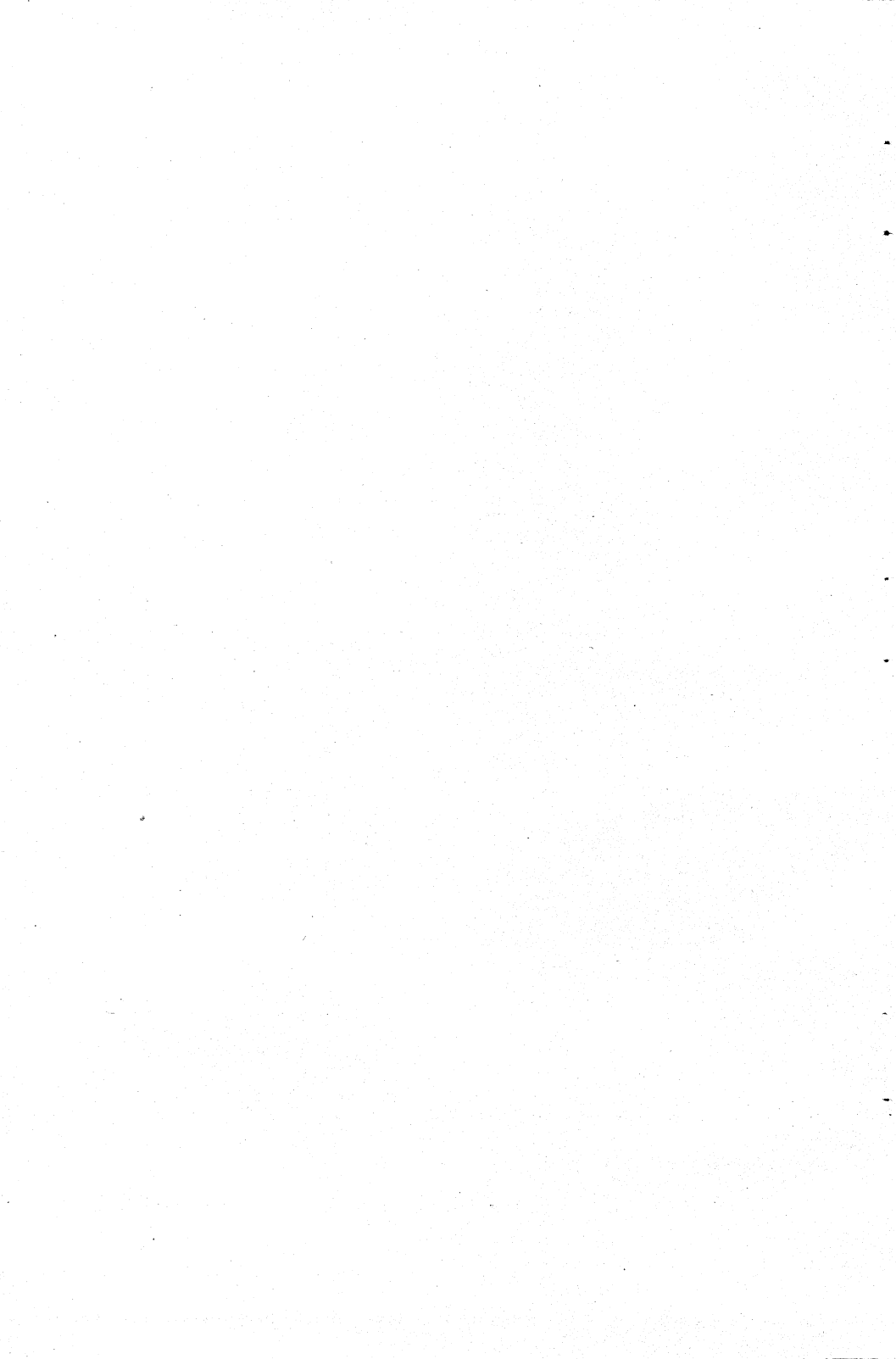
COURSES OF STUDY AND
OUTLINES OF WORK

1912



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OUTLINE OF COURSE OF STUDY

THE KINDERGARTEN

ITS PLACE:

In the Madison school system the kindergarten instruction covers one year, the fifth year of the child's life, and serves as an introduction to school life.

AIMS AND NATURE:

Froebel believed that the first years of a child's education are vitally important. He spent a life time in establishing a system that would develop the mental, moral, and physical nature of the child. As a means to this end he made use of the natural activities of the child and through carefully arranged systems of games, stories, songs, occupations, and gifts aimed to strengthen the creative instinct, form habits of prompt obedience, and instill the spirit of kindness, truthfulness, courtesy, and obedience. It was through Froebel therefore that the kindergarten or child-garden was established and became an integral part of a complete system of education.

GAMES:

The games strengthen the physical powers, develop the special senses, encourage wholesome rivalry, and cultivate a spirit of thoughtfulness for the happiness of others.

STORIES:

The stories relating to the home life give the child an insight into and idealize the community life. Nature studies make real the forces of nature and reveal the beauties and wonders of plant and animal life. Fables, folk stories, and fairy tales lead the child over the borders of the present into a beautiful and imaginative world peopled by creations of his own fancy. The activities thus aroused are the beginnings of the real activities that are essential to success in after life. The simple belief in the mythical opens the way in real life to that broader faith that reaches up and grasps truths.

SONGS:

Well selected songs cultivate the imagination, quicken the emotions, and furnish an outlet for the expressing of thought and feeling.

OCCUPATIONS:

The occupations—folding, cutting, pasting, sewing, drawing, painting and modeling, develop the muscles of the hand and arm, train the eye to accuracy, cultivate neatness and order, inspire the child to a sense of harmony of form and color, and provide him with material for self-expression.

GIFTS:

The first six gifts are used during the year. Work with these gives the child a knowledge of color, form, size, number, position, and direction. It also gives him an opportunity for self-expression and the creation of new forms.

FIRST GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Summers Primer, Summers First Reader. Words and sentences from blackboard, word method supplemented by sentence and phonic methods. Use script from the beginning. Insist upon accuracy, neatness, and legibility in all written work. Read parts of several First Readers, changing from one to the other as the vocabularies and circumstances may make desirable. The final accomplishment of the year's work should give the pupil ability to recognize readily all words taught, to read intelligently simple sentences and paragraphs, and to spell by letter and sound the words of the reading lessons. Follow Summers Manual.

2. *Story Telling*.—See outline for Language and Literature.

3. *Reading to Class*.—The teacher will read to the children from Stories for Kindergarten and Primary Schools and selections from list in outline for Language and Literature.

4. *Memorizing Choice Selections*.

5. *Word Study*.—Teach elementary sounds by slow pronunciation of familiar words. Word building. Oral and written spelling of easy words.

6. *Oral and Written Exercises*.—Conversation suggested by objects, pictures, and individual experience of pupils. Action sentences. In narratives, descriptions, and reproductions have pupils recognize two phases or viewpoints of each subject, thus training in habit of analysis and laying the foundation for paragraphing. See outline for Language and Literature.

7. *Dramatizing*.—Stories, poems, pictures. See outline for Language and Literature.

NUMBERS:

Number work during the first part of year should be largely incidental. New ideas developed in connection with various exercises and activities. Reading and writing such numbers as are presented incidentally in games, busy work, and other exercises. Constant use of blackboard by pupils.

During second half year count by twos, fives, tens. Drill on primary combinations. Blackboard exercises corresponding to oral exercises. Rapid drill in adding single columns, applying constantly the known combinations. Story problems, using familiar denominate numbers and objects. Analysis of simple problems.

ELEMENTARY SCIENCE:

See outline.

ART INSTRUCTION AND INDUSTRIAL WORK:

As outlined by supervisors.

WRITING:

Writing Hour, Book One. Particular attention to position of body and pencil. Simple exercises on blackboard with crayon to train the muscles of the hand and arm. Observation of teacher's work in writing letters and simple words. Reproduction of same by pupils, not from copy of teacher but from mental pictures. First writing on paper should be with large sized pencil with soft lead. Follow outline by supervisor.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drill, marching, games, folk dances.

SECOND GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Summers Second Reader, Classic Fables, Tree Dwellers. Supplementary readers. Frequent use of responsive or dramatic reading. Continue use of blackboard in teaching new words. Drill in elementary sounds. Special drill on words which must be spoken together. Teach meaning of words by association, not by formal definition. The final accomplishment of the year's work should give the pupils power to call at sight all words taught, to know what they mean in the sentence, to understand the thought of the lesson, and to express the thought in an easy manner. Follow Summers Manual.

2. *Story Telling*.

3. *Reading to Class*.

4. *Memorizing Choice Selections.*

5. *Word Study.*—Words from reading lesson studied and reproduced orally and in writing, oral spelling strongly predominating.

6. *Oral and Written Exercises.*—Reproduction of stories, myths, and fairy tales. Description of pictures. Exercises based on Nature Study. Simple constructive written work. Seek for originality in forms of expression. Avoid fixed or stereotyped forms. See outline on Language and Literature.

7. *Dramatizing.*—Stories, poems, pictures.

NUMBERS:

Reading and writing numbers to 1000. Roman characters to XX. Drill on the "forty-five combinations," using number cards. Apply the new facts in adding numbers of not more than three orders. Teach separation or subtraction of numbers in connection with addition. Teach multiplication with multiplier limited to one order. Teach division in same connection with divisor limited to one order. Drill for rapidity and accuracy. Simple fractional forms. Common units of measures. Analysis of simple problems.

ELEMENTARY SCIENCE:

Lessons on plants and animals according to outline.

ART INSTRUCTION AND INDUSTRIAL WORK:

As outlined by supervisor.

WRITING:

Writing Hour, Book Two. Drill exercises for position and movement. Continue use of blackboard. Daily use of pencil and paper. Criticism of writing in all exercises. Have a definite time for special drill. Use pen and ink during last half of year. Follow outline of exercises.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drill, marching, games, folk dances.

THIRD GRADE

ENGLISH:

1. *Class Reading.*—Pupils will buy Scudder's Book of Fables and Folk Stories, Hans Andersen's Fairy Tales, First Series, and Stories Mother Nature Told Her Children. Continue responsive or dramatic reading.

2. *Reading to Class.*

3. *Word Study.*—Alexander's Spelling Book, Part One. Study-recitation periods, teacher studying with pupils. Oral spelling

strongly predominating. Results tested by words and sentences written in regular spelling blank from dictation. Use pen and ink.

4. *Oral and Written Language*.—Reproduction of stories and descriptions. Short inventive stories. Simple letter writing. Complete stories begun by teacher. Technical work as outlined.

5. *Memorizing Choice Selections*.

NUMBERS:

Myers' Arithmetic, Book I, Part I.

ELEMENTARY SCIENCE:

Lessons on plants and animals according to outline.

ART INSTRUCTION AND INDUSTRIAL WORK:

Applied Arts Drawing Book, Third Year. Work as outlined by supervisors.

WRITING:

Writing Hour, Book Three. Special exercise for freedom of movement and light lines. Continue blackboard work. Have a definite time for special drill. See outline.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drill, marching, games, folk dances.

FOURTH GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Hawthorne's *Little Daffydowndilly* and *Other Stories*, and Ruskin's *King of the Golden River*. Continue use of responsive or dramatic reading.

2. *Reading to Class*.

3. *Word Study*.—Alexander's Spelling Book, Part One. Study-recitation periods, teacher studying with pupils. Oral spelling strongly predominating. Results tested by words and sentences written in regular spelling blank from dictation. Use pen and ink. Use of dictionary.

4. *Oral and Written Language*.—Reproduction of stories and descriptions. Technical work as outlined.

5. *Memorizing Choice Selections*.

NUMBERS:

Myers' Arithmetic, Book I, Part II.

ELEMENTARY SCIENCE:

See outline.

ART INSTRUCTION AND INDUSTRIAL WORK:

Applied Arts Drawing Book, Fourth Year. Work as outlined by supervisor.

WRITING:

Writing Hour, Book Four. Special exercises for freedom of movement and light lines. Continue blackboard work. Have a definite time for special drill. See outline.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drills, marching, team and competitive games.

FIFTH GRADE**ENGLISH:**

1. *Class Reading*.—Pupils will buy Elson's Grammar School Reader, Book One.

2. *Reading to Class*.

3. *Word Study*.—Alexander's Spelling Book, Part Two. Study-recitation periods. All written spelling preceded by oral spelling. Use regular spelling blank. Pen and ink.

4. *Oral and Written Exercises*.—Dictation and reproduction of literary, historical, and geographical matter. Constant use of blackboard in constructive written work. Much of the writing to be done in the class under teacher's direction. Special attention to simple paragraphing. Use Southworth's New Language Lessons as suggestive basis for work.

5. *Memorizing Choice Selections*.

ARITHMETIC:

Myers' Arithmetic, Book II, Part I. See outline for Arithmetic.

GEOGRAPHY AND HISTORY:

North America, United States, Alaska, Canada, Mexico, Central America. Stories of American History—explorers, colonists, French and Indian Wars, Revolutionary period.

ELEMENTARY SCIENCE:

See outline.

PENMANSHIP:

Writing Hour, Book Three. Simple exercises for freedom of movement. See outline.

ART INSTRUCTION:

Applied Arts Drawing Book, Fifth Year. Work as outlined by supervisor.

MANUAL TRAINING AND DOMESTIC SCIENCE:

As outlined by supervisors.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drills, marching, competitive games.

SIXTH GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Elson's Grammar School Reader, Book Two.

2. *Reading to Class*.

3. *Word Study*.—Alexander's Spelling Book, Part Two. Study-recitation periods. All written spelling preceded by oral spelling. Use regular spelling blank. Pen and ink.

4. *Oral and Written Exercises*.—Special attention to simple constructive composition throughout the year. Much of the written work should be impromptu and blackboard work should be frequent. Special attention to paragraphing, beginning with the topic sentence and developing the paragraph and related paragraphs. Work very simple at first. Chapters I to X, inclusive, of text-book will furnish basis for subject matter and material. See Suggestions in Language.

5. *Grammar*.—Southworth's English Grammar and Composition, chapters XI to XIII, inclusive.

6. *Memorizing Choice Selections*.

ARITHMETIC:

Myers' Arithmetic, Book II, Part II. See outline for Arithmetic.

GEOGRAPHY AND HISTORY:

South America, Europe, Asia. See outline for The Study of a Continent. Stories of Greek and Roman history.

ELEMENTARY SCIENCE:

See outline.

PENMANSHIP:

Writing Hour, Book Six. See outline.

ART INSTRUCTION:

Applied Arts Drawing Book, Sixth Year. Work as outlined by supervisor.

MANUAL TRAINING AND DOMESTIC SCIENCE:

As outlined by supervisors.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drills, marching, competitive games.

SEVENTH GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Elson's Grammar School Reader. Book Three.
2. *Reading to Class*.
3. *Word Study*.—Exercises selected from Alexander's Spelling Book, Part Two, and from other branches of study.
4. *Oral and Written Exercises*.—Dictation, narration, description, and reproduction of literary, historical, and nature study matter. Biographical sketches. See Suggestions in Language. Continue impromptu constructive work and the use of the blackboard.
5. *Grammar*.—Southworth's English Grammar and Composition, chapters XIV to XVII, inclusive.
6. *Memorizing Choice Selections*.

MATHEMATICS:

1. *Arithmetic*.—Myers' Arithmetic, Book III, Part I.
2. Algebraic expressions and symbols, including the methods of solving simple equations.

GEOGRAPHY:

1. Africa, Australia.
2. Principal oceans and trade routes of the world.
3. Mathematical Geography. (See outline.)
4. Wisconsin in detail. (See outline.)

HISTORY OF UNITED STATES:

1. Age of Exploration.
2. Age of Colonization.
3. Life in the Colonies Before the Revolution. (See outline.)

ELEMENTARY SCIENCE:

See outline.

PENMANSHIP:

Writing Hour, Book Seven.

ART INSTRUCTION:

Applied Arts Drawing Book, Seventh Year. Work as outlined by supervisor.

MANUAL TRAINING AND DOMESTIC SCIENCE:

As outlined by supervisors.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drill, marching, team and competitive games.

EIGHTH GRADE

ENGLISH:

1. *Class Reading*.—Pupils will buy Elson's Grammar School Reader, Book IV.

2. *Word Study*.—Exercises selected from Alexander's Spelling Book, Part Two, and from other branches of study. Special attention to spelling in all written work.

3. *Oral and Written Exercises*.—Description of persons, places, manners, customs, as found in reading, history, and geography. Continue impromptu constructive work and the use of the blackboard. Special attention to the mechanics of writing, penmanship, capitalization, punctuation, indentation, margin, neatness.

4. *Grammar*.—Text-book, chapters XVIII to XXV, inclusive. General review, giving special attention to the parts of speech.

5. *Memorizing Choice Selections*.

MATHEMATICS:

1. *Arithmetic*.—Myers' Arithmetic, Book III, Part II.

2. *Elements of Algebra*.—Fundamental operations, problems, and simple forms of factoring. Concrete geometry.

HISTORY:

United States. Revolutionary period. Administration. Civil War. Reconstruction and topics of the times. General review. (See outline.)

ELEMENTARY SCIENCE:

See outline.

ART INSTRUCTION:

Applied Arts Drawing Book, Eighth Year. Work as outlined by supervisor.

MANUAL TRAINING AND DOMESTIC SCIENCE:

As outlined by supervisors.

MUSIC:

As outlined by supervisor.

PHYSICAL TRAINING:

Calesthenic drill, marching, team and competitive games.

ENGLISH

English must occupy a prominent place in all school work. In the elementary grades it must receive constant attention, and in the primary instruction it is the center around which all exercises must be gathered. All activities in line of plays, games, imaginative work, sense training, picture lessons, story telling, and dramatizing should have as a definite end power to comprehend and express thought. A course of study must therefore include the following closely related subjects:

1. Reading.
2. Language.
3. Grammar.
4. Literature.
5. Spelling.
6. Writing.

I. READING

1. SUGGESTIONS IN READING

As a part of the work in English reading must receive constant attention. To interpret the record of the deeds, thoughts, and emotions of the race is an attainment that is related vitally to all human growth and advancement; is an art that stands first among those taught in the schools. The reading art is of first importance because through its exercise we get:

1. Information.
2. Culture.
3. Thought-power.
4. Pleasure.
5. Inspiration.

As a school exercise reading assumes two phases:

1. Learning to read.
2. Reading to learn.

As an art reading finds its application in two forms:

1. Silent reading—thought-getting.
2. Oral reading—thought-giving.

Thought Getting

The first and fundamental aim in all reading exercises must be training in thought-getting. Prof. Clark, in his book on "How to

Teach Reading," says that the first result to be obtained in a reading lesson is "power to extract thought from the printed page. After we leave school, our information is gained from books: and what we get from these is largely determined by our school training. Our system of education has much to answer for in failing to provide this training. The value of vocal expression is not to be deprecated, but of the utmost importance is the ability to get the author's meaning. Our teaching, from the primary grade to the university, should never lose sight of its responsibility in this regard."

Thought Giving

The oral or thought-giving phase of reading, though always subordinate and secondary to the mastery of thought, must not be neglected. To read expressively and to interpret correctly to others the printed page is an art greatly to be desired. Clear enunciation, correct pronunciation, and proper inflection, emphasis, and force—all enter into and are essential to good oral reading. These, however, must not be taught formally or artificially, but must be the manifestation of mental states. These must not be mechanically acquired in an objective way, but must come from within and be prompted by the rightly comprehended thought.

With a view to aiding in thought-getting and thought-giving the methods employed in class exercises must result in power on the part of pupils:

1. To call words at sight.
 - a. Know letters.
 - b. Understand diacritical marks.
 - c. Interpret marks.
2. To know meaning of words.
 - a. Word study.
 - b. Use of dictionary.
 - c. Context.
 - d. Formal definition.
3. To articulate clearly.
 - a. Phonic drill.
 - b. Slow pronunciation.
 - c. Exaggerated accuracy.
 - d. Reading aloud from distance.
4. To read fluently.
 - a. Familiarity with thought through study and conversation.
 - b. Reciting memory gems.
 - c. Reading aloud at home.

5. To read with expression.
 - a. Using the sentence as the unit.
 - b. Studying sentence before reading aloud.
 - c. Asking questions that the sentence will answer.
 - d. Telling what the book says.
 - e. Telling the story.
 - f. Dramatic or dialogue reading.
 - g. Dramatizing.
6. To enjoy the reading exercise.
 - a. Relating meaning to personal experiences.
 - b. Catching the unity of thought.
 - c. Mastery of mechanics of reading.
 - d. Consciousness of excellence.
 - e. Keen appreciation and enjoyment of selection on part of teacher.
 - f. Suggestions as to the beauty and interest of the selection.

COMMENTS

Independent thinking must be stimulated by thought-provoking questions.

Pupils should not be told what to think, but directed in their thinking.

The end of the class work is not uniform knowledge, but multiform thinking.

General agreement to an interpretation is not always a good sign. Each pupil may have a different thought and all be right.

The aim should not be to settle things, but to arouse an investigating spirit. Teaching is not telling, but stimulating.

Mastery leads to consciousness of power. Consciousness of power gives joy. The pleasure of achievement is the great moving force in the world's activities.

2. COURSES IN READING

FIRST GRADE

PUPILS WILL BUY: Summers Primer, Summers First Reader.

SUPPLEMENTARY BOOKS: Sets will be selected from the following: The Sunbonnet Babies Primer, The Wheeler Primer, Hiawatha Primer, The Bender Primer, New Education Reader, The Little Red Hen, Three Little Pigs, Wheeler's First Reader, Dramatic First Reader, Eugene Field Reader, Folk-Lore Primer, Folk-Lore First Reader, Rhymes and Stories.

SECOND GRADE

PUPILS WILL BUY: Summers Second Reader, Classic Fables, Tree Dwellers.

SUPPLEMENTARY BOOKS: Sets will be selected from the following: Robinson Crusoe, Stepping Stones to Literature, Book I, Wheeler's Second Reader, New Education Reader—Book II, Dramatic Second Reader, Jones' Graded Classics—Book II, Eskimo Stories, Around the World—Book I, Merry Animal Tales, Little Folks of Many Lands, Nature Studies, Child's Garden of Verses, Graded Poetry Readers—I and II, Robert Louis Stevenson Reader, Art Literature—Book I, Child-Lore Dramatic Reader.

THIRD GRADE

PUPILS WILL BUY: Scudder's Fables and Folk Stories (Illustrated), Hans Andersen's Fairy Tales—First Series, The Story Mother Nature Told Her Children, or Little Folks of Many Lands—Chance.

SUPPLEMENTARY BOOKS: Sets will be selected from the following: Wheeler's Third Reader, Stepping Stones to Literature—Book II, Friends and Helpers, Around the World—Book II, Nature Myths, Mother Goose Village, Child Life, Graded Poetry Reader—III, America's Story for Children—Pratt, Children's Classics in Dramatic Forms—Book II, Children's Classics in Dramatic Form—Book III, The Early Cave Men, Fifty Famous Stories Retold—Baldwin, Little Folks of Many Lands—Chance.

FOURTH GRADE

PUPILS WILL BUY: Hawthorne's Little Daffydowndilly and Other Stories or Mother Nature's Children—Gould, Ruskin's King of the Golden River and Other Wonder Stories.

SUPPLEMENTARY BOOKS: Sets will be selected from the following: Wheeler's Fourth Reader, The Later Cave Men, Round the World in Myth and Song, Our Birds and Their Nestlings, Stepping Stones to Literature—Book III, Eggleston's American Life and Adventure, Grimm's Fairy Tales, Goody Two Shoes, Graded Reader—IV, Children's Classics in Dramatic Form—Book IV, Classic Myths—Judd, Mother Nature's Children—Gould.

FIFTH GRADE

PUPILS WILL BUY: Elson's Grammar School Reader, Book One.

BOOKS TO BE READ BY PUPILS: To be bought in sets by the Board or singly by pupils, as directed by Committee on Course of Study.

Pioneers of the Rocky Mountains and the West—McMurry, Heroes of the Middle West, Children's Stories of American History, Lobo, Rag and Vixen, Hawthorne's Tanglewood Tales, William Tell, Great Americans for Little Americans, Carpenter's North America, Graded Poetry Reader—V, Secrets of the Woods—Long, Some Merry Adventures of Robin Hood—Pyle.

SIXTH GRADE

PUPILS WILL BUY: Elson's Grammar School Reader, Book Two.

BOOKS TO BE READ BY PUPILS: To be bought in sets by the Board or singly by pupils, as directed by Committee on Course of Study. Hero Stories from American History, Pioneers on Land and Sea, Favorite Greek Myths, Stories from English History, Nature Study, Graded Poetry Reader—VI, Birds and Bees, Just So Stories—Kipling—School Edition, James Whitcomb Riley Stories—School Edition, Eggleston's First Book in American History.

SEVENTH GRADE

PUPILS WILL BUY: Elson's Grammar School Reader—Book Three.

BOOKS TO BE READ BY PUPILS: To be bought in sets by the Board or singly by pupils, as directed by Committee on Course of Study. The Young American, Courtship of Miles Standish, The Cricket on the Hearth, Rip Van Winkle, Later Colonial Period, The Foundation of the Republic, Graded Poetry Reader—VII, Lamb's Tales from Shakespeare, Scott's Lady of the Lake.

EIGHTH GRADE

PUPILS WILL BUY: Elson's Grammar School Reader—Book Four.

BOOKS TO BE READ BY PUPILS: To be bought in sets by the Board or singly by pupils, as directed by Committee on Course of Study. Masterpieces of American Literature, The Man Without a Country, Longfellow's Poems, The Chambered Nautilus, The Pilot, The Last of the Mohicans, Little Stories of France, Graded Poetry Reader—VIII, Selections from Shakespeare.

II. LANGUAGE AND LITERATURE

SUGGESTIONS IN LANGUAGE AND LITERATURE.

Exercises under this head may take the form of:

1. Conversations and discussion.
2. Telling stories to pupils.
3. Reading to pupils.

4. Reproduction of stories by pupils.
5. Memorizing choice selections.
6. Dramatizing poems and stories.
7. Picture study.
8. Reading stories and poems.
9. Telling what had been read.
10. Reading books at home.
11. Oral and written composition.

The following outline will be regarded as simply suggestive. The different kinds of material will be used as the teacher thinks best.

Poems

Many of the poems suggested should be memorized by the pupils and others should be read to the pupils or by them.

Stories

The stories in the lower grades should be told to the pupils rather than read to them. In the upper grades they may be read to the pupils or by the pupils. These stories should furnish the material for much oral reproduction and some written work.

Pictures

The pictures are to be studied and enjoyed. It has been said that the mission of art is not to instruct in the intellectual sense of the term, but rather to *please*, to *reveal*, and to *inspire*. The enumeration of the objects represented in a picture or the bringing out of a few facts in regard to the artist or his picture may have some value, but "utterly insignificant in comparison with the revelation that the picture has in store for one who can understand and appreciate."

In addition to the esthetic and ethical values pictures are useful in illustrating and giving clear conceptions in almost every line of human experience. They are effective aids in all branches of school work, and especially in language work when they may be used:

1. To illustrate a narration or description.
2. To introduce and to illustrate a story or poem.
3. To serve as a basis for blackboard conversation lessons.
4. To serve as a basis for oral and written composition.

Dramatization

Dramatization should never be considered as an end in itself. It should never develop into a finished product. It should only be used as a means to an end. It may be used effectively:

1. To clarify thought.
2. To intensify feeling.

3. To vivify the imagination.
4. As a method of interpreting thought.
5. As a means of self-expression.

METHODS AND MATERIAL

FIRST GRADE

I. POEMS:

The Baby	<i>McDonald</i>
All Things Bright and Beautiful.....	<i>Mrs. Alexander</i>
The Swing	<i>Stevenson</i>
My Bed is a Boat	<i>Stevenson</i>
The Land of Nod	<i>Stevenson</i>
Stars and Daisies	<i>F. D. Sherman</i>
A Dewdrop	<i>F. D. Sherman</i>
The Rock-a-by Lady	<i>Field</i>
The Shut-Eye Train	<i>Field</i>
Wynken, Blyken, and Nod	<i>Field</i>
Hiawatha's Childhood	<i>Longfellow</i>
"He Prayeth Best"	<i>Coleridge</i>
Mother Goose Rhymes	<i>Whittier's "Child Life"</i>
A Visit from Santa Claus	<i>C. Moore</i>
Two Little Kittens	
Daisies	<i>F. D. Sherman</i>
Sleep, Baby, Sleep	
In the Heart of a Seed	<i>Kate L. Brown</i>
Suppose	
Who Stole the Bird's Nest	<i>L. M. Child</i>

II. SUGGESTIVE MATERIAL FOR RE-TELLING AND DRAMATIZATION:

Selections from Aesop's Fables. How the Woodpecker Got His Red Head. How the Robin's Breast Became Red. How We Came to Have Buttercups. How the Shooting Stars Came to Earth. Rainbow Faries. The Pea Blossom. The Daisy. Why the Evergreen Trees Keep Their Leaves. Little Red Riding Hood. The Three Bears. Cinderella. The Discontented Pine Tree. Star Dollars. Bible Stories—Story of Moses; Story of Joseph.

III. MATERIAL FOR STORIES OF CHILD LIFE OF OTHER LANDS: Seven Little Sisters. Little Folks of Many Lands.

IV. PICTURES: The pictures in the room. Millet's—The First Steps; The Gleaners; Feeding Her Birds; The Churning; Can't You Talk—Holmes. The Madonna of the Chair—Raphael.

V. ORAL AND WRITTEN WORK: Conversation suggested by objects, pictures, and individual experience of pupils. Action sentences. In narratives, descriptions, and reproductions have pupils recognize two

phases or viewpoints of each subject, thus training in habit of analysis and laying the foundation for paragraphing.

VI. TECHNICAL WORK FOR FIRST GRADE: Teach in connection with oral and written composition and other school subjects:

Capitals: Beginning of a sentence. Pronoun *I*.

Punctuation: Period at end of a sentence. Interrogation point at end of a sentence.

Verbs: Correct use of *is* and *are*, *was* and *were*.

Dictation.

SECOND GRADE

I. POEMS:

September	<i>H. H. Jackson</i>
October's Bright Blue Weather	<i>H. H. Jackson</i>
November	<i>Alice Cary</i>
Seven Times One	<i>Jean Ingelow</i>
The Barefoot Boy	<i>Whittier</i>
The Children's Hour	<i>Longfellow</i>
Hiawatha's Childhood	<i>Longfellow</i>
Origin of the Violet	
Marigolds	<i>Bliss Carman</i>
The Use of Flowers	<i>Mart Howitt</i>
The Wind	<i>Stevenson</i>
The Violet	<i>Jane Taylor</i>
The New Moon	<i>Mrs. Follen</i>
Sweet and Low	<i>Tennyson</i>
One, Two, Three	<i>Henry C. Bunner</i>
If I Were a Sunbeam	<i>Lucy Larcom</i>
My Shadow	<i>Stevenson</i>
Christmas	<i>Mrs. Hawtrey</i>

II. MYTHS CONNECTED WITH NATURE: Golden Rod and Aster. Clytie. Arachne. Philemon and Bancis. Why the Narcissus Grows by the Water. Selections from Judd's Classic Myths. Why We Have the Moss Rose. The Secret of Fire Among the Trees. The Story of the First Humming Bird. The Story of the First Snowdrops. Maple Leaf and Violet. Why the Morning Glory Climbs.

III. FABLES: The Anxious Leaf. The Unhappy Pine Tree. Crane Express. The Kind Oak and the Violets. Selections from Aesop's Fables. The Broken Wing.

IV. STORIES: Louise, the German Sister. Little Brown Sister. Bruce and the Spider. Story of William Tell. Hiawatha and Pearl Feather. Puss in Boots. New Year Story. Christmas in the Barn. How the Little Boy Got His Shirt. Bible Stories:—Youth of David; Childhood of Samuel.

V. PICTURES: The pictures in the room. Sistine Madonna—Raphael. Children of the Shell—Murillo. Ploughing—Bonheur. Cattle at Watering Trough—Dupre. The Children's Hour—Taylor. Laying Down the Law—Landseer. The Forester's Family—Landseer.

VI. ORAL AND WRITTEN WORK: Reproduction of stories, myths, and fairy tales. Description of pictures. Exercises based on Nature Study. Simple constructive written work. Seek for originality in forms of expression. Avoid fixed or stereotyped forms.

VII. TECHNICAL WORK: Review work of first grade. Teach in connection with oral and written composition and other school subjects:

Capitals: Names of persons, places, days of week. Word O.

Punctuation: Period in abbreviations in following: Mr., Mrs., St., Wis.

Plurals: Ordinary formation of *s* and *es*.

Verbs: Correct use of *see*, *saw*, and *seen*.

THIRD GRADE

I. POEMS:

A Lesson of Mercy	Alice Cary
Don't Give Up	Phoebe Cary
Obedience	Phoebe Cary
The Flights of the Birds	E. C. Stedman
What the Winds Bring	E. C. Stedman
The Village Blacksmith	Longfellow
Hiawatha's Sailing	Longfellow
Rain in Summer	Longfellow
Little Blue Pigeon	Field
Why do Bells of Christmas Ring	Field
A Strip of Blue	Lucy Larcom
The Huskers	Whittier
Spring	Whittier
The First Snowfall	Lowell
The Fountain	Wordsworth
The Brook	Tennyson
A Christmas Carol	Holland
A Child's Thought of God	Mrs. Browning
To-day	Carlyle
A Song	Riley
Thanksgiving Day	Child
Suppose	Phoebe Cary
Lucy Gray	Wordsworth
I Love You, Mother	Joy Allison

II. STORIES: Siegfried. The Fish and the Butterfly. The Holy Night. Saul and David. The Snow Image. Bellerophon and Pegasus. The Chimaera. The Bell of Atri. The Vision of Sir Launfal. Appollo and Hercules. Ulysses and the Bag of Winds. The Legend of the North Wind. Wylie. The Coming of the Prince. The Christ Child. The Swiss Sister, Jeanette. The Golden Bird. The Voices of Nature. Androculus and the Lion. Christmas Chimes. The Pattern Lily. Ji-Shib. Heidi. Bible Stories:—The Story of Jacob; The Story of Isaac; The Story of Abraham; Adam and Eve; Cain and Abel; Story of Noah; Isaac and Jacob.

III. PICTURES: The pictures in the room. Shoeing the Horse—Landseer. Repose in Egypt—Van Dyke. Baby Stuart—Van Dyke. A Pair of Nut-crackers—Landseer. Ploughing in Riverais—Bonheur.

IV. ORAL AND WRITTEN COMPOSITION: Reproduction of stories and descriptions. Short inventive stories. Complete stories begun by teacher. Simple letter writing. Technical work as outlined.

V. SUBJECTS FOR WRITING WORK: Aladdin and His Wonderful Lamp. Vulcan. The Legend of St. Christopher. How Daphne Became a Tree. Story of a Drop of Water. How a Robin Built It's Nest. Imagine You Are March. What do You Bring? The Ant and the Cricket. Hans in Luck. Sir Philip Sidney.

VI. TECHNICAL WORK: Review work of previous grades. Teach in connection with oral and written composition and other school subjects the following:

Capitals: First word of each line of poetry. Names of months.

Direct quotations (see supplementary sheet).

Punctuation: Apostrophe in possessive singular. Period in abbreviations. Hyphen at end of lines where a word is left unfinished and only at end of syllables. Comma and period in dates. Comma in term of address. Comma in a series. Comma before short, direct quotations. Abbreviations:—Av., Ave., names of months, Dr., Rev., doz., lb., qt., gal., in., ft., yd., ct. or c., sq. in., sq. ft., sq. yd., \$.

Plurals: Few irregular plurals, such as mouse, mice; loaf, loaves; knife, knives.

Possessives: Possessive singular.

Verbs: The correct use of the following irregular verbs: draw, throw, show, ring, sing, blow, grow, break; also the use of you were, there is, there are, there was, and there were; also the use of teach and learn.

Pronouns: Nominative form of personal pronoun after verb *to be*. Emphasize this particularly. Have children repeat correct forms as, "It is I." "It was she who told me," etc.

FOURTH GRADE

I. POEMS:

The Gladness of Nature	<i>Bryant</i>
Daybreak	<i>Longfellow</i>
The Day is Done	<i>Longfellow</i>
The Four Winds	<i>Longfellow</i>
The Sculptor	<i>Doane</i>
The New Year	<i>Tennyson</i>
There is Nothing Like the Rose.....	<i>Rosetti</i>
A Sudden Shower	<i>Riley</i>
The Brook's Song	<i>Riley</i>
Hark! Hark! The Lark	<i>Shakespeare</i>
To a Butterfly	<i>Wordsworth</i>
Daffodils	<i>Wordsworth</i>
The Way to Heaven	<i>Holland</i>
The Legend of the Opal	
To a Dandelion	<i>Lowell</i>
Hope, Faith, and Love	<i>Schiller</i>
Sweet and Low	<i>Tennyson</i>
The Pet Lamb	<i>Wordsworth</i>
Casabianca	<i>Hemans</i>
The Better Land	<i>Hemans</i>
The Old Oaken Bucket	<i>Wordsworth</i>
The Old Clock on the Stairs	
Norse Lullaby	<i>Field</i>

II. MATERIAL FOR REPRODUCTION—WRITTEN OR ORAL: Selections from Holbrook's "Round the Year in Myth and Song." Story of a Balder. Odin and His Valhalla. Mercury and Iris. The Flax. Arthur and the Sword. Lobo. Vixen. Jungle Tales. Alladin and His Wonderful Lamp.

III. PICTURES: Those in the room. Holy Night—Coreggio. The Shepherdess—Millet. The Lion of Lucerns—Thorwaldsen. The Angelus—Millet. The Mill—Rembrandt.

IV. ORAL AND WRITTEN WORK: Reproduction of stories and descriptions. Technical work as outlined.

V. SUBJECTS FOR INVENTIVE WRITTEN WORK: The Life Experiences of a Sponge. My Happiest Birthday. The Story of a Boy and His Kite. A Trip Down the Mississippi River. The Park Policeman. Our Back Yard. How I Spent Ten Dollars. The Boy Who Always Forgot. What I Saw Through a Crack in the Fence. A Man I Saw in the Street Car. A Strange Looking Package on Christmas Eve. The Peddler and the Monkey. One Day's Fun. A Child Lost on the Street: What would you do if you were the child? What would you do if you found the child?

VI. SUGGESTIONS FOR LETTER WRITING: Write letters to parents or friends inviting them to attend exercises or exhibitions. Write letters to parents or friends inviting them to attend an "open day." Correspond with some child who has left school or has left the city. Write to the mother of one of your friends asking her permission to give a surprise party for her son or daughter.

VI. TECHNICAL WORK: Review work of previous grades. Teach in connection with oral and written composition and other school subjects the following:

Punctuation: Comma after word *O*. Quotation marks. Period in abbreviations. Exclamation point.

Possessives: Possessive plurals.

Plurals: Boy, and the rule for such words; lady, and the rule for such words, together with all plurals used in ordinary written work. Avoid special difficulties.

Contractions: Explain how contractions are formed. I'll, isn't, aren't, wasn't, didn't. Emphasize distinction between don't and doesn't.

Verbs: The correct use of sit and set, run, wear, drown, tear, come, buy, do, give, write, freeze, has, and have.

Use of Words: Their and there; may and can; got and have; in and into.

Paragraphing: Outlines of narration and description found in reading lesson. Inspection of punctuation found in reading lesson. Letter writing. Original biographies of pet animals, etc. Synonyms. Homonyms. Words of opposite meaning.

FIFTH GRADE

I. POEMS:

The Arrow and the Song	<i>Longfellow</i>
One by One	<i>Adelaide Proctor</i>
Break, Break, Break	<i>Tennyson</i>
The Brook	<i>Tennyson</i>
The Builders	<i>Longfellow</i>
The First Snowfall	<i>Lowell</i>
Barbara Frietchi	<i>Whittier</i>
Sheridan's Ride	<i>T. B. Read</i>
Woodman, Spare That Tree	<i>Geo. P. Morris</i>
The Leak in the Dike	<i>Phoebe Cary</i>
The Huskers	<i>Whittier</i>
Down to Sleep	<i>Helen Hunt Jackson</i>
Paul Revere's Ride	<i>Longfellow</i>
The Psalm of Life	<i>Longfellow</i>

Excelsior *Longfellow*

The Charge of the Light Brigade..... *Tennyson*

II. STORIES: Wagner Opera Stories. Robin Hood Stories. Black Beauty. The Neuremberg Stove. Bible Stories—Saul, Jonathan, David, Ruth and Naomi, Moses. The Lorelei. William Tell. Florence Nightingale.

III. PICTURES: Those in the room. Landais Peasants—Bonheur. The Sower—Millet. Pied Piper of Hamelin—Kaulback.

IV. ORAL AND WRITTEN WORK: Dictation and reproduction of literary, historical, and geographical matter. Constant use of blackboard in constructive written work. Much of the writing to be done in the class under teacher's direction. Special attention to simple paragraphing. Use Southworth's New Language Lessons as suggestive basis for work.

V. SUBJECTS FOR INVENTIVE WRITTEN WORK: My Trip Up the Rhine. My Trip from New York to Liverpool on board an Ocean Steamer. How I Spent a Day in Paris. What I Saw in the Land of the Midnight Sun. (After reading description.) How to Prepare and Plant a Garden. An Auto Trip. One Week in the Country. The Autobiography of My Rocking Chair. Ten Minutes at a Window. The Life Story of a Pet (written in the first person). A Birthday Story. A Dream. The Story of a Dollar. Description of a Blue Jay. A Game of Tag. A School Day. How I Spent Saturday. What We do on Saturday Night. An April Shower. How Alfred the Great Learned to Read.

VI. SUGGESTIONS FOR LETTER WRITING: Write letters to parents or friends inviting them to attend school receptions. Write a note to accompany a birthday or Christmas gift. Write a note of thanks for such a gift. Write a short letter to accompany a gift of fruit or flowers to an invalid. Write a note of acknowledgment for the gift and letter. Write a letter requesting the loan of a book, a piece of music, or any article. Write a reply to the letter granting the request. Write a courteous refusal to a letter of request. Write to a friend requesting his assistance at some entertainment. Write replies to this request. Aim to have pupils give a "personal touch" to these friendly notes. Read to the pupils a few model letters by way of preparation.

VII. TECHNICAL WORK: Use Southworth's New Language Lessons as a suggestive basis for technical work. Give special attention to letter writing.

SIXTH GRADE

I. POEMS:

The Psalm of Life *Longfellow*

The American Flag *Drake*

The Last Leaf	<i>Holmes</i>
Ring Out, Wild Bells.....	<i>Tennyson</i>
The Builders	<i>Longfellow</i>
Curfew Must Not Ring To-night.....	<i>Rose Thorpe</i>
Lord Ullin's Daughter	<i>Campbell</i>
Hohenlinden	<i>Campbell</i>
Out to Old Aunt Mary's.....	<i>Riley</i>
Skipper Ireson's Ride.....	<i>Whittier</i>
Lucy	<i>Wordsworth</i>
The Miller of the Dee.....	<i>Mackey</i>
Nobility	<i>Alice Cary</i>
The Burial of Sir John Moore.....	<i>Chas. Wolfe</i>

II. STORIES: Legends of King Arthur. Story of Miles Standish. French History Stories. Story of the Great Stone Face. The Pied Piper of Hamelin. Pilgrim's Progress. Peter Pan.

III. PICTURES: Those in the room. The Windmill on the Rhine—Rysdael. The Contented Flock—Bonheur. Pharaoh's Horses—Herring. The Mowers—Dupre.

IV. ORAL AND WRITTEN WORK: Special attention to simple constructive composition throughout the year. Much of the written work should be impromptu and blackboard work should be frequent. Special attention to paragraphing, beginning with the topic sentence and developing the paragraph and related paragraphs. Work very simple at first. Chapters I to X, inclusive, of text-book will furnish basis for subject matter and material. See Suggestions in Language.

V. SUBJECTS FOR INVENTIVE WRITTEN WORK: What the Cotton Dress Told the Lady. What the Tree Heard. What I would do with Five Dollars. Having My Own Way and its Results. How the Game was Won. A Picture I would Like to see in our Room. An Interesting Dream. A Kind Act. How to Prepare a Garden. How to Make a Garden Beautiful. My Neighbor's Garden. The Spring Flowers I Know and where I found Them. Conversation between a Robin and a Boy-Hunter. Conversation between a Dandelion and a Rose. What Profession I hope to follow. The Care of Books. An imaginary Story about "The Lighthouse." Imagine You are a Roman Boy. Imagine You are a Roman Girl. Read Eugene Field's poem "The Duel." Let the story be told by the Chinese Plate or by the old Dutch Clock.

VI. SUGGESTIONS FOR LETTER WRITING: Write an informal letter accepting an invitation to spend vacation at the home of a friend. Write an informal letter declining to spend vacation at the home of a friend. Write an application for work during vacation. Cut a clipping "House for Sale" from a daily paper and bring to class.

Write a letter inviting a friend who is ill to take a ride with you. Write an invitation to a luncheon, a picnic, or an entertainment in which you are to take part. Write to a friend congratulating him on his success in some undertaking, or on his promotion. Send written congratulations to a friend on his birthday. Write replies to these congratulations. Girls write to friends telling how they enjoy the work in domestic science. Boys write similar letters on manual training.

VII. TECHNICAL WORK: Southworth's English Grammar and Composition, Chapters XI to XIII, inclusive.

SEVENTH GRADE

I. POEMS:

The Ship of State	<i>Longfellow</i>
The Chase	<i>Scott</i>
Sparticus to the Gladiators	<i>Enoch Kellogg</i>
What Constitutes a State	<i>Sir Wm. Jones</i>
Crossing the Bar	<i>Tennyson</i>
The National Flag	<i>Chas. Sumner</i>
The Rainy Day	<i>Longfellow</i>
Lochinvar	<i>Scott</i>
Lucy Gray	<i>Wordsworth</i>
The Solitary Reaper	<i>Wordsworth</i>
Last Rose of Summer	<i>Moore</i>
The Noble Nature.....	<i>Ben Jonson</i>
Horatius at the Bridge	<i>Macaulay</i>

II. STORIES: The Life of Lycurgus. Training of the Spartan Children. Battles of Thermopylæ. Life of Socrates.

III. PICTURES: Those in the room. Sistine Madonna—Raphael. Blind Man's Buff—Arligue. Landscape and Willows—Corot. Return to the Farm—Millet. Portrait of His Mother—Whistler.

IV. ORAL AND WRITTEN WORK: Dictation, narration, description, and reproduction of literary, historical, and nature study matter. Biographical sketches. See Suggestions in Language. Continue impromptu constructive work and the use of the blackboard.

V. SUBJECTS FOR WRITTEN WORK: My First Ride in an Auto. On the Grocer's Wagon. A Trip with the Milkman. Driving to the Station. My Visit to the Manual Training Exhibit. How what I learn in Manual Training helps at Home. How to Wash Dishes. How to Wash Windows. How to care for Goldfish. How to care for a Canary. Describe a Bird studied (without mentioning name). Describe a Forest Tree (without naming). My Favorite Poems. Learning to Swim. How to Study. How to break a Bad Habit.

Doing Good. A Canoe Ride. A Game we played at Recess today. A Disappointment. A Ball Game in which I took part. Description of a Store Window. Write a letter to England telling of an adventure with Captain John Smith. Imagine you were living in 1848 and '49 and took the gold fever as so many did. Tell which of the three routes you took and of your experiences in reaching California. Imagine you were present at the battle of Quebec. Write home telling of that great battle and making your letter personal. Describe one of your early explorers, leaders, or patriots so accurately that the pupils will recognize him.

VI. SUGGESTIONS FOR LETTER WRITING: Write to a business house countermanding an order. Write to a business college asking for information in regard to courses of study and terms. Write letters to dealers asking for samples, or for goods to be sent on approval. "A Perfect Tribute" may be used as the basis of a letter or as the basis of several letters. The pupils of this grade are able to appreciate the patriotic settings of this little book.

VII. TECHNICAL WORK: Southworth's English Grammar and Composition, Chapters XIV-XVII.

EIGHTH GRADE

I. POEMS:

An Appeal to Arms	
Warren's Address	<i>John Pierpont</i>
Song of Marion's Men	<i>Bryant</i>
The Chambered Nautilus	<i>Holmes</i>
Thanatopsis	<i>Bryant</i>
Old Ironsides	<i>Holmes</i>
Snow Bound	<i>Whittier</i>
Address at Gettysburg	<i>Lincoln</i>
The Blue and the Gray	<i>Francis Finch</i>
We Have Been Friends Together	<i>Caroline Norton</i>
The Quality of Mercy	<i>Shakespeare</i>
A Day in June	<i>Lowell</i>
The Ballad of Baby Bell	<i>T. B. Aldrich</i>
The Fringed Gentian	<i>Bryant</i>
Flower in the Cranied Wall	<i>Tennyson</i>
Selections from the Deserted Village	
The Recessional	<i>Kipling</i>
The Death of the Flowers	<i>Bryant</i>
O Captain, My Captain	<i>Whitman</i>
Oh, Why Should the Spirit of Mortal be Proud.....	
The Petrified Fern	
This Was the Noblest Roman	

II. STORIES: Story of Aeneas. The Conspiracy of Pontiac. Silas Marner. Ben Hur. The Story of Dane. Call of the Wild, Chapter IV.

III. PICTURES: The Night Watch—Rembrandt. Dance of the Nymphs—Corot. The End of the Day. The Spinner—Maas. Shoeing the Horse—Landseer. The Deer Pass—Landseer. Cows at Watering Place.

IV. ORAL AND WRITTEN WORK: Description of persons, places, manners, customs as found in reading, history, and geography. Continue impromptu constructive work and the use of the blackboard. Special attention to the mechanics of writing—penmanship, punctuation, capitalization, indentation, margin, neatness.

V. SUBJECTS FOR WRITTEN WORK: How the Fort at Detroit was Saved. The Calumet Dance. The Character of Pontiac. My First Cooking Class. How to Make Plain Biscuit. How to Make a Raft. How to Make Apple Pie. How to Make an Ice Boat. My First Day of Manual Training. A Useful Member of Society. A Book I Enjoyed. The Value of Arithmetic. What the Moon Saw. A Visit to Mars. The Story of a Penny. The Story of a Clock. My Favorite Hero. What Jaxxy Anne Found in Her Stocking on Christmas Morning. What the Moon Saw in Our Street Last Night. Sketch some historical character, omitting name. Which is the more useful member of a community—the Doctor or the Soldier? The River I Love Best. How I Would Spend \$1,000. Each tells of an ordinance which he would like to see passed, why, and how it could be enforced. Description of an old garret. Letter from Pilgrim boy or girl to friend in England. Set of Rules—Table Manners, School Conduct.

VI. SUGGESTIONS FOR LETTER WRITING: Answer to telegraphic despatches. Write to a friend, describing the historical character that you most admire. Tell why this character appeals to you. Write an order for books which you would like to own. Order these books from a local book store. Write to a friend requesting a letter of introduction to some one in a distant place where you are to visit. Write a letter introducing a friend seeking employment. Business and social forms. Write informal letters to parents or friends inviting them to attend graduating exercises. Do not forget grandfather or grandmother. Write a letter to the principal of the high school requesting a "Course of Study" of the school. Write telegraphic despatches. Write a letter to Brown, Smith and Co. Use the usual social forms. Write to a public speaker asking him to address your class. Write to a business firm asking for fuller information regarding something you have seen advertised. Answer such a

letter. Write a courteous note to a firm that has been slow in filling your order.

VII. TECHNICAL WORK: Southworth's English Grammar and Composition, Chapters XVIII to XXV, inclusive. General review, giving special drill on parts of speech.

III. WRITING

GENERAL SUGGESTIONS

I. The Teacher's Manual should be studied carefully and the suggested methods of instruction fully understood.

II. The system taught should be mastered and used by all the teachers and all written work placed before the pupils should be models of accuracy and neatness and should conform in style and character to the system taught the pupils.

III. The written work in all branches must be neatly and accurately done, and nothing but the best the pupils can do should be accepted. No careless or slovenly written work should ever be permitted.

IV. The four things to be considered in every writing exercise are POSITION, FORM, MOVEMENT, SPEED. These should receive attention in the order given.

1. POSITION.—Special attention must be given to (1) position of the boys, (2) position of the paper or book, (3) position of the hand and arm. Pupils should have some drill at the beginning of each writing exercise on the position of the body, head, arms, hands, and feet until the habit of good position is formed.

Special attention should be given to pen-holding, with special emphasis of the proper placing of the thumb opposite the first joint of the first finger. Impress also the fact that the pen or pencil must be kept in place by the pressure of the thumb and not by the pressure of the first finger.

2. FORM.—The idea of good form is developed by inspection of good copies on the board or in the books. In the primary grades much large writing should be done on the blackboard by the teacher and by the pupils. The work of the teacher will show the pupils how the various letters are made and how the hand travels in making them. The large writing on the blackboard by the children will develop the muscle of the shoulder, arms, hands, and fingers and give muscle control. The making of and observing the large letters fixes the letter forms in the mind of the child, and develops the motor sense that will aid the pupil in later practice on paper. Blackboard work should have a place in the practice work of all the grades.

In the first grade the first work on the paper should be large, and should be done with a good-sized pencil, with soft or medium lead. No. 173 Eagle or the Eagle Alpha is recommended.

3. MOVEMENT.—Movement practice should be begun as soon as the pen is taken, and continued until there is a free and easy movement of the finger and arm. In the early practice the movement should be made with a pencil or dry pen, first without touching the paper, then on the paper. To secure regularity and uniformity of movement the practice work should be under the direction of the teacher and the movements guided by counting. In this every pupil should take part and the teacher must see that no pupil disregards any given signal.

4. SPEED.—The formation of letters must be slow at first that the form may receive attention. As soon as the pupil can form every letter accurately without a copy, rapidity should be encouraged. Carelessness must not be allowed at any point. Practice in speed may be given first upon single letters and words, and afterwards upon sentences. The test of a good writer is the ability to produce readable manuscript rapidly.

5. Much of the work at the desk during the period should be in the nature of practice work and should be on loose paper or in blank practice books. The regular writing books, when in the hands of the pupils, should be used as a record or sample books in which should be written two or three lines each day, showing the best work of the pupil, and indicating the progress that is made from time to time.

During each exercise the same number of lines should be written by all the pupils. This does not necessitate uniformity of speed. After drill on practice paper for three or four minutes, the teacher may direct the pupils to write one line in the copy-book. After a second short drill, the pupils may be directed to write a second line, etc. While the pupils are writing these lines, the teacher should examine and criticise the work of individual pupils.

ARITHMETIC

FIRST GRADE

The number work of the first term should be mainly oral, should occupy little of the pupil's time, and should be presented incidentally.

I. Comparing and imagining objects to develop the idea of form.

1. Lines: straight, curved, and broken.
2. Surfaces: square, triangle, oblong, and circle.
3. Solids: prism, sphere, and cylinder.

II. Measuring and comparing objects leading to the discovery of quantitative relations.

1. Of equal magnitudes.
2. Of unequal magnitudes. (Longer, shorter, larger, smaller, etc.)

III. Measurements, Use:

1. Show lines of equal and unequal lengths by using edges of books, desks, chairs, etc.

Example: *a.* Show pupil a block three times as large as another block. *b.* Draw lines and practice dividing.

2. Show equal and unequal surfaces by using pages of books, window panes, tablets, etc.
3. Show equal and unequal solids by blocks, etc.

IV. Have cutting and folding contribute to the number concept.

Winter and Spring Terms

I. Continue work outlined for fall term.

II. Begin formal number work.

1. Incidentally learn to count to 50.
2. Count backward from 10.
3. Teach combinations through 10.

Illustration of all processes within 4.

$$1+2=3$$

$$4-2=2$$

$$2+2=4$$

$$2 \text{ twos}=4$$

$$3-1=2$$

There are 2 twos in 4

4. Learn the symbols =, +, —.

5. Concrete problems based on combinations under 10.

6. Ratio work in magnitudes with solids, tablets, drawings, etc.

Examples: *a.* Show pupils a block three times as large as another block. *b.* Draw lines and practice dividing into two equal parts; three equal parts. *c.* Draw lines. Separate into three equal parts. Measure. Is one of the parts shorter than another?

7. The following combinations should be *memorized* and *drilled* upon until the pupil can give the answer instantly:

1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	4	4	4	5
1	2	3	4	5	6	7	8	9	2	3	4	5	6	7	8	4	5	6	7	4	5	6	5

8. Teach subtraction as the converse of addition:

$$6+4=10 \quad 6+?=10 \quad ?+4=10 \quad 10-6=? \quad 10-4=?$$

SECOND GRADE

- I. Continuation and enlargement of work begun in the first grade.
- II. Keep adding to the visualizing, ratio, and problems according to the advancement of the class.
- III. Constant review of the old facts in new relations. Consult the first grade outline for combinations already learned.
- IV. New combinations:

2	3	3	4	4	4	5	5	5	6	6	6	6	7	7	7	8	8	9
9	8	9	7	8	9	6	7	8	9	6	7	8	9	7	8	9	8	9

- V. Teach subtraction as the converse of addition.
 - Count by 5's, 10's, to 100.
 - Count by 2's to 50.
 - Count by 3's to 36.
 - Count backward from 50.
- VI. Multiplication and both forms of division tables of 2's and 3's.
- VII. Teach signs for multiplication and division.
- VIII. Teach all combinations under 20 with objects and *memorize* them.
- IX. Give simple problems based upon the combinations learned and have the results given in complete statements.
- X. Teach the measure inch, foot, pint, quart.
- XI. Arabic notation to 1000 and Roman notation to 20.
- XII. Fundamental operations:
 1. Addition: Teach process of carrying.
 2. Subtraction: No digit of the subtrahend of greater value than the corresponding digit of the minuend.

3. Multiplication: The multiplier not to exceed the number 3.
 4. Division: The divisor to be exactly contained in each figure of the dividend.
- XIII. Teach meaning of halves, thirds, fourths, to tenths, and the forms $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, to $\frac{1}{10}$.
- XIV. Teach that 10 units=1 ten. 10 tens=1 hundred.
100=10 tens or 100 units. 1 ten=10 units.

THIRD GRADE

Myers Arithmetic, Book I, Part I, used as a text.

- I. Review all combinations taught in the first and second grades.
- II. Multiplication and both forms of the division tables through the 10's.
- III. Special attention to thought work is given in Meyers Arithmetic.
- IV. Supplementary work:
 1. In supplementary work give problems that involve only one step in reasoning.
 2. Take five minutes of each recitation period for rapid mental work, occasionally making use of simple denominate numbers.

Illustration: The table of two's; quarts changed to pints.
The table of nine's; square yards changed to sq. feet.
The table of four's; quarts changed to gallons.
- V. Notation and numeration:
 1. Arabic to 10,000.
 2. Roman to 50.
- VI. Fundamental operations:
 1. Addition examples of three orders.
 2. Subtraction: Teach subtraction where the digits of the subtrahend are of greater value than the corresponding digit of the minuend.
 3. Multiplication: Multiplier of *two* digits.
 4. Division: Before teaching short division in which the divisor is not exactly contained in each figure of the dividend, give abundant drill, as
 $13 \div 2 = ?$ $\frac{1}{3}$ of $13 = ?$ $17 \div 2 = ?$ $13 \div 3 = ?$ to 100.
 $\frac{1}{2}$ of $13 = ?$ $\frac{1}{2}$ of $17 = ?$ etc.
 5. Teach how to write remainders in division as fractions.
 6. Correlation of multiplication and division, as 4×8 , or $8 \times 4 = 32$, with $\frac{1}{8}$ of $32 = 4$ and $\frac{1}{4}$ of $32 = 8$.
- VII. Count by 2's, 3's, 4's, beginning with any number.

VIII. Begin analysis of problems involving the different processes.

In all work have as many answers as possible given orally.

IX. Fractions:

1. Meaning of halves, thirds, two-thirds, one-fourth, three-fourths, and their written forms.
2. Meaning of fractional parts of a number as division by the denominators, as $\frac{1}{3}$ of $12=12\div3$; $\frac{1}{5}$ of $55=55\div5=5$; $\frac{2}{5}$ of $55=2\times11$; $\frac{1}{5}$ of $55=1\times11$.
3. Amounts of money written decimally as dollars and decimals of a dollar.

X. Form-Study:

1. Comparative length of lines.
2. Making and measuring squares and oblongs.
3. Marking, cutting, and making boxes of simple forms.
4. Meaning of terms, area, dimensions, base, altitude, perimeter.

FOURTH GRADE

Meyers' Arithmetic, Book I, Part II, used as a text.

I. Review the number facts, tables, and general abstract work of the previous grades. Begin long division early in the year and continue it throughout the year. When long division is taken up, begin with the *easiest* divisors, as 11, 21, 13, 22, etc.; go through the processes step by step for the class. Then have the different pupils go through the process for the class. Then require all the class to go through it together on the same example, step by step, until the process is thoroughly mastered. This is the only way to avoid the trouble which so many children have with long division. In all work in division *insist* that pupils cultivate the power to estimate, at sight, the number of times the divisor is contained in the portion of the dividend to be used.

II. Give special attention to thought work as given in the text.

III. Analyze problems involving two steps in reasoning.

IV. Notation and numeration.

1. Arabic to 1,000,000.
2. Roman to 100.

V. Multiplication tables of 11's and 12's.

VI. Fractions:

1. Meaning of fractions and fractional operations, pictured and diagrammed.

2. Train pupils to find readily results of such as $\frac{2}{3}$ of 9 = ?
 $\frac{3}{5}$ of 10 = ? 4 is $\frac{2}{3}$ of what number?
 3. Adding, subtracting, and multiplying simple fractions.
- VII. Supplementary work:
1. Drill in multiplication by proving division problems.
 2. Give the date and require pupils to state original problems.
 3. About five minutes each day should be given to mental drills. In all work have as many answers as possible given orally.
 4. Teach the following terms: Addends, sum, subtrahend, minuend, remainder, multiplier, multiplicand, partial product, divisor, quotient.
 5. For exercises in mensuration and form-study, see Summary for fourth grade, Book I, Part II.

FIFTH GRADE

Myers Arithmetic, Book II, Part I, used as text.

- I. Follow the outline given in Summary given for Work of Part I, pages 263-265.
- II. Begin factoring:
 1. Teach the terms prime number, composite number, and factor.
 2. Teach the prime numbers to 50.
 3. Factor the numbers to 50.
- III. Supplementary:
 1. Give frequent drills, both written and oral, for rapidity and accuracy, frequently placing time limit on problems or sets of problems.
 2. Give special attention to thought work as given in the book.
 3. Exercises in estimating results.
 4. Give mental exercises on problems, having the pupils write answers only.
 5. Continue work in analysis of problems.

SIXTH GRADE

Myers' Arithmetic, Book II, Part II.

- I. Follow the outline given in Summary for Work of Part II, pages 266, 267.
- II. Continue factoring:
 1. Prime numbers to 100.

2. Factor composite numbers to 100.
3. Tests of divisibility.
4. Cancellation.

III. Supplementary:

1. Give short oral drills daily to develop readiness and alertness.
2. Give frequent written drills to develop accuracy and power of despatch.
3. Give exercises in estimating, judging, and calculating results approximately.
4. Have pupils check and test results for the purpose of cultivating self-confidence and independence.
5. Give frequent exercises in having pupils tell how problems should be worked.
6. Permit the use of pencil or crayon only when needed.
7. Continue analyses of simple problems and aim at clearness of thought and accuracy of statement.

SEVENTH GRADE

Myers Arithmetic, Book III, Part I.

- I. Follow outline given in Summary for Work of Part I, pages 301-306.

II. The Equation:

1. Make clear the meaning of the equation.
2. Make pupils familiar with algebraic expressions and symbols.
3. Give drill on solution of simple equations with one unknown quantity.

III. Supplementary:

1. Continue work suggested in outline for fifth and sixth grades.
2. Train pupils in power to determine (1) what to do, (2) when to do it, and (3) how to do it.

EIGHTH GRADE

Myers Arithmetic, Book III, Part II, completed.

- I. Follow outline as given in Summary for Work in Part II, pages 307-310.

II. Supplementary:

1. Follow suggestions for fifth, sixth, and seventh grades.
2. Continue quick mental drills.

3. Cultivate freshness and alertness by frequent mental problems in the different subjects and process of arithmetic.
4. Points to test the efficiency of the work:
 - a. Have the purposes for which arithmetic is taught been attained?
 - b. Are pupils conscious of power in the solution of problems?
 - c. Have pupils feeling of joy that attends achievement?
 - d. Do pupils take pleasure in hard work?

III. Algebra:

1. Follow an outline or some elementary text-book.
2. Solution of simple problems involving one unknown quantity.
3. Fundamental operations.
4. Simple forms of factoring.
5. Simple equations involving two unknown quantities.
Three simple methods of elimination.
6. Simple problems involving two unknown quantities.

GEOGRAPHY

I. OUTLINE FOR THE STUDY OF A CONTINENT.

1. Position:

- a. In relation to other continents and United States.
- b. In relation to oceans.
- c. In latitude and heat belts.
- d. In relation to prevailing winds.
- e. Inferences as to climate and commercial advantages from position.

2. Form:

- a. General form. Free hand map.
- b. Coast line—regular or irregular. Length. Chief indentations and peninsulas.
- c. Effects—climatic, commercial, industrial, political.

3. Size:

- a. As compared with other continents.
- b. Length and width—in degrees, in miles. Time necessary to journey across continent, traveling at known rates. How many times the size of United States? of Wisconsin?

4. Surface. (Physical map study. Model in sand.)

- a. Primary highlands, name, location, trend, height, slopes.
- b. Relative area and location of highlands and lowlands.
- c. Drainage.

5. Climate:

- a. Temperature.
 1. As determined by latitude.
 2. As modified by elevation.
 3. As influenced by ocean winds. Compare with temperature in Wisconsin.
- b. Rainfall.
 1. Regions of heavy or moderate rainfall. Why?
 2. Arid regions. Why?
 3. Seasonal occurrence of rainfall. Why?

6. Vegetation:

- Distribution of forest regions, prairies, deserts.

II. OUTLINE FOR THE STUDY OF A COUNTRY:

1. Position, form, size, surface, climate, vegetation as in outline for continental study.
2. Mineral resources. Distribution and importance.
3. Industries.
4. Cities.
5. Commerce. Advantages and disadvantages for.
6. People.
Government. Character. Education. Problems.
7. Relation to United States commercially.

III. OUTLINE FOR THE STUDY OF A CITY:

1. Location.
2. Geographical causes determining location and growth.
 - a. Harbor facilities.
 - b. Accessibility and means of transportation.
 - c. Resources of tributary area.
 - d. Power supply. Water power. Nearness to coal.
 - e. Special industries.
3. Exports and imports.
4. Points of interest to be seen.
5. Size and importance.

METHODS AND MATERIAL

SECOND GRADE

Topics introductory to geography which can be taught in connection with other subjects.

I. COLOR, FORM, AND SIZE.

- II. POSITION. Exercises with objects and pupils to teach terms: near—far, up—down, front—back, above—below, right—left, before, under, etc.

- III. DISTANCE. Relative and absolute. Horizontal and vertical. Inch, foot, pace, yard. Exercises and comparisons. Heights of pupils, room, building, trees. Relative terms: higher, twice as high, etc.

- IV. DIRECTION. The rising and setting sun furnishes fixed points for all places. Associate names east and west with these points. Develop north and south points and later intermediate points. Necessity of knowing direction developed from experiences of children and from stories of people being lost. Teach direction of objects in sight with reference to pupil. Relate the different directions to the pupil when facing north with east on the right and west on the

left. Give exercises in locating homes of children by having children tell directions in which they must walk to reach them.

V. DAY AND NIGHT TIME. Associate the occurrence of day and night with the sun. Associate the habit of working and resting of man and animals with this occurrence. Identify flowers that close at night and open in the morning. Tell the story of "Clytie." (See Cook's Nature Myths.) Telling of time. Use and need of clock. Exercises in telling time. How did people tell time before we had clocks? Illustrate with hour glass. Estimating time by sun's position and shadow. (See Cook's Nature Myths.)

VI. PLANTS. Identification of some trees by leaves, bark, wood, and general appearance. Uses of trees.

FRUITS. Cultivated crops. Identification and use.

ANIMALS. Wild and domestic. Identification and use.

Identification of some common birds. Usefulness of various animals. See Frye's "Child and Nature," ch. 7.

VII. WEATHER OBSERVATIONS: Children's experiences with the wind. Effects of the wind. Naming of direction from which the wind comes.

Observe direction of smoke from high chimneys.

Observations and children's experiences concerning clouds, rain, snow, fogs.

Associate variations in temperature with height of sun and direction of wind.

Associate rain and plant growth. Temperature and plant growth.

The seasons and clothing.

The seasons and landscape.

(See Frye's "Child and Nature," Ch. 2. Fairbanks—Home Geography for Primary Grades.)

THIRD GRADE

PURPOSES:

I. TO HELP THE CHILDREN UNDERSTAND MAPS.

1. Exercises in estimating length by the eye and verifying the results with the ruler.

a. Review the inch by cutting or drawing and measuring. Some of the material on hand for teaching arithmetic may be used.

b. Review the foot by letting the pupils find objects which they think are a foot long, or by drawing

- lines, cutting strips, etc. Verify results with the ruler. 12 in. equal 1 foot.
 - c. Measure length of the sides of desks, books, pictures, windows, doors, the distance between certain objects, lines, etc., with the eye. Verify the results with the ruler.
2. Develop the idea of area.
 - a. Review the square inch by cutting, drawing, and measuring.
 - b. Develop the idea of the square foot. Let pupils make a drawing of a figure 1 foot by 1 inch. Let them find by cutting and pasting or drawing that the area of this surface equals 1×12 sq. in. equals 12 sq. in. Increase the drawing to a width of 2 inches. Area equals 2×12 sq. in. equals 24 sq. in., and so on until a foot square is completed. 144 sq. in. equals 1 sq. ft.
 - c. Exercises in representing area. Represent by drawing the area of a number of surfaces so small that the actual size may be shown. Use books, pictures, sides of boxes, etc. Dictate other dimensions and have area represented. Compare areas.
 3. Develop the idea of scale.
 - a. Develop the idea that lines may be represented by using a scale. Represent by drawing lines so short that the actual length may be shown. Represent by drawing lines so long that the actual length may not be used. Lead pupils to suggest playing that 1 inch is 1 foot.
 - b. Develop the idea that surfaces may be represented by using a scale. Represent by drawing surfaces so small that the actual size may be shown. Represent by drawing surfaces so large that the actual size may not be shown—pictures, windows, doors, etc. Lead pupils to play that 1 inch is 1 foot.
 - c. Exercises in representing larger surfaces, using a different scale. Measure a schoolroom floor and sketch a plan, using an inch for a yard or some definite scale. Measure similar surfaces and represent areas by drawings. Dictate other dimensions and have areas represented by scale drawings. Have two boys measure school yard and report data to class. Have pupils make drawings of

area, using a scale. Give drill in representing other areas, dictating dimensions. Make a plan of the school block and city block, using some definite scale.

II. To DEVELOP POWER TO INTERPRET MAP SYMBOLS. Study carefully the natural features of the locality to develop correct mental pictures of rivers, mountains, plains, the oceans, etc.

1. Effects of heat on water—fog, rain, snow, dew, frost. Show by experiment that moisture passes into air. Let water boil and note its disappearance into the air. Let pupils breathe against a cool surface. Think of other experiments. Speak of rivers, oceans, etc.
2. Kinds of soil—clay, sand, loam. Have samples of each. How are soils made? What is vegetable mold? Tell pupils about the glaciers and how they grind up the rocks. How does the rain make plants grow?
3. Forms of land and water—lake, pond, stream, bank, hill, slope, springs, etc.
 - a. Study of the object by actual observation if possible. Lead the pupils to see things and to do things for themselves, instead of telling or giving "book definition." Outdoor observations may be made by the pupils out of school hours, the teacher giving definite directions as to what shall be observed.
 - b. Reproduction of the object by sand modeling, drawing, or oral and written description.
 - c. Association of the object with a picture of the same.
 - d. Association of the object with the representation of the same on a map.

III. To RECOGNIZE IN MANUFACTURED PRODUCTS THE RESULTS OF THE OCCUPATION OF MEN.

1. Occupations and products of the vicinity.
 - a. Articles of food—preparation for cooking; process of cooking.
 - b. Articles of clothing—material and how prepared and how made.
 - c. Places of shelter—material and how built. Encourage pupils to observe. Reproduction, oral and written.
2. Occupations and products of other places.
 - a. What we use that are not products of the vicinity. Where from and how changed for use.

- b. Use of pictures and stories. Books for reading—
"How We Are Fed." "How We Are Clothed."
"How We Are Sheltered."

IV. GEOGRAPHY OF CITY. In teaching the geography of the city use a city map and treat briefly the following points:

1. Location with reference to the lakes.
2. Give a general plan of the city, locating some of the principal streets and public buildings.
3. Locate the street car lines and railway stations.
4. Explain method of numbering houses.
 - a. The four avenues extending from the capitol square and Washington street in the western part of the city are the starting points for numbering. Streets crossing Wisconsin and Monona avenues are divided into east and west. Streets crossing Washington avenues are divided into north and south. Washington street is the initial point for numbering on all streets crossing it north and south.
 - b. Each block begins a new hundred, the first number in the first block being 101, and so on.
 - c. The even numbers are on the west and north sides, and the odd on the east and south sides of streets.
 - d. Corresponding blocks on different streets have the same numbers.

V. CONTINUE STUDY OF THE NATURAL FEATURES OF THE LOCALITY.

Rivers—source, bed, branches, banks, current, where water comes from, use in drainage, etc.

VI. STUDY GLOBE. Simple lessons to teach that the earth is round, turns around; surface composed of land and water; the names of the grand divisions of each.

VII. INTERPRETATIONS OF THE SYMBOLS OF THE MAP.

VIII. MAP OF THE GRAND DIVISION OF NORTH AMERICA SO PRINTED AS TO SHOW RELIEF. Location of its mountains and plains. Show that its general outline and the direction of rivers depend upon the location and direction of its mountains. Name and locate its rivers, lakes, the oceans that border it, its great indentations and projections.

X. DEVELOP IDEA OF POLITICAL DIVISION. Teach the political divisions of North America; that is, associate the name with the form and location. In the same way teach the political divisions of the United States; locate the capital and two or three important cities in each state. Use a dissected map. Give ideas of comparative area.

FOURTH GRADE

- I. GEOGRAPHY OF WISCONSIN. Use outline map drawn upon the blackboard; scale ten miles to an inch.
 1. Size—length and breadth.
 2. Boundaries.
 3. Locate three of the principal rivers, and show the slope of the surface drained by each; also locate three lakes of the interior.
 4. With colored crayon represent the prairie lands, timber lands, and mineral sections.
 5. Locate and discuss some of the leading industries.
 6. Locate ten cities; journeys between them by rail and water. Use railroad map.
 7. Name and locate counties by help of dissected map.
- II. TEACH THE SQUARE MILE OR "SECTION." Draw a "section map" of Dane county. Teach its area. Using the "section lines," divide it into towns. Teach their names and location. Teach the surface and drainage of the county; locate its chief cities and villages. Review occupations and their products, and trace lines of transportation through the country. Review important points in geography of Wisconsin and United States. Use Geographical Readers. Study map of South America.
- III. STUDY MAP OF THE GRAND DIVISIONS THAT INDICATE RELIEF IN THE FOLLOWING ORDER: Africa, Australia, Europe, Asia. Teach the location of the mountains and plains of each; show that outline and direction of rivers are determined by location and direction of mountains. Name and locate their rivers, lakes, the oceans that border them, their great indentations and projections.

FIFTH GRADE

- I. REVIEW NORTH AMERICA.
 1. Fundamental facts about position in heat belts, form, size, surface, drainage, climatic regions.
 2. Map of North America. Model and free hand.
 3. Political divisions. (Review meaning of political unit.)
- II. INTENSIVE STUDY OF THE GEOGRAPHY OF THE UNITED STATES.
 1. Position.
 - a. In relation to other continents.
 - b. In relation to ocean.
 - c. In latitude and heat belts.

- city.

9. Irrigation in the United States.

10. Drill exercises on location of states, larger cities, rivers, lakes, etc. Each child should have a large outline map of United States and place on it the products as studied. Pasting on the actual thing may be done with good results.

III. STUDY OF ALASKA, HAWAII, PORTO RICO, THE PHILIPPINES, CANADA, MEXICO.

1. Position, size, surface, climate, and influence upon the lives of people.
2. Industries associated with surface features, as mining in Yukon valley, seal fisheries of coast (Alaska).
3. Commercial relations to the United States.

SIXTH GRADE

South America, Europe, Asia. See outline for the study of a continent. Stories of Greek and Roman history.

SEVENTH GRADE

1. Africa, Australia. (Briefly.)
 2. Principal oceans and trade routes of the world.
 3. Mathematical Geography. (See outline.)
 4. Wisconsin in detail. (See outline.)
- Finish all work by middle of the school year.

COMMERCIAL GEOGRAPHY

I. GENERAL VIEW:

1. Define commerce.
2. What leads to:
 - a. Division of labor?
 - b. Exchange of commodities?
3. Commerce how facilitated by:
 - a. Money?
 - b. Consuls?
4. Means of communication:
 - a. The postal system.
 - b. The telegraph.
 - c. The telephone.
5. Means of transportation:
 - a. Carriers.
 - b. Dog-trains.

- c. Pack-animals—llamas, camels, horses.
- d. Freight wagons.
- e. Railroads.
- f. Canal-boats.
- g. Sailing-ships.
- h. Steamboats and ships.

6. International date line—Where located? Why necessary? What change in dates is necessary when steamship crosses date line eastward? Westward?

II. GENERAL COMMERCE (Note.—Each pupil will use a progressive outline map of the world in connection with the points under this general head, filling in the various items as they are studied.)

1. Inland waterways (Indicate on map).
 - a. Rivers—Amazon, Mississippi, St. Lawrence, Columbia, Nile, Rhine, Danube, Volga, Youkon, Mackenzie, Kongo, Niger, Ural, Yenizei, Lena, Amur, Hoangho, Yangtze.
 - b. Canals—Suez, Panama. (Note.—It is suggested that these rivers be marked with a number and the corresponding names be written on a separate sheet and attached to the map. This method may be followed also in designating canals, ocean routes, cities, and other features called for. It will add to the clearness if figures of different colors are used in marking the different features.)
2. Trans-continental railways, etc. (Indicate on map.)
 - a. Trans-Siberian.
 - b. Trans-Caspian.
 - c. Canadian Pacific.
 - d. Cape-to-Cairo (proposed).
 - e. Pan-American (proposed).

Estimate the length of each in miles, using degrees (latitude or longitude) and scale from a good map. Verify estimates.

3. Ocean cables:
 - a. About how many cable lines now in use?
 - b. About how many miles of cable now in use?
 - c. Using telegraph and ocean cable lines, trace one continuous lines around the world. Name some of the leading cities connected by this line.

4. Cities (locate on map):

London, Liverpool, Glasgow, New York, Boston, Chicago, Philadelphia, San Francisco, New Orleans, Havana, Rio Janeiro, Buenos Ayres, St. Petersburg, Constantinople, Berlin, Honolulu, Cape Town, Manila, Marseilles, Valpariso, Sydney, Auckland, Algiers.

5. Ocean routes (mark with red ink):

- a. New York to Liverpool, Havana, Hamburg, Rio Janeiro, Cape Town, Buenos Ayres, Melbourne.
- b. San Francisco to Yokohoma, Hong Kong, Bombay, Honolulu, Manila.
- c. Liverpool to Cape Town, Calcutta (two routes), New Orleans.

* 6. In some manner indicate on the map where the following are found or produced in considerable abundance: Wheat, cotton, wool, sugar, tea, coffee, rice, tobacco, iron, coal, salt, cattle, gold, silver, copper, petroleum, diamonds, ivory, spices, silks, shawls, carpets, furs, dates, sword blades, rubber, salmon, codfish, seals, whales, wine.

7. In some manner indicate on the map two articles which a steamship might carry as a cargo from each of the following seaports: Liverpool, Marseilles, Hamburg, New York, New Orleans, San Francisco, Hong Kong, Yokohoma, Calcutta, Rio Janeiro, Buenos Aires, Melbourne, Sydney, Cape Town, Algiers.

III. COMMERCIAL GEOGRAPHY OF UNITED STATES (Note.—Use a progressive map of the United States for the following exercises):

1. Area and extent of the United States.

- a. Width from north to south in degrees? in miles?
- b. Length from east to west in degrees? in miles?
- c. Area in square miles?
- d. Degrees from New York to Chicago? miles? Degrees from Chicago to San Francisco? miles? Degrees from Minneapolis to New Orleans? miles?

2. Standard time:

- a. In some way on the map indicate the four standard time divisions into which the United States is divided.
- b. By a colored line indicate the meridian which determines the time for each division.

3. Waterways:
 - a. Name the rivers indicated on the map. Mark with blue such as are specially important as commercial waterways.
 - b. Mark in the Wisconsin, the Illinois, and the Hudson rivers.
 - c. Name the Great Lakes.
 - d. Locate the Erie canal; the Welland canal; the St. Mary's Falls canal.
 - e. Trace in blue two possible waterways from New York City to Buffalo; one from Buffalo to Duluth.
4. Locate the following six important seaports: New York City, Boston, New Orleans, San Francisco, Philadelphia, Baltimore.
5. Locate the following nine lake ports: Oswego, Buffalo, Cleveland, Toledo, Detroit, Bay City, Chicago, Milwaukee, Duluth.
6. Locate the following ten river ports: Vicksburg, Memphis, St. Louis, St. Paul, Minneapolis, Kansas City, Omaha, Louisville, Cincinnati, Pittsburgh.
7. Railroads:
 - a. Locate on map three trunk lines of railroad between New York and Chicago.
 - b. Locate three through lines from Chicago to San Francisco.
 - c. Locate two lines from Minneapolis to Chicago.
 - d. Locate two lines from Chicago to New Orleans.
(Use railroad maps and folders.)
8. Productions:
 - a. In each state print in black ink two articles which are produced in considerable abundance.
 - b. Print in red ink the following articles in the two states where each is produced or found in the greatest quantities: Wheat, cotton, corn, rice, meat products, petroleum, coal, tobacco, lumber, silver, gold, iron, copper, granite, limestone, fish, fruits.
9. Manufactures: In some way print each of the following articles in the one state in which it is produced in the greatest abundance: Cotton goods, boots and shoes, iron and steel products, agricultural machinery, pottery, woodwares, malt liquors, cutlery, furniture, packed meats, sugar, watches, locomotives, steamships.

10. Exports: On the map or on a separate sheet name three articles which are exported from the six seaports on the map.
11. Imports: Name two articles which steamships bring to each of these seaports as imports.

MATHEMATICAL GEOGRAPHY

I. THE SOLAR SYSTEMS:

1. Sun. Comparative size. Distance from earth. (Illustrated by railroad trains, and in other ways. Have pupils work out results.)
2. Fixed stars. Distance, size, etc. Illustrate.
3. Planets. Name in order. Relative distances. Illustrate.

II. THE EARTH:

1. Form.
 - a. Rotundity; proofs.
 - b. Oblateness; proofs.
2. Dimensions and distances, relative to sun and moon. Allow pupils to work out results by using railroad trains.
3. Motions.
 - a. Rotary; proofs, time, results (day and night).
 - b. Revolutionary, proofs, shape of orbit, perihelion and aphelion points, solar year, sidereal year, number of rotations during year.
4. Plane of the Ecliptic.
5. The inclinations of the earth's axis.
6. Sun's apparent movements north and south of the equator—Vernal equinox, autumnal equinox, winter solstice, summer solstice.
7. Change of seasons. (Use diagrams and figures on board.)
8. Variation in length of day and night. (Use figures and diagrams.)
9. Latitude and longitude—Parallels and meridians.
10. Zones—Circles.
11. Standard time. Where does the day begin?

The above indicates the important points to be studied. The work should be made as interesting as possible by appealing to the experience and observation of the pupils and by bringing in as much relevant information as possible. Use figures and diagrams on the board freely. Jackson's *Astronomical Geography* will be found helpful. Some of the exercises from this book and some of the test

questions on the accompanying sheet, copied on the board, will furnish work for pupils during the study periods and topics for thought and discussion outside of school.

TEST QUESTIONS

MATHEMATICAL GEOGRAPHY

1. Why is it warmer at noon than at 9 o'clock A. M.?
2. Why is it warmer in Wisconsin in July than in January?
3. On what day and night is the sun nearest the Zenith at noon?
4. Farthest from the Zenith? What is the difference in degrees between the highest and the lowest altitude of the sun here at noon?
5. Is the sun at this time going from or approaching the Zenith? When will there be a change? What point will the sun reach when the change takes place?
6. Why is the Torrid Zone warmer than the Temperate Zones? The Temperate Zones than the Frigid?
7. If you lived at the equator would the sun ever be directly over your head? If so, when?
8. To an observer on the equator in how many and what months is the sun north of the Zenith? South of the Zenith? Trace the movement of the vertical rays of the sun in the Torrid Zone. The line which marks the path of the sun through the Torrid Zone is called what?
9. Are the rays of the sun ever vertical at the Tropic of Cancer? If so, when? North of the Tropic of Cancer? At the Tropic of Capricorn?
10. If you lived at Quito in what direction would your shadow fall at noon in July? In January?
11. In what months are the shadows of vertical objects in Madison longest at noon? In what month the shortest? Why?
12. When does the sun rise exactly in the east? In what months does it rise north of east? South of east? When does it rise farthest north of east at the equator? How many degrees?
13. When the rays of the sun are vertical at the Tropic of Cancer which zone has no day? Which no night?
14. Which pole of the earth is in continual darkness in July? Which will be next December? Why the change?
15. How many times in the year and when are the days and nights equal? Is this true in all parts of the earth? On what line are the rays of the sun vertical when the days and nights are equal?

16. When will the days in Madison be the longest? The shortest?
Will this be true in all parts of the Temperate Zones?
17. Which has the longest day in summer, Madison or New Orleans?
Madison or Ashland? Quito or Quebec?
18. Which has the longest day in January, Quito or Buenos Ayres?
19. Where are the days and nights always equal? When are they
everywhere equal? Why?
20. Under what conditions would there be no change of day and
night?
21. In the year 1892 the earth rotated how many times? Why?

HISTORY

HISTORY

I. GENERAL PURPOSE: In the primary and intermediate grades the work consists of interesting stories such as will (1) appeal to the imagination, and (2) furnish a stock of facts and mental pictures for use in the more advanced work. These stories will also (3) furnish good moral lessons, and (4) the conversations and questions arising in the class will develop ability to reason.

II. METHOD: 1. In the primary grades, and to a great extent in the intermediate grades, history stories should be told orally by the teacher. In preparation for telling a story first read all available accounts of the topic, selecting such facts as are suited to the class. Next, outline the facts in a logical way. Under each main heading build up a mental picture of persons and situations in the story. To make these pictures clear and vivid refer frequently to things that the pupils have seen or experienced. Use illustrations from books; draw a sketch map on the blackboard. Tell about one unit of the story at a time, stopping then to see if the pupils grasp the idea. Encourage them to ask questions and to suggest reasons and results. In the intermediate grades have the class assist in making an outline of the story (or part) that has been told.

The most valuable feature of this work is the re-telling or oral reproduction of the stories by the pupils. Insist upon good language, but not upon exact agreement of different pupils' stories in all details. When practicable have the stories reproduced in writing also.

2. Some history stories will be read by pupils in the reading class. Sometimes the school can supply copies of a book of history stories as supplementary readers. See Reading outline.

3. When there is but one copy of a history story book, it may be used for sight reading in either the history, reading, or language class.

NOTE.—The material for the outline in history for the first four grades is taken largely from the report of the Committee of Eight.

4. Pupils will read, and tell to the class, history stories from books of the library. Both the stories the teacher has already told and new ones will appeal to them if their interest is aroused.

FIRST AND SECOND GRADES

I. INDIAN LIFE:

1. Historical background:
 - a. Description of Indian home.
 - b. Description of Indian babyhood.
 - c. Description of Indian boyhood.
2. Stories:
 - a. Childhood of Hiawatha.
 - b. Legends of Red Children.
3. Pictures:
 - a. Indian warrior.
 - b. Indian mother, baby.
 - c. Wigwam.
4. Construction:
 - a. Wigwam, doll dressed to represent Indian.
 - b. Indian home scene constructed upon the sand table.
 - c. Animals mentioned, through moulding or paper cutting.

II. IN CONNECTION WITH THANKSGIVING DAY:

(This group should be begun in the month of November. Stories of the "Mayflower" and of Plymouth Rock could lead up to the first Thanksgiving Day. The subjects contained in this group, however, could extend over the months of December and January. Indian life appears in its relation to the first settlers. The severe winter experienced by the Pilgrim Fathers affords background for stories during the winter months.)

1. Historical background:
 - a. Landing of the Pilgrims.
 - b. Thanksgiving Day.
2. Stories of:
 - a. The Mayflower.
 - b. Plymouth Rock.
 - c. The First Thanksgiving Day.
 - d. Miles Standish.
 - e. Samoset and Squanto.
 - f. The first winter.

3. Pictures:

- a. Pilgrim Settlers.
- b. Landing of the Pilgrims.
- c. Thanksgiving scene.

4. Construction—Paper cutting: clay modeling of animals, fruits incident to Thanksgiving.

III. IN CONNECTION WITH THE CELEBRATION OF WASHINGTON'S BIRTHDAY:

1. History—Celebration of Washington's Birthday.

2. Stories of:

- a. Washington's boyhood.
- b. His home, parents, brothers and sisters.
- c. His playmates, dogs, and horses.
- d. Flower bed.
- e. His mother's love for him; his love for her.

3. Pictures:

- a. Washington.
- b. Dress, costume of Colonial times.

4. Construction—Paper cutting: Continental soldier's hat, gun, tent.

IV. STORIES DEALING WITH HISTORIC ANNIVERSARIES:

1. Christmas.
2. Lincoln's Birthday.
3. Decoration Day.

References:

- Boston Collection of Kindergarten Stories—J. L. Hammett and Company, Boston.
- Story Hour—K. D. Wiggin and Nora A. Smith—Houghton, Mifflin and Company, Boston.
- Four Great Americans—James Baldwin—Werner School Book Company, New York.
- Story of Lincoln—Frances Cravens—Public School Publishing Company, Bloomington.
- Hofer Child's Christ Tales.
- Story of Washington.

THIRD GRADE

Continuation of work outlined for First and Second grades.

I. LOCAL HISTORY OF MADISON:

- a. Early pioneers.
- b. Early log-houses.
- c. Hardships.

d. School-houses.

e. Early roads and modes of travel.

II. GROWTH OF MADISON:

III. LOCAL CIVIC INSTITUTIONS:

a. The police department.

b. The fire department.

c. The street department.

d. The board of health.

IV. HISTORY STORIES:

a. Alexander the Great and Bucephalus.

b. Joan of Arc.

c. Alfred the Great.

d. Florence Nightengale.

e. Audubon.

f. William Penn.

V. CURRENT EVENTS.

References:

Lessons for Junior Citizens—Hill.

Thwaites' History of Wisconsin.

Madison Past and Present.

Madison Guide Book—Rev. Gilmore.

Wisconsin Historical Collection, Vol. VI.

Story of the Greeks—Guerber.

Child's History of England—Dickens.

Girls Who Became Famous—Sara K. Bolton.

Great Americans for Little Americans.

FOURTH GRADE

I. PIONEER STORIES OF WISCONSIN:

a. The French in Wisconsin.

b. Joliet, Marquette, and LaSalle.

c. Pontiac's Conspiracy.

d. Wisconsin a Part of Northwest Territory.

e. The Discovery of Lead Mines.

f. Black Hawk's War.

g. Wisconsin Territory.

h. Formation of the State Government.

i. Story of "Old Abe."

j. Story of J. M. Rusk.

II. PIONEER STORIES OF MISSISSIPPI VALLEY:

a. Geo. R. Clarke.

b. LaSalle.

c. Lincoln.

- d.* Joliet and Marquette.
- e.* Hennepin.
- f.* The Sioux Massacre.
- g.* Daniel Boone.
- h.* Robertson.
- i.* Marietta and Cincinnati.
- j.* Lewis and Clarke.
- k.* Fremont.

III. CIVIC INSTITUTIONS:

- a.* Life-saving service.
- b.* Light-house service.
- c.* Postoffice service.
- d.* Army and navy.

IV. CURRENT EVENTS.

References:

Thwaites' History of Wisconsin.
Bass' Pioneer Stories.
Pioneer History Stories of the Mississippi Valley.
Community and Citizen—Dunn.
Encyclopedia.
General Reference Books.

FIFTH GRADE

I. HISTORICAL TOPIC CONNECTED WITH THE STUDY OF NORTH AMERICA AND OF THE UNITED STATES:

1. North America:

- a.* Discovery of the New World by Columbus.
- b.* Discovery of North America by the Cabots.
- c.* Amerigo Vespucci, and how America got its name.

2. United States:

- a.* New England—Story of the Pilgrims and the Settlement of Plymouth. Early Revolutionary history as associated with Boston and vicinity, *e. g.*, Boston Tea Party, Faneuil Hall, North Church, Paul Revere, Battles of Lexington and Concord, Bunker Hill, etc.
- b.* Middle Atlantic States—Henry Hudson and the Discovery of the Hudson River. The Dutch in New York. John Smith and settlement of Jamestown. William Penn and the settlement at Pennsylvania. Lord Baltimore and Maryland. Local associations with the Revolutionary War and the War of the Rebellion.

3. Southern States—Ponce de Leon and Florida. De Soto and the discovery of the Mississippi. Sam Houston and David Crockett in Texas. Battle of the Alamo. Local associations with Revolution and Rebellion.
 4. The Great Lakes and the Mississippi—Early French explorers: Marquette, Joliet, Hennepin, LaSalle. Daniel Boone.
 5. The Western Section—Lewis and Clarke's Expedition. Drake's voyage and visit to California. Discovery of gold in California in '49.
- II. CURRENT EVENTS.
- III. CIVICS—Institutions for care of sick, insane, blind, aged and helpless, poor, orphans.

SIXTH GRADE

- I. STORIES FROM GRECIAN HISTORY:
- a. The Olympic Games.
 - b. Lycurgus.
 - c. Darius.
 - d. Miltiades.
 - e. Leonidas.
 - f. Alexander the Great.
- II. STORIES FROM ROMAN HISTORY:
- a. Romulus.
 - b. Horatius at the Bridge.
 - c. Cincinnatus.
 - d. How Hannibal Crossed the Alps and Fought in Italy.
 - e. Caesar.
 - f. The Destruction of Pompeii.
- III. STORIES FROM GERMAN HISTORY:
- a. Charlemagne.
 - b. Frederick Barharossa.
 - c. Frederick the Great.
 - d. Bismark.
- IV. STORIES FROM FRENCH HISTORY:
- a. Joan of Arc.
 - b. Richelieu.
 - c. Napoleon.
- V. STORIES OF THE CRUSADES:
- a. Stories of the Tomb of Christ and the Turks.
 - b. Stories illustrating purpose of Crusades.
 - c. Richard the Lion-hearted.
 - d. Peter the Hermit.
 - e. The Children's Crusade.

VI. CIVICS:

Prior to all election days, discuss with the children forms of government of city, county, state, and nation; offices; method of nomination and election of officers; how the statutes of the state and city are made and enforced; duty of citizens, including children, to obey all laws.

Teach responsibility of citizens, including children, for a beautiful city, so far as home yards and streets are concerned, both as to planting and cleanliness, back yards and alleys, gardening—all having to do with civic life.

The school premises as a center of influence.

VII. CURRENT EVENTS.

NOTE.—Lists of references will be furnished in mimeograph form.

SEVENTH GRADE

I. SCOPE OF WORK:

1. Stories from English history. These stories may be read or told by the teacher, may be read by the pupils in the reading class, read by a pupil aloud to the class, or may be read by pupils in books from the library and told to the class.
2. Civics—Elementary work in this line will be taken up in connection with the geography of Wisconsin. The *Young American* will be used as a text in reading during the spring term.
3. Current Events—Discussion once a week during opening exercises.
4. American History—An organized course of history will be taken up about the middle of this year.

II. TEXT:

Woodburn and Moran, Gordy, McMaster, Fiske. The work should not be confined to one book, nor should the pupils of the class all buy the same book. One book may be in the hands of one group of pupils, another book in the hands of a second group, and still another in the hands of a third group.

III. METHODS:

- a. Pupils should feel that they are studying real history and not simply a text-book.
- b. Lessons should be assigned by topics and outlines, and not by pages and paragraphs.
- c. Page references should be given to a limited number of easily accessible reference books.

- d. In recitation follow outline of assignment, having pupils recite by topics. Train pupils to stand and tell what they know on a topic without suggestion or question on the part of the teacher.
- e. Questions should be used sparingly to broaden scope of work and to bring out new phases and ideas.
- f. Call up pupils frequently to pass judgment upon the ethical aspect of events and actions of men.
- g. Correlate all events with geography. Maps should be in constant use. Every event should be associated with its location before discussion is permitted.
- h. Seek constantly for exactness of knowledge, clearness of thought, and accuracy of expression.

IV. ASSIGNMENTS:

The following is taken from the Common School Manual: Take plenty of time for making an assignment; it will save time in the next recitation. Do not assign simply by pages or paragraphs. If blackboard space allows, write the assignment there; otherwise, have pupils copy it in class. Matters that may properly come into an assignment are: (1) Explanation by the teacher (with open books) of difficult points which pupils will be able to look up or think out by themselves. (2) Directions to pupils to look up location of places and meanings of hard words. (3) An outline of important points in the lesson. (4) Thought questions, connecting this with previous lessons or with facts of the world today, or calling for the judgment of pupils. (5) Supplementary reading references. Unless pupils are prepared in these ways to study the next lesson, they will either memorize the text without understanding, or will waste time dawdling over the text-book.

V. STORIES FROM ENGLISH HISTORY:

- a. Alfred the Great.
- b. William I.
- c. Richard I.
- d. Warwick.
- e. Elizabeth.
- f. Raleigh.
- g. Cromwell.
- h. Pitt.
- i. Gladstone.

VI. OUTLINES OF WORK, AMERICAN HISTORY.

SEVENTH GRADE

A. *The Discovery of America*

- I. TRADE BETWEEN EUROPE AND ASIA—Routes of Commerce.
- II. THE GREAT DISCOVERERS—Columbus, The Cabots, Americus Vesputius, Vasco da Gama, Magellan.
- III. POEMS—"Joaquin" Miller—Columbus; Arthur Clay—Columbus; Lowell—Columbus.

B. *The Age of Exploration*

- I. THE SPANISH EXPLORERS.
- II. THE FRENCH EXPLORERS.
- III. ENGLISH EXPLORERS.

C. *The Age of Colonization*

- I. THE NEW WORLD AND ITS PEOPLE:
 1. Physical Geography of Eastern United States.
 2. The Indians.
- II. THE ENGLISH COLONIES:
 1. Virginia.
 2. Massachusetts.
 3. New York.
 4. Pennsylvania.
 5. Pupils should be directed to read about the rest of the thirteen original colonies. Assign special topics.
 6. Comparison of English colonies; boundaries, people, race, elements, etc.; dominant idea in the establishment of each; first settlement in each, circumstances; leading personages, etc.
- III. THE FRENCH COLONIES IN AMERICA:
 1. Acadia and New France.
 2. Louisiana.
- IV. INTER-COLONIAL WARS.

D. *Life in the Colonies Before the Revolution*

- I. INDUSTRIAL CONDITIONS.
- II. SOCIAL CONDITIONS.
- III. POLITICAL CONDITIONS.

For more complete outline, details, and references, see mimeograph copy of Course of Study. Also consult the Report of the Committee of Eight.

EIGHTH GRADE

A. *The Revolution*

- I. CAUSES OF THE REVOLUTION.
- II. BEGINNING OF THE WAR.
- III. ATTEMPT TO GAIN CONTROL OF THE HUDSON AND THUS DIVIDE THE AMERICAN FORCES.
- IV. WARFARE ON THE BORDER AND ON THE SEA.
- V. WAR IN THE SOUTH—SURRENDER OF CORNWALLIS.
- VI. RESULTS OF THE REVOLUTION:
 1. Treaty of Peace.
 2. Cost of War.
 3. Condition of the Country.

B. *Administrations*

- I. REVIEW THE FORMATION OF THE CONSTITUTION.
- II. STUDY OF ADMINISTRATIONS. For outline under each, consult mimeograph copy of Course of Study.
- III. REVIEW THE FOLLOWING SUBJECTS:

Acquisition of Territory, Slavery, Roads and Canals, Railroads, Inventions, The Tariff, The United States Navy, The United States Treasury, Political Parties, Education, Literature.

Correlate the history with Geography. Make use of the globe, wall maps, and blackboard maps constantly. The important features of the geography of North America can be reviewed in this way.

IV. REFERENCES:

1. Fiction: Cooper—The Spy, The Pilot. Henty—True to the Old Flag. Harte—Thankful Blossom. Simms—Partisan. Mitchell—Hugh Wynne. Brady—For Love of Country. Churchill—Richard Carvel. Thompson—Alice of Old Vincennes. Hawthorne—Grandfather's Chair.
2. Poetry: Holmes—Grandmother's Story of Bunker Hill, Independence Bell, Boston Tea Party. Bryant—Seventy Six, Song of Marion's Men. Calvert—Bunker Hill (American History in Literature, Lane and Hill). Finch—Nathan Hale. Longfellow—Paul Revere's Ride. Lowell—Under the Washington Elm. Whittier—Yorktown, The Old South.
3. Outside Reading: Coffin—The Boys of '76. Fisk—War of Independence. Revolutionary Stories Retold from St. Nicholas. Everett—First Battles of the Revolution. Tomlinson—Short History of the American Revolution.

ELEMENTARY SCIENCE

I. PURPOSE:

1. To interest the pupils in nature. The work should be so conducted as to inspire the children with a love of the beautiful and with a sympathy for all living things. Children should be taught how to preserve and protect the plants, rather than how to dissect them.

2. To train and develop the children. The children should be trained to (a) observe, compare, and express (see, reason, and tell); (b) to investigate carefully and to make clear, truthful statements; (c) to develop a taste for original investigation.

Professor C. Lloyd Morgan of England says: "I am so fully convinced of the supreme importance of training the faculties of observation and habit of sensory alertness in the early plastic and impressionable periods of childhood—I hold so strongly the belief in the desirability of cultivating the sensory memory and storing the mind with faithful images of natural objects and scenes—that I am disposed to claim for nature-study a foremost place in the early stages of the education of all."

3. The acquisition of knowledge in regard to plant and animal life, mineral forms, and natural phenomena.

II. METHODS:

a. The children must study plants or flowers, not about them, in books. They must be led to make their own unaided observations, and to express them. By questions, the teacher can lead to particular observations. The children's thoughts concerning the flowers may furnish subject matter for oral and written language lessons.

b. Birds in cages, fish in aquariums, flowers and plants in boxes, pet animals, and nature specimens of various kinds will furnish opportunities for supplementary outside work. Pictures, sketches, poems, stories, fables, and songs will add to the interest of the work and enrich the experience of the children.

c. As busy work, the children should be led to trace and sketch leaf, stem, and root forms of some particular

flower; to represent its colors with paints; to write little stories about it; to make a number of sentences in regard to its leaves, petals, and sepals; to tell where it grew, how it grew, and when to look for it; to describe some incident connected with the flower or recalled by it.

In this manner, nature study may contribute something to language, reading, spelling, drawing, painting, numbers, and geography.

d. In connection with this work, the teacher should relate or read to children stories about flowers, and from time to time have pupils memorize and recite short poems and selections relating to flowers and nature. Wordsworth's Poems on Daffodils, Harry Cornwall's on the Snowdrop, and many others will be found appropriate. Many quaint and curious stories connected with flowers may be related. The mythical origin of the hyacinth, the legend of the sacred lily, the financial disturbance in Holland caused by the tulip, will be found interesting.

e. Much of the success of nature lessons will depend upon the form and wording of questions. Frederick L. Holtz in his manual for Nature-Study gives the following cautions:

1. Questions should be clear and concise. A vague and lengthy question cannot be understood or followed by the pupils.
2. Questions should be definite, admitting of but one answer. "Why is the lamp burning?" "What are we always doing?" are indefinite questions and may be answered correctly several times before the desired answer is obtained.
3. Do not, as a rule, ask direct questions, answerable by yes or no. "Is the heron's bill short?" "Does the animal have thick fur to keep it warm?" are questions that require little if any original thought.
4. Do not ask alternative questions that admit of but two answers. "Is the bird's bill long or short?" "Has this plant entire or separate leaves?"
5. Do not ask questions that encourage guessing merely. Children are apt to theorize about things in nature. Hold them to facts.

Suggestions:

1. Do not tell pupils what to see, but lead them to see for themselves. Observations should be accurate, but not in too much detail. Guard against exaggerated state-

ments and wild vagaries of imagination. Cultivate habit of truthfulness and reliability in all observations and statements.

2. In observations and conversation exercises have pupils see at least two parts or phases of each object. This will train in habit of analysis and will lay foundation for paragraphing.
3. Pupils should be lead to see and enjoy the beauty of form and the varying tints and colors in objects of nature. Forms and colors of nature furnish excellent subjects for painting and drawing. Color is one of the best and easiest modes of expression for the younger pupils and should be the first and chief medium used. In the more advanced grades many of the forms and designs in the decoration of written work, essay and booklet covers, portfolios, and note-books may be derived from nature. Leaf forms, plant structure, colors of flowers, autumn foliage, bird plumage, and the varying tints of nature furnish excellent suggestions for art exercises. The pencil, crayon, and brush should have an important place in all nature work.

FIRST FOUR GRADES

CENTRAL THOUGHT: CARE AND PROTECTION

I. SEEDS AND GERMINATION:

Let the children:

1. Plant beans and watch their growth.
2. When the seedlings are two or three inches high, study the seed and its parts.
3. Study the pea in a corresponding way, and then compare it with the bean, noting first the differences and then the resemblances.
4. Study seed and plant, in each case, in relation to their surroundings, air, water, and sunlight. (Children should be led to discover the uses of the different parts, first to the plant and then to the animal and man.)
5. Continue the observations on the bean and pea during the remaining part of the school year, noting the development, use, and general structure of buds, stems, roots, leaves, and, if possible, of flowers and fruit.

II. BUDS:

The study of buds should be carried on in connection with the work in germination suggested above.

Let the children:

1. Gather branches having large buds, such as the horse-chestnut, elder, or the lilac; put them in water, watch them, and tell about their development and the gradual unfolding of their parts.

2. Study the stem and its parts, wood bark, and pith and their uses and structure.

3. Later, study the fresh buds and compare them with those which have unfolded.

4. Compare the first bud studies with some other large bud.

III. REPRODUCTION AND FLOWERS:

In connection with the study of the buds, call the attention of the children to the catkins of the willow, the poplar, and the hazel, and then to the flowers of the elder, the lilac, and, if possible, of the bean and pea.

Let the children:

1. Find the dust-bearing (staminate) and seed-bearing (pistillate) flowers and parts of flowers. (This will give opportunity to develop the idea that flowers are for the production and protection of seeds.)

2. Study the dissemination of seeds that fly, as those of the dandelion and milkweed; seeds that sail, as those of the maple and basswood; seeds that stick, as those of the burdock and the tick; seeds that fall, as those of the bean and pea.

As early as may seem wise, the teacher should develop largely by stories and supplementary reading the use of other parts of the plant to the seed and flowers.

IV. LEAVES:

Let the children:

1. Watch the unfolding of the leaves in the bud, and notice their protection and arrangement as suggested before.

2. Note the use of leaves and their parts, stipules, stalks, and blade; and of veins, epidermis, breathing pores, and pulp. (In connection with the use of veins, they should study ventilation.)

3. Study the position, arrangement, and parts of leaves with reference to their uses; their relation to sunlight, air, rain, and the directing of water to the roots.

4. Study the positions of leaves with reference to buds, and note the order and plan shown in bud and leaf.

5. By means of charts or blackboard outlines, to which pupils may constantly refer, they should be familiarized with the more common forms of the leaf as a whole and of base, apex, margin, and should be trained to give orderly, exact, concise descriptions.

V. FRUITS AND VEGETABLES:

1. Make study of fruits, nuts, and vegetables.

2. Study color, parts, edible portions, coverings, pits, stones, seeds.

3. Observe them growing and have samples in school-room. Make lists of common kinds.

4. How do we keep them? Where do we buy them? What use do we make of them in the home and how do we prepare them?

5. Encourage the planting of a garden at home, or having a share in the family garden.

6. Have a school garden when possible.

VI. ANIMALS:

1. Birds: Observe and study common birds—migration, food habits. Make lists of birds as recognized by the children with dates of appearance. Study the turkey in connection with Thanksgiving.

2. Mammals: Have children's pets—dog, cat, squirrel, rabbit—in the school-room and let children watch and care for them. Tell anecdotes. Develop an interest in, and a kindly feeling for, animals.

Study cow, horse, sheep in their relation to man. How they should be treated.

Give attention to fur bearers: muskrat, beaver, mink, raccoon, bear; homes, habits, food, uses. Tell or read stories of trapping, hunting, and of primitive man.

Make distinction between animals that are useful and animals that are harmful to man. Animals useful to man are valuable (1) as companions, (2) as beasts of burden, (3) as sources of material for food, clothing, and ornaments, (4) as destroyers of injurious insects.

3. Insects: Select subject for observation and study from following list: House-fly, mosquito, grasshopper, cricket, spider, beetle, butterfly, moth, honey-bee, bumble-bee, wasp, dragon-fly, lady-bug. Any of these will furnish subject for deeply interesting and profitable observation and study.

Specimens of many may be kept in the school-room and their life histories and cycles studied. Their variety of form, beautiful colors, ingenious ways, remarkable adaptation to modes of life, and wonderful transformations will fascinate children and fill them with wonder and delight.

Special emphasis should be given to the fact that the fly and mosquito are harmful to man because of their liability to carry infected filth and germs of disease. Children should be instructed to use all legitimate means, without cruelty, to eliminate these dangerous pests.

VII. NATURAL PHENOMENA:

1. Daily observations of weather. In lower grades keep on blackboard a record of sunshine, cloud, and rain in form of calendar or weather-charts.

2. The sky, the sun, the moon, the stars, the wind. Cause of day and night.

3. The wind, direction, what it does, how it helps us.

4. Air: How moisture gets into the air, clouds, rain and dew.

5. Melting of snow and ice: cause, results, where the water goes.

6. Temperature: use of thermometer, freezing point, boiling point. Have pupils keep record of temperature for given periods, noting the maximum and minimum. Compare the records on weather reports.

VIII. HYGIENE:

Simple oral exercises on fresh air and general cleanliness; care of eyes, ears, nose, hair, skin, finger nails; value and necessity of sleep; habits of eating, table manners, and care of teeth. Incidental exercises to show the injurious effects of alcohol and tobacco.

"Good Health" of the Gulick Hygiene Series used as a basis of work through these grades.

Books for grades First to Fourth:

Nature Study—Manual for Teachers: Frederick L. Holtz—Scribner's.

Stories of Humble Friends: Katherine Pyle—American Book Co.

Animal Life: Florence Bass—D. C. Heath & Co.

Seaside and Wayside Books, 1 and 2: Julia McNair Wright.

Our Feathered Friends: Elizabeth and Joseph Grinnell—D. C. Heath & Co.

Stories of Animal Life: Holder.

Ten Common Trees: Susan Stokes—American Book Co.

Animals at Home: L. L. Bartlett—American Book Co.

Elementary School Teacher, March, 1910.

Bulletin No. 8, Oshkosh Normal School, Nature Study Number.

FIFTH AND SIXTH GRADES

I. AUTUMN:

1. Plant life:

- a.* Trees: Oak, hard maple, elm. Identification by leaves, bark, wood, and general appearance. Observe changes with seasons. Uses of trees.
- b.* Fruits: Apples, plums, grapes; color, odor, taste, parts, uses.
- c.* Vegetables: Potatoes, onions, turnips, tomatoes, pumpkins; color, shape, uses.
- d.* Leaves: Recognition, color, shape, size.
- e.* Seeds: Collection made, uses, methods of distribution.

2. Animal life:

- a.* Birds: Common birds recognized, migration, food, habits. Special study of the turkey in connection with Thanksgiving exercises.
- b.* Pet animals: Food, habits, uses. Read animal stories.

II. WINTER:

1. Weather conditions—Frost, snow, ice.

2. Plant life:

- a.* Nuts: Study different kinds and compare them.
- b.* Trees: Compare bare trees with evergreens. Study spruce and fir trees for Christmas time.
- c.* Flowers: Plant bulbs in jars or bowls in pebbles and clean water. Have children observe signs of life. Have potted plants and window boxes in the school-room.

3. Animals:

- a.* Study cow: benefits derived—milk, meat, leather, butter, cheese.
- b.* Sheep: uses, food, clothing.
- c.* Birds: Blue jay, nut hatch, chickadee, English sparrow. How they get food and where they stay at night. Teach protection and care of birds.

III. SPRING:

1. Weather conditions: Signs of spring; position and warmth of sun, melting snow, running water. Note changes from day to day in altitude of sun at noon.

2. Plants:

- a.* Study root, stem, leaves.

- b. Flowers: Pussy willow, alder, violet, dandelion, hepatica, and others. Keep list of new flowers and date of appearance.
 - c. Opening buds: Hickory, horse-chestnut, lilac. Study protection of birds and opening of leaves.
 - d. Germination of seeds: Plant in window boxes and observe how different seedlings come out of the ground.
 - e. Experiments to show that plants need water: Place some seed in dry sand or flannel; other seed in moist sand or flannel; note difference as to signs of life and growth. Allow plants to wilt, then apply water.
 - f. Encourage children to plant seeds at home and watch them grow.
3. Natural phenomena:
- a. Study moisture in the air, clouds, rain. Show benefit to plants and animals.
 - b. Learn use of thermometer, the freezing and the boiling points. Keep a record of cloudiness, rain, wind, and temperature for a short time each season.
 - c. Observe direction of smoke from high chimneys and from position of weather-vanes, windmills, and flags.
 - d. Trace some relation between direction of winds and temperature, direction of winds and rainfall.
 - e. Explain uses of barometer and how it indicates changes of weather.
 - f. Make simple study of weather maps and how predictions are made.
4. Hygiene:
- a. What to do in emergencies. How to avoid accidents.
 - b. Circulation, digestion, and how each bodily function may be kept in most favorable action.
 - c. "Emergencies" and "The Body Work," Books II and IV of the Gulick Hygiene Series will be used as a basis for these exercises. This work must be carried on regularly and must be thoroughly done.

Books for grades Fifth and Sixth:

How the World is Fed: F. C. Carpenter—American Book Co.

Mother Nature's Children: A. W. Gould—Ginn & Co.

Some Useful Animals: John and Caroline Montieth—American Book Co.

The Spinner Family: Alice J. Patterson—McClurg Co.
Romance of the Insect World: L. B. Badebecb—Macmillan Co.
Outdoor Studies: J. G. Needham—American Book Co.
Our Birds and Their Nestlings: H. C. Walker—American Book Co.
Nature Studies on the Farm: C. A. Keffer—American Book Co.
The Gulick Hygiene Series, Books II and III—Ginn & Co.

SEVENTH GRADE

I. ELEMENTARY ASTRONOMY:

This will be studied in connection with mathematical geography.

II. PLANT LIFE:

1. The meaning of chlorophyll to plants, to animals, and to the world's supply of food.
2. Simple experiments to discover leading activities as related to chlorophyll and the elemental chemistry of starch and sugar formation.
3. The release of oxygen and the use of carbon dioxide.
4. The origin of a few of the common plants. History of their domestication.

III. PHYSICS: Heat, light, ventilation.

1. Sources of heat:

- a. Friction, simple illustrations.
- b. Sun and other heavenly bodies.
- c. Combustion:

1. Requires air; removes oxygen.
2. Products of burning.

3. Common combustibles contain carbon:

a. Forms of carbon: charcoal, lampblack, coke, diamond, graphite.

b. Wood, tallow, paper, coal, etc., contain carbon.

c. Common food materials contain carbon: sugar, starch, flour, potatoes.

4. Oxidation is a slow burning: rust, decay.

2. Light:

a. Sources, transmission, reflection, refraction.

b. Practical application: mirrors, lenses, microscope, telescope, camera, human eye.

3. Fuels and illuminants.

4. Respiration and oxidation:

a. Organs of respiration.

- b. What we breathe: air.
- c. Why we breathe: animal heat and energy.
- d. Waste products from oxidation.
- 5. Ventilation:
 - a. Why important?
 - b. Impurities in the air:
 - 1. Carbon dioxide.
 - 2. Poisonous organic matter.
 - 3. Dust and disease germs.
 - c. Essentials to good ventilation:
 - 1. Fresh air inlet.
 - 2. Fresh air outlet.
 - 3. Forced circulation of air.
 - d. Tests of bad air: odor, drowsiness, headache.

IV. HYGIENE:

- 1. Hygiene of the community.
- 2. Necessity for clean water, clean streets, ventilation.
- 3. Use "Town and City," Book III of the Gulick Hygiene Series as a basis for this work. This work is of special importance and must receive careful and regular attention.

EIGHTH GRADE

I. PHYSICS:

- 1. Simple ideas of matter and energy:
 - a. States, conditions, and properties of matter.
 - b. Molecular structure of matter.
 - c. Energy: sources, manifestations.
 - d. Gravitation, cohesion, capillary action.
- 2. Weights and measures, specific gravity.
- 3. Simple machines:
 - a. Levers, screws, wheel and axle, pulleys, inclined plane.
 - b. Principle and construction of clocks.
 - c. Have pupils construct simple devices to illustrate principles.
- 4. Sound:
 - a. Sources and transmission.
 - b. Echoes, pitch, loudness, overtones, etc.
 - c. Practical application: musical instruments, telephone, phonograph, human ear, etc.
- 5. Simple lessons on magnetism and frictional electricity:
 - a. The magnet:
 - 1. Attracts certain bodies.

2. Only ends attract.
3. Poles, one always points north.
4. Opposite poles attract; like poles repel.
5. Temporary magnets.
6. Permanent magnets.
7. Applications—Compass.
- b. Frictional electricity:
 1. How excited.
 2. Passage from one body to another.
 3. How presence may be detected.
 4. Kinds.
 5. Conductors and insulators.
 6. Applications—lightning rod, motors, dynamos, electric light.
 7. Dangers to life, cautions.
6. Voltaic electricity:
 - a. Simple cell.
 - b. Open and closed circuits.
 - c. Induction.
 - d. Applications—telegraph, telephone, bells, electric clocks, etc.

II. HYGIENE:

1. The nervous system.
2. Fatigue and muscle power, fatigue and brain power.
3. Alcohol and cigarettes, effects on nervous system.
4. Five sets of nerve endings, the senses.
5. Habits.
6. Alcohol in relation to morals and character.
7. Power of suggestion.
8. Use "Control of Body and Mind," Book V of the Gulick Hygiene Series as a basis of work.

Books for Use of Teachers:

Nature Study: F. L. Holtz—Scribner's.

Nature Study and Life: C. F. Hodge—Ginn & Co.

Hand Book of Nature Study: D. Lange—Macmillan Co.

The Nature Study Idea: L. H. Bailey—Doubleday, Page & Co.

How to Make School Gardens: Hemenway—Doubleday, Page & Co.

Children's Garden: Louise K. Miller—D. Appleton & Co.

The Book of Vegetables: Allen French—Macmillan Co.

DRAWING, MANUAL TRAINING, DOMESTIC SCIENCE

DRAWING

COURSE IN ART INSTRUCTION, ELEMENTARY GRADES

AIMS

1. To train mental faculties—observation leads to clear percept; clear percept to clear concepts; clear concepts lead to correct judgments. To stimulate originality.
2. To train the hand to execute with nicety the dictates of the mind.
3. To create a love for and appreciation of beauty in form, color, and arrangement.
4. To correlate drawing with other lines of school work, making them mutually helpful.
5. To develop the child's powers into a character of moral beauty and symmetry.

FIRST AND SECOND GRADES

1. *Mediums of expression*—Charcoal, colored crayons, water colors, clay, paper cutting.
2. *Form study*—Mass work from toys, flowers, action figures. Illustrate work.
3. *Color study*—Six standard colors applied in design.
4. *Design*—Pleasing arrangement of flower and animal forms in different spaces. Dictation of borders and surface coverings.
5. *Picture study*—Pictures in room.
6. *Construction*—See outline for Industrial Work.

THIRD AND FOURTH GRADES

1. *Mediums of expression*—Pencil, charcoal, water colors, colored crayons.
2. *Form study*—Special attention paid to cylindrical objects in vertical position. Appearance of ellipses. Much work from a variety of objects.
3. *Color study*—Six standard colors reviewed and tints and shades studied. Applied in design work.
4. *Design*—Two tone work from flowers, landscapes and pose drawings arranged in different spaces. Borders planned for table covers for doll. Decoration for blotter, pottery, baskets, rug.
5. *Picture study*—Pictures in the room.
6. *Construction*—See outline for Industrial Work.

FIFTH AND SIXTH GRADES

1. *Mediums of expression*—Pencil, charcoal, colored crayons, water colors.
2. *Form study*—
 - a. Review principles involved in drawing of cylindrical objects.
 - b. Drawing of objects based on cube in parallel perspective—street.
 - c. Become familiar with type forms. Sphere, cube, hemisphere, cone, square, prism, triangular prism.
 - d. Still life groups of two objects.
3. *Color study*—Complementary colors applied in design work.
4. *Design*—Three tone decorative composition from landscapes and flowers, rug, book cover, blotter pad.
5. *Picture study*—Pictures in the room.
6. *Construction*—

Fifth grade—Blotter pad with border design.
Sixth grade—Blotter design with corner design.

SEVENTH AND EIGHTH GRADES

1. *Mediums of expression*—Pencil, charcoal, water colors.
2. *Form study*—Cylinder and cube in parallel perspective reviewed. Cube in angular perspective studied; applied in drawing of corner of room and house. Still life groups.
3. *Color study*—Complementary colors reviewed. Colors of half intensity studied and applied in designs.
4. *Design*—
 - a. Four tone decorative composition from landscapes, natural sprays, and still life groups.
 - b. Poster.
 - c. Dresser scarf.
 - d. Pillow.
5. *Picture study*—Pictures in the room.
6. *Construction*—

Seventh grade—Dresser scarf.
Eighth grade—Sofa pillow.

INDUSTRIAL WORK—FIRST TO FOURTH GRADES

The industrial work in the first five grades is taught by the regular grade teacher under the supervision of the manual training director. The outline for the course is arranged in advance, but is not followed rigidly, allowing the teacher plenty of freedom to express her own individuality.

FIRST GRADE.—First semester: Paper folding and cutting is given, allowing thirty minutes per week for the work. The paper is colored, using water colors and cut to size for warp and woof. Later the bogus paper weaving mats are used for making handkerchief cases and cornucopias for Christmas.

Second semester: Rug or holder weaving, using chenille. weaving into mats 6"x9" in size.

SECOND GRADE.—Forty-five minutes per week are given in this grade for hammock making; woven or knotted hammocks are made, using macreme cord. Color harmony is taken up in this grade in connection with the industrial work, the child is required to design hammock, using colored crayons for the same.

THIRD GRADE.—One hour per week is devoted to the work in rug-weaving. Color harmony is again spoken of, the child designs his rug on 9"x12" paper, using colored crayons for the design. Yarn is used in this grade for weaving the rugs.

FOURTH GRADE.—One hour per week is given in the first semester to basketry, making baskets of reed and raffia combined, teaching different stitches, strap, split, knotted, and figure eight.

Second semester is devoted to clay work. Vegetable and fruit forms are made, followed by vase forms, tiles, and candlesticks.

MANUAL TRAINING—FIFTH TO EIGHTH GRADES

WOODWORK—FIFTH GRADE

Knife work occupies one hour per week on the program. The work is done in the regular school room and taught by the grade teacher.

The knife is the important tool in this grade. The ruler, compass, and desk cover are supplied. Whenever needed the boy furnishes the hammer, brace and bit, and pencil.

Materials.—Bass wood, sandpaper, nails, glue, and drawing paper.

Models.—Key label, plant label, cord winder, match scratcher, pencil sharpener, fish line winder, paper file, match box, tooth brush holder.

WOODWORK—SIXTH GRADE

- I. TIME—One sixty minute period per week.
- II. TOOLS USED—Jack plane, back saw, turning saw, chisel, spoke shave, brace and bit, knife, hammer, nail set, small drill, counter sink, and screw-driver.
- III. MATERIALS—Bass wood, pine, glue, sandpaper, nails, and screws.
- IV. MODELS—In selecting the models special attention is given to the immediate and practical use of same, as the most

good is derived from the model if it can be taken home as soon as finished and put into actual use, so that the child may see the benefits of his work in the shop.

1. Laying out tools, sawing—Window stick, flower trellis.
2. Use of plane, brace and bit—Bill file, counting board.
3. Use of turning saw and spoke shave—Coat hanger.
4. Use of chisel—Door wedge.
5. Duplicate pieces, review of operations, assembling—Plant stand.

WOODWORK—SEVENTH GRADE

The course is more advanced than in the previous grade and a more thorough study and application of principles is required. More skill and greater appreciation of high standards of work are demanded. Attention is also given in this grade to design. The designs are executed during the drawing periods and applied during the woodworking periods.

- I. TIME—One ninety minute period per week.
- II. AIM—A closer correlation of woodworking and drawing.
- III. TOOLS—Jack plane, back saw, turning saw, coping saw, cross-cut saw, rip-saw, chisel, gouge, spoke shave, brace and bit, expansion bit and counter sink, file, nail set, hammer, and screw-driver.
- IV. MATERIALS—Bass wood, gum wood, red oak, sandpaper, brads, screws, stain, shellac and wax.
- V. MODELS—The boy is allowed more freedom in this grade. He has several models in each division to select from:
 1. Laying out T bevel—Shelf.
 2. Use of plane, duplicate parts—Tie rack and cup and saucer rack.
 3. Use of chisel, boring exercise—Broom, whisk broom and fan rack.
 4. Use of gouge, application of design work—Pen tray and pen and ink stand.
 5. Groove joint, application of design—Book stall.

WOODWORK—EIGHTH GRADE

In this grade more freedom is allowed than in the previous grade. Cabinet making methods are taught, and finishing is made an important part of the course.

- I. TIME—One period per week with two and one-fourth hours.
- II. TOOLS—Jack plane, jointer, back saw, turning saw, coping saw, cross-cut saw, rip-saw, chisels, gouge, spoke shave, brace and bit, file, clamp, nail set, hammer, and screw-driver.

- III. MATERIALS—Bass wood, gum wood, red oak, sandpaper, brads, screws, stain, filler, shellac and wax.
- IV. MODELS—A review of previous exercises is given, which are all included in the sleeve board. Then the boy is permitted to choose a small piece of furniture which he wishes to make. The latter part of the year is devoted to simple school furniture for the domestic science department or the principal's office.
- V. MECHANICAL DRAWING—The pupils of the grammar grades are required to make a working drawing of each piece.

DOMESTIC ART

SEWING—FIFTH GRADE

- 1. Practice Piece:
 - Material—Unbleached muslin (4½" warp x 3" woof). Thread No. 50. Needles No. 8.
 - Exercises—Basting. Overcasting. Overhanding.
- 2. Duster Bag:
 - Material—Burlap (18" warp x 6" woof). Colored yarn. Crewel needle.
 - Exercises—Basting. Overcasting. Overhanding. Cross stitch.
- 3. Dusting Cloth:
 - Material—One yard cheese cloth. White thread No. 70. Needle No. 8. Colored sausk. Crewel needle.
 - Exercises—Straightening ends. Basting. Hemming. Overhanding. Feather-stitching.
- 4. Pen Wiper:
 - Material—Circles of available material 4" in diameter. Colored sausk. Crewel needle.
 - Exercises—Blanket stitch.
- 5. Pin Disk:
 - Material—Cardboard, two pieces 4" in diameter. Gingham or other available material 6" in diameter. White thread No. 60. Colored sausk. Needles No. 8 and No. 5. Metal ring (if desired).
 - Exercises—Original design. Outline stitch. Running stitch. Basting. Blanket stitch.
- 6. Pencil Case:
 - Material—Gingham or other suitable material (17" warp x 5" woof). White thread No. 60. Tape 12". Needles No. 8.
 - Exercises—Basting. Overhanding. Backstitching.
- 7. Hemmed Patch:

- Material—Striped or checked gingham (5"x5"). Patch (3"x3").
- Exercises—Basting. Hemming.
8. Overhand Patch:
- Material—Striped or checked gingham (5"x5"). Patch (3"x3").
- Exercises—Basting. Overhanding. Overcasting.
9. Stocking Darn:
- Material—Worn stocking. Darning cotton. Darning needle.
- Exercises—Basting. Darning.
10. Woolen Darn:
- Material—Plaid or striped woolen material. Darning needle.
- Exercises—Basting. Darning.

SEWING—SIXTH GRADE

1. A Bag:

Material—Heavy crash, one yard. White thread No. 70. Needles No. 7 or 8. Heavy mercerized floss. Cord to match, two yards. Crewel needle.

Exercises—Straightening ends. Basting. Overhanding. Hemming. Backstitching. Buttonhole stitch. Ornamental darning. Outline stitch.

2. Needle Book:

Material—Two pieces of burlap (4"x6"). Heavy mercerized floss. Two pieces flannel (3 3/4"x3 3/4"). Small button or one-half yard ribbon.

Exercises—Basting. Blanket stitch. Pinking.

3. A Towel:

Material—Glass toweling, one-half yard. White thread No. 70. Needles No. 8. Cotton tape 5".

Exercises—Straightening ends. Basting. Hemming. Overhanding.

4. A Holder:

Material—Bleached muslin (12" warp x 13" woof). Canton flannel, two pieces 6" in diameter. Cotton tape No. 6, one yard. White thread No. 70. Needle No. 8.

Exercises—Cutting. Basting. Backstitching. Quilting. Binding. Hemming. Overhanding.

5. Sleeve Protectors:

Material—Paper for pattern, 12"x14". Bleached muslin, one-third yard. White thread No. 70. Needle No. 8.

Exercises—Measuring. Pattern-making. Stretching material. Cutting. Combination stitching. Flat fell seam. Hemming.

6. Kitchen Apron:

Material—Bleached muslin. Rick rack braid, two and one-half yards. White embroidery floss. White thread No. 70. Needles No. 8. Buttons 3. Red marking cotton.

Exercises—Stretching cloth. Cutting. Basting. Combination stitch. Flat fell seam. Hemming. Overhanding. Catch stitching. Button holes. Sewing on buttons. Cross stitch initials.

7. Discussions:

Study of flax, manufacture of cloth—warp and woof.

DOMESTIC SCIENCE

COOKING—SEVENTH AND EIGHTH GRADES

1. Introduction:

Acquaintance with kitchen. Rules for dish-washing. House-keeping duties.

2. Cream of Wheat:

Study of cereals. Cooking of starch. Use of double boiler.

3. Cornstarch Mold:

Blending of starch to avoid lumps. Starch as a fuel food.

4. Potatoes:

Review cooking of starch. Value of mineral matter. How to retain mineral matter in potato.

5. Creamed Turnips:

Classification of vegetables. Food value of vegetables. Classification of White sauce.

6. Rice and Cheese:

Value of rice and cheese. How best cook combination of starchy food and proteid.

7. A Simple Breakfast:

Review. Rules for serving. Laying the table.

8. Macaroni and Tomato Sauce:

Macaroni as a proteid food. Hard and soft wheat. Manufacture of macaroni.

9. Cranberry Sauce:

Value of fruit acids. Cultivation of cranberries. Action of pectin, a vegetable gelatin.

10. Cream of Tomato Soup Croutons:

Classification of soups. Reason for adding soda. Care in addition of soda. Use of stale bread.

11. Junket:

Study of milk. Source of rennet and its use in the body. Circulation of milk.

12. Apricot Jelly:
Source of gelatin. General directions for use. Comparison with fectin. Use of dried fruits.
13. Peanut Brittle:
Effect of heat on sugar. Advantages of cooking candy at home.
14. Welsh Rarebit:
Food value of cheese. Proper cooking of cheese. Manufacture of cheese. Kinds.
15. Pop-overs:
Batters and doughs classified. Leavening agents classified. Use of steam as a leavening agent.
16. Baking-powder Biscuits:
Use of baking-powder as a leavening agent. Constituents of baking-powder. Making a drop batter. Use of butter and and lard as shortening agents.
17. Griddle Cakes and Muffins:
Use of soda with sour milk or molasses as a leavening agent. Study of flour.
18. Ginger bread:
Soda as a leavening agent.
Study of yeast:
 - a. What it is.
 - b. What it needs for growth.
 - c. How it acts as a leavening agent.
19. Steamed Brown Bread:
Method of steaming. Effect of food thus cooked. Difference in result between baked and steamed mixture. Improvising a steamer.
20. Bread:
Value of bread. How to tell good bread. How to tell when a flour mixture is sufficiently baked.
21. Salmon Loaf and Escalloped Oysters:
Use of fish in place of meat. Place of fish in the diet.
22. Peach Cobbler:
Review biscuit. Use of canned fruits.
23. Plain and Sponge Cake:
Classification of cakes. Baking powder and air as leavening agents.
24. Gingersnaps.
25. Custard Pie:
General directions for pastry. Thickening power of eggs. Other thickening agents.

26. Omelet and Prune Whip:

Use of eggs and their food value. Use of beaten eggs to make mixture light.

27. Floating Island:

Soft custard or boiled custard.

28. Cheese Fondue:

Review cheese. Use of egg.

29. Tea, Coffee, Sandwiches:

Beverages. Making and packing sandwiches.

30. Rhubarb Sauce and Freshened Bread:

Food value of rhubarb. Freshening stale bread.

31. Vanilla Ice Cream:

Frozen desserts. Improvising a freezer.

32. Cleaning. Inventory.

33. Review of year's work.

MADISON HIGH SCHOOL

COURSES OF STUDY

ANCIENT CLASSICAL	MODERN CLASSICAL
LATIN	GERMAN
SCIENCE	ENGLISH
COMMERCIAL	GENERAL
MANUAL TRAINING	DOMESTIC SCIENCE

GENERAL INFORMATION

1. Admission to the Madison High School may be upon:
 - a. Certificate showing that the pupil has completed the work of one of the elementary schools of Madison or that he has completed the equivalent work in some recognized school outside of Madison.
 - b. Passing satisfactory examinations in grammar, composition, history, arithmetic, and geography.
2. The selection of studies must as a rule be made from the studies of the year in which the pupil is classified. Any other arrangement must be made with the principal.
3. No study can be discontinued before its completion without the consent of the principal.
4. In determining the classification of a pupil, account will be taken of unfinished work. A pupil having more than $1\frac{1}{2}$ units of unfinished work must remain classified in the lower grade until such work is completed.
5. The classification of a pupil from other schools will be determined when he furnishes evidence of his previous work.
6. Up to and including June, 1913, 15.5 units will be required for graduation. After that date 16 units will be required for graduation in all courses.
7. If a pupil desires recommendation to any college, he must so select his studies as to fulfill the requirements of that college.

STUDIES OFFERED AND UNITS CREDIT GIVEN FOR EACH

(A credit of one unit will be given for the completion of a study taken five times a week for one year.)

ART—2 units

COMMERCIAL—6 units

Shorthand and Typewriting	2 units
Bookkeeping	2 units
Commercial Arithmetic	$\frac{1}{2}$ unit
Commercial Law	$\frac{1}{2}$ unit
Special work, including spelling, English, pen- ship, office routine	1 unit

DOMESTIC SCIENCE—2 units

- 1st Year..... 1 unit. Sewing 6 periods per week,
3/5 of a unit, and Art 4 periods per week, 2/5 of a unit.
- 2nd Year.....1 unit. Cooking and Food Study
6 periods per week, 3/5 of a unit, and Art
4 periods per week, 2/5 of a unit.

ENGLISH—4 units.

English includes work in composition and literature.

GERMAN—4 units. Three courses, offered as follows:

1. Four year course 4 units
2. Two year course for students who have
taken no other foreign language..... 2 units
3. Two year course for those pupils who have
studied Latin 2 units

HISTORY—4 units.

Civics I	$\frac{1}{2}$ unit
Economics	$\frac{1}{2}$ unit
History I, Greek History	$\frac{1}{2}$ unit
History II, Roman History	$\frac{1}{2}$ unit
History III, English History	$\frac{1}{2}$ unit
History IV, Modern History	$\frac{1}{2}$ unit
U. S. History and Government.....	1 unit

LATIN—4 units

Lessons	1 unit
Caesar and Composition	1 unit
Cicero and Composition	1 unit
Vergil	1 unit

MANUAL TRAINING—2 units

- 1st Year, 1 unit. Bench work 6 periods per week, 3/5 units.
Mechanical Drawing, 4 periods per week, 2/5 units.

2nd Year, 1 unit. Wood Turning and Pattern Making,
3/5 units. Mechanical Drawing, 2/5 units.

MATHEMATICS—3 units

Elementary Algebra	1 unit
Higher Algebra	½ unit
Plane Geometry	1 unit
Solid Geometry	½ unit

SCIENCE—6 units

First Year Science	1 unit
Geography	1 unit
Zoology—Physiology	1 unit
Botany	1 unit
Physics	1 unit
Chemistry	1 unit

- A. Courses of study adopted by the Board of Education, June 6, 1911, to be pursued by pupils entering September, 1911.
B. Courses of study to be followed by pupils who will complete their work before July, 1913.
A. Adopted June 6, 1911.

FIRST YEAR

First Semester

Second Semester

REQUIRED OF ALL

English I	5	English II	5
Algebra I	5	Algebra II	5
First Year Science I	5	First Year Science II	5
Physical Training I	2	Physical Training II	2

ELECT ONE

Latin I	5	Latin II	5
German I	5	German II	5
Arithmetic I	5	Civics I	5
Special English	5	Civics II	5
Manual Training I	10	Manual Training II	10
Domestic Science I	10	Domestic Science II	10
Art I	10	Art II	10

SECOND YEAR

First Semester

Second Semester

REQUIRED OF ALL

English III	5	English IV	5
Geometry I	5	Geometry II	5
Physical Training III	2	Physical Training IV	2

ELECT ONE

Latin III	5	Latin IV	5
German III	5	German IV	5
History I	5	History II	5
Geography I	5	Geography II	5
Bookkeeping I	10	Bookkeeping II	10
Manual Training III	10	Manual Training IV	10
Domestic Science III	10	Domestic Science IV	10
Art III	10	Art IV	10

THIRD YEAR

*First Semester**Second Semester*

REQUIRED OF ALL

English V	5	English VI	5
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ELECT THREE

Latin V	5	Latin VI	5
German V	5	German VI	5
German, Science I	5	German, Science II	5
German, Classical I	5	German, Classical II	5
Greek I	5	Greek II	5
French I	5	French II	5
History III	5	History IV	5
Bookkeeping III	5	Bookkeeping IV	5
Science I	5	Science II	5
Algebra III	5	Geometry III	5
Stenography & Typewriting I ..	10	Stenography & Typewriting II ..	10

FOURTH YEAR

*First Semester**Second Semester*

REQUIRED OF ALL

English VII	5	English VIII	5
United States History and Government II	5	United States History and Government II	5

ELECT TWO

Latin VII	5	Latin VIII	5
German VII	5	German VIII	5
German, Science III	5	German, Science IV	5
German, Classical III	5	German, Classical IV	5
French III	5	French IV	5
Greek III	5	Greek IV	5

Science III	5	Science IV	5
Economics	5	Commercial Law	5
Stenography & Typewrit'g III	10	Stenography & Typewrit'g IV	10
Special Work	5	Arithmetic II	5

Ten courses of study are suggested in the High school, five of which require foreign language as follows:

1. Ancient Classical: Four units of Latin and two units of Greek.
2. Modern Classical: Four units of Latin and two units of German or French.
3. Latin: Four units of Latin.
4. German: Four units of German.
5. Science: Two units of Latin, German or French.

The remaining five courses, English, Commercial, Manual Training, Domestic Science, and General, are designed to be not only cultural in character, but to equip the pupil for commercial and business lines.

SUGGESTED GROUPING OF STUDIES

1 ANCIENT CLASSICAL—6 units of foreign language

Latin	4 units
Greek	2 units
Mathematics	2 units
English	4 units
Ancient History	1 unit
Elective	1 unit
First Year Science	1 unit
United States History and Government.....	1 unit

Total 16 units

2 MODERN CLASSICAL COURSE—6 units of foreign language

The requirements are the same as for the Ancient Classical, except that German or French is required in place of the Greek.

3. LATIN AND GERMAN COURSES

Latin or German	4 units
English	4 units
History	3 units
Mathematics	2 units
First Year Science	1 unit

Additional Science	1 unit
Elective	1 unit
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Total	16 units
4. SCIENCE COURSE—2 units of foreign language	
English	4 units
First Year Science	1 unit
Geography	1 unit
Additional Science	2 units
Ancient History	1 unit
United States History and Government.....	1 unit
Arithmetic I or Special English	$\frac{1}{2}$ unit
Latin, French, or German	2 units
Mathematics	2 units
Civics	$\frac{1}{2}$ unit
Elective	1 unit
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Total	16 units
5. ENGLISH COURSE—No foreign language	
English	4 units
History	3 units
Mathematics	3 units
First Year Science	1 unit
Geography	1 unit
Economics	$\frac{1}{2}$ unit
Commercial Law	$\frac{1}{2}$ unit
Civics I	$\frac{1}{2}$ unit
Additional Science	2 units
Arithmetic or Special English.....	$\frac{1}{2}$ unit
<hr/>	
Total	16 units
6. COMMERCIAL COURSE	
English	3 units
Special English I	$\frac{1}{2}$ unit
Special Work II	$\frac{1}{2}$ unit
Algebra	1 unit
Geometry	1 unit
Arithmetic II	$\frac{1}{2}$ unit
Bookkeeping I	1 unit
Economics and Commercial Law	1 unit
First Year Science	1 unit
Geography	1 unit

United States History and Government.....	1 unit
Stenography and Typewriting	2 units
Elective	2½ units

Total 16 units

7. MANUAL TRAINING AND DOMESTIC SCIENCE COURSES

English	4 units
Mathematics	2 units
Manual Training or Domestic Science.....	2 units
History	3 units
First Year Science	1 unit
Additional Science	1 unit
Elective	3 units

Total 16 units

8. GENERAL COURSE

English	4 units
Algebra	1 unit
Geometry	1 unit
First Year Science	1 unit
Additional Science	1 unit
History	2 units
Elective	6 units

Total 16 units

B. Courses of Study to be followed by pupils who will complete their work before July, 1913.

ANCIENT AND MODERN CLASSICAL COURSES

SECOND YEAR

<i>First Semester</i>		<i>Second Semester</i>	
Geometry I	5	Geometry II	5
Latin	5	Latin	5
English	5	English	5
Medieval and Modern History	5	Medieval and Modern History	5
Gymnasium	2	Gymnasium	2

THIRD YEAR

Physics or Chemistry.....	5	Physics or Chemistry.....	5
Latin	5	Latin	5
Greek, German or French....	5	Greek, German or French....	5
English History	5	English	5

FOURTH YEAR

Geometry	5	Geometry	5
Latin	5	Latin	5
Greek, German, or French....	3	Greek, German, or French....	3
United States History and Government	5	United States History and Government	5
English	2	English	2

GERMAN COURSE

SECOND YEAR

*First Semester**Second Semester*

Geometry I	5	Geometry II	5
Medieval and Modern History	5	Medieval and Modern History	5
English	5	English	5
German	5	German	5
Gymnasium	2	Gymnasium	2

THIRD YEAR

Physics or Chemistry.....	5	Physics or Chemistry.....	5
English	5	English	5
German	5	German	5
English History	5	English History	5

FOURTH YEAR

Geometry	5	Geometry	5
German	5	German	5
United States History and Government	5	United States History and Government	5
English	5		

SCIENCE COURSE

SECOND YEAR

*First Semester**Second Semester*

Geometry I	5	Geometry II	5
English	5	English	5
Medieval and Modern History	5	Medieval and Modern History	5
Zoology	5	Botany	5
Gymnasium	2	Gymnasium	2
Manual Training or Domestic Science	10	Manual Training or Domestic Science	10

THIRD YEAR

Physics or Chemistry	5	Physics or Chemistry	5
Latin, German or French....	5	Latin, German or French....	5
English	5	English	5
English History	5	English History	5

FOURTH YEAR

Geometry	5	Geometry	5
United States History and Government	5	Latin, German, or French ...	5
Latin, German or French....	5	English	5
English	5	United States History and Government	5

ENGLISH COURSE

SECOND YEAR

First Semester

Geometry I	5
English	5
Medieval and Modern History	5
Zoology	5
Gymnasium	2
Manual Training or Domestic Science	10

Second Semester

Geometry II	5
English	5
Medieval and Modern History	5
Botany	5
Gymnasium	2
Manual Training or Domestic Science	10

THIRD YEAR

Physics or Chemistry	5	Physics or Chemistry	5
English	5	English	5
English History	5	English History	5
Commercial Arithmetic	5	Commercial Arithmetic	5

FOURTH YEAR

Geometry	5	Geometry	5
English	5	English	5
United States History and Government	5	United States History and Government	5
Economics	5	Commercial Law	5

COMMERCIAL COURSE

SECOND YEAR

First Semester

Geometry I	5
Bookkeeping	5
Medieval and Modern History	5
English	5
Gymnasium	2

Second Semester

Geometry II	5
Bookkeeping	5
Medieval and Modern History	5
English	5
Gymnasium	2

THIRD YEAR

Physics or Chemistry	5	Physics or Chemistry	5
English	5	English	5
Bookkeeping or Elective	5	Bookkeeping or Elective	5
Typewriting and Stenography 10		Typewriting and Stenography 10	

FOURTH YEAR

Geometry	5	Geometry	5
English	5	English	5
Economics	5	Commercial Law	5
Typewriting and Stenography 10		Typewriting and Stenography 10	

GENERAL COURSE

SECOND YEAR

First Semester

English	5
Bookkeeping	5
Geometry I	5
Manual Training, Domestic Science, Biology, or Medie- val and Modern History...	5
Gymnasium	2

Second Semester

English	5
Bookkeeping	5
Geometry II	5
Manual Training, Domestic Science, Biology, or Medie- val and Modern History...	5
Gymnasium	2

THIRD YEAR

English	5	English	5
Physics or Chemistry	5	Physics or Chemistry	5
Latin, German, or French....	5	Latin, German, or French....	5
English History, or Typewrit- ing Stenography	5	English History, or Typewrit- ing and Stenography	5

FOURTH YEAR

English, Latin, German, French, or Typewriting and Stenography	5	English, Latin, German, French, or Typewriting and Stenography	5
Geometry	5	Geometry	5
Economics	5	Commercial Law	5
United States History and Government	5	United States History and Government	5

Madison High School