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OUTLINE
OF
COURSE OF STUDY
MOUNDSVILLE PUBLIC SCHOOLS



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This outline is intended to present the principal subjects of the course of study in brief form to serve as a guide to all the teachers of the city respecting the points to be covered during the year. There is no intention to enter into any detail concerning matter or method but rather to suggest some of the essential points in each subject and thereby assist in securing more uniformity of matter studied in each grade. The personality of the teacher must determine the method in the main, and the number and advancement of pupils should be a considerable factor regarding the amount of matter to be presented, but the aim should be to take up as much of the subject matter indicated in the outline as is possible.

Every teacher should have a copy of the State Manual and a copy of the Institute Annual for 1910.

ENGLISH.

English is the medium through which the major portion of our subjects of instruction win additional educational value. It is the mother-tongue of the greater number of the children who attend our public schools, and it is through the use of this language that these children will become acquainted with the world and find their place in it. Our first, and often the most enduring, impressions of sympathy and sentiment come to us through the rhymes and jingles of childhood; throughout life our mother-tongue continually presents to us new and higher ideals of the realities of life and duty. The literature of the English language is rich in all that fosters moral sentiment, deep emotions, keen sensibilities, "the highest ideals of achievement, beauty, honor and love," and it reveals the effect of these ideals on human aspirations and conduct. Effective work in English exhibits itself in the other school work to a considerable extent and much care should be taken that it be thoroughly done. Emphasis should be placed upon the use of proper motives to stimulate pupils to think, to feel, and to express their thoughts in good, clear, and effective language. The love for good books should be acquired early and an acquaintance with the best writings in prose and poetry with a continually higher ideal in the selection of reading matter should be the aim of each succeeding year.

"The chief work of the Primary school teacher is to teach reading. For the first three years of the pupils' school life all other studies should be subordinate. A good reader holds the key to every department of learning; and it may be added that much of the unsatisfactory work of the grammar school is in consequence of the pupils' inability to read and understand readily the books placed in their hands."—R. C. Metcalf.

First Grade.

(13 1-2 hours per week.)

1. Oral Exercises.
 - A. Conversations,
 - a.—Concerning home and school.
 - b.—Surroundings of school.
 - c.—About animals, plants, occupations.
 - d.—Objects in which color, form, and number are concerned.
 - e.—Concerning pictures, drawings, handwork.
 - f.—Picnics, holidays, travel.
 - B. Reproduction of Stories,
 - a.—Stories told by teacher to pupils.
 - b.—Explanation of pupils' drawings, clay models, sand table work.
 - C. Mastery of Forms,
 - a.—Use of a and an.
 - b.—Use of came, did, saw, have.
 - c.—Simple forms in etiquet.
2. Written Exercises.
 - A. Copying,
 - a.—Bits of good verse.
 - b.—Sentences pupils use in reproduction lessons.

c.—Simple, easy letters to parents.

d.—Names of parents, use of Mr., Mrs., Dr., "I," pupil's name.

3. Literature.

A. Myths,

a.—Mythical stories told by the teacher.

B. Reading, (by teacher.)

a.—Standard Fairy Tales.

b.—Fables.

c.—Parables.

C. Poetry,

a.—Read or recited by teacher,

1. Nursery rhymes, Mother Goose melodies.

2. Verse concerning children of other races.

b.—Learned by children,

1. Rhymes and melodies in 1.

2. Counting-out rhymes, riddles.

List of Books:

Heart of Oak, Book I; Verse and Prose for Beginners; Six Nursery Classics; Hiawatha Primer; Palmer Cox Brownie Primer; The Eugene Field Reader; The Robert Louis Stevenson Reader; Stories of Indian Children; A Child's Garden of Verses; Rhymes of Childhood; Three Years with the Poets; Songs of Treetop and Meadow; A Book of Nursery Rhymes; In Storyland; Fairy Tales Every Child Should Know; Myths Every Child Should Know.

4. Reading

a.—Text, New Education Reader, Books I. and II.

See Introduction and Directions to Teachers.

b.—Lessons from the blackboard matter from oral lessons in conversations and reproductions.

c.—Make charts and leaflets of material selected from b.

Second Grade.

(13 1-2 hours per week.)

Oral Exercises.

1. Conversations,

a.—Continuation and elaboration of work in Grade I.

b.—Contents of reading lessons, substance of stories told to pupils or read to them.

c.—Explanations of work at sand table or hand work.

d.—Holidays and special occasions.

e.—Studies of primitive life.

2. Mastery of forms.

a.—Use of have been, have come, have done, have seen, sit, sat, run, ran, drink, drank.

b.—Took or gave me, took or gave us, took or gave you and me.

c.—Observe the above in reading; use correctly in written work and oral lessons; observe same in every day speech.

Written Exercises.

1. Copying,

a.—Fables, proverbs, verse.

2. Capitals,
 - a.—Proper names.
 - b.—Beginning of sentences.
 - c.—Beginning of lines of poetry.
 - d.—“O”, “I”.
3. Punctuation,
 - a.—Period at the end of sentences; use in abbreviations.
 - b.—Interrogation point in questions.
 - c.—Comma.
 1. Before and after names of address.
 2. In heading and salutation of letters.
4. Sentences,
 - a.—Sentences in the simplest form.
 - b.—Changing the contents of a so that simple plurals in s may be used.
 - c.—Distinguishing between prose and verse.
5. Letter writing,
 - a.—Letters of thanks, birthday, Christmas greeting; use of abbreviations where needed.
 - b.—Letters to parents or friends.

Literature.

1. Myths, fairy stories, fables.
 - a.—Red Riding Hood, Tom Thumb, The Golden Touch, Story of a Donkey.
 - b.—Why the Fox’s Tail has a White Tip, Why the Bear has a Short Tail, How Robin Got his Red Breast.
 - c.—The Wind and The Sun, The Wolf and the Crane, The Crow and the Pitcher.
 - d.—Jack the Giant Killer, Jack and the Bean Stalk, The Fox and the Grapes, Whittington and his Cat.
 - c.—Pandora, Clyte, Neptune, Arachne, Ceres.
2. Bible Stories,
 - Story of The Ark, Appearing of the Shepherds.
3. Stories of Patriotism.
 - Washington, Lincoln, Betsy Ross.

Methods,

- a.—Reading by teacher from book.
- b.—Stories told by teacher.
- c.—Reproduction work by pupils.
- d.—Poems read or recited by teacher.
- e.—Some poems committed to memory by pupils.
- f.—Some of the easier poems to be read by pupils.
- g.—Some of the work of reciting of counting out rhymes, nursery rhymes, Mother Goose Melodies, Jingles

Reading,

- a.—Text, New Education Reader, Book III. See Introduction.
- b.—Lessons from the blackboard on matter found in conversation and reproduction work.
- c.—Make charts and leaflets of material selected from b.
- d.—Use Supplementary Readers.

Suggestive Book List:

Heart of Oak, Book I; Old World Wonder Stories; Crib and Fly; Story of a Donkey; Six Nursery Classics; Child's Garden of Verses; Three Years With the Poets; Stories of the Red Children; Fairy Stories and Fables; Stories of Great Americans; Grimm's Fairy Tales; Book of Nature Myths; Children's Classics in Dramatic Form; First Year Nature Reader.

Third Grade.

(13 hours per week.)

Oral Exercises.

1. Conversations,
 - a.—Continuation of work of grades I. and II.
 - b.—Important current events.
 - c.—Local history.
 - d.—Holidays and special occasion
 - e.—Science or nature work.
 - f.—Primitive life.
2. Reproductions,
 - a.—Substance of reading lessons.
 - b.—Review of past lessons.
 - c.—Stories told by teacher.
 - d.—Stories read by pupils.
3. Mastery of forms,
 - a.—Attention to all oral work with the aim of securing correctness.
 - b.—“At home”, “go to town,—in a carriage,—into the house,” “this—that kind”, “May I,” “Shall I.”
 - c.—Continue work on simple plurals.

Written Exercises.

1. Copying,
 - a.—Simple conversations.
 - b.—Short poems to be kept.
 - c.—Memory gems.
2. Letter Writing,
 - a.—Short letters and replies.
 - b.—Invitations and replies.
 - c.—Thanks and greeting.
 - d.—A letter or letters for real sending.
 - e.—Sentences more elaborate than in Grade II. Original remarks on Nature Study, hand-work, biography.
 - f.—A number of sentences about the same thing, leading to the paragraph.
 - g.—Indentation, margin, capitals.
 - h.—Recognition of quotation marks, paragraph, verse.
 - i.—Plurals of such words as man, tooth, mouse, child; change simple sentences from singular to plural form.

Literature.

1. Greek Myths; continuation of work in Grade II. Let the work lead to the “Wonder Book.”
 - a.—“Old Greek Stories”; (Baldwin).

2. Nature Myths;

“Nature Stories”, (Bass), “Calendar Stories”, (Boyle).

3. Stories and poems read to pupils by teacher.

4. Prose and verse committed and recited by pupils.

Suggestive Book List:

Heart of Oak, Book II; Bible, (for Samson, Daniel, Deluge, etc). Do-
cas, The Indian Boy; Stories of My Friends, (Seasons); Grimm's German
Household Tales; Robinson Crusoe, Public School Pub. Co.; Three Years
With the Poets.

Reading.

Text, New Education Reader, Book IV.

See Introduction, and Directions to Teachers in Book I. and II.
Supplementary Readers.

Work to be suitable to the season or occasion; the daily activities of
the school may determine the subject matter to be taken up.

Make charts and leaflets from oral or reproduction work.

Arrange for a pleasant as well as profitable reading period. Keep
in mind the child's point of view.

Give frequent drills in pronunciation and expression; get clear tones
and aim to cultivate a feeling of confidence on the part of the
pupil while reading aloud.

Fourth Grade.

(11 hours per week.)

Vocabulary.

a.—Increasing from all lessons.

b.—Elementary study of related terms, walk, march, pace; hark,
hear; etc.

c.—Difference in meaning taught thru illustration.

d.—Use of dictionary for pronunciation and meaning.

Oral Exercises.

1. Conversations,

a.—Local excursions, vocations, history, men of note, town elec-
tion, authors of books.

b.—Easy character studies in connection with reading lessons.

c.—Substance of stories.

d.—Holidays.

2. Mastery of forms,

a.—Love, like; learn, teach; want, wish; may, can; I shall, you will.

b.—Use of capitals,

Comma preceding direct quotation, following yes and no, etc.

Contractions and abbreviations in common use.

Possessive forms, plurals,

Forms of letters for ordinary correspondence, business forms.

Written Exercises.

1. Copying from books of prose and poetry to be kept. Where en-
tire selection is not used note the book from which it is taken;
also append the author's name. (Pupils to have some choice as to
what is to be copied.)

2. Letter writing,

- a.—Friendly letters and invitations with replies.
- b.—Copy and study some business forms.
3. Make lists of nouns in the singular and change to the plural.
4. Themes in two or three paragraphs from observation and experience of pupil.
5. Language,
 - a.—Simple analysis of sentence as to subject and predicate.
 - b.—Distinguish number and tense of some simple verbs.
 - c.—Use of some of the more common adjectives.

Literature.

1. Reading of teacher,
Myths, stories, poetry, description.
2. Reading of pupil,
Same as I except under the direction of the teacher.
3. Prose and poetry committed to mem

Memory Selections:

Maple Leaves; Aldrich,
Pippa's Spring Song; Browning,
Norse Lullaby; Field,
Sweet and Low; Tennyson,
Woodman, Spare that Tree; Morris,
A Child's Thought of God; Mrs. Browning.

Suggestive Book List:

Heart of Oak, Book III; Days and Deeds a Hundred Years Ago; Anderson's Fairy Tales, Vol. II; Kingsley's Greek Heroes; Norse Myths; The Heroes of Asgard; Hiawatha; King of the Golden River; Lolami, the Little Cliff Dwellers; Little Lame Prince; Stories from The Arabian Knights; The Nurnburg Stove; A Dog of Flanders; Crag and Johnny Bear; Old Stories of the East, (Bible); The Cambridge Book of Poetry; Poems of American Patriotism; The Children's Hour; A Book of Famous Verse.

Fifth Grade.

(9 hours per week.)

Vocabulary.

1. Continued study of related terms leading up to synonyms.
2. Conversations as in Grade IV, but somewhat enlarged.
3. Exercise in recitation work by topic.
4. Relating incidents in stories read or in local happenings. Note correctness of language used with attention to pleasing tones and good enunciation.
5. Mastery of forms.

Such expressions as: A person looks well, happy, pretty.
An apple looks good, ripe, rosy.
A person feels well, happy, sad.
I had rather, I had better.

Written Exercises.

1. Plurals of English nouns.
2. Masculine and feminine forms.
3. Sentences containing personal pronouns in the predicate—as at-

tribute, as object.

4. Some exercises in writing tense forms and using same in sentences.
5. Making of easy compound and complex sentences taken from conversations.
6. Acquiring of skill in full, accurate and apt expression of thought in themes based on Geography, History, Biography, Stories.
7. Business letters and forms.
8. Letters to friends or relatives in other towns. Letters for this grade should be prepared for real sending.
9. Punctuation for capitals, commas, quotation marks.
10. Use of verbs lay, lie, sit, set, can, may, shall, will, get, in sentences.
11. Correction of errors in every-day speech.
12. Practice in the use of dictionary for meaning and pronunciation.
13. Writing sentences and paragraphs dictated by the teacher.

Literature.

1. Much poetry by one author. (Stevenson or Longfellow).
2. Training of taste in the selection of reading matter.
3. Committing of some poetry, children having some choice as to what shall be copied or committed.

Memory Selections.

October's Bright Blue Weather,
Robert of Lincoln, (Bryant),
The Arrow and the Song, (Longfellow),
The Barefoot Boy, (Whittier),
America, (Smith),
Independence Bell,
The Flag Goes By, (H. H. Bennett),
Warren's Address, (Pierpont).

Suggestive Book List:

Heart of Oak, Book III; Tales of Troy; The Rose and the Ring; Lobo, Rag and Vixen; Ways of Wood-Folk; Our Feathered Friends; Old Testament Stories in Scripture Language; Diddie, Dumps and Tot; Life and Adventures of Santa Clause; Round the Year in Myth and Song; Paul Revere's Ride, The King of the Golden River.

For the Teacher:

Wonder Book; Tanglewood Tales; Tales of King Arthur; Legends of the middle Ages; Poems of American Patriotism; Posy Ring; Golden Numbers.

Reading.

The aim in this grade should be to have the pupil develop to the fullest extent possible, his ability to read. By the time this grade is finished, the pupil will have approached quite closely his limit in the mechanical part of reading, and much care will be necessary to have as much as possible finished in this year. The same remark applies to his writing.

Sixth Grade.

(8 1-2 hours per week.)

Vocabulary.

1. Have pupils keep list of new words learned.

2. Simple study of English roots, prefixes, suffixes.
3. Constant use of dictionary for spelling, meaning, pronunciation.
4. Conversations on matters of interest, local or national.
5. Reproduction of matter silently read.
6. Recitation by topic from plans made in class.
7. Work out plans for themes in class.

Written Exercises.

1. Comparative and superlative of adjectives and adverbs.
2. Masculine and feminine of nouns.
3. Plurals of compound nouns, figures, letters.
4. Copy a few paragraphs containing
 - a.—Good compound sentences,
 - b.—General statement followed by particular, (:),
 - c.—A break in thought, (—).
5. Letter writing,
 - a.—Business letters,
 - b.—Friendly letters,
 - c.—Business forms, all for real work in business.
6. Themes as in grade five but more advanced. More use of plan and outline. Outlines made and used in class work.
7. Descriptions of places of interest, public buildings, parks, travels. Historical, biographical, scientific themes.
8. Dictation to test language, spelling, punctuation.

Literature.

1. Oral reading in class.
2. Silent reading at home, at school.
3. Memory work in prose and poetry.
4. Critical work of some short poetry and prose selections.
5. Have pupils read aloud at home and at school; do work for good tones and clear enunciation.

Selections for memory.

Paul Revere's Ride, Longfellow.
 Concord Hymn, Emerson,
 The Daffodils, Wordsworth,
 Sheridan's Ride, Reade,

Suggestive Book List.

Heart of Oak, Book IV.; Snowbound and Songs of Labor; Selections from Irving; Tales from the White Hills; Courtship of Miles Stanish; Birds, Christmas Carol; Hoosier School Boy; Legends of King Arthur and his Court; Some Merry Adventures of Robin Hood; Rab and his Friends; The Captain's Dog; Stories of Animal Life; Bob, Son of Battle; Call of the Wild; Jack Hall, (for boys); Betty Leicester, (for girls); The South American Republics; Ten Great Events in History; Century Book for Young Americans.

Grammar.

Some simple story as a basis.

Observe,

- 1.—Paragraph,
 - a. Subject of paragraph.
- 2.—Sentences,

- a. Classify according to use.
Declarative, imperative, interrogative, exclamatory,
 - b. Study of simple sentence,
 - 1. Essential parts,
Subject, predicate.
 - 2. Use of nouns, verbs.
 - 3. Subject modifiers,
Possessive, adjective, easy phrases.
 - 4. Predicate modifiers,
Single words that tell how, when, where;
Groups that tell how, when, where.
 - 3.—Words,
 - a. Nouns,
 - 1. Classes—common, proper;
 - 2. Number—singular, plural;
 - b. Verbs,
Simple tense—and number—forms.
- Texts suggested,
Modern English Course, Book II., Macmillans.
Language Through Nature, Literature and Art, Book Sup. Co
Mother Tongue, Book II.

Seventh Grade.

(8 1-2 hours per week)

Vocabulary.

- 1.—Keep list of new words.
- 2.—Constant use of dictionary for pronunciation, spelling, meaning.
- 3.—Frequent use of Encyclopaedia, reference books, supplementary books.
- 4.—Continue use of plans and outlines, practice in reciting from topics in outlines; themes from outlines previously made.

Written Exercises.

- 1.—Lives of authors, statesmen; stories of travel; simple book-review.
- 2.—Note plurals of nouns, comparison of adjectives, tense and number forms of verbs.
- 3.—Letters and business forms for actual use.

Literature.

- 1.—Oral reading in class. Some critical study of short selections of prose and poetry.
 - 2.—Suggest readings from library and ask for oral reviews of some books read. Aim to cultivate the desire for good reading.
- Suggestive list of Books and selections.

Robinson Crusoe; Tales from Shakespeare; Cricket on the Hearth, Maynard Merrill & Co.; Poor Richard's Almanac, H. M. Co.; The Voyage and Other Essays, H. M. Co.; True Tales of Birds and Beasts; Gold Bug; Enoch Arden; Evangeline; Tales of the Wayside Inn; The Man Without a Country; Two Years Before the Mast; Hans Brinker, Scribners; My Dogs in the Northland; The Page Story Book; Poems of American Patriotism; Hero Tales from American History; Around the Camp-fire.

Memory Selections:

The Death of the Flowers; The Landing of the Pilgrims; A Psalm of Life; Psalm CIII; The Old Clock on the Stairs; The Gladness of Nature; The Isles of Greece; Columbus (Joaquin Miller); Sir Galahad, (Tennyson).

Grammar.

- 1.—Further study of the sentence based upon a simple piece of literature.
- 2.—Very easy compound sentence, members joined by and, but, or other easy connectives.
- 3.—Exercises in simple analysis.
- 4.—Adjective and adverbial modifiers.
- 5.—Subject modifiers,
 - a.—Clause,
 - b.—Change from clause to single word, or word to clause in easy exercises.
- 6.—Predicate modifiers.
 - a.—Clause showing when, where, manner.
- 7.—Study of easy phrases.
- 8.—Exercises in easy figures of speech; similes, metaphor, personification; note same in reading work.
- 9.—Correction of every-day speech.

Eighth Grade.

(8 1-2 hours per week.)

Grammar.

- 1.—Parts of Speech and their use in sentences.
- 2.—Sentences.
 - a. Subject.
 - b. Predicate.
 - c. Object.
 - d. Modifiers.
- 3.—Short exercises in the inflection of
Nouns,
Pronouns,
Verbs.
- 4.—Study of irregular verbs.
- 5.—Connecting words.
Conjunctions,
Adverbs.
- 6.—Correction of every day speech.

Composition.

- 1.—Daily theme.
Historical,
Biographical,
Geographical,
Scientific.
- 2.—Correct and fluent expression of thought.
- 3.—Use of simple figures of speech.
- 4.—Reference books and dictionary.

5.—Letters and business forms.

Literature.

Oral reading in class.

- a. Critical study of some short selections.

Sketch Book,
Deserted Village,
Cotter's Saturday Night,
The Building of the Ship,
Sharp Eyes and Other Papers,
To a Skylark.

- b. Figures of speech.

- c. Classical References.

- d. Biographies.

Silent reading at home and at school.

- a. Oral reports in class,

- b. Written reports for information and language.

Suggestive Book List:

Marmion; Lady of the Lake; Deserted Village; Pied Piper and Other Poems; Sella, Tranatopsis, etc.; Grandmother's Story of The Battle of Bunker Hill; Building of the Ship; Vision of Sir Launfal; Under the Old Elm; The Tent on the Beach; The Gettysburg Speech; Selections from Ruskin; Autobiography, (Franklin); Last of the Mohicans; The House of Seven Gables; The Great Debate; Poetry of the Seasons; Choice English Lyrics; Golden Treasury of Songs and Lyrics; Hero Tales from American History; Talisman; Oregon Trail; Santa Claus' Partner; Land of the Long Night; Standish of Standish; Bow of Orange Ribbon; Van Dyke Book.

For the Teacher:

Teaching the Language Arts; Teaching of English; Talks on Writing English; How to Teach Reading; Counsel on the Reading of Books; English Composition; Exercises in English Composition; Special Method in Reading of the Classics; Books and Culture; Literary Values; Talks on the Study of Literature; How to Teach Reading; Problem of Elementary Composition; Studies in Nature and Language Lessons; Outline of English Grammar; Special Method in Primary Reading; How to Tell Stories to Children.



HISTORY.

The work in history in the first four grades should be in the form of stories told by the teacher or read by the pupil. Much of the supplementary reading of these grades should be of this character, having matter pertaining to the life of the Indians, their manners and customs, methods of carrying on war, procuring food, defense against wild animals, and training of the young. Many legends of the red man as found in Hiawatha should be learned, and among some of the younger pupils some of the stories should be dramatized.

Stories of pioneer life showing the hardships of early settlers, dangers from Indians, wild animals, and lack of food, should be abundant. The story of the Pilgrims should be made quite elaborate, setting forth the life lived before coming to America, the journey, the landing, getting ready for the winter, struggle for existence, relations with the Indians and character of the settlers. The story of John Smith and the Virginia colony, William Penn and the Indians. Some stories of local history such as Betty Zane, Lewis Wetzel, Captain Foreman, Samuel McCulloch, Siege of Fort Henry.

The life story of some of the men instrumental in the founding of the nation should be well learned. Some war stories showing nobility of character or heroism or sacrifice for the good of the country should be used, but avoid, as much as possible, that which emulates the shedding of blood. Aim to show that true patriotism may be exhibited more nobly in other ways than in the killing of persons in war.

The following list may be suggestive of material suitable for the work of the different grades up to and including the fourth.

First Grade.

Six Nursery Classics, O'Shea; The Tree Dwellers, Dopp; Children of the Wigwam; Glimpses of Pioneer Life; Hiawatha Primer.

Second Grade.

Story of Lincoln; Stories of Great Men, Stories of American Pioneers; The Tree Dwellers; The Early Cave Men; The Later Cave Men; Hawk-Eye, (Indian Boyhood); Child Life in Poetry and Prose.

Third Grade.

Children of the Cold; Children of the Wigwam; Epochs in American History; Fifty Famous Stories Retold; Lives of the Presidents.

Fourth Grade.

Cortez, Montezuma and Mexico; Four American Naval Heroes; Four American Explorers; The Louisiana Purchase; Story of Our Country (Poetry and Song); American Indians; Docas, The Indian Boy; Noble Deeds of our Fathers; Stories of Our Country; Story of Columbus; True Stories of American Life.

Fifth Grade.

Use as a text for daily work Montgomery's Beginners' American History. The work of this year should be mainly in the nature of biogra-

phy. Events of importance regarding the settlement of the country should be taught, but they should be grouped about the life of some prominent person. Discovery and exploration should find much of its interest in such men as Columbus and De Soto. Much of the supplementary reading of this grade should consist of biographies of prominent men and women and interesting accounts of great events. Stories of heroic deeds and the life history of men who have acted nobly in some great cause should have a prominent place. Some work in related European history can be profitably introduced in this grade. The story of Isabella of Spain and the Conquest of Granada; Elizabeth of England, in connection with the work of Raleigh and Drake; Wallace and Bruce of Scotland; Tales from Scottish History; Heroic Ballads of England and Scotland; Stories of Chivalry and Sea Tales, all lead to the final work in American History. Stories of pioneer life furnish an animated portraiture of an event or character which is so desirable in arousing interest in history. A good foundation in Geography should be laid in connection with the work of this grade as it furnishes a basis for clear knowledge.

The following list of books will be found helpful:

The Boston Tea Party; Children's Life of Lincoln; Four Old Greeks; Grandfather's Stories of American History; The Great West; Pilgrims and Puritans; Children's Stories in American History; Children's Stories in American Progress.

Sixth Grade.

The text for this grade is Thomas' Elementary History of the United States. The plan of this book should be followed in the main, the greater portion of the work being biographical. The period of exploration and settlement should be thoroughly studied in connection with the lives of Henry Hudson, Roger Williams, William Penn, Lord Baltimore, James Oglethorpe. Some points in local history such as first settlement in West Virginia, settlement along the Ohio river, early settlers of our city or immediate vicinity. The movement westward might be studied in connection with the lives of Daniel Boone, George Rogers Clark, the Lewis and Clark Expedition, Discovery of Gold in California.

A good knowledge of pioneer life should be acquired and pupils should be led to understand something of the struggle for existence in the period of settlement and the early days of the nation. A brief outline of the French and Indian War should be worked out, with at least two points, e. g. Story of Fort DuQuesne and the Story of the Capture of Quebec, studied more in detail.

In the study of the Revolution, the Causes might be worked out in the life story of Samuel Adams, John Hancock, and George Washington.

In the study of the life of Lincoln the causes and some important events of the Civil war should be worked out. Current events should have a large place in the history work of this grade, particularly those of world-wide importance.

A good geographical basis should be provided for this work, and where practicable, maps and drawings should be made illustrative of important events and places.

The following list of supplementary books will be found helpful:

Boys of '76; Boys of 61; In the Boyhood of Lincoln; Colonial Stories; Revolutionary Stories; Civil War Stories; Life and Deeds of Gen. U. S. Grant; Little Journeys to Our Western Wonderland; Stories of the Civil War; Tales of the Pathfinders; Two Little Confederates; Life of George Washington.

Seventh Grade.

Use Montgomery's Leading Facts in American History as text. Let the work of the year cover the first part of the book to Washington's Administration. Make a brief study of European conditions leading up to the discovery of America and the settlement of the colonies. Let most of the work be done from the standpoint of cause and effect rather than from mere chronology. Aim to develop a few topics thoroughly. The history and geography of important events should be correlated; maps and drawings should be made to supplement and illustrate the texts. Much biographical work should be done in addition to the regular text book work.

Suggestive list of Supplementary Reading:

War of Independence; Story of the Great Republic; Story of the Britons; Stories of the Old World; From Colony to Commonwealth; City of the Seven Hills; Boots and Saddles; Romance of Industry and Invention; West From a Car Window.

For the Teacher:—

Geographical Influences in American History; American History and its Geographical Conditions; Man and His Markets; The Teaching of Geography, (Geike); Special Method in Geography, (McMurry); Winning of the West, (Roosevelt); American Revolution, (Fiske); The Critical Period in American History, (Fiske); Trail to Railway, (Brigham); Pioneers of the Mississippi Valley, (McMurry).

Eighth Grade.

Use Montgomery's Leading Facts in American History. Briefly review the first part of the book to Washington's Administration. Begin here for the regular work. Aim to have the work of this year develop a good general idea of the growth of the nation. Give special attention to such points as **Organizing the Government, Growth under the Constitution, The Civil War and Reconstruction**. Have the work done in such a manner that pupils will have a knowledge of the growth of our civil government. The idea of cause and effect should predominate and only such detail and chronology followed as will furnish the necessary connecting links. Geographical influences should be noted and development maps and drawings should be freely used.

Supplementary Readings:

Source Book in American History, (Hart); Men Who Made the Nation, (Sparks); Expansion of the American People, (Sparks); How Our Grandfathers Lived, (Hart); The Crisis, (Churchill); Red Rock, (Page); Tales of New England; Age of Fable; Daughters of the Revolution; Hugh Wynne; Lewis and Clarke's Travels; Up From Slavery; The Aztecs; The Transit of Civilization; Epoch in American History—The Colonies, 1492-1750, Formation of the Union, 1750-1829, Division and Reunion, 1829-1889; History of Louisiana Purchase; Our Western Border; Panama; Stepping Stones of American History.

GEOGRAPHY.

The work in Geography for the first four years should be correlated with nature study and history. The chief source for material should be in excursions and in the supplementary reading. A beginning should be made by studying the physical features and natural phenomena of the immediate vicinity of the home and school. There should be no formal lessons from a text book, but a ground-work for future lessons should be furnished by the oral instruction in the various elementary science lessons. Beginning with the home or school the pupil should be led out into the county, state, and nation. He should know something of the names of the various divisions of the land and water as they are met with in his daily life and in his field excursions for study or pleasure. He should be able to tell the names of the chief products of his community and explain in a general way the conditions for such productions. This will necessitate the knowledge, in an elementary way, of the relation between products, and climate, soil, altitude, etc. He should also know something of the relation between climate, products, etc., and social and industrial conditions of various communities. Stories of travel, pictures, cabinets of minerals, collections of animal or vegetable products should be used freely. The beginning of map work might be made here by making a diagram of the school room, the school grounds, or the home; some maps might be traced if such is not continued too long. The points of the compass should be known by the rising and the setting of the sun and by the position of the pole-star. Pupils should be led to notice the change of seasons, time for trees to put out leaves or blossoms, state of weather and change of temperature. Excursions should be made with a view to obtaining material, by observation or collection, for class work. These excursions should be well planned by the teacher in advance; the ground should be thoroughly gone over and studied, that the pupils may be properly directed. The names of a large number of trees and plants should be learned, with something of the conditions of soil and location suitable for growth. Study some of the living things as birds, animals, or insects, together with their manner of living, struggle for existence and the good or harm they do. Have all the work lead gradually to the text book study of the subject for the fifth year.

Fifth Grade.

Use Frye's Elements of Geography. Let the work cover the first part of the book to page 79; then begin with page 115 and finish to page 144. These pages include all the matter pertaining to North America. Continue to correlate the History and Geography. With this plan, sufficient European Geography can be learned for present needs. In the use of the text book the arrangement of topics found there should be followed in general. Where it is found necessary to meet the conditions, the teacher's own arrangement should be followed. Aim to have the work lead the pupil from the home outward. A number of topics of immediate interest should be taken up and studied closely. Use the home city as a beginning in the study of conditions as to location, government, industries, commerce, railroads, means of outside communication. Have a map of the city and give pupils practice in locating points and

tracing the most convenient routes for transportation of merchandise or for pleasure. What conditions favor the location of factories? Study the water supply. This will be the introduction to the study of the water supply of other cities and towns and if properly treated can be made quite useful in arousing thought regarding purity of the drinking water and care regarding its selection.

Study some large city, e. g. Pittsburg, as a trade center. Show its advantages as to location in proximity to the supply of raw material, and transportation facilities. Study some of the chief industries as the manufacture of iron, glass, oil refineries. Compare some of these with those of our own state.

Location and description of a coal mine. Use, value, difficulty of procuring. Any interesting facts or data regarding the mining or use of coal.

Make a number of type studies of some physical features of importance or industry in connection with the topics found in the text.

Make liberal use of maps and globes. Models in clay or pulp and the drawing of maps should have a prominent place in this grade. Cabinets or collections of products could be used to impart added interest. Collections of pictures and clippings from daily papers or magazines would be found useful.

Sixth Grade.

Use Frye's Complete Geography as text. Have the work for the year cover the following pages, 1-52, 123-161. This includes all the matter pertaining to North America. In this grade should begin the more intensive study of the relations existing between industries and physical conditions. Let it be the "Geography of Cause and Effect." Study some local industry in relation to its location, supply of raw material, fuel, workmen, finished product, market for product, source of profit to company on account of location, profit to community on account of location.

Study something of the motions of the earth, causes of change of seasons, day and night, length of day and night at different seasons, parallels, meridians, isotherms, zones, effect of location on climate, use of thermometer, barometer, rain gauge, direction of winds, weather forecast.

Study the subjects, in the main, as they are found in the text. In case of necessity take up any European geography that might be helpful in the regular work. Considerable use should be made of large wall maps and globes. Pupils should be encouraged to make a number of maps to accompany the regular lessons where maps are needed. Relief maps in pulp or clay and product maps of the county or state might be of interest in this grade.

Suggestive Books for the Teacher:

Geographic Influences in American History, Brigham; Physical Geography, Redway; Glaciers of North America, Russel; Excursions and Lessons in Home Geography, McMurry; Type Studies from the Geog. of the United States, McMurry; Geography of Commerce, Trotter; Teaching of Geography, Geikie; Geographical Readers, Carpenter.

See State Manual.

Seventh Grade.

Use Frye's Complete Geography. Material on pp. 53-123, pp. 161-end. These pages contain the material outside North America. Cover the ground in a manner similar to the work of sixth grade. Aim to make a few type studies in a larger way than before. Try to find the influence exerted by climatic conditions upon commerce. Study routes of travel; ocean, canal, railway, caravan. The principal centers for various important industries should be learned. Compare climatic and industrial conditions with those of America in the same latitude. Note some causes and effects of emigration.

Have much work in making maps. Each pupil should be able to illustrate his recitation by the use of a quickly drawn sketch. Relief maps made of pulp or clay should be used freely. Collections of mineral, animal, or vegetable products should add interest; photographs of people, physical features, or industrial plants might be used to advantage. Books of travel, books descriptive of industries, Carpenter's Geographical Readers, and magazines should supplement the regular text.

Suggestive list of Books:

Across Asia on a Bicycle, Allen; Romance of Industry and Invention, Cochrane; Land of the Long Night, Du Chaillu; West from a Car Window, Davis; Coal and Coal Mines, Greene; Great World's Farm, Gaye; Java, the Pearl of the East, Higginson; Two Years in the Jungle, Hornaday; My Arctic Journal, Peary.

For the Teacher:

American History and its Geographic Conditions, Semple; Comparative Geography, Ritter; Elementary Lessons in Physical Geography, Tarr; The Golden Gates of Trade, Yeats; The Teaching of Geography, Geikie; Special Method in Geography, McMurry; Teacher's Manual of Geography, Redway; New Basis of Geography, Redway.

Eighth Grade.

The work of this grade should be of a general character leading up to a study of Commercial Geography. All the important topics of the History work should have a good geographical setting and the influences of geographic conditions should be thoroughly discussed. The making and study of maps illustrating historical matter should be encouraged.

By the end of the eighth grade the student should have a good knowledge of,

The general conditions which determine the distribution of life forms—plant and animal.

The races of men and the civilization developed under the conditions of their environment.

The chief lines of human industry,—Agriculture, Grazing, Lumbering, Fishing, Mining, Manufacturing, Commerce.

A number of type studies should be made after the manner described in McMurry's "Type Studies from American Geography."

Suggestive Books:

Stoddard's Lectures; Carpenter's Geographical Readers; The South American Republics, Markwick; Life in Asia, Smith; Footprints of Travel, Bailou; Wild Life Under the Equator, Du Chaillu; Boy Travelers, Knox; Around the World in the Yacht Sunbeam, Brassey.

ARITHMETIC.

First Grade.

Let the aim be to make the mechanical processes in numbers automatic. Strive for rapidity and accuracy. Have the work of the first year as concrete as possible, using objects such as sticks, beads, balls cards, counting frame, to illustrate whatever may be under discussion in the way of numbers. The number work should be mainly incidental, having its origin in the daily work of the school room, the pupils' experience upon the street and in the home, in the games, songs, stories, and the hand work with scissors, paper folding, clay modeling.

Count to 100.

Read numbers to 100.

Use the ruler in learning inches and feet; have pupils measure some familiar object in the school room.

Fold paper for finding square inch, one-half, one-third, one-fourth.

Combinations of numbers to 10; by synthesis and analysis.

Recognize groups in twos, threes, etc.

Count money and make change in small amounts.

Tell time by the clock.

Write numbers to 100.

Roman numerals to XII.

Second Grade.

Have the main part of the work to be in concrete form, using the daily experiences of the pupil as the basis for all problems. Use problems relating to buying and selling, loss and gain, products of the farm and factory.

Read and write numbers to 1000.

Count by twos, threes, fours, fives.

Use ruler for inch, foot, yard.

Teach quart, peck gallon, pound.

Teach some simple fractions by paper folding.

Multiply by 2 and 3.

Divide by 2 and 3.

Combinations, by synthesis and analysis, of numbers to 40.

Read and write Roman numerals to L.

Simple fractions— 1-2, 1-3, 1-4, 1-5, of easy numbers.

Third Grade.

Read and write numbers to 10,000.

Read and write Roman numerals to C.

Hand work requiring the use of inch, foot, quart, pint, pound, ounce.

Multiplication and division by 2, 3, 4, 5, 6, 10.

Adding and subtracting of U. S. money.

Adding and subtracting easy fractions.

Two-step problems, concrete and easy.

Various measurements applied in problems.

Tables for time measure, long measure, liquid measure, avoirdupois weight in easy form. Problems from every day experience in these tables.

Fourth Grade.

In this grade the work in the four fundamental rules should be finished. Frequent and thorough drills and exercises in all the operations so that the pupils work may be accurate and rapid.

Read and write all Roman numerals found in everyday work.

Make problems using various combinations of the fundamental operations. Find problems in newspapers, at home, in the store or factory.

Learn the use of such simple fractions as are necessary in the solution of the above problems. Use decimals in connection with problems involving the use of dollars and cents. Extend to other tables.

Add, subtract, multiply fractions such as halves, thirds, fourths; divide whole numbers by halves, thirds, fourths.

Explain and demonstrate all rules and principles learned.

Work in practical measurements; find surface of floors and ceilings; shingles at \$x per M.; cost of plastering, flooring, papering; simple problems in excavating cellars, ditches; cubic feet of air in rooms.

Making of bills of articles bought, orders for groceries or books.

Practice in solutions and explanations orally.

Use short division in all problems when the divisor is less than 12.

Fifth Grade.

Use text book. Review the fundamental operations and Denominate numbers, Complete Common Fractions. Ray's Practical Arithmetic.

Give frequent exercises in oral explanation and solution.

Have pupils make bills, receipts, checks, etc.

Bring to school problems involving principles found in the work for the year. Aim to have the work done meet the every-day experience of pupils and parents. Omit such portions of the text as have not some value in ordinary transactions, e. g. Troy Weight, problems in reduction or denominate numbers beyond two denominations.

Give practice in practical measurements: change cubic feet to gallons, find number of bushels in a bin, bricks in a wall, shingles for a wall or roof, lumber for floor, squares of tin or slate for roof. Cost of same.

Find cost of bills of articles purchased at local stores; teacher to find current prices; find cost when buyer pays freight, cost when discount is given for cash; receipt bills when paid; make order for books at regular prices.

Sixth Grade.

Review work of fifth grade. Begin with Decimals and complete text to Percentage. Ray's Practical Arithmetic.

Give ample work in every-day problems. Have pupils bring problems in ordinary transactions; make such problems.

Drill in practical measurements, use ruler, tape line, yard stick, scale and weights, measures for volume. Find contents of vessels in cubic inches and gallons, areas of fields and lots by actual measurement, cost of roofs, floors, walls.

Show relation between decimals and common fractions with frequent exercises in changing from one to the other.

Teach pupils to find cost of bills of articles when discount is given

for cash. Find total cost when freight or express is prepaid; when purchaser pays freight or express; what should be selling price to make desired profit?

Seventh Grade.

The regular work of this grade should begin with Percentage and finish to Ratio. Text, Ray's Practical Arithmetic. Supplement with mental work.

Review the work of previous grades in fractions, denominate numbers, and practical measurements.

Show relation between percentage and fractions.

Give special attention to the following:

Simple interest on notes and accounts,

Trade Discount,

Commission,

Profit and loss,

Bank Discount,

Insurance,

Taxes.

Make floor plans for building and estimate cost. Find prices from local dealer.

Eighth Grade.

Begin with Ratio and finish the text. Ray's Practical Arithmetic.

Give special attention to the following:

Simple Ratio,

Simple Proportion,

Mensuration,

Practical measurements of surfaces and solids.

Simple lessons in construction of geometrical figures and such calculations as are necessary for correct work.

Make simple floor plans for buildings with calculations for material and estimates of cost. Make drawings to scale. Make drawing to represent pitch of roof and estimate cost of same.

Find capacity of cisterns and estimate cost of construction.

Review fractions, applications of percentage, practical measurements.

Mental work at all times to supplement written work. Oral and written analysis of problems for accurate statements.



PHYSIOLOGY.

First Grade.

Parts of the body. The pupil should be taught the names of the various parts of the body and the principal use of each. There should be no attempt to cover much ground except to arouse interest. Since the hands are used to a great extent in the first years of the pupils' life he should be taught something of their structure and use; proper care and the value of cleanliness.

Cleanliness. Pupils should be impressed with the importance of keeping the body clean and healthful. Aim to create a spirit which shall result in the wearing of clean clothing and a desire to care for clothing.

Food. Have pupils talk freely of the foods which are proper for children of their age. Show that disease may be contracted by eating food not properly cooked, or which has been exposed to dust and dirt. Discuss the subject of water for drinking. Try to have pupils realize that the ground near the well should be kept perfectly clean at all times.

Alcohol and narcotics. Use the course of study provided by the W. C. T. U. to show the effects of alcohol.

Second Grade.

Parts of the Body. Extend the work of the first grade to some degree. Speak of the feet in walking that a correct gait may be acquired. Show that erect carriage of the body assists in deep breathing and better circulation of blood.

Cleanliness. Insist upon clean hands and face. Show how it is usual for unclean bodies and bad conduct to accompany each other. Speak of the cost of clothing and the necessity of caring for it. Have pupils learn something of the various materials of which clothing is made and the season of the year when each is suitable. Speak of clothing as a protection to the body and as a decoration.

Food. Discuss various kinds of food. Learn why some foods are suitable for winter and others for summer. Places where food may be procured. Proper preparation of food; preserving various fruits and vegetables for winter use; protection of food from dust and dirt; reasons for same.

Hair and nails. Show the use of each. Give instruction in the proper care; show that much of character is indicated by the manner in which the body is cared for.

Harmful practices. Use of tobacco in its various forms; the evil effects of cigarette smoking; effects of alcohol. See W. C. T. U. pamphlet for effects of alcohol.

Third Grade.

Parts of the body. Review work of the previous grades and make a little further study of names and uses. Show that, while the body is made up of parts, the perfection of the whole depends upon the perfection of each part. Study the effect of proper exercise in the development of the various parts. A series of gymnastics for increasing breathing capacity or developing erect posture might be carried out; encourage any

athletics that have for their object the development of a strong, sound body.

Cleanliness. Make a study of the sanitary conditions in the city and show the relation of unclean streets and alleys to the origin and spread of disease. The need of sewers, street cleaning department, health officer. Various disinfecting and cleansing agents; necessity of fumigating houses after contagious disease.

Food. Localities furnishing various food products. Need of different kinds of food in winter and summer; different kinds of food for people in various vocations. Effects of over eating, especially of very rich foods. Proper preparation of food; need of cooking; how to care for uncooked foods; exposure of food products by dealers.

The water supply should have much attention; show that many diseases originate in impure water.

Clothing. Study the methods of preparing materials for clothing by the early settlers and by primitive people. Best materials for different seasons; effect of color upon clothing. Study the construction of dwellings as protection from the elements; methods of heating and ventilating; lighting. Proper care of sleeping rooms; use of carpets and rugs, methods of dusting and sweeping; value of sun light.

Special senses. Teach pupils how to care for the sense organs. Effects of drugs upon the sense of taste and smell; improper lighting upon the sight.

Harmful practices. See W. C. T. U. pamphlet for material relating to the effects of alcohol. Show the harmful effects of smoking cigarettes.

Fourth Grade.

Good Health.—The importance of good health; study the conditions that are conducive to good health; pure air, good food, proper exercise, light of the sun, cleanliness of body and home surroundings. Show how clean home surroundings, clean body, clean clothing are factors in a clean life. Effects of alcohol and cigarettes or tobacco upon the growing body and the growing mind.

Parts of the Body.—Teach the names of the different parts of the body and the relation of the parts to each other. Show that the perfection of the body depends upon the perfection of each part. Study in brief the composition of the body; mineral and animal matter, with the part each plays and the necessity of providing properly for supplying these elements.

Motive Power.—Study muscles, brain, and nerves; show the relation between these and the bodily movements. Necessity of rest, sleep, exercise.

Growth and Repair.—Foods; various kinds and the proper preparation; foods in season, necessity of a change of food, where foods are obtained, care of vegetables. Study habits, showing the effect of bad habits on health and morals. Care of the skin, hair, nails. How to protect the body from cold. Prevention of disease by proper breathing, pure air, pure water, clean foods.

All the work of this grade should be oral and in simple form so that it may be easily comprehended. Much repetition is necessary in order that the impressions may be lasting. Some work in examining foods or

specimens of molds which may result in disease, should be done. A little direction of the play would be profitable. Aim to have your work result in a healthier body and mind.

Fifth Grade.

There might be some work done of a slightly technical nature, say in the description of one or two of the organs of the body or in some one of the bodily activities, e. g. digestion. Call for a good share of outside reading on the lessons assigned being careful to give reference to materials in reach of the pupil. One of the main objects should be to impress upon the pupil the necessity of caring for his bodily health; teach cleanliness and have it practiced to the extreme if possible.

Have lessons on the following:

The Body.—General care of the body, natural temperature, cause and prevention of colds, correct habits of sitting, walking, standing; advantage of having good, strong, healthy bodies.

Food and drink.—Proper kinds of food, preparation of foods, use of milk and eggs, more easily digested food, proper time for eating and drinking, the use and mis-use of sugar and candy, proper cooking of foods.

Teeth and Mouth.—Number and arrangement of teeth, structure of teeth, care of teeth, use of tooth brush; chewing of food, use of saliva, use of nostrils in the process of eating; cause of decayed teeth, repairing of teeth; spitting on floors, streets and public places.

Skin and Its Care.—Color, texture, use, care; contagious and infectious diseases; distinguish between these terms; some of the common skin diseases, and something of their prevention; care of the hair and nails, vermin and the prevention of the same, perspiration, its office; uses of soap, best kinds for various purposes, how made; vigilance with regard to cleanliness.

Lungs—Use and structure; need of pure air, proper breathing, breathing exercises, cause and prevention of tuberculosis, proper ventilation of sleeping rooms, effects of adenoid growths upon breathing and the general health, how to increase lung power, prevention of lung diseases.

Heart.—Blood and its use, how to aid circulation, location of the heart, number of beats per minute, the pulse and its relation to the heart, how to distinguish between a bleeding vein and a bleeding artery, what to do till the doctor comes.

Bones and Muscles.—Location of the most important bones of the body and the use of same; kinds of joints, how to prevent injuries to joints; how a muscle moves a part of the body, why exercise is necessary, proper kinds of exercise for rest or development of muscles, why does a change of occupation or position produce rest.

Special Senses.—Structure of some of the organs of special sense, proper care of the eye, ear, and organs of taste and smell; teach the care of these organs rather than their anatomy.

Alcohol and Narcotics.—Effects of alcohol, how it affects the brain, what it does in the process of digestion when taken into the stomach, what it does if applied to the skin, use of alcohol in preserving meats or vegetables, effects of the use of tobacco and alcohol.

Sixth Grade.

Respiration. Study the respiratory system. Show effect of tight clothing, insufficient clothing; clothing for different seasons. Sleeping rooms; light and ventilation, sweeping and dusting, clothing for beds. Pure air and exercise; what makes air impure, what purifies air, what enable one to breath more deeply, result of deep breathing.

Circulation. Use of blood, need of its being pure, how purified. Relation between circulation and respiration. What promotes a good circulation. Show the value of pure air, proper food, proper exercise on the blood.

Muscular System. Teach the names of a few of the principal muscles, and their location; how developed. Various uses.

Digestion. Proper time for eating. Kinds of food for different people and different seasons. Why we enjoy some food in winter and not in summer. Effects of over-eating or eating over rich foods. Various drinks in connection with eating, proper time for drink. Value of pure water. Table etiquette.

Bones.—Names of a few of the principal bones which may be easily injured; their location and methods of protection. Need of food for providing bone material. Necessity of erect posture in standing and sitting. Results of wearing improper clothing, tight-fitting shoes, shoes with high heels.

Alcohol and Narcotics. Effects of alcohol on digestion. Effect of alcohol upon vegetable or animal matter in preserving from decay or action by digestive juices. Effects of cigarettes and tobacco. See W. C. T. U. pamphlet.

Seventh Grade.

The work of this grade should be a fuller development of the topics in the sixth grade outline. Some laboratory work might be introduced to add interest and to develop the spirit of research. A few specimens of mold under the microscope or the dissection of an eye furnished by the butcher could be done to great advantage. In all of this kind of work the teacher should make a thorough preparation of the lesson, being certain of all the steps to be taken. A careful study should be made of the best methods of sanitation and the prevention of disease. Ritchie's Primer of Sanitation contains much material that could be profitably used in this grade.

Eighth Grade.

Make a few intensive studies from Overton's Applied Physiology. As far as possible accompany the lessons with appropriate laboratory exercises. While the main object should be to teach hygiene there should be sufficient anatomy and physiology taught to throw light upon the work that is being done.

Use Ritchie's Primer of Sanitation for material and suggestions concerning the prevention of disease and such laws of health as can be profitably studied here. The Gulick Hygiene Series is also excellent for this work.

NATURE STUDY.

First Grade.

Homes. Conversations about homes and surroundings; construction of the house; methods of heating; coal, gas, wood, steam; lighting; gas, oil, electricity, candles; old fashioned tallow dip; use sand table.

Foods. Different foods; need of food, preparation of food, cleanliness in preparation. Homes, food, clothing of some primitive people. Study weaving; use simple processes, work with reeds or strips of paper.

Flowers. Study golden-rod as a type of fall flowers. Study all the parts; stem, root, leaves, flower. Uses of the plant; if for medicine, decoration, in the arts, food. Some poem or story about golden-rod. Of what use is it apart from the above? Where does it grow? Kind of soil best adapted to its growth? How are the seeds planted? What feeds upon it? What kills it? Study other fall flowers. Specimens may be pressed and kept. Collect some seeds for spring planting; put in packages and label.

Birds. Study some migratory bird as a type. The common black-bird is a good example. Habits, place of nesting, eggs, young. Nests high in trees, in bushes, on ground. Material of nests; where and how to procure? Compare with nests of other birds. When does he go away? Does he have enemies? Do his enemies kill him or drive him away? Why is he hated, if so? What does he eat and how is it procured? Make a short list of migratory birds. Study the quail as a type of birds that remain all winter. List other birds that remain. Food; food and care of young. Manner of feeding the young. Of what use are the birds to man? Why protect them? If possible, put up some bird-boxes.

Fruits. Use the apple as a type. Study the tree as to roots, trunk, branches, leaves, fruit. Compare leaves with leaves of pear and peach. Examine fruit, note color, taste, size. Learn names of a few varieties. If scales can be procured, weigh some specimens, pupils doing the weighing. Plant some seeds and watch process of growth. If seeds do not grow try to find cause. What destroys trees or fruit? Study two or three other fruits.

Snow. At the first snowfall keep a watch for the beautiful crystals. Learn some uses for snow, as a covering for plants in cold weather, as a source of many pleasant sports. Study formation of ice on streams and ponds. Where do fish and other water animals go when ice forms? How protect ourselves from the cold? How are animals protected? Material for clothing; where procured, how? Where some birds go in winter. Means of protection. Make sled or toboggan.

Gardens. In the fall while studying plants, gather some seeds for spring planting. In the spring, prepare soil and plant. Watch the growth; plant sufficient seeds that some can be taken up at times to see process of growth. Study kinds of soil best suited to the varieties planted; need of water, sun light, cultivation. Things that destroy plants. Protection of plants.

Second Grade.

Grains. Study corn as a type of grain for fall work. Note the steps in the production of the ear of corn. Study the ear, formation in rows,

shape of grains, covering of husks, how husks are laid on. Trace threads of silk back to the grains. Use of roots, brace roots, silk, tassel. various uses of corn and means of preparing for use. Means of preserving for winter. Corn as food for man and for farm stock. What kills or destroys corn; birds, animals, insects? How prevent destruction? Study some other grains in same manner as corn. Visit the local flour mill. Use clay to make model of ancient grinding mill. Make collection of grains and products.

Birds. Study the robin as a type. Learn something of his habits. Does he migrate? Place of nesting, eggs, care of young. Is he hunted? If so, by whom? For what purpose? Is he useful? In what way? Is he harmful? How does he protect himself from his enemies? Study at least three other birds in like manner. In the spring study birds as they return. The robin is the first to appear in some communities; is he here? Make him the center of the spring bird study. Note the appearance of the first one; keep watch on him at all times. Study other song birds and learn to name them by song, plumage, or nest.

Nuts. Chestnut; where found? what use? when ripe? Flowers of the chestnut; two kinds. Compare with flowers of other nut-bearing trees. Compare with other nut-bearing trees as to size, shape, leaves, fruit. What kills chestnut trees? What prevents fruiting? How protect them? Study pine tree in winter in same manner as chestnut. Study other trees; make list of native trees; recognize by bark, leaves, fruit. Prepare some boxes for early spring planting.

Hand work. Study various materials used in making clothing. Study the weaving process and do some elementary work. Make mat, basket, card tray from reeds, raffia, cotton, pine needles. Make a very simple form of loom that could be used in this work. The life of a weaver; where he works, what he makes, his pay; cotton mills, children who work in these mills. Study cotton, wool, flax.

Flowers. Continue the study of flowers. Make a collection of early spring flowers; press a few specimens. Study the leafing and blooming of tree and the development of fruit. Use water colors in the study of fruit as a means of expression. Some work in gardening. Try to have some work done at home in planting and caring for flowers or vegetables and report at school.

Third Grade.

Flowers. Notice the fall flowers. Their use in decoration. Use the sun-flower as a type of the composites. Study others as to use, kind of soil, enemies, means of protection, method of propagation, struggle with other plants for supremacy.

Pumkins and other vining plants; for profit, for decoration. Observance of Hallow-e'en.

Study Migration of birds. Do animals migrate? If so, for what purpose? Why do birds migrate? List of birds that migrate; those that remain all winter. Food, protection, care of birds. Their use to man.

Hand work. Study manners and customs of the Indian. Clothing; how made, of what material; implements, homes, building materials. Make wigwam, bow, arrow. Their food; how procured and prepared.

Compare early inhabitants of the community with those of the present time; their manners, customs, occupations; means of heating, lighting, procuring food. Stories of explorers, early settlers.

Study petroleum, gas, coal; methods of production, use. Aim to create a sympathetic feeling for the miner and others who risk their lives for our comfort.

Study the movements of the earth in relation to the sun. Set up some kind of apparatus to determine noon. Apparent movement of the sun north and south by the increase and decrease of the length of the shadow of a vertical stick. Study light and its value to man. Show by means of a block or similar device the reason for warm and cold seasons. Winds, clouds, rain. Make excursions to the woods and fields for material for class work and for observation.

Fourth Grade.

A study of pioneers. Manners and customs, food, houses, clothing, occupations. Means of transportation; making roads. Their struggle against the Indians, wild animals, famine, cold. Their object in settling in the wilderness; implements used in clearing the forest. Make some simple articles used by the early settlers; use clay, plaster, wood, leather.

Grains. Kind of soil best suited to the various grains. Grain fields of the great north-west. Harvesting of the great crops; machinery for harvesting—primitive and modern. Insect pests and how they damage the grain; how destroy the pests or prevent the damage. Uses of the various grains; products, alcohol—its use and abuse.

Gardening. Soils for various vegetables; preparation, means of fertilizing. Flowers, seeds, roots, stems, leaves, tubers, in connection with garden vegetables. Weeds; how killed when necessary. Useful weeds. Would there be any profit in cultivating any weeds? Medicinal properties.

Minerals. Kinds of rock, sand, cement. Uses of concrete; how prepared. Uses of coal, iron.

Study life forms in ponds. Make aquarium for specimens. Fish; varieties, uses, where found, food; struggle for existence among other forms of aquatic life. Fish hatcheries; stocking streams with fish. Study birds as in other grades; their use to man; their life history.

Experiments showing circulation of air; study the ventilating system of the school building. Winds, clouds, moisture. Study thermometer and barometer. The weather bureau and its service to agriculture and navigation.

Fifth Grade.

Trees. Forests; use as a preventive of floods, preserver of animal life, shelter against storms. Animals becoming extinct upon the removal of forests. Lumbering industry; logging camps, saw-mills, tram roads. Destructive lumbering. Enemies of trees; insects, decay, winds, weather. Food of trees.

Fruits. Best methods of cultivation, most profitable fruits for this

community, different varieties; grafting and budding to produce more hardy or more prolific varieties. Protection against cold, drought, insects. Means of getting new varieties. Story of Luther Burbank.

Birds. Various kinds; birds useful to men, birds destructive, song birds, birds that are hunted. Birds that live on the water; what they eat, where they nest, care for their young. Birds noted for beauty of plumage, where found; raising ostriches. Life story of a few birds. Their struggle for existence.

Animals. Those that are hunted, those that are useful for food, for fur, ivory, bones, exhibition, sport. Native animals; those destructive, those most useful. Animals that show most intelligence. Excursions for study of plant and animal life.

Study of snow, rain, hail, ice, sleet, fog, clouds, rainbow. Cause of wind, general winds from what quarter, direction from which rains usually come, why? Weather predictions, depth of rainfall; make a rain gauge. Value of rivers, lakes, springs, pure water. Hot springs, geysers. How water gets into wells and springs. How keep well water pure. Method of getting mineral substances from the earth. Study coal-fields, oil-fields, gas-fields, and means of placing product upon the market.

Talk about the heavenly bodies and their movements.

Sixth Grade.

Forest trees, nuts, coloring of leaves in autumn; uses of leaves. Hardwoods, evergreens; distribution.

Insects with especial reference to harmful and beneficial influences. Bees, ants, grasshoppers, locusts. Tropical insects compared with local representatives.

Distribution of animals and birds; causes of migration. Plants and animals of desert regions.

Irrigation. Importance of irrigation and methods in use in various parts of the world. Study photographs of irrigation systems and of irrigated regions. Importance of forests in preserving the summer water supply.

Study of grasses; uses, preservation, machinery for haying.

Farm animals; food and care; dairying and wool growing.

Study of the fish industry. Information in government bulletins.

Simple study of machines; steam engine, common lift- and force-pumps, sewers, sinks, sanitary plumbing; cleanliness of premises and how secured; methods of opening drain pipes and keeping clean. Telescope, clock, magnetic needle, barometer, thermometer. Study the ventilating system of the school building.

School gardening. Reference: Among School Gardens—Greene.

Seventh Grade.

Study of industrial operations in the community. Study same for other parts of the world as related to the character of the people and their physical surroundings.

Forestry. Kinds of trees in native forests, use of each; renewal of forests, how accomplished, what birds or animals provide conditions for

the renewal of forests? Destruction by winds, fire, insects, parasitic plants, weather, wasteful lumbering, molds. Why should forests be renewed?

Weather. Weather charts, meteorological instruments; storms, winds, rains. Benefits derived from winds.

Fire and the process of combustion. Methods of securing intense heat for welding, refining ores, manufactures.

Distilled liquors. From what obtained and their use.

Kitchen and cooking. Different kinds of foods and their preparation. Use of spices. Salt, its use and how procured. Cleanliness in the kitchen. Cooking utensils, stoves and ranges. Different methods of procuring heat for the kitchen.

Talk about the earth and other heavenly bodies. Eclipses of the sun and moon. The moon in connection with tides.

In connection with the work in hygiene study bacteria, molds, and fungi.

Eighth Grade.

Some work in the classification of trees with reference to their various uses. Study landscapes and landscape gardening. Various hardy vining plants for decoration with methods of cultivating and propagating.

In connection with the geography work study rocks and rock strata. Classification of rocks in a simple way. Formation of limestone, sandstone, granite, marble; uses of each. Where best varieties are found. Fossils in rocks, what they indicate. Canons with something of their formation and history. Formation of valleys and the building of mountains. Plains and drainage.

Essentials of a good dwelling viewed from the standpoint of science. Its construction and preservation.

A study of the art of printing. Progress in recent years. Kinds of presses, typesetting machines; folding and binding of papers, magazines, and books.

A study of the electric light. Some easy experiments in electricity and its phenomenae. The use of electricity in modern civilization.

Make a study of a railway passenger train of the vestibuled type; Dining, parlor, sleeping, observation and chair cars. Why vestibule cars are used. The structure of a modern passenger car. Heating, lighting, ventilating of cars. Cost of maintenance.

Photography. Processes; making exposures; plates, films; printing by sunlight and artificial light. Developing, fixing, toning, mounting. The camera, its structure and the theory of its operation. Its use in the arts, history, agriculture, geography, science.

The kitchen and cooking. Proper foods and their preparation. Adulteration of foods.

COURSE OF STUDY FOR THE MOUNDSVILLE HIGH SCHOOL.

Requirements for Admission.

The requirements for admission to the High School should be flexible, that no one may be deprived of educational opportunity. The minimum requirement should be that the pupil is prepared or able to pursue some one or more of the subjects in the High School with profit to himself. The maximum should be the successful completion of an elementary school program of studies or its equivalent.

Prescribed Units.

Sixteen units of work shall be required for graduation, eight of which shall be prescribed and eight elected by the student. A unit represent the work done in a subject in a high school in thirty-six weeks of five recitations per week, with recitations of at least forty-five minutes in length; half a unit would represent eighteen weeks work. The prescribed units shall be as follows:

English, 4 units,
Mathematics, 1 unit, or
Industrial Subjects, 1 unit,
Science, 2 units,
History and Civics, 1 unit.

Program of Studies.

(The figure after each subject indicates the number of recitations per week).

First Year.

English, 5,
Algebra, 5,
Latin, 5,
German, 5,
Ancient History, 5,
Arithmetic, 5,
Book-keeping, 4,
Typewriting, 1,
Biology, 5.

Second Year.

English, 5,
Physiography, 5,
Latin, 5,
German, 5,
Mediaeval History, 5, (Modern His.),
Geometry, 5,
Botany, 5,
Stenography, 4,
Typewriting, 1.

Third Year.

English, 5,
Chemistry, 5,
Latin, 5,
Algebra, 5, (1-2 yr.),
Geometry, 5, (1-2 yr.),
English History, 5.

Fourth Year.

English, 5,
American History and Civics, 5,
Latin, 5,
Trigonometry, 5, (1-2 yr.),
Physics, 5,
Agriculture, 5.

