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# Schools of Colorado

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# A COURSE OF STUDY

FOR

## THE PUBLIC SCHOOLS OF COLORADO

ISSUED BY  
THE DEPARTMENT OF PUBLIC INSTRUCTION  
HELEN M. WIXSON, Superintendent  
1912



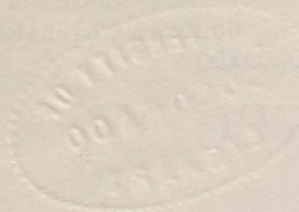
REVISED BY  
MARY C. C. BRADFORD  
1914

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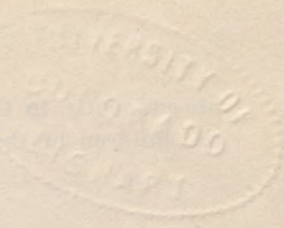


### **This Course of Study Is Public Property**

It is furnished the teacher by the County Superintendent. At the close of the school year it should be left, with the Daily Attendance and Term Register, for the use of future teachers.



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## INTRODUCTION

This issue of the "Course of Study for the Public Schools of Colorado" is somewhat in the nature of a reissue of the very excellent course prepared by former Superintendent Helen M. Wixson. The material contained in that volume met the needs of the schools so thoroughly that it would be a waste of accomplishment to supplant it with an altogether different plan. In one or two subjects this book substitutes new matter for that formerly used, omits certain recommended lists of books, and makes other slight changes which, it is hoped, may prove fruitful of good to the teachers and school children of the state.

The problem of a course of study for the high schools of Colorado is ever present, and an attempt at its solution is made in the suggested course of study for high schools which follows the course for elementary schools.

It has been the aim of this portion of the present volume to present a definite view of the proper place of the high school in the educational system of a commonwealth like Colorado. Believing that a clear conception of the especial function of a secondary school is necessary to an efficient discharge of the duties of an instructor in such a school, a comparatively large amount of space has been devoted to the general idea and plan of high-school work.

This has been followed by suggestions of methods and practical illustrations of high-school teaching in several branches. That these may assist in unifying, energizing, and rendering more efficient the work of secondary education in Colorado is the desire of the state office.

The Department of Public Instruction is grateful for the assistance rendered by representatives of the various educational institutions of the state, a number of county and city superintendents of schools, and high-school and grade teachers. The work as a whole is a composite of the viewpoints of the school people of Colorado, and is sent out with the earnest wish that this "Course of Study" may prove of service to the public-school teachers and



pre-eminently to those for whose sake the public schools exist—  
the children of the commonwealth.

*Mary C. C. Bradford.*

State Superintendent of Public Instruction.

Denver, Colorado,  
October 1, 1914.



## SUGGESTIONS

*"The course of study exists for the child and not the child for the course."*

As children spend more time preparing for recitations than in reciting, the time spent at their desks must be remunerative; hence a program of study as well as a program of recitation is necessary. A course of study states what should be taught, allotting the time to be spent.

All lessons should be definitely planned for tomorrow's work. Make each moment count.

Use the time allotted to the recitation period for that recitation. Never use it to get ready.

Definitely assign lessons. State what is to be done and how.

Insist upon quickness of mind and body, and upon prompt and unquestioning obedience.

Do not do the talking. Teach pupils to talk freely. They should be encouraged to talk correctly and without interruption upon a topic for several minutes.

Cultivate in pupils a regard for public property; also pride in the schoolhouse and playgrounds.

Form "Clean-up Clubs" to care for the grounds and adjoining neighborhood, and establish a "Patrol" to maintain law and order. Control on the playground means control in the school-room.

Make the school a social center. Help in every possible way to improve the material, intellectual, social and religious condition of the people with whom your lot is cast.

Teach the dignity and reward of labor.

Be frank and sincere.

Teach true patriotism and the ways of peace.

Join in making a splendid American history, unspotted by blood, unmarred by hate and passions. Give attention to the outward symbols of good breeding.

Encourage politeness to teachers and classmates.

Encourage the study of current events.

Set aside an afternoon when each pupil may give, in his own language, an account of some event of interest.

Consideration should be given to events that are attracting the attention of congress and the state legislature; to local matters



of the county and state, such as political, social and financial matters; to biographical sketches of local and state people of prominence; to educational topics; to achievements in science, art and industry.

It would be well for teachers to permit the pupils in the higher grades to read once or twice a week from a paper or magazine of current events. This exercise takes the place of the regular reading lesson, and there should be free discussion in the class of the subjects read. The pupils should reproduce the same, and look up all locations and all new work. Assign different articles to different pupils, to be reported upon at a certain date. Require them to recite upon the topic, explain locations upon the wall maps, and any historical or other references.

Study the children in your school. Base their advancement upon your real knowledge of their work and ability.

Use a movable bulletin board to exhibit postals, pictures and newspaper clippings.

Use pen and ink in written lessons. These lessons are valuable for penmanship and neatness of habit.

Perry Pictures, Brown's Pictures and The Turner Pictures may be obtained for a few cents. These may be put on the walls temporarily for use in composition and language work, as well as to beautify the room. The Turner pictures by great masters, with accompanying literature, are obtained of Horace Turner, Boston.

The following firms supply five-cent classics: Charles E. Merrill Company, New York; Educational Publishing Company, Chicago; Orville Brewer Company, Chicago. C. M. Parker, Taylorville, Illinois, publishes penny classics.

If eighth grade graduates joined in writing their examination at one specified place, and an examining board, named by the county superintendent and teachers, graded the papers, the work accomplished would be more uniform, the passing on to the high school easier and more certain.

If the eighth grade graduates of a county had graduating exercises together, making it an event of genuine importance, it would create healthy pride and competition.

In some rural schools it seems necessary to combine classes in order to lessen the number of periods of recitation. Alternation is the systematic and regular union of two grades of pupils, both grades doing the work of one year in one class, while the



other year's work is omitted. The next year the work omitted is taken up and the first year's work dropped. In this way each pupil does all the work of the course, but not all in the same order, and the number of classes is diminished.

In the first and second years there cannot be much alternation, but classes in writing, drawing and nature studies should be combined, the teacher giving special direction and instruction to the different classes or sections on different days.

In the third and fourth years all of the work may be alternated, with the possible exception of arithmetic. But all pupils who have mastered addition, subtraction, multiplication and division of integral numbers, simple and compound, of fractions, common and decimal, may belong to the same class in arithmetic. It is not necessary that every pupil who begins to read in the third reader should begin with the first lesson.

In the fifth and sixth years all subjects may be alternated. In some localities it may be found difficult to combine classes in arithmetic; but certainly there should not be more than three arithmetic classes for third, fourth, fifth and sixth-year pupils. If possible, the number should be reduced to two.



## ARITHMETIC

### FIRST YEAR

**First Four Months.** Begin by teaching children the idea of size, position, extent, measurement, etc., by having them use and illustrate at their desks such terms as up, down; over, under; large, small; big, little; high, tall, low; short, long; wide, narrow; right, left; east, west; etc.

**COUNTING.**—Teach counting to ten by means of splints, blocks, grains of corn, pebbles, or other counters, without the use of figures. Place objects or counters in groups to represent numbers to ten. The name of the number is given by the teacher and repeated by the children. Write the figure on the board and ask them to read it. Each child will copy or write the figure from dictation on blackboard or paper. Teacher should be careful to place good models before the children for imitation. Count the doors and windows you see in the schoolroom. How many panes in each window? How many panels in each door? The glass in each window cost \$1.00. How much did all the glass cost?

**DRAWING—PAPER-FOLDING.**—Draw horizontal lines, one, two, three and four inches long. Draw vertical lines of the same length. Draw a TWO-INCH SQUARE and divide it into one-inch squares. A two-inch square equals how many one-inch squares? Draw a THREE-INCH SQUARE. Divide it into one-inch squares. A three-inch square is equal to ——— one-inch squares. Draw an OBLONG one inch by three inches. Draw an oblong two inches by three inches. Divide each oblong into one-inch squares. Allow the child to use ruler at first, then require him to draw to a scale of inches without it, using ruler to test accuracy of dimension. Require pupils to image the figures 4, 9, 3, 6, which represent the respective squares and oblongs divided.

Provide each pupil with a FOUR-INCH SQUARE of paper. Note the length and width. Count corners and edges. Fold the right edge upon the left. Crease. Unfold. How many oblongs? How wide is each oblong? How long is each oblong? Each oblong is what part of the four-inch square? Fold the right edge of the paper to crease; the left edge. Unfold. Tell number of oblongs, width, length and part each is of the four-inch square. Fold the lower edge upon the upper edge. Unfold. Tell number of oblongs, width, length, and part each oblong is of the four-inch square. Fold the lower edge of the paper to the crease; the upper edge.

Unfold. Give size of each square. Number of inch-squares in one row. Number of rows in all. Number of inch-squares in all. Continue to cultivate the imaging power by requiring answers to such questions: How many oblongs, giving length and width, in a four-inch square folded with the right edge upon the left edge? Count by 2's to 10. Then have children build columns thus:

$$\begin{array}{r}
 2 \\
 2 \ 2 \\
 2 \ 2 \ 2 \\
 2 \ 2 \ 2 \ 2 \\
 2 \ 2 \ 2 \ 2 \ 2 \\
 \hline
 4 \ 6 \ 8 \ 10
 \end{array}$$

that they may see and memorize the numbers of 2's it takes to make each sum, as 4, 6, 8, 10. Teach combinations with 1 and 2 to 10. Pupils should be led to tell stories involving these combinations. Teacher: "Who can make a story about 5 and 1?" Child: "If I have 5 cents and my mother gives me 1 cent more, I have 5 cents and 1 cent. 5 cents and 1 cent are 6 cents." Number stories afford an interesting means of drill in numbers as well as in language. Introduce subtraction, or "take away," in these stories. Teach subtraction as the inverse of addition. Count by 1's and 2's from 10 to 1, until descending numbers can be called quickly. Count by 2's to 20 and by 1's to 50.

**Fifth Month.** Review combinations given for first four months. Count to 50 by 2's and by 2's from 3 to 49. Make sure of combinations of the numbers 3, 4 and 5. Use some such form for each group:

$$\text{Five} = \begin{array}{cc} 1 & 2 \\ 4 & 3 \end{array} \left. \vphantom{\begin{array}{cc} 1 & 2 \\ 4 & 3 \end{array}} \right\} \text{Five 1's.}$$

Put splints in groups or draw tops or flags to show the following:

4 flags and 1 flag are — flags. 5 flags less 1 flag are — flags.  
 3 flags and 2 flags are — flags. 5 flags less 3 flags are — flags.  
 1 flag and 4 flags are — flags. 5 flags less 4 flags are — flag.

**Sixth Month.** Teach use of plus, +; minus, —; and equals, =; also inch, foot, yard, pint, quart, gallon, cent, nickel, dime. Fill a pint measure with sand or water and empty it into the quart measure. Do this again. You have shown that 2 pints equal 1



quart. Show in the same way that 4 quarts equal 1 gallon. Show with pebbles the combinations that form 6:

$$\begin{array}{rcccl} & 1 & 2 & 3 & \\ \text{Six} = & & & & \\ & 5 & 4 & 3 & \end{array} \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} \text{Six 1's.} \\ \text{Three 2's.} \\ \text{Two 3's.} \end{array}$$

Lead children to make number stories as was done in previous months, using  $+$ ,  $-$ ,  $=$ . Make sure of combinations used thus far, using objects only to determine results.

**Seventh Month.** Count by 1's to 100, by 2's to 40, and by 10's to 100. Teach  $\frac{1}{2}$  and  $\frac{1}{4}$  with objects and drawings on black-board and slate. Combinations that form 7 and 8:

$$\begin{array}{rcccl} & 1 & 2 & 3 & \\ \text{Seven} = & & & & \\ & 6 & 5 & 4 & \end{array} \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} \text{Seven 1's.} \\ \\ \end{array}$$

$$\begin{array}{rcccl} & 1 & 2 & 3 & 4 \\ \text{Eight} = & & & & \\ & 7 & 6 & 5 & 4 \end{array} \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} \text{Eight 1's.} \\ \text{Four 2's.} \\ \text{Two 4's.} \end{array}$$

Illustrate the combinations that make 7 and 8 by leading the children to tell number stories about each group. Use subtraction as the inverse of addition.

**Eighth Month.** Teach Roman numerals on the clock face; number of days in the week; weeks in the month; months in the year. Combinations that form 9 and 10:

$$\begin{array}{rcccl} & 1 & 2 & 3 & 4 \\ \text{Nine} = & & & & \\ & 8 & 7 & 6 & 5 \end{array} \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} \text{Nine 1's.} \\ \text{Three 3's.} \\ \\ \end{array}$$

$$\begin{array}{rcccl} & 1 & 2 & 3 & 4 & 5 \\ \text{Ten} = & & & & & \\ & 9 & 8 & 7 & 6 & 5 \end{array} \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} \text{Ten 1's.} \\ \text{Five 2's.} \\ \text{Two 5's.} \end{array}$$

Illustrate each group as in previous months. It is not expected that all children will be able to apply all the combinations used in the foregoing months, as they are to be continued in succeeding years until the naming of the resulting combinations and separations become automatic.

**Ninth Month.** Review essential things in year's work.

## SECOND YEAR

Review combinations and other work of first year not familiar to class. Number relations to 20 should be the chief outcome of the second year's work, and the exercise of the first year should be continued in the second year with frequent reviews. When-



ever new facts or processes are to be learned, objects should be used to put old facts in new relations.

**First Month.** Count by 2's, 5's and 10's to 100 and backward by groups. Write numbers to 100 and the words to 12. Illustrate the combinations of 11 in number stories or little problems:

$$\begin{array}{r} \text{Eleven} = \begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 \\ 10 & 9 & 8 & 7 & 6 \end{array} \end{array} \left. \vphantom{\begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 \\ 10 & 9 & 8 & 7 & 6 \end{array}} \right\} \text{Eleven 1's.}$$

$$2 \text{ pencils} + 9 \text{ pencils} = ? \qquad 11 \text{ pencils} - 4 \text{ pencils} = ?$$

$$5 \text{ pencils} + 6 \text{ pencils} = ? \qquad 11 \text{ pencils} - 8 \text{ pencils} = ?$$

$$4 \text{ pencils} + 7 \text{ pencils} = ? \qquad 11 \text{ pencils} - 7 \text{ pencils} = ?$$

$$\begin{array}{r} \text{Add:} \quad \begin{array}{cccccccccc} 2 & 8 & 6 & 7 & 9 & 3 & 10 & 4 & 5 & 1 \\ 9 & 3 & 5 & 4 & 2 & 8 & 1 & 7 & 6 & 10 \\ \hline \end{array} \end{array}$$

Subtract from 11 lower numbers in addends.

**Second Month.** Write numbers to 150 and words to 12. Write Roman numerals to 12. Teach use of times,  $\times$ , and divide by,  $\div$ . Combinations that form 12. Illustrate as in first month, using cents.

$$\begin{array}{r} \text{Twelve} = \begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 & 6 \\ 11 & 10 & 9 & 8 & 7 & 6 \end{array} \end{array} \left. \vphantom{\begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 & 6 \\ 11 & 10 & 9 & 8 & 7 & 6 \end{array}} \right\} \begin{array}{l} \text{Six} \times 2 = 12. \quad \text{Three} \times 4 = 12. \\ \text{Four} \times 3 = 12. \quad \text{Two} \times 6 = 12. \end{array}$$

Write table of 2's to 12. Apply subtraction and division 2's, to products obtained in table, thus: With the fact 2 times 6 equals 12, teach  $12 \div 2 = 6$  and  $12 \div 6 = 2$ ;  $1/2$  of 12;  $1/3$  of 12;  $1/4$  of 12.

By use of drawings and paper-folding teach use of  $1/2$ ,  $1/3$ ,  $1/4$ ,  $1/5$  and  $1/6$  in getting parts of easy numbers.

**Third Month.** Use the inch, foot and paper money made, to illustrate the combinations that form 14. Exercises in making change up to 15 cents. Read and write numbers to 200. Review the addition, multiplication and division tables already learned. Give drills from the blackboard. Teach a more accurate use of measuring with the ruler and with the pint, by giving problems.

**Fourth Month.** Count by 3's to 30 and 4's to 40, beginning with 0. Learn the addition and multiplication tables of 3's to 21, thus:

$$\begin{array}{rcl} 1 + 3 & = & 4 \\ 11 + 3 & = & 14 \\ 2 + 3 & = & 5 \\ 12 + 3 & = & 15 \\ 3 + 3 & = & 6 \end{array} \qquad \begin{array}{rcl} 1 \times 3 & = & 3 \\ 2 \times 3 & = & 6 \\ 3 \times 3 & = & 9 \end{array}$$



Count and write numbers to 300. Combinations to 16, using addition and subtraction facts, beginning with 10:  $10 + 1 = ?$   $11 - 1 = ?$   $10 + 3 = ?$   $13 - 3 = ?$   $10 + 6 = ?$   $16 - 6 = ?$

Add and subtract 6 from these digits as:

$$\begin{array}{r} 8 \ 7 \ 9 \\ 6 \ 6 \ 6 \end{array}$$

Do this without the idea of carrying.

**Fifth Month.** Count by 2's, 3's, 4's and 5's to 60. Write numbers to 500. Add two and three figure numbers, as:

$$\begin{array}{r} 12 \\ 23 \\ \hline \end{array} \qquad \begin{array}{r} 132 \\ 433 \\ \hline \end{array}$$

Subtract digits from two and three figure numbers. No borrowing. Give much practice in increasing numbers of two orders (tens and units) by numbers of one order (units).

Introduce the idea of carrying, as  $\begin{array}{r} 24 \\ 8 \\ \hline \end{array}$  = the sum of 8 and 4 for

figures of the first order, and 1 and 2 for the figure of the second order. Apply forms used above in many abstract and concrete problems.

**Sixth Month.** Count by 3's and 4's to 100, beginning with numbers from 1 to 4. Backward from 40 to 0. Write numbers to 700. Add and subtract digital numbers of two orders, carrying and borrowing. Add simple columns, no addendum larger than 8 and sums not over 40.

Learn the addition and multiplication tables of 4's to 28 as in fourth month. Apply division 4's as in second month. Give drill in elementary combinations to 24. Make problems, using toy money in buying pints, quarts and gallons in combinations to 24.

**Seventh Month.** Count by 5's and 10's to 100. Backward to 0. Write numbers to 900. Review tables. Apply the denominate numbers in various ways—inch, foot, yard, square inch; pint, quart, gallon; second, minute, hour, day, week; nickel, dime, quarter-dollar, half-dollar, dollar. Continue operations in combinations. Memorize. Drill on simple column addition, using small addends with an occasional 9, sums under 50.

Abstract and concrete problems in addition and subtraction of numbers of three orders, no carrying or borrowing. Use as high as four numbers in the addition column.

**Eighth Month.** Count by 4's to 48, 5's to 50 and 6's to 36. Write numbers to 1,000. Count by 2's to 14 and back again. Divide (measure) 14 by small numbers, as 2, 3, 4, 5, 6, 7. Provide foot-rulers with inches divided to sixteenths, but do not draw lines true to sixteenths. Use measure to test remainders. Addition and subtraction of numbers of three orders, carrying and borrowing in the first column, as:

$$\begin{array}{r} 546 \\ +347 \\ \hline \end{array} \qquad \begin{array}{r} 671 \\ -257 \\ \hline \end{array}$$

Teach orders of numbers as units, tens and hundreds. Learn the addition and multiplication tables of 5's to 60. Show that multiplication is a short process of making several additions to the same number.

**Ninth Month.** Review the 45 combinations. Give thorough drills. Apply in numbers from 10 to 20.

### THIRD YEAR

**First Month.** Most of the work should be oral and given by the teacher, but pupils should have a book in this grade.

Review combinations in short columns of three-place numbers.

Count by hundreds to 1,000; by thousands to 10,000. Add and test columns of three numbers, three figures each. Problems from text and from daily life at home and at school. Review multiplication and division of second grade and apply in practical problems.

Use 2 as a multiplier and a divisor in any number of two orders, no carrying, and similarly with any number of three orders. In division let the dividend be some multiple of the divisor.

**Second Month.** NOTATION AND NUMERATION to 1,200.

**SUBTRACTION.**—Count backward by 2's, 3's, 4's, and 5's from 22, 33, 44 and 55, respectively. Subtract from numbers of four figures or orders. (Explain meaning of units, tens, hundreds, thousands.)

**ROMAN NUMERALS.**—Read and write to 18.



TABLES.—Memorize tables up to the 5's. Use 3 as a multiplier of numbers of two and three orders.

**Third Month.** NOTATION AND NUMERATION to 1,500.

DIVISION.—Find quotients and remainders in numerous problems, as:

$$2) 11 ; \quad 3) 13 ; \quad 4) 33 ; \quad 5) 16 ; \text{ etc.}$$

Show that these divisions are the same as taking  $1/2$ ,  $1/3$ ,  $1/4$  and  $1/5$  of the respective numbers.

MULTIPLICATION.—Count by 6's to 72 and back from 30. Memorize table of 6's. Use 4 as a multiplier in small problems, finding the cost of *many* articles when the cost of *one* is given.

Ex.—If 1 horse costs \$215, what will 4 horses cost?

**Fourth Month.** NOTATION AND NUMERATION to 2,000.

VOLUME.—Cube; cubic inch; cubic foot. Ex.—There are  $2 \times 4$  blocks in a layer, and two times  $2 \times 4$  blocks or ——— blocks in the pile. Illustrate with blocks. Find volumes in given exercises. Make comparison of measures in problems.

ADDITION AND SUBTRACTION.—Ex.—Find the sum of 1420, 315, and 57.

$$1420 = 1 \text{ thousands} + 4 \text{ hundreds} + 2 \text{ tens} + 0 \text{ ones}$$

$$315 = 0 \text{ thousands} + 3 \text{ hundreds} + 1 \text{ tens} + 5 \text{ ones}$$

$$57 = 0 \text{ thousands} + 0 \text{ hundreds} + 5 \text{ tens} + 7 \text{ ones}$$

---


$$1792 = 1 \text{ thousands} + 7 \text{ hundreds} + 8 \text{ tens} + 12 \text{ ones}$$

Show that 12 ones = 1 ten and 2 ones.

Ex.—        4   12

4

12

$$5 \quad 5 \quad 2 = 5 \text{ hundreds} + 5 \text{ tens} + 2 \text{ ones}$$

$$- 4 \quad 2 \quad 9 = 4 \text{ hundreds} + 2 \text{ tens} + 9 \text{ ones}$$

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$$1 \text{ hundreds} + 2 \text{ tens} + 3 \text{ ones}$$

MULTIPLICATION.—Count by 7's to 84 and back from 42. Memorize table of 7's. Use two-place multipliers from 10 to 16.

DIVISION.—Divide numbers of three and four orders by 4. Relate  $\div 4$  to  $1/4$  of.

**Fifth Month.** NOTATION AND NUMERATION to 4,000.

MULTIPLICATION.—Count by 8's to 96 and back from 48. Memorize table of 8's. Multiplication by 5, followed by division by 5, carrying and borrowing as in previous months. Continue drills



in counting by 2's, 3's, 4's, 5's, etc., as the tables are based upon such drill.

**DIVISION.**—Take  $1/2$ ,  $1/3$ ,  $1/4$  and  $1/5$  of numbers that will leave remainders.

$$\text{Ex.}—1/2 \text{ of } \$7 = \$3 + 1/2 = \$3 \frac{1}{2}$$

**Sixth Month.** NOTATION AND NUMERATION to 10,000.

**UNITED STATES MONEY.**—Read dollars and cents, using \$ sign and decimal point. Write columns of dollars and cents and add.

**ADDITION.**—Give speed drills.

**MULTIPLICATION.**—Review the 2's to  $2 \times 12$ ; 3's to  $3 \times 12$ ; 4's to  $4 \times 12$ , and 5's to  $5 \times 12$ .

**FRACTIONS.**—Draw lines or oblongs and divide to show that:  $1/2 = 2/4$ ;  $1/3 = 2/6$ ;  $3/6 = 1/2$ , etc. Begin addition and subtraction of halves, fourths and sixths. Use whole numbers with these fractions.

Ex.—

$$\begin{array}{r} 47 \frac{3}{4} \\ + 30 \frac{1}{4} \end{array} \qquad \begin{array}{r} 47 \frac{3}{4} \\ - 30 \frac{1}{4} \end{array}$$

**Seventh Month.** NOTATION AND NUMERATION to 25,000.

**MULTIPLICATION.**—Count by 9's and 10's to 108 and 120, respectively, and back from 45 and from 120. Memorize tables of 9's and 10's. Multiply four-place numbers by 6, carrying. Similarly in division, carrying, borrowing.

**FRACTIONS.**—Add and subtract sixths, halves and fourths, halves and sixths, thirds and sixths.

Ex.—

$$\begin{array}{r} 42 \frac{5}{6} \\ + \text{ or } - 28 \frac{1}{2} \end{array} \qquad \begin{array}{r} 36 \frac{1}{2} \\ + \text{ or } - 14 \end{array}$$

Find parts of numbers.

$$\text{Ex.}—1/3 \text{ of } 12; 2/3 \text{ of } 12$$

**Eighth Month.** NOTATION AND NUMERATION to 50,000.

**ADDITION AND SUBTRACTION.**—Problems.

**MULTIPLICATION.**—Count by 11's to 132 and back from 99. Memorize table of 11's. Multiplication and division of four-place numbers by 7 and 8, carrying and borrowing, and by small mixed numbers.



**DIVISION.**—Dividends of four-place numbers; divisors from 3 to 9. Begin long division. Teach long division first, if you prefer. Observe steps in dividing:

$$\begin{array}{r} 11 \overline{) 245} \end{array}$$

$$\begin{array}{r} 11 \overline{) 7988} \end{array}$$

**Ninth Month.** NOTATION AND NUMERATION to 100,000.

**MULTIPLICATION.**—Count by 12's to 144 and back from 72. Memorize table. Drills on tables should be continued in fourth year and in the fifth, if necessary.

General review and test.

#### FOURTH YEAR

**First Month.** REVIEW fundamental operations of third year, especially tables and rapid combinations.

**TEXT-BOOK.**—Encourage the child to master the book and hold him responsible for what it contains. Supplement and develop the subject-matter in the book as time will permit.

Review on Roman numerals to L.

Give exercises in making change with toy money.

Teach minuend, subtrahend and remainder.

**Second Month.** NOTATION AND NUMERATION.—Drill in reading five- and six-place numbers. Review multiplication tables of 9's and 12's. Count by 6's and 7's to 72 and 84. Review tables of 6's and 7's.

**FRACTIONS.**—Add and subtract eighths; use circles to illustrate. Mixed numbers containing halves and thirds; thirds and fourths. Do this work to prepare the way for more difficult applications of fractions to follow.

Numerals to LXX.

**Third Month.** **MULTIPLICATION.**—By any two-place multiplier. Also use such multipliers as  $4\frac{1}{3}$ ,  $23\frac{1}{4}$ , etc. Problems.

**DIVISION.**—Use the divisors 9, 11, 12. Show by divided lines that  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$ . Note that each numerator and denominator has been multiplied by the same number.

**DRY MEASURE.**—Pint, quart, peck and bushel. Learn table.

**MEASURES OF LENGTH.**—Inch, foot, yard, rod, mile. Learn table. Measure school yard with ten-foot pole or line; doors, windows and room with yardstick.

**MEASURES OF AREA.**—Square inch, square foot, square yard. Calculate area of desk top, door and window space and walks. Develop by giving dimensions to rectangles, using small figures.

**Fourth Month. MULTIPLICATION.**—Give table of 2's to  $25 \times 2$ ; 3's to  $16 \times 3$ . Make sure of tables used in the preceding year. Teach multiplicand, multiplier, product, using three-place multipliers and any number of thousands as multiplicands.

**DIVISION.**—Long and short division. Use divisors from 2 to 12. Also take  $1/7$ ,  $1/8$ ,  $1/9$ ,  $1/10$ ,  $1/12$  of numbers. Teach form of long division, using divisors up to 12. Write quotient over dividend thus:

$$\begin{array}{r} 367 \\ 8 \overline{)2936} \\ \underline{24} \phantom{00} \\ 53 \phantom{00} \\ \underline{48} \phantom{00} \\ 56 \phantom{00} \\ \underline{56} \phantom{00} \\ 0 \end{array}$$

**MEASURES OF VOLUME.**—Cubic inch, cubic foot, cubic yard. Learn table. Measure rooms, boxes, bookcases, bins, etc. Problems.

**Fifth Month. DIVISION.**—Teach short methods of dividing by 100, 1,000, 9,000, 1,600, 10,000, 500,000. Exercises in giving quotients at sight. Solve problems with two- and three-figure divisors. Find quotients, using divisors from 13 to 19, and test by multiplication. Show how to find averages—average age and weight of pupils in the room, and average noon temperature for the week.

**MEASURES.**—Review measures learned in third and fourth month.

**REVIEW** by giving rapid drill in addition, subtraction, multiplication and division. Make the exercises easy at first.

**Sixth Month. ADDITION AND SUBTRACTION.**—Count by 2's, 3's, 4's, 5's, 6's, 7's, 8's, 9's, 10's, 11's, 12's, to 100. Count backward, using same numbers. Rapid subtraction in United States money, using time limit. Give special attention to placing the decimal point.



**MULTIPLICATION.**—Keep up the reviews of the tables by thoroughly memorizing and applying them. Give easy problems which will require some analysis on the part of the pupil.

Ex.—A boy works 8 hours a day. How many hours does he work in 28 days?

**MEASURES OF TIME.**—Second, minute, hour, day, week, year. Learn table.

**Seventh Month. FRACTIONS.**—Term of the fraction. Illustrate with easy fractions. Reduction to lowest terms; to an improper fraction; to integers or mixed numbers. Find a part of numbers. Multiply by a mixed number, thus:

$$\begin{array}{r}
 32 \\
 6\frac{1}{2} \\
 \hline
 16 = \frac{1}{2} \text{ of } 32 \\
 192 = 6 \text{ times } 32 \\
 \hline
 208 = 6\frac{1}{2} \text{ times } 32
 \end{array}$$

**FACTORING.**—Name the prime and composite numbers to 100. Teach prime numbers in groups, as:

$$\begin{array}{l}
 1 \text{ to } 10 = 2, 3, 5, 7 \\
 10 \text{ to } 20 = 11, 13, 17, 19 \\
 20 \text{ to } 30 = 23, 29 \\
 30 \text{ to } 40 = 31, 37, \text{ etc.}
 \end{array}$$

Give thorough drill in recognizing at sight.

**MEASURES OF WEIGHT.**—Ounce, pound, hundredweight, ton, long ton. Learn table.

**MEASURES OF LAND.**—Square rod, acre. Find area of lots, blocks, fields.

**Eighth Month. DIVISION.**—Practice in long division. Divide by 30, 40, 50, 60, 31, 41, 51, 61, at first; then use any divisor of two places until the process as well as the result is accurately known.

**ADDITION.**—Give speed drills in adding columns of six and seven numbers.

**PROBLEMS.**—Price expressed as easy fraction of a dollar, find cost of many articles.

**DECIMAL FRACTIONS.**—Teach decimal tenths and hundredths. Compare constantly with United States money. Read, write and



add decimals in tenths, hundredths and thousandths. Write Roman numerals to MM.

**Ninth Month.** REVIEW fundamental operations for the year, emphasizing accuracy and rapidity. Multiplication tables through  $12 \times 12$  must be thoroughly learned.

#### FIFTH YEAR

**First Month.** FUNDAMENTAL OPERATIONS.—Rapid review of fourth year's work.

NOTATION AND NUMERATION.—Teach how to read and write large integral numbers.

RAPID ADDITION.—Fix time limit for units' columns of ten numbers each. Add columns in United States money.

COMMON FRACTIONS.—Develop the idea of a fraction. Give plenty of drill work on writing and reading fractions. Add and subtract mixed numbers where the common denominator can easily be determined by inspection.

DECIMALS.—Relate the decimal fraction to the common fraction by showing that it is another form for the common fraction. Give practice in writing tenths from the common fraction. Writing, adding and subtracting decimal thousandths.

LONG DIVISION.—Three-place divisors.

**Second Month.** ADDITION.—Add columns rapidly by grouping.

SUBTRACTION.—Given money paid and purchase, make change. Problems.

MULTIPLICATION.—Make sure of tables. Problems in excavation at customary price per yard. Compute the capacity of boxes, bins and rooms in cubic feet or cubic inches.

DIVISION.—Drill in finding quotients, using six-place dividends and three- and four-place divisors.

"PER CENT."—Teach that "per cent" means hundredths of anything:  $\frac{1}{2}$  of it is 50% of it;  $\frac{1}{3}$  is 33  $\frac{1}{3}$ %;  $\frac{1}{4}$  is 25%;  $\frac{1}{5}$  is 20%;  $\frac{1}{8}$  is 12  $\frac{1}{2}$ %; and  $\frac{1}{10}$  is 10% of it. Express 50% as .50; 33  $\frac{1}{3}$ % as .33  $\frac{1}{3}$ ; etc. Apply in easy problems. Fix in the memory like the multiplication table the aliquot parts of 100.

**Third Month.** FACTORING.—Classify and define numbers. Review the prime and composite numbers to 100. Factor the composite numbers to 100. Make tests of divisibility, using 2, 3, 4, 5, 9 and 10 as divisors. Drill thoroughly on this subject.



**CANCELLATION.**—Show that factors common to both the dividend and the divisor can be canceled.

**FRACTIONS.**—Read and write in words. Teach reduction. Do not forget the reasons. Follow text-book in teaching common multiple, L. C. M., common denominator, L. C. D., common divisor, G. C. D. Pupils should be able to find the L. C. D. and the G. C. D. of numbers readily resolved into factors.

**Fourth Month.** **FRACTIONS.**—Up to this time you have handled simple addition and subtraction of fractions whose denominators can be determined by inspection through the comparison of parts of objects, rectangles, circles, etc. Now you are ready for such forms as  $3/4 + 1/2$ ,  $3/4 - 1/2$  by using the process of finding their least common denominators learned in the third month. More difficult fractions should be used, as:  $4/5 + 3/8 + 1/10$ ;  $4\ 2/3 + 9\ 7/8 + 23\ 5/12$ ;  $20\ 3/10 - 7\ 5/6$ ; making the steps more complicated as you proceed. Master problems given in the book.

**MULTIPLICATION.**—Multiply fractions by fractions, integers by fractions, and fractions by integers.

**DIVISION.**—Develop:

$$\begin{array}{r} \frac{6}{2)6}, 2, 6 \div 2; \end{array} \quad \begin{array}{r} \frac{1}{2)1}, 2, 1 \div 2; 2 \div 2 = 1, 2 \div 1 = 2, \\ 2 \div 1/2 = 4 \end{array}$$

Make no attempt in this year's work to explain why the divisor is inverted. It is not necessary for the pupil to know at this stage of his advancement, as such explanations are invariably confusing.

In the review of fractions give many problems requiring analysis, as: If a yard of cloth cost  $\$3/4$ , what will  $5/8$  yards cost?

**Fifth Month.** **DECIMAL FRACTIONS.**—Relate decimal fractions to common by reducing decimal fractions to common and common fractions to decimals. Before giving practice in reading and writing, explain meaning of decimals.

**ADDITION AND SUBTRACTION.**—Make units the basic place and not the decimal point.

**MULTIPLICATION AND DIVISION.**—Give problems in multiplication of common fractions in which the denominator of the multi-

plier and multiplicand is 10 or some power of 10. Then have product written as a decimal. Ex.—

$$2/10 \times 4/100 = 8/1000 = .008$$

Note that there are as many places pointed off in the decimal, .008 as there are ciphers in the denominator of the common fraction,  $8/1000$ . Tenths  $\times$  hundredths = thousandths, etc. Develop rule for "pointing off" in this way. Give special attention to pointing off in division of decimals. Frequent drills of this kind can be given:

$$1/10 \div 1/10 = ? \quad .1 \div .1 = ?$$

$$10 \div .01 = ? \quad .01 \div 10 = ? \quad 1000 \div .001 = ? \quad .001 \div 1000 = ?$$

Commit to memory table showing decimal parts of \$1.00 that can be changed readily to a fraction.

**Sixth Month.** MEASUREMENTS.—Memorize counting table, as, pair, score, dozen, gross, great gross.

BILLS AND ACCOUNTS.—Form of bill and account. Debtor, creditor, footing, balance, paid. Make out and receipt bills. Give problems in which local prices are given. Keep the child measuring and thinking in a business way. Give problems including United States money to eight addends. Review tables of 6's, 7's, 8's, 9's.

PURCHASE AND SALE.—Articles—quantity and cost—selling price. Many practical problems.

DECIMALS.—Review with special reference to accuracy and speed.

**Seventh Month.** MEASUREMENTS OF SURFACES.—Rectangles, parallelograms, triangles, rectangular solids. Teach relation of one to the other by diagrams logically formed. Problems should be given in finding areas of floors, walls, ceilings, sidewalks, and the cubic contents of boxes, bins, etc. Relate irregular figures to regular figures.

COMMON FRACTIONS.—Review addition, subtraction, multiplication and division, giving reasons where practicable. Illustrate freely. Simplify complex fractions.

DECIMAL FRACTIONS.—Give practice in reading and writing decimals and in reducing common fractions to decimals.

**Eighth Month.** DECIMAL FRACTIONS.—Add and subtract quickly. Apply multiplication and division in many problems



written on the blackboard, so that each child will penetrate the meaning of each problem, independently of the book. Write quantities with the numerator larger than the denominator, then vice versa, as: 16 is what part of 4; 4 is what part of 16? 1 part of 16 is  $1/16$ , 4 parts are  $4/16 = 1/4 = 25\%$ , therefore 4 is 25% of 16.

**FINDING PER CENTS.**—Find per cents of numbers in abstract numbers, then in problems. Express 25%, 75%, etc., thus: .25, .75, before solving such problems: If a boy spells 25 words in a spelling test and is marked 88%, how many words did he spell correctly?

**Ninth Month.** Test the year's work by holding pupils for the ability to read, write, add, subtract, multiply and divide simple fractional, decimal and integral numbers. Review 11's and 12's, and principles of year's work.

#### SIXTH YEAR

**First Month.** Some advanced text-book should be used now, if written in a two-book series.

Less attention need be given to the mechanical operations with numbers, if the previous work has been thoroughly done, but increasing emphasis should be placed upon the solution of problems which require close and careful thinking. While the use of objects and drawings in making clear a new process is always desirable, there should be less dependence upon them as the pupils come to acquire greater power of generalization.

**REVIEW FUNDAMENTAL PROCESSES** used in previous years.

**DENOMINATE NUMBERS.**—Easy reductions, as:

- a. Change 8 gallons 1 pint to pints.
- b. How many inches are there in 14 feet 10 inches?
- c. How many feet and inches are there in 1,020 inches?

Follow these with more difficult reductions. Solve enough problems from text in addition, subtraction, multiplication and division of denominate numbers to make sure of principles and accurate results. Emphasize division in order to prepare the way for the process involved in solving problems in longitude, which will follow in the seventh year.

Practice adding long columns. Teach proof of subtraction.



**Second Month. FRACTIONS.**—Give special attention to adding mixed numbers. The average pupil finds some difficulty in handling such fractions. The form following is found convenient:

Add  $12\frac{3}{4}$ ,  $6\frac{3}{5}$  and  $10\frac{7}{8}$ .

$$\begin{array}{r} 40 = \text{l. c. d.} \\ \hline 12\frac{3}{4} = 12\frac{30}{40} \\ 6\frac{3}{5} = 6\frac{24}{40} \\ 10\frac{7}{8} = 10\frac{35}{40} \\ \hline \end{array}$$

$$12\frac{3}{4} + 6\frac{3}{5} + 10\frac{7}{8} = 28\frac{89}{40} = 30\frac{9}{40}$$

Note that the l. c. d. of 4, 5 and 8 is 40. Each new numerator is found by taking  $\frac{3}{4}$ ,  $\frac{3}{5}$  and  $\frac{7}{8}$  of 40, respectively.

Master many practical problems of the text-book that will apply to the different forms and operations of common fractions.

**DECIMALS.**—Review notation and numeration. Observe that decimals are only so many 10ths, 100ths, 1000ths, etc., of a unit, expressed by placing a period before the numerator and omitting the denominator. Apply multiplication in such problems as: A merchant sold 75 yards of muslin at \$1.25 per yard. How much did he receive for it?

Give special attention to division of decimals. Successful teachers have used the caret  $\wedge$  in marking off. Mark off by a *caret* the same number of decimal places from the right of the decimal point in the dividend as there are decimal places in the divisor, thus:

a. Divide 5.88 by .7.    b. Divide 96.8 by .004.    c. Divide 1.2864 by .032.

$$\begin{array}{r} 8.4 \\ \hline .7)5.8\wedge8 \\ 56 \\ \hline 28 \\ 28 \\ \hline \end{array}$$

$$\begin{array}{r} 24200 \\ \hline .004)96.800\wedge \end{array}$$

$$\begin{array}{r} 40.2 \\ \hline .032)1.286\wedge4 \\ 128 \\ \hline 64 \\ 64 \\ \hline \end{array}$$

**Third Month. PERCENTAGE.**—Teach percentage as the process of computing by hundredths and by showing its close relation to what has already been learned about fractions. Use fractions having 100 for a denominator; also fractions representing the most common per cents, such as  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{2}{3}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{3}{5}$ ,  $\frac{1}{8}$ ,  $\frac{3}{8}$ ,  $\frac{5}{8}$  and  $\frac{7}{8}$ . Change to decimals, then to per cents.



Drill in finding per cents of numbers. Memorize table of equivalents. Exercises in finding what part one number is of another.

Ex.—What part of 10 is 5?  $1 = 1/10$  of 10;  $5 = 5/10 = 1/2$  of 10.  $1/2$  of 100 % = 50 %.

From such exercises develop until pupil sees clearly what PER CENT (part) one number is of another. In the same way find a number when a *per cent* of it is given.

Ex.—6 % of a number is 18. Find 1 %, then 100 %, or express 6 % decimally and divide.

Review on *parts* in percentage by encouraging the pupil in oral drills to make many problems from the experiences of everyday life in the shop, store, or on the farm, to precede those given in the text-book.

SHORT PROCESSES.—Give practice in short processes of multiplying by 17 or 71, using the multiplicand as a partial product. Multiply by 98 by subtracting twice the multiplicand from 100 times the multiplicand. Use other multipliers.

**Fourth Month. ANALYSIS.**—The work of the text-book should be supplemented freely by the teacher. Insist upon much of the work being done mentally. The use of the pencil should be required only so far as it may be necessary. Encourage pupils to reason correctly in problems following:

a. If  $2/3$  of a bolt of cloth is worth \$3.20, what are 13 such bolts worth? If the pupil fails to see the conditions and the place to begin in “a,” give easy similar problems until he has found the clew. Ex.—

b. If 2 oranges cost 12 cents, what will 6 cost? After finding out what 1 orange costs, substitute  $2/3$  in “a” for 2 in “b” and solve. Use such methods rather than so much outright telling.

c. If  $7/8$  of Mr. Brown’s capital is \$700, how much is  $11/16$  of it? Require clear-cut statements and accurate results. Encourage pupils to compose similar problems and bring them to class for solution, for the purpose of stimulating originality and awakening mind.

Review and give special sight drills to last not longer than five or ten minutes.

**Fifth Month. LUMBER MEASURE.**—In computing, put two dimensions in feet and one in inches, then multiply together for number of board feet.

Ex.—Find the number of board feet in 250 joists 2 in.  $\times$  8 in.  $\times$  24 ft.

$$1 \text{ bd. ft.} \times \frac{2}{1} \times \frac{2}{3} \times \frac{24}{1} \times 250 = 8000 \text{ bd. ft.}$$

PRACTICAL MEASUREMENTS.—Plastering, papering, painting and carpeting. Solve enough illustrative problems from text-book and the resources of pupils to give them a clear understanding of these measurements. Make this work practical by actually measuring rooms. Review on areas of rectangles, including the square and rectangle proper. Have pupils draw the diagrams to a scale to represent the object measured.

**Sixth Month.** PERCENTAGE.—Give exercises in finding base, rate and percentage by the following comparison :

#### In Multiplication

1. Multiplicand  $\times$  multiplier = product
2. Product  $\div$  multiplier = multiplicand
3. Product  $\div$  multiplicand = multiplier

#### In Percentage

Base  $\times$  rate = percentage

Percentage  $\div$  rate = base

Percentage  $\div$  base = rate

\$300 Multiplicand

6 Multiplier

---

\$1800 Product

\$300 Base

.06 (Rate)

---

\$18.00 Percentage

Erase one term and show how it can be found again.

Show that the operations of percentage may be classified as follows :

1. Problems in which we are to find a certain per cent of a number.

2. To find the number of which a certain per cent is given.

3. To find what per cent one number is of another.

Solve many simple problems.

PROFIT AND LOSS.—Applications.

COMMISSION.—Agent, collector, commission merchant or broker, buying and selling. Problems from text-book.



**Seventh Month.** COMMERCIAL DISCOUNT.—Explain how such discounts are allowed. Problems.

DISCOUNTING BILLS.—Gross and net amounts. Marking goods.

INTEREST.—For years, months, days. Interest, principal and amount.

Write out promissory notes given and held by pupils to the amount of \$500, with interest as far as 10%. Compute the interest. Make these problems practical by getting or making blanks for them. Be sure that pupils know at least one good method of computing simple interest.

Rapid addition of eight addends as far as seven orders of integers and United States money.

**Eighth Month.** Review tables of denominate numbers. Study a good list of miscellaneous and industrial problems involving fractions, decimals and denominate numbers.

DECIMAL FRACTIONS.—Rapid review:

1. Notation and numeration; give thorough drill.
2. Change a decimal fraction to a common fraction.
3. Change a common fraction to a decimal.
4. Write decimal equivalents.
5. Addition and subtraction of decimals.
6. Multiplication and division of decimals.

RATIO AND PROPORTION.—Give special attention to statement of terms in simple proportion, reasoning from the third term. Solve numerous problems.

**Ninth Month.** Speed work in factoring small numbers.

Review on Roman numerals.

Drills in the four operations, tables and reading of seven order numbers.

Draw bills in note book and receipt same.

Review year's work and test.

#### SEVENTH YEAR

**First Month.** Give less attention to mechanical forms for the solution of problems, but insist upon solutions which set forth in neat and correct form the logical steps leading to results. When a pupil finds a problem so difficult that it needs to be explained by the teacher, the difficulties should be approached by



giving an easier problem involving the same conditions in a modified form. To illustrate:

a. B. & O. 4's are quoted at 96. How many such bonds can be bought with an investment of \$4800? The pupil is confused here with the new terms and phraseology. He will see the relations by the teacher's asking for a solution of this simple problem:

b. Oranges are quoted at 5 cents each. How many oranges can be bought for 30 cents?

In this year pupils should acquire more skill in the art of computation. The development of mathematical principles should be inductive in method and deductive in their application. Hold pupils for clear and concise statement of principles, definitions and rules derived from processes.

Review the fundamental processes of the fifth and sixth years. Learn the practical short methods of addition, subtraction, multiplication and division.

**Second Month.** RATIO AND PROPORTION.—Review ratio and simple proportion, and solve problems in compound proportion, partnership and average. Review factors, divisors, multiples and tests of divisibility. Drill on accounts, bills and cost of things bought by the 100, 1000 and ton. Teach pupils that the multiplier must always be an abstract number (unless used otherwise for convenience) and that the divisor may be abstract or concrete. At least one of the terms in multiplication and division must be abstract. Do not allow such incorrect forms to be used as:  $16 \text{ in.} \times 5 \text{ in.} = 80 \text{ sq. in.}$  It should be  $1 \text{ sq. in.} \times 16 \times 5 = 80 \text{ sq. in.}$ , or  $16 \text{ sq. in.} \times 5 = 80 \text{ sq. in.}$

**Third Month.** Finish compound denominate numbers. Review tables and various equivalents.

LONGITUDE AND TIME.—Meridian, prime meridian of Greenwich, England. East and West longitude, earlier time, later time, sun time. The day, where it begins. International Date Line—course. Standard or Railroad Time and the five standards of railroad time in the United States and Canada.

Problems:

1. Given the longitudes of two places and the time at one of them, to find the time at the other.
2. Given the times at two places and the longitude of one, to find the longitude at the other.

REVIEW FRACTIONS.—Common and decimal. Reduction, addition and subtraction.



**Fourth Month. GOVERNMENT REVENUE (Percentage).**

a. Taxes—real and personal. Use familiar examples, both in showing the purpose of taxation and meaning of the various terms used. From recent assessor's reports give actual facts of the valuation and rate of taxation of the town or city in which or near which the pupils live. Secure from your county assessor a summary of assessment of the county, giving valuation and tax of county, cities and towns. If the pupil has applied the terms—base, rate and percentage—lead him to see that the assessed valuation of property represents the base, and taxes the percentage. Solve problems in text-book.

b. Duties or customs—ad valorem and specific problems. Insurance. Review commission and brokerage, noting different forms of compensation. Define terms—agent, broker, commission merchant, principal, commission, net proceeds. Solve problems involving a remittance to cover a purchase and a commission, for the purpose of illustrating an important principle, even though such problems are not regarded as being very practical.

**Fifth Month. ANALYSIS BY EQUATIONS.**—One or two weeks may be given here, if teacher prefers, to teaching the algebraic equation. It will serve to break the monotony of things and may stimulate an ambition for higher education. Teach known and unknown numbers, equation. Solving the equation. First member, second member. Solution of equations in  $x$ . Spend the remaining time in oral review, using some good mental arithmetic as a reference, for solving practical industrial problems, pertaining to the farm, the store, the shop, and the markets. Do not attempt any problems requiring mental gymnastics. Work for quick and accurate results without the use of pencil and paper.

**Sixth Month. PRACTICAL MEASUREMENTS.**—Bins, tanks, cisterns, the cylinder, concrete, stone and brick work. Estimate the capacity of bins in bushels; tanks and cisterns in gallons or barrels. Find the convex and the entire surface of cylinders. Illustrate the convex surface by taking a piece of paper fitted to cover the cylinder, then unroll it. The pupil will observe that its form is that of a rectangle. For entire surface add area of bases. In estimating contract work or cost of labor, talk with a contractor, stone mason, brick-layer or concrete builder, and compare his methods of measuring and estimating material with what your text-book may have to say about the subject. Study measures of temperature. Review lumber measure. Figure bills for lumber for floors, porches, sheds, etc. Get a lumberman's table



at the yard. Ask questions about it. Measure different piles of lumber and determine cost at so much per M.

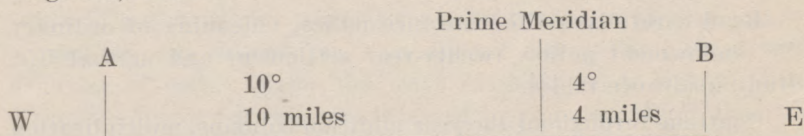
Speed drills—addition, columns of nine addends.

**Seventh Month. REVIEW.**—Roofing and flooring, plastering and painting, papering and carpeting. Have pupils find number of yards and cost of carpet in rooms of the home, giving attention to the number of strips, turning under, etc.

Review square and other measures. Teach from map how public lands are laid out; townships; ranges; sections; principal meridian; base line. Show meaning of such descriptions as: the S. W.  $\frac{1}{4}$  of N. W.  $\frac{1}{4}$  Sec. 21, T. 2 N., R. 3 W. Locate land described on section map. Read tax receipts for various descriptions and find areas in square feet, square rods or acres. Give oral exercises covering topics taught this year. Reviews aid the understanding and strengthen memory.

**Eighth Month. METRIC SYSTEM.**—Teach that the metric system, which is used in nearly all the countries of continental Europe, is based upon the meter, 39.37 inches. Note that its subdivisions are denoted by the Latin prefixes: milli ( $\frac{1}{1,000}$ ), centi ( $\frac{1}{100}$ ), deci ( $\frac{1}{10}$ ). For the multiples the Greek prefixes are used: deka (10), hecto (100), kilo (1,000) and myria (10,000). Solve only enough problems to illustrate principles in measures of length, surface, volume, capacity. Do not give much time to this subject.

**LONGITUDE AND TIME—REVIEW.**—Make clear how to find difference of longitude when one place is east and the other is west of the prime meridian; when both places are east or west. Draw diagrams, thus:



Suppose that the meridian passed through the school yard, from north to south, and one place, A, or town, was ten miles west of you, and the other place, B, was four miles east. How many miles apart are they? What did you do to find the difference, 14 miles, add or subtract? What is the difference of longitude if one place is  $10^\circ$  west and the other  $4^\circ$  east? Draw a different diagram to show in the same way the difference when both places are east or west. Review percentage in which time is not an element. Use oral drill.



**Ninth Month.** Study a good list of miscellaneous problems involving the year's work.

#### EIGHTH YEAR

The student should have a knowledge of business forms in common use, and should acquire such knowledge by dealing with the facts of his experience, drawn from his environment. The various processes should therefore be taught objectively supplementing the text-book with industrial problems relating to the business of the country and to the common occupations of our people.

Pupils should be made to feel the importance of becoming acquainted with business customs, preparatory to entering the business world. Encourage order and thrift by leading them to keep simple accounts of daily life in the home, in the shop and on the farm. Pupils should keep a neat notebook in which they may record important truths and principles during the year.

**First Month. PERCENTAGE.**—Next to fractions, percentage and its applications are most used. Lead pupils to see that the subject involves no new principles, but is simply a repetition of principles which they should already know. For the sake of the reasoning process, solve a few problems under each operation of percentage by pure percentage. Follow text-book.

**INSURANCE.**—(a) Property—fire and marine. (b) Personal—life and accident. Read a fire-insurance policy and study meaning of terms—premium, rate, term. Why should the full amount of the policy not be paid? What determines the difference in rates on different buildings?

Read carefully a life-insurance policy. Meaning of ordinary life, endowment policy, twenty-year settlement and mutual life. Study insurance tables.

Continue throughout the year addition columns, multiplication and division, noting accuracy and rapidity in combinations of figures.

**Second Month. SIMPLE INTEREST.**—Require at least one good method of computing interest. The 12% method is found convenient, as is the 6% method. The final test is accuracy of manipulation. Five quantities are involved in the general problems of interest: principal, rate, time, interest, amount.

**TRADE DISCOUNT.**—Explain list price, compound discounts, etc. Write an order for goods, using correct form. Problems. Teach



meaning of present worth and true discount, and solve problems from text. Note the additional steps necessary for determining annual interest.

**Third Month. COMPOUND INTEREST.**—Compound interest is no longer allowed on notes. Compare the process of computing with simple interest. Its only practical application for elementary schools is found in computing interest on savings accounts.

**PROMISSORY NOTES.**—Learn important facts about promissory notes: (a) If a note is made payable at a particular place. (b) When no place of payment is designated in a note. (c) When no rate is mentioned in an interest-bearing note. (d) A condition stated in interest-bearing notes which applies if not paid when due. (e) A note payable on demand. Essentials of a note: maker, payee, face, time, place, legal rate "with interest." "value received." Note terms: negotiable, indorsement, holder, etc. Discuss and write the various forms of notes, indorsements, and investigate some legal provisions in regard to them. Usury—by whom used? Why unjust? Partial payments—United States rule; mercantile rule.

**BANKING.**—Organization of commercial, national, state and private banks and trust companies. Economic advantages of banks to a community. Receiving deposits, lending money, transmitting money by means of drafts, issuing paper money, are the four chief functions of banks. Define bank discount, proceeds, term of discount. Show how banks differ from individuals in lending money. Solve problems in text-book.

**Fourth Month. EXCHANGE.**—Explain how a debtor may pay a bill in a distant city without the actual transfer of cash. How a creditor may collect bills at a distant city without the actual transfer of cash. Name the ways of doing so in current use. Trace the history of some draft issued by your local bank through the clearing-house, until it returns to the bank again. Explain why premium and discount are used. Consult banker.

**STOCKS AND BONDS.**—Give reasons for the existence of corporations. Tell how railroads, large factories, and reservoir projects are financed; how mines are developed. Organize a stock company in school and become familiar with the terms: shares, stockholders, certificates of stock, dividends, assessments, stocks—common and preferred, market value, government bonds, etc. Explain stock quotations given in daily papers. Solve problems of various types.



**Fifth Month.** RATIO AND PROPORTION.—Review with special reference to proportional parts. Ex.—

a. A and B together invest \$1,500, and A's investment is to B's as 2 is to 3. How much does each invest?

b. Divide 10 lbs. into parts in the ratio of  $\frac{2}{3}$  to  $\frac{3}{5}$ .

**PARTNERSHIP.**—Define partnership, capital stock, assets, liabilities, firm or house. Explain that when shares of the partners are invested for equal times, gains and losses are distributed among the partners in proportion to their respective shares and times. And when shares are invested for unequal times, gains and losses are distributed among the partners in proportion to their respective shares and times, except when otherwise agreed upon. Solve problems illustrating types.

**POWERS AND ROOTS.**—Exponent, power, root, square. Raise to powers indicated.

**EXTRACTING ROOTS.**—Square and cube by factoring. Study processes. Problems. Abstract numbers, right-angled triangles, hypotenuse.

**Sixth Month.** MENSURATION.—Surface, and solid contents of prisms, pyramids, cylinders, cones and spheres. Develop formula for area of rectangle, rhomboid, triangle, circle, trapezoid, hexagon, octagon, etc., solving many problems to illustrate. Think of rectangular solids as being made up of layers, composed of equal rows of cubes. Have pupils make prisms and cylinders of stiff paper and develop the method of calculating their areas. Construct pyramids and cones, and determine their surfaces and solid contents. Make or procure a semi-circular protractor and use it in the measurement of angles.

**Seventh Month.** SIMILAR SURFACES AND SOLIDS.—Observe that similar figures are plane surfaces that have exactly the same shape, but differ in size. Point out similar figures. Note principles which apply to corresponding lines; areas proportional to the squares of their corresponding lines. Note principles applying to similar solids. Solve problems. Review mensuration. Study reference tables of measures with the view of retaining many important facts worth remembering.

**Eighth Month.** REVIEW involution and evolution.—Square root and its applications. Select practical problems for oral drill. Study and solve a good list of miscellaneous problems.

**Ninth Month.** REVIEW year's work, emphasizing the needs of the class.



## AGRICULTURE

The following course has been arranged for the seventh and eighth grades. The second year is intended, in a measure, to be an application of the first. It will be well in the first year to teach only general principles, and during the second to extend the studies to investigations of local conditions.

It ought not to be necessary to insert an argument for the study of agriculture here, but it may be well to state some advantages that this study seems to possess:

1. It creates an interest in and respect for the occupation of farming.
2. It brings the school in closer contact with the everyday life and experiences of the child.
3. It stimulates the creative instincts in combination with those of acquisition.
4. It teaches lessons of success and failure in the conduct of everyday affairs.

### HELPS IN TEACHING

No teacher should attempt to teach agriculture from one book alone. One or more books will be needed for reference and guidance.

### FREE LITERATURE

*Government Bulletins.*—The United States government publishes much desirable literature free of cost. Begin by requesting Circular 94 of the Office of Experiment Stations. This gives a list of free publications classified especially for the use of teachers. Select those desired, and this will lead into other fields. Address the Secretary of Agriculture, Washington, D. C.

*Colorado Experiment Station.*—The Committee on Rural Education of the State Agriculture College sends a selected list of bulletins to teachers requesting them. Every school should have a set. Address S. Arthur Johnson, State Agricultural College, Fort Collins, Colorado.

### FIRST YEAR

**First Month.** SEEDS.—Study the structure of some common large seeds.



The bean: Soak a sufficient number of beans in water twenty-four hours, so that all the class may have specimens. Compare the soaked specimens with unsoaked. Examine some that have been soaked only two or three hours. At what part of the seed does the water seem to enter? Examine the structure of the bean. Note the seed-coat. Texture. Use. Observe the large seed-leaves (cotyledons). Why are they so thick? What do they contain? If iodine can be obtained, make the starch test. Find the plantlet between the seed-leaves. Note the little leaves at one end, and rootlet at the other. Make sketches.

The corn: Make a similar study of corn. Note differences. Where is the nourishment stored?

Four-o'clock: These seeds are excellent for showing how starch may be stored up outside of the seed-leaves. The seed-leaves are wrapped about a ball of starch in a life-and-death grip. For dissection soak them thoroughly, and carefully remove the tough outer covering. Start a large number to germinating, and dissect a few each day. Note how the starch is gradually absorbed before the seed-leaves forsake the shell to come to the surface of the ground. Compare with other seeds.

SEED PURITY.—Freedom from foreign seeds and other material.

Some impurities: Weed and other kind of seeds, chaff, pieces of stem, sand, etc.

Seeds most likely to be impure are grass and other small seeds; those that resemble some weed seed; those that are difficult to clean.

PURITY TEST.—Illustrative material. Named samples of commercial and weed seeds, such as corn, oats, barley, sorghum, dandelion, wild barley, etc. Names of unknown seed can be obtained by sending a small sample to the Agricultural College at Fort Collins.

A small lens is useful in identifying smaller seeds.

HOW TO MAKE THE TEST.—Mix thoroughly each lot of seeds to be tested. Place a small amount on a sheet of white paper. Separate and place in different piles all the kinds of seeds, etc.

Make a form like the following and fill in the proper places:

REPORT ON PURITY OF SEED

Name of student.....

Date.....

Name of seed tested.....

Names of Weed Seeds and Other Impurities Found	No. Found	Per Cent Found
.....	.....	.....
.....	.....	.....
.....	.....	.....
Total weeds.....	.....	.....
Other impurities.....	.....	.....
Total impurities.....	.....	.....

Estimate the percentage of impurities by weight, if possible, but if no scales are at hand, estimate it by number. Put down any seeds which cannot be identified as "unknown."

SEED GERMINATION

**Second Month.** CONDITIONS FOR GERMINATION.—1. *Moisture.*  
—Select a dozen seeds each of corn, beans, wheat and squash or other seeds. Divide each into three lots. Soak the first lot over night, the second lot two hours; leave the third lot unsoaked. Plant these seeds in a shallow box of sand. Use cardboard labels to indicate where each group of seed is planted. Cover the box to keep in moisture, and put in a warm place, being careful to have the heat applied as nearly equal to all parts of the box as possible. Watch to see which seeds come above the sand first. Did the soaking have any influence on the time of germination? Were any seeds injured by soaking? What has soil moisture to do with seed "coming up"?

2. *Temperature.*—Plant beans or other seeds in three boxes of equal size. Make the conditions as nearly equal as possible. Place one box near the stove, one in a cool corner of the room, and the third in the coolest place to be found where it will not freeze. Which seeds germinate first, which last? What is the effect of heat on germination?

Plant a variety of seeds—oats, wheat, lettuce, tomatoes, etc.—in the boxes and place in the same positions as before. Make lists of seeds which will germinate at low temperature, those



which require high temperatures, and those which will germinate at moderate temperature. Of what value are these facts when we come to garden and crop-planting?

3. *Air*.—Soak a double handful of peas in plenty of water for twenty-four hours. Take two fruit-jars, fill one two-thirds full and put the cover on. In the other put a few soaked peas on moist cotton in the bottom. The next day put a burning match down into the open jar, and note that it burns. Remove the cover very carefully from the other jar, and immediately insert a burning match. Note that it is extinguished. The seeds have absorbed the oxygen and given off carbon dioxide. With lime water the usual tests for carbon dioxide may be made. Replace the cover on the jar and watch for the germination of the seeds. What effect has air on seed germination?

SEED TESTING.—Proper testing of seed is one of the most important operations in successful farming. The following outline by Mr. Frear is readily understood and easily followed:

#### EXERCISE—SEED VITALITY

Seed for planting must possess two characters: (1) vitality, (2) purity. (See above for purity test.)

*Vitality*—ability to germinate or sprout.

Two factors are important in germination:

(a) *Germinating energy*, or rapidity of germination. Those seeds that germinate quickest are the best for planting, other things being equal.

(b) *Germinating capacity*, or the percentage of germination. The higher the percentage, the better the seed. Both of these qualities should be present to a high degree.

Vitality is expressed by percentage. Vitality decreases with increased age of the seed.

Some factors which aid in decreasing the vitality of seeds:

1. Harvesting before ripe.
2. Improper curing.
3. Slow curing.
4. Piling up green and allowing to heat.
5. Storing when wet.
6. Injury in threshing.
7. Freezing before dry.

8. Injury by disease and insects.
9. Overheating.
10. Lack of ventilation.
11. Treatment with strong chemicals or water too hot for diseases or insects.
12. Old age.

GERMINATION TEST.—Material needed: two plates, one piece of cloth as large as a plate and one piece twice as large, some water, and a small amount of seed of each kind.

Dip the cloths in water, and squeeze until they are moist. Place the larger cloth on a plate, and by a series of ridges across the cloth divide the area of the plate into as many parts as there are kinds of seeds to test. Mix each lot of seed well, count out 100 and distribute evenly in a division of the plate. Write the name of the seed on a strip of paper and lay on top of the seed. When all of the seed is in the plate, cover with the small moistened cloth, and invert the other plate over all. Set in a temperature of 70 to 90 degrees F. Examine daily. Sprinkle the cloths when they become dry.

Prepare a form like the following:

REPORT ON SEED GERMINATION

Name of student.....

Date experiment began.....

Kind of Seed	No. Placed in Germinator	No. of Seeds Germinated at the End of							Total No. Germinated	Per Cent Germinated
		1st Day	2d Day	3d Day	4th Day	5th Day	6th Day	7th Day		
.....										
.....										
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Discard daily all the seeds which have a sprout one-fourth of an inch long, and record the number in the proper place. At the end of the seventh day discard all seeds left. Add up the "Number germinated" and figure out the percentages.



All good commercial seeds, with the exception of some of the smaller seeds and grasses, should germinate between 90 and 100 per cent. Other seeds will range from 50 per cent up. Good alfalfa seed should germinate 80 per cent or more.

Seed low in vitality is worth considerably less than seed high in vitality. Where better seed is not obtainable it is necessary to increase the amount planted per acre according to the per cent of germinations.

**Third Month. FARM SEEDS.**—What are the principal crops raised in your school district? What methods do the farmers employ in selecting their seed? Do any of the farmers raise any crops to be marketed for seed—i. e., to be sold to be planted rather than consumed in some other way? What is a good average yield of the different crops raised in the district? What particular varieties of grains do the farmers prefer for planting? Find the reasons.

**DEPTH OF PLANTING.**—Plant several bean seeds in a box of moist earth, planting the seeds at different depths from one to six inches. Keep records of the time required to send the sprout up to the light from seeds at each depth. What do you judge is the best depth to plant beans? How deep should seed be planted? Fill a box with good soil. Put a few seeds of corn, oats, and beans in one corner one inch deep. In another corner plant an equal number three inches deep; in another six inches deep, and in another ten inches deep. Record the time of coming up of each kind of seed and from different depths of planting.

#### SOILS

**Fourth Month. ORIGIN OF SOIL.**—Attention should be given to the ways in which soil originates. Some of the more recent geographers go into this subject in a very adequate manner, and should be consulted and followed. It will not be sufficient to cover the mere text-book work, but the pupils' knowledge should be drawn upon to illustrate the processes actually at work. Almost every district furnishes most of the conditions necessary for a fairly good study.

In the wide range of Colorado we have every possible condition, and actual observations of these in the field should be made. This may be done by short excursions.

1. *The Work of the Sun.*—What is the effect of the hot sun on the rocks during the day? What parts of the rocks are heated

during the day? What becomes of the heat during the night? What effect does the unequal heating of the rocks have on their texture?

2. *The Work of the Air.*—What effects do the movements of the air have upon the soil? What is the effect of the sands blowing against the rock? If you do not live in a locality where all the effects are to be found, tell about the other conditions.

3. *The Work of Water.*—What happens to water that falls on the surface of the rocks? Does any of it soak in? What happens to the rock when this water freezes? Water has the power to dissolve out certain portions of the rock. In what condition does this leave them? Why are rivers and creeks muddy after a rain? What becomes of the mud in the water? Compare the nature of the soils with the rocky country near them. Tell about the work of ice, glaciers and snow-slides.

4. *The Work of Plants.*—Try to dig or pull up some plants which are growing in the rocks. Note where their roots go. Pry loose some pieces of rock and find the roots of plants in between. What is the effect of this upon the rocks?

5. *The Work of Animals.*—Find the burrows of animals. What effect does their work have upon the soil?

#### THE PARTS OF SOIL.

1. *Sand.*—Collect samples and note the sizes of the particles in the different lots. Grade them into coarse, fine and medium. Save samples of the different kinds in bottles. What will be the comparative amounts of air in the different samples? Do air and water move through sand readily? In what localities is sand found in nature?

2. *Clay.*—Secure samples of clay. Compare with sand as to the qualities. Lime is often used on clay soils. Why?

3. *Lime.*—If possible, obtain samples of lime soils and tell the class from what they are formed.

4. *Humus.*—Collect rich soils and note the decaying animal and vegetable parts of it. Examine the soils along the creek where vegetation is growing. How does this soil differ from other kinds in texture? Color?

Preserve in bottles samples of these different constituents of soils.

**Fifth Month.** EXAMINATION OF SOILS.—Collect samples of different kinds of soils. Put each separately in a bottle of water



and shake thoroughly. Allow to settle. Notice the different layers formed at the bottom of the bottle. Estimate from the layers the amounts of the different constituents in the soil. Which of these samples were considered to be good soil? Which poor? Which heavy? Which light?

**DEPTH OF SOIL.**—Make an excursion to railroad cuts or banks where the soil has been exposed vertically, and measure the different depths. Which is the most valuable for farming purposes? What constituent of soil helps you to tell the depth? What value has this part in crop-raising?

**Sixth Month. WATER IN SOIL.**—Illustrative material: three cylindrical lamp chimneys (student chimneys) and a frame for holding them perpendicular, with the larger end up and the smaller end high enough from the table to allow a cup or glass to be placed under each; enough sand, loam and clay to fill one chimney of each; some pieces of cloth to place over the lower ends of the chimneys to hold the soil in, and some rubber bands to hold the cloths onto the chimneys; three cups to place under the chimneys; a shallow, narrow dish to place under the three chimneys; a small cloth sack, a large paper bag and a sieve (one can be made by tacking a piece of screen over the bottom of a small box).

1. *Capillary Water.*—The water which moves through the soil, due to attraction between the water and the soil particles. Its movement may be in any direction, but is usually upward and sideways. Where this kind of water is present in the soil without any gravitational water, as soil particles, the smaller spaces are filled with it, but the larger spaces are filled with air. This is the only form of water which is commonly available to plants.

**Rise of capillary water:** Fill one chimney with sand, one with loam, and one with clay. Place in the frame. Under the three chimneys place a shallow dish, so that the edge of the dish comes about an inch above the bottom of the chimneys. Pour water into the dish, replenishing the supply from time to time as it is taken up by the soil. Observe the rise of the water in the soils. Keep a record of the time which is required for it to reach the top of each kind of soil.

What kind of water is rising in the soil? Can you see it? In which kind of soil does it rise the most rapidly? The least rapidly? Can you give any reason for this? In which soil will the water rise highest? In which lowest? (The water will rise



highest in the clay and lowest in the sand.) Can you give any reason for this?

2. *Gravitational Water*.—When water flows under the influence of gravitation, it percolates down into or flows through the soil. After a rain, water flows down through the soil in a sheet and is called sheet water. The level at which water stands in the soil is called the water table. The roots of most plants will not live in water, hence cannot penetrate below the water table.

Fill the chimneys as for the previous exercise, but place a separate dish under each one. Measure out into three separate dishes the same amount of water. Gradually pour the water from a dish into each chimney. Keep a record of the time which is required for the water to pass through the soil and begin to drip into the dishes below. Cease adding water as soon as it begins to drip freely. When all dripping has ceased, pour the drippings into the original dish and measure all of the water left.

What kind of water dripped from the ends of the chimneys? What kind of water remained in the soil? In which soil did the dripping begin first? In which last? How long did it take for the water to pass through each kind of soil? What effect would this time have on the value of short hard rains and long slow rains? Why? On the length of time required to irrigate? Why?

3. *Hygroscopic Water*.—A very thin layer of water is present on the surface of particles which appear to be "dry." Plants cannot use this form of soil water.

4. *Retention of Water in the Soil*.—Nearly fill two large buckets with thoroughly moistened garden soil. In one pack down the soil firmly, leaving the top smooth. In the second leave the surface, to the depth of three inches, loose and open, and each morning stir it gently. Weigh at the beginning of the experiment and each day for a week. Which loses water through evaporation more rapidly? Why does the farmer cultivate the ground after each storm?

#### **Seventh Month. PLANTS AND WATER.**

1. *Methods of Absorbing Water*.—Plant some seeds in the seed-tester, and after the roots have grown an inch or more examine the root-hairs. Note that they are quickly destroyed by dry air. Their office is to absorb moisture. Germinate some seeds in moist sand, carefully lift the plants, and observe how the root-hairs cling about the grains of sand.



2. *Use of Water to the Plant.*—Collect some plants. Put some with their roots in water and leave the others to dry. Note the effect of water.

3. *Plant Food.*—Pure water is not sufficient for the life of plants. Soil water is never pure, though it may look clear. Before the water is taken up by plants, many things are dissolved in it. Illustrate by dissolving sugar and salt in water. May soil water carry different amounts of plant food? Different kinds? What effect will “rich” soil have on soil water? “Poor soil”?

4. *Transpiration.*—Take two vials. Select two twigs as nearly alike as possible. From one trim away nearly all the leaves. Fill the vials equally full of water and insert a twig in each. The next day observe which twig has taken up and given off the more water. Plants give out water to the air in somewhat the same way that we give off water from our lungs.

**Eighth Month. SOIL TILLAGE.**—This is a good month to study soil tillage. The process is everywhere being carried on. Examine the different methods and find the reasons for each.

1. *Tillage Tools.*—Examine the methods of plowing and the reasons for each. Get definite data, and find how much it costs per acre for each method. What difference do you find in the plows and the cost per acre? What kind of plows do the best work? Which are the most expensive as tools? Do the value and nature of the crop have anything to do with the methods of plowing?

2. *Objects of Tillage.*

- a. Makes the soil deeper and firmer. Of what use is this to the plant?
- b. Prepares a good seed bed.
- c. Permits the soil to hold more moisture.
- d. Permits the air to enter the soil.
- e. Puts plant food at the place where the roots can most readily get it.
- f. Prevents evaporation.

## SECOND YEAR

**First Month. FARM CROPS.**—Make a study of the farm crops of the neighborhood. What is regarded as a good average yield per acre of the principal farm crops? Find a prosperous farmer.

and gather data to compute the cost of raising and harvesting each of the principal crops per acre. Compare with the market value. What crops does the farmer raise other than those intended for market? What are his reasons for doing this?

#### THE POTATO

**Second Month.** The following study of the potato was outlined by Mr. Frear:

##### EXTERNAL PARTS

Illustrative material: Some good Irish potatoes.

Place a number of potatoes in the light and some in the dark, in a warm, rather moist atmosphere, and leave until they have produced sprouts of considerable size.

Examine a potato and observe the following parts:

1. Eyes—the more or less oval depressions. What are the eyes?

2. The seed or “rose” end—the end which contains the greater number of eyes, one of which seems to be more prominent than the others.

3. The base or stem end contains a rather deep depression, in the center of which was attached the small stem which connected the potato to the plant. Find a potato with the small stem still attached.

Observe that the eyes are arranged around the potato more or less spirally, and gradually decrease in numbers from the seed end to the base.

Draw a potato showing all of these characteristics.

##### INTERNAL PARTS

Cut two potatoes into halves, one lengthwise, the other crosswise. Cut off a thin slice and hold up to the light. Note the areas. Examine the cut surfaces and observe the following characteristics:

1. The skin around the outside.

2. The whiteness of the inside. To what is it due? Starch.

3. Within half an inch of the skin of the potato a faint dark line, which follows in general the outline of the surface. When this occurs, where does it end? This line is the place where the potato makes its growth. It is called the cambium ring. If you have cut the potato through the stem end, you will find that the



ring runs clear to the end. It continues through the small connecting stem and through the entire potato plant into the leaves.

4. Between the cambium ring and the skin a rather dark, dense area, the cortex—the most valuable part of the potato, because it contains the best food material. The larger this area, the better the potatoes. Thick peeling of potatoes wastes a large amount of this part, hence the reason for peeling thinly.

5. At the center a more or less star-shaped area of clear watery appearance; seen best when a thin slice is held to the light. The poorest part of the potato, because it is largely water, with little of the more valuable food materials. The smaller this area, the more valuable the potatoes for food. It is called the internal medulla.

6. Between the internal medulla and the cambium ring a more or less irregular area, dense and starchy in appearance. It is called the external medulla. Comes second in food value. Contains less water than the internal medulla, and more starch and other food materials.

7. Occasionally a hollow will be found at the center of a potato. Large ones are more likely to be hollow than smaller ones, because the large size is partly the cause of their being hollow. On this account medium-sized potatoes are usually to be preferred to large ones.

Draw the inside view of a potato showing all of the parts.

*Is the potato a stem or root?*

Illustrative material: Potatoes which have produced sprouts in the light and in the dark.

Observe the following points:

*Potatoes:*

Color: Those exposed to the light, greenish tinge; those kept in the dark, natural dark color.

*Sprouts:*

Color: Those in the light, greenish; those in the dark, white.

Branches: Those in light, small green leaves; those in dark, no leaves.

Length and thickness: Those in light, shorter and thicker.

From these facts, would you conclude that there is any relation between the light and the green coloring of plants?



**Explanation:** The action of sunlight on living plant tissue, which naturally grows above ground, or which is constructed like parts which grow above ground, results in the production of a green coloring matter in the surface tissue. This is known as chlorophyll.

Roots do not produce chlorophyll, because they grow underground out of the sunlight, have never had a chance to learn how, and do not need it to do their work.

**Buds:** In the sprouting potatoes we find that the parts which are called "eyes" have produced the sprouts. We know that on trees the branches and leaves are produced from the buds. The sprouts are branches with leaves, consequently the "eyes" must be buds. Roots do not produce buds, as a rule.

**Purpose of:** From the size of the potatoes, what would you suppose their natural purpose to be? (To serve as a storeroom for food material for the young plants which grow from them when they are planted.) Are they able to gather any food directly from the soil? (No.) All roots are able to gather food directly from the soil. Considering all of the points of the potato, is it a stem or a root? Why?

Stems which grow under the ground and store up food material, as the potato does, are called tubers. (A tuber is a short, thick, fleshy underground stem bearing a number of buds or "eyes," from which new plants may be grown.)

What happens to the potatoes as the sprouts increase in size? Explain. Each eye of a potato is capable of producing a plant, and will do so if planted with some of the fleshy part of the potato attached to it.

Plant some pieces of potatoes in a box of soil and watch their development.

**Third Month. SOIL FERTILITY.**—This may be studied under the following outline:

1. We have seen that plants must have food. What kinds of food do they need? Phosphoric acid, potash, nitrogen. Do certain crops need them in definite proportions? If one or more elements are not present in sufficient proportions needed, what must happen?

2. Plant foods must be available; i. e., they must be capable of being dissolved by the water. Why? If they cannot be dissolved by the water, one of two things must be done:



- a. The soil must be treated in such a way as to make them dissolvable or
- b. The elements must be supplied in available form.
3. Method of making plant food available.
4. Maintenance of fertility.
  - a. Uses of fertilizers.  
Barnyard manure.  
Commercial fertilizers.  
Green manures.
  - b. Nitrifying the soil by leguminous plants, alfalfa, clover, etc.
5. Crop rotation. What crop rotations are practiced in your district? What are the reasons for this? Do different soils require different rotations? What different effects do crops have on soils with regard to
  - a. Tillage?
  - b. Use of soil elements?

**Fourth Month. PLANT PROPAGATION.**

1. *Reproduction by Flowers and Seeds.*
  - a. Study of the flower. Learn the parts, especially those related to fertilization. Explain pollination of corn, wheat and other farm crops. Explain use of parts of flowers. Work of insects in pollination.
  - b. Review the work on germination and seed-testing of last year.
2. *Grafting and Budding.*—Children can learn these processes. If possible, get an experienced person to give advice.
3. *Runners.*—Strawberries.
4. *Underground Stems.*
5. *Dividing the Clumps of Plants.*

**Fifth Month. FARM ANIMALS** (from the Minnesota Course of Study).—Knowledge of qualities of farm animals can be gained by cultivating the power of observation.

1. Call the attention of pupils to pictures and written descriptions of the different breeds and types of farm animals.
2. Study carefully the correct type form, and have the pupils compare the animals found on the nearest farms with these pictures and descriptions.

3. The pictures may be clipped from farm bulletins and papers. Mount them on cardboard and keep for further reference.

4. Teach the characteristics, types, and special uses of each breed of animals.

5. In this way a study should be made of the different breeds of cattle, sheep, hogs, horses and other farm animals.

DAIRYING.—Milk:

1. Composition:

- a. Fat—How to determine amount—Babcock test.
- b. Casein—Use.
- c. Sugar—Use.

2. Bacteria in Milk:

- a. Friendly and unfriendly.
- b. Pasteurization.

3. Machines for separating cream from milk.

4. The silo as a means of providing cows with succulent food in winter.

**Sixth Month. FARM POULTRY.**

1. *Different Classes of Chickens.*

- a. What breeds are found in the district? To what classes do they belong?
- b. Characteristics and habits of each breed.

2. *Food of Chickens.*

- a. Kinds of feed needed by chickens.
- b. Varieties of available food and food substitutions.
- c. Changes of food in different seasons.

3. *Housing Chickens.*—Children will be much interested in constructing models of houses, feed-boxes, nests, watering devices, etc. Consult government bulletins and farm papers for suggestions.

4. *Life-History of Chickens.*

- a. Time of hatching. Methods of hatching. Care of young chicks.
- b. Compare breeds as to rapidity of growth.

5. *Products of Poultry.*—Collecting and marketing eggs and poultry. Keep accurate records of the cost of feeding and returns from pens of chickens for one year. This carefully carried out for a year will be among the most valuable lessons that the chil-



dren can have for life. Few farmers know accurately what their crops cost, or where their profits and losses are.

**Seventh Month.** BEAUTIFYING HOUSE AND SCHOOL GROUNDS.—Study the elements of landscape gardening and carefully plan ways to improve the school grounds. This problem is more difficult in Colorado than in states where rainfall is abundant. Much may be done, however, by creating an interest and neighborhood pride. Select hardy trees and shrubs—natives preferred—and plan for future growth and beauty. Native material is often the best. Pupils will be glad to assist in collecting and planting. In many cases water may be had from neighboring fields at intervals during the summer. This is one of the most valuable fields that the teacher can undertake for the improvement of rural conditions.

**Eighth Month.** IRRIGATION AND DRAINAGE.—A course of study in agriculture for Colorado which did not mention irrigation would be sadly lacking; yet the subject is so much modified by local conditions in each case that it is rather difficult to give an outline which will be satisfactory. The following subjects should be investigated and taught:

1. Measurement of water.
2. Division boxes, types and methods of using.
3. Times and methods of watering different crops.
4. Seepage water. Its use and methods of avoiding it.
5. Drainage.

## CIVICS

From the first day of their school life to the last day, the children learn lessons in civics, and it depends upon the teachers whether or not the knowledge gained is such as will aid in training for true citizenship. Before the pupils have been in school many weeks, they know that they have tasks to perform; that certain rights and privileges belong to them as long as they do not infringe upon the rights and privileges of others, and that they must obey the teacher.

The capable teacher will present to the childish minds clear ideas of why obedience to authority, respect for the rights of others, and prompt performance of every duty are necessities in a well-organized school. Teach idea of leadership and service through games and plays; rights and privileges of children on playgrounds.

Since the object of our schools is to train children to become intelligent, good citizens when grown up, an ideal of school citizenship should be developed.

When a pupil's desk is untidy, the floor under his seat littered with paper, bits of crayon, mud from his shoes, etc., and his desk attracts flies on account of crumbs from his luncheon, he should be told that, as a school citizen, it is his duty to make clean and tidy his desk and floor space, because said desk and floor space, when in such a condition, are a nuisance to the school community.

When a pupil insists on whispering, the teacher may point out to him that, by disturbing the peace of the school community and preventing the citizens from doing their work (getting their lessons), he is on a par with the man who walks along the village street annoying the people by shouting or by trying to draw other pedestrians into quarrels with him. Hence the rights of the other pupils demand that the proper authority, the teacher, compel him to cease being disorderly, just as the town officer forces the noisy man to be quiet, or else takes him into custody.

The idea of teaching children to be good citizens should be carried into the games on the playground.

Good Citizens' Clubs may be organized as a means of teaching children to elect officers, conduct meetings, pass judgment upon the conduct of members disobeying the laws of the club, get up



entertainments under the auspices of the club, and invite the parents to be present.

If the teacher and the children once get the true spirit of citizenship, the government of the school is an easy matter.

In the fifth and sixth grades the child should realize that each political unit—precinct, city, county, state and nation—is a group of people organized in such a manner as to do for the members of each group that kind of work which all need to have done.

### SEVENTH YEAR

In nine-month schools, begin the text-book early in the eighth month; in seven-month schools, early in the sixth month.

Before taking up the formal text, by correlation with history and geography, develop the following: meaning and necessity of laws; necessity of learning obedience to authority, as every person is under some kind of authority all his life; government of self is the first requisite to governing others.

**Eighth Month.** Use current political events constantly.

**KINDS OF GOVERNMENT.**—Patriarchal or parental, monarchical, aristocratic, republican.

**PARTS OF GOVERNMENT.**—Legislative, executive, judicial. In which kinds of government are these three in one?

**SCHOOL DISTRICT.**—Directors elected when and by whom? Term of office, powers, duties, compensation. Powers and duties of teachers. How expenses of school are paid. General fund, special fund, and uses to which each may be applied. Compare family government and school government.

**COUNTY GOVERNMENT.**—Map your township, locating your home and your schoolhouse. How many townships in your county? What is the class of your county?

Make a study of the work done by the storekeeper, the baker, the policeman, the fireman, the street railway.

How mail is carried. The telegraph, the telephone.

**Ninth Month.** Have pupils know the names of their county officers. Name duties of these officers, length of term, salaries, manner of election, and duties.

Precincts, justices' courts, notaries public. Describe a trial in a justice's court, and explain the jurisdiction of said court.

## EIGHTH YEAR

(Two or three recitations per week are sufficient, if the study be kept up throughout the term; and, if not, the first four months, with a recitation each day, will complete the work.)

**First Month. TOWN AND CITY GOVERNMENT.**—Officers, courts, charters, different classes of cities, ordinances.

STATE GOVERNMENT.—Definition of state, state institution, citizen, elector, constitution.

Qualification of senators and representatives, terms, salaries, privileges, presiding officers. Special powers of House and of Senate.

Sessions of legislature held when and where? Length of time allowed to hold. Names of senator and representative from your district.

**Second Month. EXECUTIVE OFFICERS.**—Duties, length of term, salaries, names.

Veto power, pardoning power. Necessity of placing officers under bond. Officers appointed by the governor.

State boards and their duties.

State inspectors.

COLORADO NATIONAL GUARD.—How supported? Who is eligible to membership? Duties of members.

**Third Month. DECLARATION OF INDEPENDENCE.**

ARTICLES OF CONFEDERATION.—Weak points, showing necessity for making a constitution creating the three departments of government.

Preamble to the Constitution. Explain meaning fully. How constitution may be amended.

**Fourth Month. BILL OF RIGHTS.**—The constitution a compromise between the large states and the small ones.

LEGISLATIVE DEPARTMENT.—Qualifications of senators and representatives. Manner of election, length of term, special privileges; how vacancies in either house are filled; number of representatives, how determined; powers and forbidden powers; special powers of the Senate; special powers of the House.

**Fifth Month. OFFICERS OF HOUSE AND SENATE.**—Appointment of committees; power of speaker; speaker's right to vote; president of the Senate and his right to vote.

How a bill becomes a law.



Length of sessions.

Impeachment.

If the state legislature is in session, have children know names and something of the life and work of the governor, lieutenant governor, speaker of the house, members from their own section of the county. Create such interest that the part of the newspaper giving the workings of the legislature will be of interest to the pupils. Teach the great opportunity that members of the legislature have for helping their state. Lead them to see that it is each boy's and girl's duty to vote when he is old enough, and that one reason why they are studying civics is to prepare them to vote intelligently. Instill the fact that it is cowardly not to vote.

**Eighth Month.** JUDICIAL DEPARTMENT.—Supreme Court, how constituted; its jurisdiction; session held when and where; chief justice, associate justices; salary and tenure of office of judges. Circuit court, district court, court of appeals, court of claims, territorial courts. Court officers. Appeals from lower to higher courts.

**Ninth Month.** Comparison of our government with that of foreign countries. General review and careful comparison of moral, social, political and industrial rights.

## COOKING

Cooking in the rural or village school, where there is no equipment and but little time for the work, should be confined to instruction and practice in the ordinary line of cooking, and to such work as can be carried out successfully at the homes of the pupils with the provisions and equipment which are found in the ordinary home.

Each locality, with its individual conditions, will call for modification of any specific set of lessons. It is not necessary that the teacher should know a great deal about cooking in order to interest her pupils. If she has a desire to learn and a desire to teach, she can be successful.

Each girl on leaving the eighth grade should know how to make good, wholesome bread; to cook vegetables, meats and cereals so as to get the largest amount of food value from each; to make coffee and tea; to take care of milk; to make butter; to preserve and take care of, for winter use, fruit grown in her particular section of the state.

Great interest can be added to the work by setting apart certain afternoons in which the girls bring to school samples of cooking, and invite their parents and friends. Prizes could be offered for the best loaf of bread or cake, or the best butter. An afternoon tea could be served by the girls. On this same afternoon samples of the work in sewing could be shown; also the work done by the boys in manual training.

In the sewing class have the girls make a simple uniform, consisting of cap, apron and sleevelets, to be worn when cooking. Aprons should be made as long as the dress, with a bib. Sleevelets should come above the elbow.

### THINGS TO BE REMEMBERED

Have a place for everything, and keep everything in its place.

Always wash your hands and clean your nails before beginning the work of cooking.

One of the most important things to learn is that "we must be clean."



It is best to wear for kitchen work a plain cotton dress, short enough to clear the floor. It is a good plan to have a hand towel buttoned on the apron band while at work in the kitchen.

Economize in the use of materials and fuel.

Keep all cooking utensils clean.

The following receipts will be found helpful, and should be supplemented by other good receipts procured in the community:

#### TABLE OF MEASUREMENTS

3 teaspoonfuls equal	1 tablespoon
16 tablespoonfuls equal	1 cup
4 cups equal	1 quart

#### SCHOOL LUNCHES

Teach the putting-up of lunches in a neat and attractive form. Teach that the cost of a neatly prepared lunch is no greater than the unattractive and poorly prepared one so often brought to school.

The pupils should realize the nutritive value of fruits cooked and uncooked. Bread is usually in every lunch, but it is not always as tempting as it might be. It should be cut in thin slices and evenly buttered. Sandwiches of thin slices of bread, filled with boiled eggs, chopped or sliced meat, lettuce or jam, or cheese, are an addition.

#### FRUITS AND CEREALS

Table for Cooking Cereals

Kind	Quantity	Water	Time
Steam cooked and rolled			
oats .....	1 cup	1¾ cup	20 minutes
Quaker rolled oats.....	1 cup	1¾ cup	20 minutes
Rolled oats.....	1 cup	1¾ cup	20 minutes
Steam-cooked and rolled-			
wheat .....	1 cup	1¼ cup	30 minutes
Rice (steamed).....	1 cup	2¼-2¾ cups	45-60 minutes
Indian meal.....	1 cup	3½ cups	3 hours
Wheatena .....	1 cup	3¾ cups	30 minutes
Hominy (fine).....	1 cup	4 cups	1 hour

The minimum time of cooking is given in this table. Cereals are much improved by long cooking in a double boiler. Where a fire is kept at night it is an advantage to leave the cereals on the back of the stove all night. See that the double boiler contains the necessary amount of water.

#### Oatmeal Mush with Apples

Core apples, leaving large cavities; pare and cook until soft in syrup made by boiling sugar and water together; fill cavities with oatmeal mush. Serve with sugar and cream.

Dates stoned and cut in pieces, or bananas sliced, may be served with breakfast foods.

A double boiler may be made at home by setting one kettle within another. Partly fill the outer kettle with boiling water. A few nails in the outer kettle prevents the inner kettle resting directly on the bottom.

### BEVERAGES

#### Tea

Scald teapot, put in tea, and add boiling water; let stand 3 to 5 minutes. One teaspoonful of tea for every three persons.

#### Coffee

1 cup of coffee	$\frac{1}{2}$ cup of cold water
Part of white of egg and shell	6 cups of boiling water

Scald the coffee-pot; put in ground coffee, egg, and cold water; mix thoroughly with fork; add boiling water; bring gradually to a boil; settle with 2 tablespoonfuls of cold water. One tablespoonful of coffee to cup of water and 1 for the pot. Putting coffee in cheese-cloth bag insures clear coffee; add small part of egg and shell.

#### Cocoa

1 teaspoonful of cocoa	$\frac{1}{2}$ cup of boiling water
1 teaspoonful of sugar	$\frac{1}{2}$ cup of scalded milk
Few grains of salt and drop of vanilla	

Mix cocoa and sugar; add gradually, stirring, to boiling liquid; boil 1 minute; flavor; beat with Dover egg-beater 2 minutes, preventing scum.



**Chocolate**

1½ squares of Baker's chocolate    3 cups of milk  
 4    tablespoonfuls of sugar            1 cup of boiling water  
    Few grains of salt

Scald milk; melt chocolate in small saucepan placed over hot water; add sugar, salt and gradually boiling water; when smooth, boil 1 minute; add to scalded milk, and serve with whipped cream.

**WHITE BREAD****Quick Process**

½ cup of hot water                            1 teaspoonful of shortening  
 ½ cup of scalded milk                    ½ yeast-cake dissolved in about  
 ½ teaspoonful of salt                      ¼ of cup luke-warm water  
 1 teaspoonful of sugar                    3 cups of bread flour

Put salt, sugar and shortening into a large bowl; pour on hot liquid. When the mixture is lukewarm, add the dissolved yeast. Stir in flour to make a batter; beat well; then add more flour, a little at a time, to make a stiff dough, mixing with a knife. Turn it upon a floured board; knead until it is smooth, elastic and does not stick to the board. Put into a greased bowl, cover closely, and let it stand in a warm place until double in bulk. This will take between 2 and 3 hours. Knead again until fine-grained, shape into a loaf or biscuits, and place in a warm, greased pan. Cover and put in a warm place. When double in bulk, bake in a hot oven. Bake a loaf 50 to 60 minutes; biscuits, 15 to 20 minutes.

**Slow Process**

Use one-half as much yeast. Allow the bread to rise over night.

Knead the second time in the morning. Proceed the same as in the quick bread.

**CORN BREAD**

2 cups of meal                                    1/2 teaspoonful of soda  
 1 cup of flour                                    1 egg  
 1 cup of sour milk                            1 tablespoonful of melted but-  
 ¾ cup of boiling water                      ter, lard or drippings  
 1 teaspoonful of salt

Sift meal, and scald with boiling water. Allow to cool. Sift flour, salt and soda together, and add to cornmeal and egg slightly beaten. Add milk, and, lastly, melted butter. Pour into hot, greased pan. Bake in a moderate oven 20 minutes, or until brown.

### EGGS

Eggs form another complete food, like milk, but are so highly concentrated that it is necessary to use them with food rich in starch (bread, potatoes, etc.).

#### Selecting and Testing Eggs

- a. Fresh eggs should have a thick, rough shell and feel heavy.
- b. Hold egg between your eye and the light. If clear, it is fresh.
- c. Drop the egg into cold water. If it sinks, it is fresh.
- d. Shake the egg, holding it near your ear. If the contents rattle, it is somewhat stale.

#### Poached Eggs

Prepare a slice of buttered toast for each egg, and keep it hot. Have ready a shallow pan containing enough boiling, salted water to cover the eggs, allowing one teaspoonful of salt to one pint of water. Break egg into saucer, and slip it carefully into the water. Cook until the white is firm, and a film forms over the top of the yolk. Pour water over the yolk with a spoon, if necessary. Remove eggs from water with a skimmer, drain, trim off rough edges, and place each egg on a slice of toast. Add salt, pepper and butter to taste. Muffin rings or egg-poachers are often used to keep eggs in shape.

#### Scrambled Eggs

5 eggs	1/2 teaspoonful of salt
1/2 cup of milk	1/8 teaspoonful pepper
2 tablespoonfuls of butter	

Beat eggs quickly; add salt, pepper and milk. Heat pan, put in butter, and when melted turn in mixture. Stir constantly until mixture is fluffy.

#### Stuffed Eggs

6 eggs	1/8 teaspoonful of pepper
1 teaspoonful of butter	1/4 teaspoonful of salt and a
1/4 teaspoonful of mustard	few drops of vinegar



Cook 6 eggs 30 minutes. Remove the shell and cut lengthwise. Remove the yolks; mash the yolks. Add butter, salt, pepper and mustard. When smooth, add a few drops of vinegar. Fill the whites with the mixture. Smooth the top. Arrange each half on a bed of fine parsley or lettuce. If liked, add half the quantity of potted or deviled ham or tongue.

#### Plain Omelet

4 eggs	4 tablespoonfuls of milk or
1/2 teaspoonful of salt	water
1/8 teaspoonful of pepper	1 tablespoonful of butter

Separate yolks from whites. Beat the yolks until thick; add salt, pepper and milk. Beat the whites until dry; cut and fold them into first mixture. Butter sides and bottom of a hot omelet pan; turn in the mixture; spread evenly. Cook slowly until well puffed up and a delicate brown underneath; place the pan on the grate of the oven to cook the top. The omelet is cooked if firm and dry when touched by the finger. Fold over, turn onto a hot platter, and serve immediately. If desired, pour one cup thin white sauce around the omelet.

#### EGGS AND MILK

##### Cup Custard

1 quart of scalded milk	1/2 cup of sugar
4 to 6 eggs	1/4 teaspoonful of salt
Nutmeg	

Mix eggs slightly, and stir in the sugar and salt, then slowly the hot milk. When the sugar has dissolved, pour into cups (about 6), and grate a little nutmeg over each custard. Set the cups in a pan of hot water, and bake in a moderate oven till a pointed knife inserted in custard comes out clean. Do not let the water in the pan boil. Serve plain or with caramel sauce.

##### Soft Custard

2 cups of milk	1/4 cup of sugar
3 egg yolks	1/8 teaspoonful of salt
1/2 teaspoonful of vanilla	

Heat milk in a double boiler. Mix egg yolks with sugar and salt. Pour hot milk over this mixture till the egg is all removed from the side of the bowl. Return to double boiler, and cook

until custard coats the spoon, stirring constantly. Strain, and, when cool, flavor. If the custard curdles, pour into a cold dish and beat vigorously with a Dover egg-beater. If desired, the whites of eggs may be beaten stiff, poached on hot water, and served on top of custard.

#### Tapioca Cream

- 4 tablespoonfuls of pearl tapioca, or
- 2 tablespoonfuls of minute tapioca
- 1 pint of milk                      1/3 cup of sugar
- 2 eggs                                1/4 teaspoonful of salt
- 1 teaspoonful of vanilla

Soak tapioca in enough water to cover, in double boiler. When the water is absorbed, add the milk and cook until transparent. Beat sugar and salt into the yolks of eggs, and pour the hot tapioca over the mixture, stirring well. Return to double boiler quickly, and cook 2 or 3 minutes. Remove from fire, add vanilla, and fold in the stiffly beaten whites of eggs. Serve cold.

#### DUMPLINGS

- 2 cups of flour                      3/4 cup of milk
- 4 teaspoonfuls of baking powder    1/2 teaspoonful of salt
- 2 teaspoonfuls of butter

Mix and sift dry ingredients. Work in butter with tips of fingers, add milk gradually, using a knife for mixing. Toss on a floured board, pat, and roll out to one-half inch in thickness. Shape with biscuit cutter, first dipped in flour. Place closely together in a buttered steamer, put over a kettle of boiling water, cover closely, and steam 12 minutes. A perforated tin pie plate may be used in place of a steamer.

#### CAKES AND PUDDINGS

The work in this should be confined to the simple white and chocolate cakes, bread puddings, and other simple dishes.

#### Pastry

To be healthful, pastry must be carefully prepared according to specific directions furnished by the teacher or other persons qualified to give directions. The heavy, underdone variety of pastry should be abandoned.



**Pie Crust**

1 1/2 cups of flour

1/2 cup of lard

1/2 teaspoonful of salt

Cold water to make stiff dough

Mix flour, salt and lard in with tips of fingers. Moisten sufficiently to roll out. Leave crust a little larger than pie-tin to allow for shrinkage. Perforate top crust to allow escape of steam. Bake in quick oven, unless filling demands slow cooking.

**PRESERVATION OF FOOD**

Including canning, pickling and preserving vegetables and fruits common in the home. Great care should be taken to thoroughly scald the vegetables or fruit, to scald the jar or can, to avoid using old rubbers which will not prevent the escape of air, and to invert the can over night, that any air remaining in the can may be detected and its contents reheated.

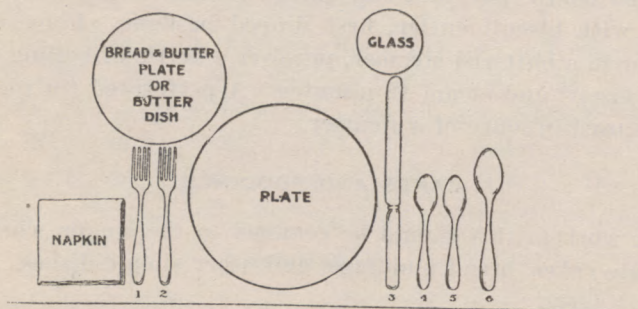
**INSTRUCTION IN THE ART OF TABLE-SETTING**

Emphasize cleanliness and neatness of the cook, kitchen, table linen and dishes.

**Silver**

- |                 |                  |
|-----------------|------------------|
| 1. Salad fork   | 4. Dessert spoon |
| 2. Dinner fork  | 5. Coffee spoon  |
| 3. Dinner knife | 6. Soup spoon    |

In using silver, use from the outside.



Edge of table.

**VEGETABLES**

(1) Wash thoroughly. (2) Pare, peel or scrape, if skins must be removed. (3) Soak in cold water until ready to cook (to keep crisp or to freshen if wilted, or to prevent discoloration).

(4) Cook in freshly boiling (water that has just reached boiling point), salted water until tender. (5) Drain off the water; shake over fire to dry off water that may not have drained off. Serve hot with seasonings.

To 1 cup of cooked vegetables, add 2 teaspoonfuls of butter,  $\frac{1}{2}$  teaspoon of salt and  $\frac{1}{16}$  teaspoon of pepper. Vegetables may be reheated over hot water in a double boiler.

NOTES: Allow 1 teaspoon of salt to 1 quart of water. Use enough boiling water to cover vegetables. Salt may be added when vegetables are put in, except in the case of delicate green vegetables, as peas, spinach, etc., when it should not be added until the vegetables are nearly done.

Vegetables are valuable chiefly for the pure water and mineral matter which they contain.

#### Time Table for Cooking Vegetables

Potatoes .....	25-30 m.	Onions .....	45-60 m.
Carrots .....	35-45 m.	Cabbage .....	46-60 m.
Turnips .....	45 m.	Cauliflower .....	20-30 m.
Beets (young) .....	45 m.	Asparagus .....	20-40 m.
Beets (old) .....	3-4 hrs.	Spinach .....	30-45 m.
Tomatoes .....	1-4 hrs.	Celery .....	20-30 m.
Parsnips .....	35-40 m.	Green peas .....	30-45 m.
String beans .....	1-3 hrs.	Lima beans .....	1 hr. or more
Green corn .....	12-20 m.	Rice .....	20-45 m.

Pare potatoes thin. The nutritive value lies close to the skin.

Cabbage cut in quarters, dropped into boiling water, and let to boil hard 20 minutes uncovered, will be mealy and more digestible than if boiled longer.

Corn on the cob dropped into boiling water, and let to boil hard 10 minutes, will not discolor or lose flavor.

#### SOUPS

Furnish receipts for the preparation of vegetable soups, including corn, peas, beans, lentils, celery, etc., with the addition of white sauce and seasonings.

Soups without stocks have for their basis white sauces, the smoothness of the soup depending upon the white sauce.



**I. Plain White Sauce**

- 1 cup of milk
- 1 tablespoonful of butter
- 1 tablespoonful of flour

**II. Medium White Sauce**

- 1 cup of milk
- 2 tablespoonfuls of butter
- 2 tablespoonfuls of flour

**III. Thick White Sauce**

- 1 cup of milk
- 3 tablespoonfuls of butter
- 3 tablespoonfuls of flour

Rub flour and butter to smooth paste. Beat gradually into scalding milk. Season to taste.

**MEATS**

A brief discussion of meats and their relative values as food.

Beef is the most nutritious meat; mutton ranks next; pork is nutritious, but difficult to digest; lamb is tender, but not as valuable as mutton; veal is the least nutritious.

This should include the question of value of long and slow cooking of inexpensive cuts of meats; for example, soup bones and pot roasts. Discuss the best methods of boiling, roasting, and frying, with a comparison of the healthfulness of the meat as prepared by each method.

**GRAVIES**

Learn the best ways of making gravies in connection with different meats.

For soups and stews, cook meat in a large amount of cold water. For roasts, sear by putting in hot water. Cook in a very small amount of water. Season thoroughly. Basting once or twice with salt water improves roast.

**SUGAR**

Sugar is made for common use from sugar cane, sugar beets and maple sap. Honey is the purest natural form of sugar.

Glucose, or grape sugar, is found in honey, fresh fruits, and on the skins of dried fruits, such as raisins, dates, etc. It is also made for commercial use from the starch of corn.

The sugar of milk is called lactose.

Sugar made from sugar cane and sugar beets is the kind most commonly used. The products of sugar cane are molasses, brown sugar, granulated, cut-loaf, powdered and confectioners' sugar.

Only white sugar is made from beets.

Sugar is very easily digested, as it dissolves so rapidly. It is a very necessary food when taken in small quantities. It produces heat and energy in the body; children, being more active than grown people, naturally crave more sweets.

#### Evil Effects of Too Much Sugar

If sugar in any form is left on the teeth, it will ferment, and cause them to decay.

If too much is eaten at one time, part of it will ferment in the stomach and interfere with the digestion of other foods.

#### Fudge

2 cups of sugar	1 teaspoonful of vanilla
1 cup of milk	$\frac{1}{4}$ of 2-oz. cake of bitter chocolate, or
2 tablespoonfuls of butter	4 tablespoonfuls of cocoa

Boil sugar, chocolate (or cocoa) and milk together till it reaches the soft ball stage. Remove from fire, and add butter and flavoring. Beat till creamy and thickened. Pour quickly into a greased tin. When firm, cut in squares.

#### Penuche

2 cups of brown sugar	1 teaspoonful of vanilla
$\frac{3}{4}$ cup of milk	1 cup of chopped nuts
2 tablespoonfuls of butter	

Boil sugar and milk to the soft ball stage. Remove from the fire; add butter, flavoring and nuts. Beat till creamy and thickened; pour into a greased tin. When firm, cut into squares.

#### Peanut Brittle

2 cups of sugar	$\frac{1}{2}$ to 1 cup of shelled peanuts
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Break peanuts in pieces, or chop them. Line a greased pan with peanuts. Put sugar in saucepan, and heat until it becomes a



thin, light-brown syrup, stirring constantly. Pour over peanuts and mark in squares. When cool, break in pieces.

Puffed wheat or puffed rice may be used in place of the nuts.

#### Molasses Candy

2 cups of molasses	1 tablespoonful of vinegar
1 cup of sugar	1 tablespoonful of butter

Boil till it is brittle when tried in cold water. Pour in a buttered pan. When cool, pull until light colored.

#### Cooked Fondant

2 cups of sugar (fine granulated)  
 2/3 cup of cold water  
 1/8 teaspoonful cream of tartar

Boil all together until it makes a soft ball when tried in cold water. Turn out on large platter, and when cool, work it till creamy. Divide into portions and flavor to taste. Shape into chocolate creams, cream dates, nut creams and bonbons.

#### RULES FOR SERVING

Cold food should be served on cold dishes, hot food on hot dishes.

When passing a dish, hold it so that the thumb will not rest upon the upper surface.

In passing dishes from which a person is to help himself, pass always to the left side, so that the food may be taken with the right hand.

In passing individual dishes, such as coffee, etc., set them down carefully from the right side.

When the dishes are being served by a person at the table, the waitress should stand to the left, hold the tray low and near the table. Take on the tray one plate at a time, and place before the person for whom it is intended, setting it down from the right side.

When one course is finished, take the tray in the left hand, stand on the left side of the person, and remove with the right hand the soiled dishes, never piling them on top of each other.

Soiled dishes should be first removed, then food, then clean dishes, then crumbs.

Fill the glasses before every course.

Never fill glasses or cups more than three-fourths full.

Before the dessert is served, remove crumbs from the cloth either with a brush, crumb-knife or napkin.

Do not let the table become disorderly during the meal.

The hostess should serve the soup, salad, dessert, coffee, and, at a family dinner, the vegetables and entrees.

The host serves the fish and meat.

#### TO CLEAN ROOM AND TABLE AFTER A MEAL

Brush up the crumbs from the floor. Arrange the chairs in their places. Collect and remove knives, forks and spoons. Empty and remove cups.

Never set any food away on dishes used for serving.

Pile all dishes of one kind together.

Brush the crumbs from the cloth and fold it carefully in the greases.

If the napkins are to be used again, place them, neatly folded, in their individual rings.

"The National System of Industrial Education," Plano, Illinois, gives a very valuable and definite course in cooking.



## DRAWING

This outline is intended merely to give a few suggestions concerning the character of the work that may be attempted by elementary schools. It must be remembered that in elementary schools, especially in rural schools, the chief aim of drawing should be to cultivate taste and to develop power of observation. To this end, all work should be of the simplest character, but correct in principle.

### FIRST, SECOND AND THIRD GRADES

1. Pleasing combinations of colored papers; forms cut from paper of one color and arranged as designs on paper of another color.

Colors and forms may be appropriate to the season; as, Thanksgiving, Christmas, Washington's Birthday, etc.

2. The construction of very simple articles, such as blotter covers, pen-wipers and boxes; Christmas gifts consisting of calendar pads, with appropriate pictures or verses, mounted on soft colored paper.

3. Model in clay: large familiar fruits and vegetables.

4. Draw the same in color without pencil outline.

5. Draw the same with pencil in outline.

6. Draw toys, such as wagons, trains, animals, etc.

7. Draw on blackboard with free arm movement, vertical, horizontal and oblique lines; also circles, ovals and ellipses.

8. Illustrate games, parades, the circus, kite-flying and daily experiences.

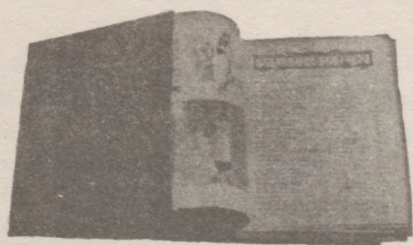
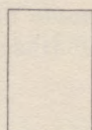
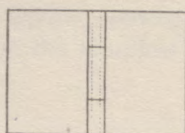
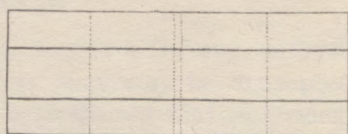
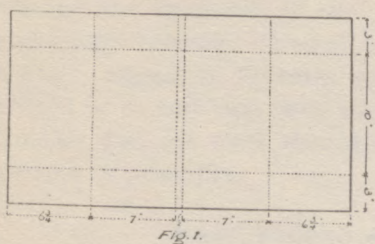
### FOURTH, FIFTH AND SIXTH GRADES

1. Draw vegetables, and simple sprays of leaves and flowers, in outline, accenting the near edges.

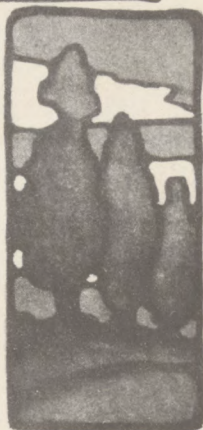
Draw butterflies and birds, making from them color-notes to be used in design.

2. From these drawings select flowers and leaves from which simple, conventional units of design can be easily evolved. Apply these units as designs for notebook covers, doilies, and similar objects. Make working drawings of envelopes, boxes, card-

# MAGAZINE COVERS







Courtesy of ATKINSON-MENTZER & GROVER.

receivers. Construct these articles, using colored paper where possible, and decorate with the units described above.

3. Model in clay: familiar fruits, vegetables and birds.

4. Draw in color, without pencil outline, flowers, fruits and vegetables.

5. Draw familiar articles of any kind, such as kitchen utensils, books, lunch-boxes, caps and hats, in outline first, then in simple light and shade.

6. Illustrate stories, tales from history, and daily experiences.

7. Free-hand lettering.

Present a simple Roman alphabet, having all strokes of the same thickness. Make pleasing arrangements of lettering for Christmas cards, program covers, notebook covers, etc.

#### SEVENTH AND EIGHTH GRADES

1. Draw fruits, vegetables, and sprays of leaves and flowers, in pencil outline. Make color studies of the same.

2. Use these forms as suggestions for units of design. Make designs for stenciling table runners, mats and borders for curtains. Pay special attention to designs intended to fit definite spaces.

3. Draw groups including such objects as vases, bowls, jugs, boxes and books, in light and shade. Teach as much perspective as is necessary for the correct drawing of these studies. Avoid scientific perspective.

Pencil drawing from life may be attempted.

4. Draw plan of schoolroom; scale,  $1/4$  in. = 1 ft.

5. If illustrative drawing be attempted in these grades, attention should be given to composition as well as to free expression.

#### GENERAL SUGGESTIONS FOR ALL GRADES

1. Study as much as possible the printed reproductions of masterpieces in painting, sculpture and architecture. Bring to the attention of pupils the excellent current magazine articles on these subjects. Lead the pupils to understand the artist's point of view, the principles of composition, beauty of line and mass. Teach them to find beautiful subjects for pictures in their own



neighborhood. Encourage them to make very simple sketches in color.

2. Suit the character of the work to the season.
3. Attempt only that which can be accomplished with success.
4. Posters should be of the simplest character, such as beautiful arrangements of lettering on soft colored paper, with no decoration or illustration.
5. Remember that training in taste is the purpose; nothing can be gained by aiming to produce showy or startling effects.

#### MATERIALS

Loose sheets of good, white drawing paper 9 x 12.

Box of water-colors (Milton Bradley or other standard make).

Colored crayon (such as Milton Bradley's Manual Arts Crayon).

Dixon's S. M. pencil.

An assortment of good colored papers for primary work.

Ten pounds of clay. (Keep moist in wooden box.)

#### COLOR

Teach primary, secondary, tertiary and complimentary colors by means of color scale.

Teach the laying of a flat wash.

Work much with secondary and tertiary colors, and their tints and shades.

Avoid the harsh effects obtained by combining primary and complementary colors.

#### LIGHT AND SHADE

Establish first the lightest and the darkest tones; then find three tones between these extremes. Draw five 1/2-inch squares, placing these tones in the squares to form a scale of values. Make constant use of this scale.

Too much care cannot be given to the proper handling of pencil and brush.



Courtesy of ATKINSON-MENTZER & GROVER.





Courtesy of ATKINSON-MENTZER & GROVER.

## GEOGRAPHY

Having in mind this thought expressed by McMurray, "The study of the earth *as related to man* is geography," this outline has been prepared.

The study of geography should give the child a true appreciation of his position in life as related to his surroundings, and acquaint him with the interdependence of mankind. Emphasize the relation between themselves and the great world outside.

Magazines and books of travel furnish excellent supplementary material to the text-book and keep the class in close touch with the people of the world. *The Natural Geographic Magazine* is valuable for its excellent illustrative matter. *The World's Work* and *The World To-Day* are magazines containing an abundance of excellent material. Good pictures can be procured at little cost. A scrapbook, made up of pictures clipped from magazines and postcards, adds much to the interest of the subject. A school museum is possible for any school. For instance, when the class is studying cotton, let some pupil get in correspondence with a school in the South. The southern boy or girl would be proud to send his northern cousin samples of cotton, from the raw to the finished state, in exchange for rocks containing certain minerals so easily found in Colorado. Children never lose their interest in the Philippines after receiving a letter from some dark-skinned child. Everything connected with the islands has an added interest to them, and they are eager to learn of the home life of their new friend. The collection thus acquired should be educative, and not a mere collection of things of no geographic interest.

### FIRST GRADE

The function of geography in the primary grades is to give the child, in a general and incidental way, various facts about common and usual phenomena in his immediate environment. In the first grade the work is conducted in an informal way, the topics taken up depending much on the interest and curiosity of the pupil. Any of the following topics may be used at any time, as they are not given in any regular sequence:

#### A. Fall Term.

1. Color of sky.
  - a. Morning, noon, and evening.
  - b. Bright and cloudy days.



2. Position of sun in sky.
  - a. Early morning.
  - b. Noon.
  - c. Evening.
3. Position of moon in sky.
  - a. Evening and morning, if seen.
  - b. Shapes and sizes.
    - (1) Quarter.
    - (2) Half.
    - (3) Full.
    - (4) New.
4. Sun and shade. Why?
  - a. Morning: Length? Which side of object?
  - b. Noon: Length? Which side of object?
  - c. Evening: Length? Which side of object?
5. Observation of any of the following after a rain:
  - a. Hills formed by rivulets cutting down the sides.
  - b. Buttes formed by rivulets cutting down on all sides.
  - c. Forming of valleys.
    - (1) Canon.
    - (2) Small valley with sloping sides.
    - (3) Wide valley.
      - (a) By direct observation and discussion.
  - d. Fans or deltas made by the streams in little puddles.
    - (1) Carrying the sediment to the puddle.
    - (2) Depositing of pebbles and coarser material first.  
Why? Experiment with sand, pebbles, coarse dirt, etc., in glasses of water.
6. Building things observed on the sand table.
  - a. Hills.
  - b. Valleys.
  - c. Fans, etc.

## **B. Winter Term.**

1. Wind and wind direction.
  - a. In connection with Robert Louis Stevenson's "The Wind," or other poems about the wind. Much may be brought out in the discussion of such a piece of literature.
  - b. Direction of wind.
    - (1) How discovered: smoke, snow, dampening hand, etc.

- c. Speed of wind.
    - (1) At the rate of four miles per hour, only leaves move; at higher rates, branches also move.
  - 2. Snow and snow crystals.
    - a. The good that snow does. Winter-wheat industry, etc.
    - b. Color and weight of snow.
    - c. Snow crystals.
      - (1) Size.
      - (2) Shape: hexagonal. Discuss in regard to shape of honey-comb.
      - (3) Pattern; naked eye; also microscope.
        - (a) Free cutting of snowflakes.
    - d. If locality is suitable, snow-drifts and snow-slides may be taken up in a very general way.
    - e. Winter sports: skating, sliding, skiing, etc., brought in incidentally.
    - f. Different forms of water.
      - (1) Ice.
      - (2) Snow.
      - (3) Water.
        - (a) Prove by experiment.
  - 3. Observation after a thaw.
    - a. Rivulets caused by melting snow, and amount of water. Length of time it remains compared with that after a rain.
    - b. Why does the water not sink into the ground so rapidly?
    - c. Amount of sediment carried.
    - d. Value of this water in irrigation.
      - (1) Relation of mountain snow and irrigation.
  - 4. Frost.
    - a. Does frost help or injure a road? How?
    - b. Pictures on windows.
    - c. Anything from the child's own experience concerning frost.
  - 5. Dew.
- C. Spring Term.**
- 1. Study of clouds.
    - a. Kinds.
    - b. Uses.
    - c. Sizes, shapes, and colors.



- d. How the sky looks before a gentle shower.
- e. How the sky looks before a hard storm.
- f. Differences in clouds in winter and summer.
2. What rain does to the air.
3. What rain does to the ground.
4. What rain does for the plants and animals.

## SECOND GRADE

### A. Fall Term.

1. Climate and temperature.
  - a. Differences in temperature between day and night.
  - b. Between morning and noon.
  - c. Reading of thermometer in connection with arithmetic.
  - d. Snow on mountains, intense heat in valleys. Why?
  - e. Difference in temperature of summer and fall.
  - f. Difference in temperature of fall and winter.
2. Observation after a hard rain. Then make on sand table.
  - a. Hills and valleys.
    - (1) Slope.
    - (2) Flow of rivulets.
    - (3) Result.
  - b. Seas.
    - (1) How formed?
    - (2) Size.
  - c. Capes, peninsulas, islands, etc.
  - d. Mountain ranges in miniature and in reality.
    - (1) Type: Long's Peak, Pike's Peak.
    - (2) Children's idea of use, height, distance to them, etc.
    - (3) Make an isthmus and a strait, if they cannot be found in a mud puddle.

### B. Winter Term.

(To be answered from observation.)

1. From which direction do the snow, winds, and clouds usually come? (Northeast.)
2. Is the temperature high or low just before a snowstorm?
3. Difference in appearance.
  - a. Snow and rain.
  - b. Snow and hail.
  - c. Rain and hail.

4. Food, shelter, and care of cat, dog, horse, and cow taken up.
5. General study of Eskimo.
  - a. Food.
    - (1) Oil, fish, seal, walrus, etc. (Brought in incidentally: Water life depends on sea-weed.)
  - b. Shelter.
    - (1) Igloo—dirt and snow.
    - (2) Building of igloo.
  - c. Clothing.
    - (1) Fur, etc.
    - (2) Pictures.
  - d. Transportation.
    - (1) Dogs.
    - (2) Reindeer.
6. Stories of Christmas in different lands. Edson, Laing, Readers.
7. Field trips in school yard.
  - a. Snow melts on which slope first? Why?
  - b. Where does it remain longest?
  - c. Value of water for irrigation.
    - (1) How gathered together, etc.

### C. Spring Term.

1. General knowledge of direction: east, sunrise; west, sunset; etc.
2. General study of Egypt and Palestine in connection with history.
  - a. Position on wall-map and globe.
  - b. Size compared with State of Colorado and United States.
  - c. Nile valley in connection with story of Moses.
    - (1) Crops.
    - (2) People.
      - (a) Kinds.
        1. Egyptians.
        2. Negroes.
        3. Method of irrigation compared with ours.
3. Wool industry taken in connection with story of Joseph.
  - a. Visit feeding-racks at sugar factory.



- b. Discuss process of preparing wool for manufacturing thread, cloth, etc.
- c. Visit museum.
- d. Visit manufacturing plant, if possible.
4. Field trip to an adjacent hill. Observe:
  - a. Slope.
  - b. Gullies.
  - c. Valleys, etc.

### THIRD GRADE

#### A. Fall Term.

##### I. HOME GEOGRAPHY.

1. a. Map of schoolroom drawn to scale.
  - (1) Desks, etc., located.
- b. Map of school building.
  - (1) Rooms, etc.
  - (2) School grounds.
- c. Field trip to high point.

##### Observation of:

- (1) Fields.
- (2) Ditches.
- (3) Reservoirs.
- (4) Roads.
- (5) Railroads.
- (6) Farmhouses.
- (7) Laid-out streets.
- (8) Churches.
- (9) Schoolhouses.
- (10) Factories.

##### Ideas of:

- (1) Distance.
- (2) Direction.
- (3) Location.

##### Physical features:

- (1) Mountains.
- (2) Hills.
- (3) Slopes.
- (4) Valleys.
- (5) Rivers.
- (6) Plains and their significance.

Beauty of plains, mountains, etc.

- d. Construction of individual maps of your region, showing aforementioned topics.
- e. Construction of a common map on sand table, locating thing mentioned.
2. Irrigation.
  - a. Value.
  - b. Compare with natural rainfall.
  - c. General study of mains and laterals; construction on sand table.
3. Potato and starch industries. Take up dry-farming of potatoes.
  - a. Making of starch.
4. Sugar-beet industry.
  - a. Visit to factory.
  - b. Making of sugar.
5. Cattle and sheep.
  - a. Food.
  - b. How connected with sugar industry?
6. Relation of country to town: automobiles, horse and buggy.
7. Relation of town to rest of the state: transportation by rail.
8. Relation of state to rest of the United States: by rail and water.

## II. FOREIGN GEOGRAPHY.

1. The Arab—type of desert region.
2. The Eskimo and Lapp—types of frigid zone.
3. The African and Filipino—types of tropical zone.
  - a. Present relation to civilized world.
  - b. Nile.
  - c. Sahara.
4. The Chinese and the Japanese—oriental types.
5. The Indian. Studies of home country.
  - a. Northwest: Indented coast develops seamen and fishermen.
  - b. Southwest: Semi-arid and arid conditions; invention of pottery; need for preserving water.
  - c. Prairies: Hunting; tent life and its significance.
  - d. Eastern woodlands: Fertile country; plenty of rain; most democratic government as result of favorable conditions.



## FOURTH GRADE

In the third grade the pupils have obtained an idea of maps and map directions from their study of the home region—its streets, directions, etc. It shall be the endeavor of this grade to make a more thorough study, using this knowledge in map studies of the continents. The best way to introduce map study is to begin with the globe, as it gives a proper idea of the shape of the earth, the relation of the continents to each other, and the proper size of the continents—not the exaggeration of Mercator's projection on a flat map. The study made of the other continents at this time should be cursory—not detailed; simply a foundation for the commercial geography of the sixth grade. The study of the United States should be more exhaustive, while the rest of North America should be left until later. Emphasis should be placed upon the mile-posts in geography—upon the products rather than upon that serious causal study which can only follow a knowledge of physical geography. However, the causal should not be neglected where it can be brought in, as we underestimate the ability of our pupils in the lower grades. Helmholtz was right when he said that “you can explain anything to a child which you understand absolutely and thoroughly yourself in its simplest terms.”

**POSITION OF CONTINENTS.**—In relation to other continents. Follow the nearest parallels to the northern and southern edges of the continent around the earth. Follow the meridians on its east and west sides north and south.

**SIZE.**—Compare with other continents, using globe—not Mercator's projection.

**North America**

Study in a general way the mountain ranges, river systems, plains, and other relief features; but postpone consideration of the parts outside the United States until a later grade.

**United States****STUDY OF RELIEF MAP**

Major highlands.

Appalachian.

Cordilleran.

Rockies.

Basin Ranges.

Sierra Nevada.

Cascades.  
 Coast Range.  
 Minor highlands.  
   Black Hills.  
   Ozarks.  
 Lowlands.  
   Atlantic plain.  
   Great central plain.  
   Pacific slope.  
   Valley of California.  
 River systems.  
   Mississippi.  
   St. Lawrence.  
   Atlantic coast.  
     Hudson.  
     Connecticut.  
     Delaware.  
     Potomac.  
     Susquehanna.  
   Columbia.  
   Colorado.  
   Nelson.

## DIVISIONS OF THE UNITED STATES

### ROCKY MOUNTAIN STATES

This section includes the States of Montana, Idaho, Nevada, Wyoming, Colorado, Utah, New Mexico, and Arizona.

**PHYSICAL FEATURES.**—This region includes the Rocky Mountains and the Basin Ranges, and extends westward to the Sierra Nevada Mountains. It lies in the basin of the Mississippi on the east, the Columbia on the northwest, and the Colorado on the southwest. A large part of the central portion, especially Utah and Nevada, does not drain at all to the sea, but lies in enclosed basins draining into salt lakes.

**CLIMATE.**—Due to the distance from the sea and the enclosing mountains, all of this region is arid or semi-arid, with hot summers and cold winters in the northern part, and very hot summers and mild winters in the southern part. In ascending the numerous mountain ranges, cooler conditions, both winter and summer, are found, and the rainfall increases.



**POSITION.**—In the interior of the continent railway-building is expensive, due to mountains, and often unprofitable, due to small population. The chief handicap to many industries is remoteness from the great centers of population.

**MINERAL RESOURCES.**—Uplift of the Rockies, breaking and rupturing of rocks, volcanic action, and the movement of mineralized waters underground have made this region, especially the Rocky Mountain part, a great reservoir of precious metals. Gold, silver, copper, and lead are the chief metals mined.

**AGRICULTURE.**—Very little of the land, except in mountain valleys somewhat elevated, can be cultivated without irrigation or dry-farming. Irrigation is extensively practiced for wheat, fruit, beet sugar, and potato-raising. Dry-farming: cultivation of grain, but more successful as a grower of forage for the dairy industry.

**STOCK-RAISING.**—Sheep and cattle; but industry giving way before farming.

**MANUFACTURING.**—Not important, largely due to railway rates and distance from market; for coal, the other factor for manufacturing, is often present.

#### PACIFIC COAST STATES

Composed of a series of gigantic blocks lifted up as mountains, while the troughs between the blocks make the Gulf of California, the valley of California, the valley of Willamette in Oregon, and Puget Sound in Washington.

**CLIMATE.**—California has hot, dry summers and mild, wet winters. The summers and winters of Oregon and Washington, west of the Cascades, are mild, with much rain falling, mostly in the winter; while the part of Oregon and Washington east of the Cascades is arid, with hot summers and cold winters.

**POSITION.**—On the Pacific coast, with good opportunity for trading with the Orient, Alaska, Australia, and South America.

**MINERAL RESOURCES.**—Not so great as in the Rockies, except the gold in the Sierra Nevada and the oil in southern California.

**LUMBERING.**—The great lumber reserve of the United States is in the fir and cedar forests of western Washington and Oregon.

**AGRICULTURE.**—California: great granary of the valley of California; fruit-raising in the southern part. Oregon and Washington: fruit-raising, hop-raising, and dairying in the wet western part; fruit-raising and wheat-raising in the arid region east of the Cascades.



## NEW ENGLAND STATES

**PHYSICAL FEATURES.**—Northern part of Piedmont Plateau, heavily glaciated. Glacier wore away rather than deposited; resultant: poor soil, waterfalls, and good harbors.

**CLIMATE.**—Its northern position. Winds prevailing from the west. Continental climate. Effect of Gulf Stream south of Cape Cod and of Labrador current north of it. The marine climate compared with the interior. Effect of heavy snowfall on lumbering in Maine, fogs in Newfoundland on fishing, spring freshets on lumbering industry.

**POSITION.**—Isolation of New England from the rest of the country by a western mountain barrier. Hoosac tunnel as a highway to the West. Nearness of New England to Europe, and closeness to Middle Atlantic coal fields. Immigration and fuel; lumber products.

**LUMBERING.**—Rocky soil; pine tree family. Snow helps lumbering by spring freshets. The paper-pulp industry. Rock maple of Connecticut and Lake Champlain basins. Maple-sugar industry.

**MINERAL RESOURCES.**—Absence of coal in New England. Granite rocks of Piedmont, quarries of reddish granite at Westerly, Rhode Island, and gray granite at Barre, Vermont. Folding of mountains and rocks in them changes shale to slate and limestone to marble. Presence of both of these stones in folded Green Mountains in Vermont. Bring out presence of a dense population, which provides market for New England building-stone, while Colorado marbles and granite, often as good, are yet undeveloped, due to distance from market.

**AGRICULTURE.**—The absence of good soil in New England. Competition of western good soils, causing abandoned farms in upland and rural districts. Intensive agriculture, due to dense manufacturing population, market-gardening, poultry-raising, dairying. Special forms of agriculture, due to local soil conditions. Tobacco in Connecticut River valley; cranberries at Cape Cod; potatoes. Eastern Maine.

**MANUFACTURING.**—Factors developing it in colonial days:

1. People settled in towns or harbors; in the valleys where soil was good; or often settled around the meeting-house in a "town" for protection from Indians, and for church and school facilities.



2. Poor soil gave little return; so most things were made at home.

3. Long winter days and nights gave abundant leisure. Early clock, hat, and woodwork manufacture carried on in farm-houses. (Note like conditions in Switzerland, Norway, and Sweden, and see what natural factors in New England resembled these.)

*Modern Manufacturing Factors—*

Historical: The Great Embargo.

Geographic:

- a. Water power.
- b. Good harbors.
- c. Nearness to Middle State coal fields.
- d. Poor soil drives labor from farms.
- e. Nearness to east Canada and Europe gives cheap labor.

Economic: An old community has capital to start manufactures.

FISHING AND COMMERCE.—Conditions favorable to fishing:

1. Good harbors and timber to build ships.
2. Continental shelf widens to form banks of Newfoundland—a fishing place for cod.
3. Herring fishing of the coast.
4. Whale fishing of Nantucket and New Bedford.

A typical fishing town—Gloucester.

The sardine industry—Eastport.

COMMERCE.—Fishing makes a commercial nation, because it teaches the sea-faring life, and fishermen moving from place to place not only must find a market for surplus fish, but have many opportunities for trade.

The old New England sailing vessels and their triangular voyage. Codfish to West Indies traded for molasses; molasses taken to New England and made into rum; rum taken to Africa and traded for slaves; slaves to West Indies traded for molasses to make rum.

*Present-Day Commerce.*—Largely imports of raw materials used in manufacture and food supply, and export of manufactured goods.

## MIDDLE ATLANTIC STATES

PHYSICAL FEATURES.—Largely (with exception of New York and northern New Jersey and Pennsylvania) unglaciated.

## DIVISIONS—

- (1) Coastal Plain.
- (2) Piedmont Plateau.
- (3) Appalachian Mountains.
- (4) Lake Plains.

1. *Coastal Plain*.—A sandy area, varying from scarcely a mile in width to nearly one hundred miles. Was formed by deposits on the sea-floor, and subsequent elevation has lifted the continent and brought this strip of sea-floor above sea-level. This strip was early settled, but is often too sandy for agriculture. Good for market-garden products, sweet potatoes, and water melons.

2. *Piedmont Plateau*.—A much worn-down region, composed of old, much-folded rocks lifted above sea-level before either Appalachians or Coastal Plain. It is separated from the Coastal Plain by the "full line." This full line was the old seashore before uplift brought the Coastal Plain above sea-level. The streams flowing across the harder rocks of the Piedmont into the softer rocks of the Coastal Plain wear harder on the latter, causing waterfalls and rapids where Piedmont joins Coastal Plain. This is, and was during colonial times, the head of navigation on many streams, and this fact, together with the use of the water power, located many cities on the full line. Trenton, N. J.; Philadelphia, Pa.; Baltimore, Md., and Washington, D. C., are on the full line.

3. *Appalachian Mountains*.—Divisions:

- (a) Blue Ridge.
- (b) Great Valley.
- (c) Alleghany Plateau.

a. Blue Ridge: Composed of old granite rocks. Highest peaks in the Appalachians in this ridge. Gaps through it to the West.

b. Great Valley: Series of parallel ridges, trending from northeast to southwest. Water gaps and wind gaps breaking across ridges on an east-to-west line. These ridges and valleys are on the site of a former great folded mountain region. At present streams have worn down the soft shales and limestones of the tilted rocks into valleys, leaving the hard sandstones stand



out as ridges. Valley soils often very fertile; ridge lands poor soil. In Pennsylvania folded ridges often contain coal, changed by the folding from soft coal to hard coal.

c. Alleghany Plateau: A high plateau of horizontal rock structure, the hills and valleys being due to the wearing-down of streams on the elevation of the region. Contains numerous beds of bituminous or soft coal. Oil and gas also present. Soil poor, and farming not so important as in many sections. Separated from the Great Valley by the great wall called the Alleghany Front. Few highways through this Alleghany Front to the West, except where some river flows eastward or westward, as in the case of the Susquehanna, Potomac, and Kanawha. These rivers across the Front and across the ridges of the Great Valley have formed the highways of railroads to the West. The Pennsylvania Railroad follows the Susquehanna, the Baltimore & Ohio the Potomac, and the Chesapeake & Ohio the Kanawha.

4. *Lake Plains*.—The narrow belt along the Great Lakes in Pennsylvania and New York. The lowering of the lake-level caused this land.

CLIMATE.—Continental climate: Cool summers and mild winters on the coast; cool summers and cold winters in the mountains; hot summers and cold winters in the Piedmont and Alleghany Plateaus. Rainfall heaviest on the coast and in the mountains. Why?

POSITION.—On coast, facing Europe; on highways to the West through Mohawk, Susquehanna, and Potomac Rivers.

AGRICULTURE.—Good soils in Piedmont region, lake plains, mountain valleys, and strips of coastal plains. Nearness to dense population provides good markets. Market-gardening, dairying; hay, potatoes, corn, oats, and wheat chief crops.

FISHING.—Shad migrates up the streams to spawn. Oysters find ideal conditions in the shallow, warm, brackish waters of Chesapeake Bay. Bluefish, mackerel, and menhaden obtained in deep sea waters off coast.

MANUFACTURING.—Conditions favorable:

- (a) Presence of immense beds of coal.
- (b) Transportation routes.
- (c) Central position compared with other sections.



Manufactures heavy where cost of fuel is important element in price. Iron and steel, glass, brick, cement, important products where this is true.

COMMERCE.—Good harbors on coast, due to sinking of land, *drowning* the lower end of coast rivers. These *drowned river valleys* also afford highways to the rich Mississippi Valley, making these ports great export and import ports for the whole country. In general, the size and importance of the port cities depend on the height of the mountain barrier behind them. The higher the grade of the pass over the mountains, the smaller the port on the coast. Why?

Location of rivers.

Lists of cities.

#### SOUTHERN STATES

##### PHYSICAL FEATURES—

- (a) Coastal Plain.
- (b) Piedmont.
- (c) Appalachians.
- (d) Mississippi Valley.
- (e) Gulf Plain.
- (f) Great Plains Region.
- (g) Florida.

a. *Coastal Plain*.—Widest in south, attaining a width of 200 miles in North Carolina. Sandy soil, covered with pine trees (why?); whence arise the Georgia pine-lumbering and the turpentine industry.

b. *Piedmont*.—Soils of clay have given rise to great agricultural section—tobacco in northern part, cotton in south. Hard-wood forests; why?

c. *Appalachians*.—Little developed because rugged. People backward. Immense resource of hard-wood forests. Immense beds of coal in Cumberland Plateau (southern extension of Alleghany Plateau).

d. *Mississippi Valley*.—Great cotton section. Uplands, of red clay soil, yielding less than one bale per acre; lowlands yielding as high as three bales per acre; why? Poor whites on uplands; dense negro population in lowlands; why? Delta region devoted to sugar-cane culture.



e. *Gulf Plain*.—Low plain, covered with dense pine forests in eastern part, and with grass land in central and western Texas. Rice, sugar cane, cotton, and cattle are raised.

f. *Great Plains Region*.—High plateau, with low rainfall confined to western and northwestern Texas. Cattle-raising and "dry-farming."

g. *Florida*.—Low up-arching of the sea-floor, bringing coral and other limestones above sea-level. Surface at no place very high above the ocean; soil sandy, heavily covered with pine forests, except the Everglades, where reeds and other grass-like plants cover the half-drowned surface.

CLIMATE.—Three factors:

1. Latitude; compare Florida and Virginia.
2. Distance from the sea; compare South Carolina and western Texas.
3. Elevation; compare Savannah on the coast to Mount Mitchell (about 7,000 feet high).

*Most of the South has a heavy rainfall, hot summers and mild winters.* Exceptions: (a) The mountains have cool summers and cold winters. (b) Western Texas has little rainfall, with dry, hot summers and occasional cold periods, called "northers," in winter. (c) Florida is warm throughout the year, the southern part escaping frost altogether.

AGRICULTURE.—Agriculture flourishes because of warm climate, heavy rainfall, and good soil. An abundant labor supply is furnished by the negroes, descendants of the slaves. Cotton, corn, tobacco, rice, sugar cane, and early vegetables are principal crops.

MANUFACTURING.—Manufacturing has not developed much in the South, because the laboring population in the past was largely slave labor that was not skilled enough to manufacture. Today white labor is kept out by the great amount of negro labor. This handicaps manufacturing.

*Advantages* that are today attracting textile manufacturing to the South are:

- a. Presence of raw cotton.
- b. Power in the rapids of the fall line and the coal-beds.
- c. Low taxation, few factory laws, and cheap labor.

COMMERCE.—Developing, but handicapped by the absence of many railroads and the neglect of river navigation. The harbors



are shallow, and constantly being filled up by sand brought by rivers and shore currents.

River highway.

Cities and rivers.

#### CENTRAL STATES

**PHYSICAL FEATURES.**—In general, include the valley of the great Mississippi north of the mouth of the Ohio; also the drainage basin within the United States of western Lake Erie, Lake Huron, Lake Michigan, and Lake Superior, together with the southern part of the Nelson Basin.

*Surface.*—The surface is a great flat plain, which, however, has been produced in two ways:

1. The prairie region—the region north of the Missouri and Ohio Rivers. Forested east of Illinois, and north of central Wisconsin and Michigan. The rest covered originally with high grass. In New England the glacier wore away the soil, but here the glacier ground up the various rocks over which it passed, and, mixing them together, dropped them to form a layer of mingled ground rock beneath it. This soil is very fertile, because it contains so many different kinds of mingled mineral materials. The great corn belt does not extend south of the glacial boundary. The great wheat area is in the northern part of the glaciated belt.

2. The great plains region—the area in the Central States west of the 100th meridian. The land is an elevated sea-floor, worn down almost as far as the streams can wear it. It is treeless, due to low rainfall; while the treelessness of the prairie region is due to soil conditions and prairie fires. Trees are replaced by buffalo grass and other similar grasses. These dry on the ground, forming natural hay and making the plains region a great grazing region.

**CLIMATE.**—Extremely continental: hot summers, cold winters; moderate rainfall in east, dropping to one-half as we pass the 100th meridian; why?

**AGRICULTURE.**—These Central States east of the 100th meridian are the “granary of the Union.” Corn and oats are the chief grains south of the forty-fifth degree; north of that they are replaced by wheat. Corn is used to fatten immense numbers of hogs and cattle. Land values in the corn belt are higher than in any other equal area in the United States, if we except limited tracts in the East and irrigated tracts in the far West.



**MINERAL PRODUCTS.**—Ohio, Illinois, Missouri, and Iowa contain vast coal fields. The old, worn-down stumps of immense mountain chains in Michigan, Minnesota, and Wisconsin contain the iron remaining from the thousands of feet of rock above and caught in the troughs of the folded rocks. Copper in its metallic state is found in one extremely rich area on the shore of Lake Superior. Brick is burned everywhere, limestones and sandstones are mined (the Bedford oolitic limestone of Indiana is famous), and cement is made in many places.

**MANUFACTURES.**—Although this is principally an agricultural region, it is a great manufacturing region as well, due to good transportation facilities and the presence of coal. Iron and steel, wheat and flour, and packing-house products are the chief manufactures.

**COMMERCE.**—Although the Central States are handicapped by their distance from the sea, they have unrivaled waterways. The Great Lakes afford an easy highway east and west. The grain, lumber, and iron are going east on the Great Lakes, and the coal and manufactured products coming west. Why is not iron-smelting carried on at the iron mines, instead of at Pittsburg or Cleveland?

The Ohio, Mississippi, and Missouri should be vast arteries of traffic, but today are little used, due to the railroads. The reasons for this are the uncertainty of the state of water in the river, the slowness and unreliability of the traffic, and the fact that any place at a distance from the river is compelled to use the railroad part of the way. Government improvement of channels and the building of boats to float in shallow water will help overcome these factors.

**Railroads.**—The Central States region is the region of the railroad, because: (1) it is very easy and cheap to build a railroad on flat land; (2) more goods can be pulled with the same power on flat land.

#### FIFTH GRADE

##### Geography of Colorado

##### DIVISIONS OF THE STATE—

1. Eastern plains region.
2. Mountain ranges.
3. Park region.
4. Western slope.



## CLIMATE—

*Factors Influencing:*

1. Distance from the sea.
2. Mountain ranges.
3. Altitude.
4. Latitude.

*Characteristics of Climate:*

1. Low humidity or dry air.
2. Large amount of sunshine.
3. Change in temperature from day to night and sun to shade.
4. Low rainfall.

*Characteristics of Climates of Different Regions:*

1. Plains region: Hot summers; cold winters; dry air; most of rain during summer; rainfall, ten to seventeen inches.
2. Mountain region: Short, cool summers; long, cold winters; much snow; rain mostly in warm season; rainfall much more than on plains—twenty to forty inches. Great shifts in temperature from day to night and sun to shade.
3. Park region: Cool summers, very cold winters; very little rainfall—five to twelve inches. Why little rainfall?
4. Western slope: Hot, dry summers and cold, snowy winters. Winters have fewer "cold waves" than eastern slope, but general temperatures are lower. Rainfall less than east in general—nine to fourteen inches.

*Points for Teacher to Consider:*

1. Mountain (night) and valley (day) breezes.
2. The Chinook wind, or dry, warm west wind of winter. Its effect on stock-raising and making the eastern slope a health resort.
3. Inversion of temperature, or sinking of cold air at night into valleys. Its effect on the fruit industry, locating the orchards on mesas.
4. The zones of climate up a mountain slope like Pike's Peak; Canadian, Hudsonian, and Arctic zones.

*References.*—Bulletin I of the Weather Bureau, entitled Henry's "Climatology of the United States," Colorado Section; Colorado Sectional Report of the Weather Bureau, published monthly by the Weather Bureau, Denver.



## PLANT LIFE—

1. *Plains Life*.—Trees: broad-leaved and narrow-leaved cottonwood, choke cherry, occasionally yellow pine. Shrubs and herbs: sagebrush, cactus, yucca, Russian thistle, gramma grass, buffalo grass, blue-stem, wild onion.

The way plants of plains fit themselves to dry plains conditions and keep what little moisture they have.

a. Cactus has lost its leaves, which have been replaced by spines, so that there is a much smaller space to lose water by evaporation.

b. Sagebrush is covered with down, which prevents wind from blowing moisture away from the pores of the leaf.

c. Gramma grass and buffalo grass curl up, and thus prevent much water from being lost from the leaf.

d. Alfalfa has a deep root extending down to water in the ground.

e. Wild onion stores food and water in its underground bulb.

2. *Mountain Life*—

a. *Lower or Wooded Mountains*.—Note that most of the broad-leaved, or deciduous, trees grow along the streams, while the pine-like trees grow on the slopes. Which requires the more moisture? Why? Note the typical broad-leaved trees, narrow-leaved cottonwood, birch, mountain maple, and trembling aspen. Which one does not always grow in the valley by the stream, but often on the slopes?

Notice the various pine-like, or conifer, trees. Some of the common ones are the pinon pine, yellow pine, white-barked pine, white fir, Douglas spruce, Colorado blue spruce, Engelmann's spruce, and the juniper.

Notice whether you can see any difference in the number of trees on north- and south-facing slopes of the mountain valleys. Which slope is the one shaded and keeping the snow the longer? Notice the yellow pine tends to grow on the south slope and the spruces on the north slope.

b. *Mountains Above Tree Line*.—Do the plants above the tree line grow in a continuous carpet, or do they grow in patches with spaces between? Notice that most of the plants assume two positions: the cushion plant, like a moss in its general shape, and the rosette plant.



Are the climatic conditions on a mountain very severe on plants? Answer: They are, for the following reasons:

(1) The change from day to night is so great that it often means a difference of from ninety degrees in the sun at daytime to twenty-five degrees in the night time. This is because the air is so thin on our mountains that the sun shines down to the ground easily in the daytime, and there is no blanket of thick air to hold in the heat during the night. Therefore, on our mountain-tops in Colorado we might be said to have about two seasons in a day, or in all 730 seasons during the year. The plant has to fit itself to all these hard conditions.

(2) The soil is so thin or so frozen that the plant cannot get much water from the ground, but all this time it is rapidly losing moisture into the thin air.

(3) The wind is very high and dries out the plant.

How do plants protect themselves from these conditions? Answer: They protect themselves in many of the same ways that the plants of the plains protect themselves: (1) by being close to the ground out of the wind; (2) by small leaves; (3) by thick, tough leaves; (4) by leaves covered with down.

*Points for Teacher to Consider:*

Mountain plants often have brighter color—more notably brighter blues rather than reds; larger flowers in relation to the size of the plant; more oils and nectars than plants below. The bee industry flourishes in Switzerland and the Pyrenees in proportion to altitude of the hives. The peculiar flavor of Alpine hay, due to oils in it, makes Swiss and other cheeses made from milk of cattle and goats pastured on this hay a natural monopoly of the Alps.

*Reference.*—Schimper's "Plant Geography" (chapter on "Mountains").

ANIMAL LIFE—

Have the children give some of the typical animals of the plains region. Study the colonial life of the prairie-dog. Note the relation between the killing off of coyotes and the number of jack rabbits. Note the magpie as a carrier of hog cholera, due to its scavenger habits of flying from pen to pen.

Among the mountain animals, study the effect of the killing of the mountain lion on the number of deer. Notice how some of



our mountain birds are white in winter time, and covered with dark feathers or down in summer time. Why?

Name two typical Colorado birds not at all found in the East. Blue jay and magpie.

#### PEOPLE—

Trace the distribution of the Indians before the white man came to Colorado, telling why there were few Indians in the very rugged mountain regions. What animals in the plains region of the east attracted the Indians to this region? Why were they forced to be moving from place to place? What were some of the chief tribes of Indians?

If the railroad had not been invented until one hundred years later, what effect would this have had upon the settlement of Colorado? Why would California have been less affected by a later invention of the railroad?

#### INDUSTRIES—

*Agriculture.*—What two methods of agriculture are carried on in Colorado?

Where is the largest dry-farming district? Answer: The eastern plains.

Where is the greatest irrigated district? Answer: The north-eastern part of the state, just east of the mountains.

Note that more irrigation is carried on just east of the mountains, because of the number of small streams there that join into trunk streams few and far apart farther out on the plains.

Note that the fact that the most of the rain comes in summer in the plains district makes it an ideal dry-farming district.

Account for the fact that Colorado does not raise so large crops or so good corn as the Middle West.

Note that the large amount of sugar in Colorado crops favors the cultivation of the sugar pea and sugar beet. It is possible that this larger amount of sugar is due to the effect of the altitude and low humidity on the plants. Certainly, it is peculiar to Colorado, and many claim that other vegetables, like cabbage, turnips, and parsnips, raised in this altitude, have a larger sugar content.

Notice that the fruit district is chiefly confined to the western slope, largely due to the fact that cold waves and late spring freezes are less frequent there than east of the mountains. The



single exception is the Canon City district, protected by mountains on the north.

Name some of the chief crops of Colorado, telling where they are raised and, if possible, why.

Notice how well the potato (first cultivated by the Peruvians in the high tablelands of the Andes) seems to flourish when it is returned to an ancestral mountain home in such a region as Colorado. Notice how splendidly the potato yields in the high park districts. Name the chief potato districts of the state.

*Grazing.*—Why is the open range no longer a possibility over the eastern plains district? Why are beef cattle still ranged in the mountain parks? What effect has the melting of snow, due to the dry Chinook, or west wind, on the cattle industry of the eastern plains district?

What industry on the plains has been helped by the silo?

What crops are specially adapted to dry-farming?

What is alkali? Why is it not present to any extent in eastern soils, and how may it be eliminated?

*Mining.*—Notice that the conditions which give the precious metals in Colorado are as follows: In the uplift of the mountains, numerous breaks and cracks have been made in the rocks. Often lava, from hidden volcanoes, has been forced up toward the surface through these cracks. This lava has not only heated the water and made it dissolve minerals more readily (just as hot water dissolves sugar more easily than cold water), but the water coming up along these cracks has cooled, and, as it cooled, the mineral formed out of the water, was deposited along the edge of the crack. Thus a mineral vein was formed. Later ages of wear, cutting down the mountain, often exposed these veins.

As the above conditions are found only in mountains, our metal-mining is confined to the mountainous part of the state.

Notice how low-grade ores (those where a pound of ore would contain much less than a cent's worth of gold) are now smelted by the use of the cyanide process. Notice how the war in Europe may affect the mining of gold in Colorado, because the potash for the cyanide comes from Germany.

Note that the metal-mining camps in Colorado are declining as agriculture is increasing.

Notice that coal-mining in Colorado is hardly ever in the mountain district proper, but in the foot-hills, where the coal-bearing



rocks called the Laramie Formation come to the surface. Here the chief coal-mining towns—Canon City, Florence, Trinidad, Walsenburg, etc.—are situated.

Notice the three kinds of coal in Colorado: (1) lignite, largely mined in the northeast and central-east district (Greeley, Boulder, Denver, and Colorado Springs districts); (2) bituminous, a harder coal, mined at Canon City, Trinidad, and Walsenburg; (3) anthracite, mined at Crested and Anthracite Buttes, where it has been formed by lava flows heating the coal and changing its structure.

Notice that Colorado probably has more coal than Pennsylvania.

*Manufacturing.*—Notice that this is largely confined to making up the raw products of the state: beet sugar and pea-canning in the northeast, creameries and condensed-milk factories especially in the Arkansas valley, and the smelting of iron at Pueblo.

Bring out how freight rates hurt Colorado manufactures, as does our distance from the coast.

*LOCATION OF CITIES.*—Note that the three largest cities in Colorado—Denver, Pueblo, and Colorado Springs—are on the contact line of mountain and plain. Some of the reasons for this are as follows: (1) Railroads can be easily built to the mountain barrier, but it is expensive to build beyond. (2) Cities in this line can act as supply depots for both mining in the mountains and agriculture and ranching in the plains districts. (3) North-and-south railroads run along the plains as near the mountains as possible.

*Denver.*—Denver originally owed its being to the fact that it was a supply depot for the mines in the mountains, and, as these declined, it became the marketing center for the rich agricultural districts. As the end of the railroad, it early had an advantage over Cheyenne. Wyoming, on a transcontinental line. Now Denver finds it is restricted in its markets by not having a line across the mountains to tap the rich great basin district. A tunnel is contemplated through the Divide to open these resources, and may mean as much to Denver as the Hoosac tunnel through the mountains from the Connecticut to Hudson River valleys meant to Boston.

*Pueblo.*—Pueblo is located between the iron fields of Wyoming and the coking-coal fields in southern Colorado. From Palmer Lake to Pueblo is all a down-hill grade on the railroad, as it is



from the southern coal field to Pueblo. This makes it an ideal location for an iron smelter. Pueblo also benefits from the gateway of the Arkansas up to the central part of the state, and by the rich agricultural district of the Arkansas southeast of it.

*Colorado Springs.*—Colorado Springs owes its existence to its scenery and fine climate. In the uplift of Pike's Peak the rocks to the east were tilted up, forming the curious formation in the Garden of the Gods. Its cool climate of summer, due to its altitude of 6,000 feet, attracts thousands of summer visitors; while its protected situation, with the high Arkansas-Platte divide to the north and Pike's Peak to the west, insures a mild winter climate, with long periods of westerly winds, thoroughly dry and warm (due to being compressed, as air in a bicycle pump) from descending the mountain wall. These dry, clear, bracing autumns and winters make Colorado Springs an ideal health resort.

NATIVE PLANTS OF COLORADO.—Of the thousands of varieties of Colorado's native trees and shrubs the following are considered the best:

#### TREES

*Acer glabra* (mountain maple) ; likes association and moisture, but will grow in the open.

*Alnus tennifolia* (mountain alder) ; likes damp places.

*Amelanchier alnifolia* (juneberry, serviceberry) ; will grow in exposed positions.

*Betula fontinellia* (water birch) ; likes moist places.

*Crataegus coloradensis* (Rocky Mountain thorn) ; white flowers, red berries; exposed positions.

*Corylus rostrata* (Rocky Mountain hazel) ; open places.

*Prunus americana* (wild plum) ; open places.

*Prunus virginica* (choke cherry) ; open places.

*Prunus demissa* (wild cherry) ; erect and slender.

*Populus angustifolia* (narrow-leaved cottonwood).

*Robinia neo-mexicana* (pink-flowering locust).

#### SHRUBS

*Cornus stolonifera* (dogwood) ; white fruit; prefers moist places; will grow anywhere.

*Cornus canadensis* (red-fruited dogwood) ; likes moisture, but will grow anywhere.



*Cercocarpus discolor* (mountain spirea); white, plume-formed flowers; likes exposure.

*Jamacia americana*; white flowers with orange fragrance; prefers humidity and shade.

*Physocarpus Ramaleyi* (nine-bark); white flowers; likes partial shade.

*Rubus deliciosus* (thimbleberry); purple, raspberry-like fruit.

*Ribes aurea* (yellow currant); grows anywhere.

*Ribes cereum* (pink currant); red fruit.

*Aster adsensus*; violet-blue; midsummer.

*Aster Posterii*; small, white; found everywhere.

*Campanula rotundifolia* (mountain harebell).

*Calochortis gunnisonia* (Mariposa lily).

*Castilleja linarifolia* (tall painter's brush); pale-red flowers.

*Castilleja integra* (dwarf painter's brush); rich orange-red; numerous in foothills.

*Clematis Fremontii*; erect-growing tuft form; thick purple sepals.

*Clematis alpina*; both trailing and climbing; purplish-blue flowers.

*Chrysopsis villosa* (golden-yellow aster).

*Coriopsis tinctori* (yellow ticksaw).

*Delphinium Nelsoni* (mountain larkspur); dwarf; dark blue.

*Epilobium coloratum* (mountain willow herb).

*Gaillardia aristata* (blanket flower); orange and maroon color.

*Geranium Fremontii* (cranebill); lavender.

*Iris missouriensis* (lavender fleur de lis).

*Lepachys columnaris* (fairy torch); yellow.

*Lepachys pulcherrima* (fairy torch); bronze, purple ray.

*Linum perenne* (flax); lavender-blue.

*Lupinus decumbens* (lupine); tall, purple.

*Lupinus argentea* (lupine); silver foliage, blue flower.

*Pusinus plattensis* (prairie lupine); lavender.

*Mentzelia ornata* (evening star); white.

*Mertensia ciliata* (prairie bluebell).

*Mertensia lanceolata* (mountain bluebell).

*Pentstemon barbatus* (bear tongue); tall, orange-red.

*Pentstemon glabra* (bear tongue); lavender-blue.

*Pentstemon caerulea* (bear tongue); dwarf, pale blue.



*Rosa Woodsii* (tall wild rose); grows anywhere.

*Phus glabra* (medium-growing sumac); exposed, well-drained positions.

*Sambucus canadensis* (elder); dark-purple fruit, maturing to black.

*Sambucus melanocarpa* (black-fruited elder).

*Shepherdia argentea* (buffalo berry); a silver-foliaged, spiny shrub, with red fruit.

#### DWARF SHRUBS

*Berberis repens* (trailing barberry); exposed positions.

*Physocarpus Torreyi* (nine-bark); partial shade.

*Potentilla fraticosa* (shrubby cinquefoil, or five-finger); yellow flower; moist places.

*Ribes saxosum* (mountain gooseberry).

*Rosa Arkansas* (wild rose); red fruit.

*Rosa blanda*; medium-growing; red fruit.

*Symphoricarpus occidentalis*; this is the winter form of the snowberry, but best known out here as wolfberry.

*Symphoricarpus panicifolia*; another form of the snowberry, commonly called buck rush.

#### HERBACEOUS FLOWERING PLANTS

*Abronia fragrans*; white, fragrant flowers; trailing habits.

*Achillea millefolium* (white yarrow).

*Anemone patens* (early pasqueflower); purple.

*Anemone cylindrica* (windflower); white.

*Anemone Richardsonii* (windflower); light purple.

*Aqualegia caerulea* (columbine, state flower); lavender and white.

*Aqualegia chrysantha* (golden-spur columbine).

*Aster laevis* (Michaelmas daisy, or starwort); lavender-blue flowers in fall.

*Polemonium confertum* (Jacob's ladder); blue flowers.

*Rudbeckia kirta* (cornflower, or black-eyed Susan).

*Solidago spectabilis* (tall golden-rod).

*Solidago himilis* (dwarf mountain golden-rod).

*Thermopsis rhombifolia* (buffalo pea); yellow.

*Veronica alpina spicata* (speedwell); light blue.



## MOUNTAIN PEAKS OF COLORADO—

	Feet		Feet
Mount Massive .....	14,424	Mount Maroon .....	14,003
Mount Elbert .....	14,421	Mount Capitol .....	13,997
Sierra Blanca .....	14,390	Snowmass Mountain...	13,970
Mount Harvard .....	14,375	Pigeon Mountain .....	13,961
La Plata Mountain...	14,342	Mount Ouray .....	13,956
Gray's Peak .....	14,341	Mount Grizzly .....	13,956
Mount Torrey .....	14,336	Horseshoe Mountain...	13,912
Mount Evans .....	14,330	Mount Blanc .....	13,905
Mount Lincoln .....	14,297	Mount Frustum .....	13,893
Mount Buckskin .....	14,296	Pyramid Mountain ....	13,885
Uncompahgre Peak ....	14,289	Silver Heels Mountain..	13,855
Long's Peak .....	14,271	Mount Haynes .....	13,832
Quandary Peak .....	14,266	Mount Arkansas .....	13,807
Castle Mountain .....	14,259	Mount Hamilton .....	13,800
Mount Wilson .....	14,250	Mount R. G. Pyramid..	13,773
Mount Antero .....	14,245	Mount Rowter .....	13,750
Mount Shavano .....	14,239	Mount Ptarmigan .....	13,746
Mount Crestone .....	14,233	Mount Gibson .....	13,729
Mount Princeton .....	14,196	Mount Silesia .....	13,699
Mount Yale .....	14,187	Mount Oso .....	13,640
Mount Bross .....	14,185	Spanish Peaks .....	13,620
Baldy Mountain .....	14,176	Mount Grayback .....	13,615
Mount of Holy Cross..	14,170	Mount Rosalie .....	13,575
Mount Lizard Head....	14,160	Mount Guyot .....	13,565
Mount Sneffles .....	14,158	Mount King Solomon..	13,550
Goats Mountain .....	14,132	Trinchera Mountain....	13,546
Pike's Peak .....	14,109	Mount Buffalo .....	13,541
San Luis Mountain....	14,100	Mount White Rock ....	13,532
Mount Red Cloud .....	14,092	Mount Arapahoe .....	13,520
Mount Culebra .....	14,069	Mount Dunn .....	13,502
The Wetterhorn .....	14,069	Mount Dolores .....	13,502
Mount Simpson .....	14,055	Mount Kendall .....	13,480
Mount Aeolus .....	14,054	Sultan Mountain .....	13,336
Needle Mountain .....	14,051	James' Peak .....	13,283
Mount Sherman .....	14,048	Mount Homestake ....	13,227
Mount Humboldt .....	14,041	Mount Hunchback ....	13,133
Mount Stewart .....	14,032	Mount Sopris .....	12,823
Mount Handie .....	14,008		



Eight miles south of due west from Denver, and thirty-five miles distant, is Mount Evans; its summit 14,330 feet above sea-level. The first name given to the peak was "Mount Rosa." The name was later changed and the great peak named in honor of Governor John Evans.

Two miles southeast of Mount Evans is Mount Rosalie, the highest peak in a group of several as yet unnamed.

Due west from Denver, and next in height to Mount Rosalie, is James Peak, named for the botanist and historian of Long's Exploring Expedition.

Looking to the north, fifty-five miles from Denver is Long's Peak.

Sixteen miles south of Long's Peak is Arapahoe Peak.

Midway between Long's Peak and Arapahoe Peak is Audubon. From the lover of birds came the name.

North of Long's Peak is Mummy Mountain, so named from a fancied resemblance to a mummy.

Pike's Peak is due south from the State Capitol.

To the north is Mount Warren, named for Bishop Henry W. Warren. This mountain is still given as Platte Mountain or Devil's Head on the government maps.

At the entrance of Platte Canon are Turk's Head and Turkey Head, obstructing the view of Needle's Buttes.

To the north of Mount Evans are the Chief and Squaw. The Chief is the higher of the two.

The higher range, known in Colorado as the Continental Divide, is far above timber line, and always shows snow.

East of Denver are Gray's and Torrey's Peaks.

The celebrated Mount of the Holy Cross is near Red Cliff.

Mount Massive, near Leadville, is the highest mountain in the state.

The College Peaks—Harvard, Yale and Princeton—were named in honor of the universities.

Mount Elbert was named for the territorial governor of that name.

Sierra Blanca, seen from Alamosa and other southern points drew its name from the white rocks that cap its summit.

Mount Antero and Mount Shavano were named for Ute Indian chiefs.



Mount Lincoln bears that name in honor of Abraham Lincoln.

Long's and Pike's Peaks bear the names of the intrepid explorers.

Uncompahgre, a peak not distant from Lake City, is an Indian word meaning "Hot-Water Spring."

The Spanish Sangre de Cristo is "The Blood of Christ," and La Plata, "Mountain of Silver."

The Mount of the Holy Cross bears the name because there is a perpetual cross of snow on its summit.

**RIVERS AND LAKES.**—The Platte, the Arkansas, the Colorado, the Uncompahgre, the Gunnison, the Rio Grande, the Yampa, Green River, and others.

The five rivers first named wind through canons of wonderful grandeur, with walls rising from 1,000 to 3,000 feet above the surface of the streams.

None of these rivers are navigable.

The rivers east of the Continental Divide reach the Atlantic through the Gulf of Mexico; those west of the Divide reach the Pacific through Colorado River and the Gulf of California.

The Arkansas is the principal river. It has a course of 500 miles and sixty tributaries.

The South Platte rises in the Front Range. It flows northeast and enters Nebraska.

The North Platte crosses the northern border of the state and enters Wyoming.

The Rio Grande flows southeast into New Mexico. It has many tributaries in San Luis Park.

The San Juan, Grand, White and Yampa drain the western division of the state.

**WILD ANIMALS.**—The wild horse and the buffalo are gone from the plains.

The deer have retreated to the mountains.

The gray wolf, the coyote, and the swift are still found on the plains.

Only a few small animals, such as the rabbit, gopher, and prairie-dog, are found east of the foothills.

Big game is found principally in the northwestern part of the state.



In the mountains elk, deer, antelope, mountain sheep, bear, mountain lion, wild cat, lynx, wolf, coyote, fox, badger, beaver, rabbit, squirrel, wolverine, mink, marten and others are found.

The mountain streams abound in trout.

MANUFACTURING AND OTHER INDUSTRIES.—The power which can be generated by falling water in her mountain streams is from 1,000,000 to 2,000,000 horse-power. Such advantages must make Colorado a great manufacturing state.

According to the United States census, Denver's manufacturing output is \$52,711,000 a year, or more than \$1,000,000 a week, and its factory pay-roll is more than \$1,000,000 a month.

The first experiments in the manufacture of beet sugar in Colorado were made in 1898. The Great Western Sugar Company now has factories at Eaton, Greeley, Windsor, Fort Collins, Loveland, Longmont, Sterling, Brush, and Fort Morgan. In 1911 these factories handled 980,000 tons of beets, grown on 82,000 acres.

The smelting of gold, silver, copper, lead and other ore is carried on mainly at Pueblo and Denver.

To some extent smelting is carried on also in Leadville and Durango.

At Florence and at Colorado City there are chlorination and cyanide plants for the reduction of ores.

Pueblo is a center for the manufacture of iron and steel.

The manufacture of mining machinery is extensively carried on.

There are coke ovens at Trinidad and Crested Butte.

The output of the oil fields is about 2,000 barrels of crude petroleum per day. This is refined at Florence.

Stoves, cars and car wheels, carriages, brick and tile pottery, lead pipe, paint, leather, soap, pickles, canned goods, flour and crackers are manufactured products of Colorado.

Meat-packing is an industry of importance.

The annual value of manufactured products is estimated in excess of \$130,000,000.

THE PUBLIC-SCHOOL SYSTEM.—When established. How administered.

STATE INSTITUTIONS.—Where located.



The continents to be studied this year are: South America, Africa, Asia and Australia. This is for two reasons; the first reason being that the countries of these several continents, and their characteristic features and industries, were entirely neglected in the first rapid survey of the fourth year, and the second being that the sixth year will bring with it added maturity and a sure, thorough comprehension of the two important continents left for that year.

The elementary map-study begun in the third grade should be continued and made more definite.

From the globe and the maps used in connection with work of this grade, the children should have learned thoroughly and intelligently the locations and names of the most important geographic features of the world, both physical and political, and something of the life and industries of the countries they have studied.

Care should be taken to give the correct pronunciation of all geographic terms.

## SIXTH GRADE

### Commercial Geography

#### GENERAL CONSIDERATIONS

No serious work can be expected or followed out in commercial geography without the following aids:

- (1) Museum products.
- (2) Pictures.
- (3) School garden.
- (4) Field trips.
- (5) Geographic reader.

1. MUSEUM PRODUCTS.—These can be obtained by writing to some of the chief manufacturers in various lines of activity. Care should be taken to get only those museum products which will articulate in the course; that is, the main staples. For instance, a cotton exhibit, from the plant to the cloth, is preferable to a fountain pen or a watch exhibit. The exhibit should show the stages in manufacture from beginning to end. One may often have to get his exhibit from different places and piece it together.

2. PICTURES.—The commercial or any other geography class is a failure without the picture. The sources of the picture are



the steamship lines, the railways, the chambers of commerce, state bureaus of immigration, and magazines. They may either be mounted on cardboard or collected in a scrapbook. Post-cards from foreign parts often help, but, unfortunately, these are usually scenic rather than commercial.

3. SCHOOL GARDEN.—The school garden may be an invaluable aid to the study of commercial geography. Plants like hemp and flax, which can be grown in our climate and are not, can be grown in the school garden. It may be a window garden, where the plants are planted in tomato cans or lard pails. In fact, this system has its advantages, as they then can be taken home at the end of the school year. The school garden also may be used, in the case of potted plants, to plant seed rice or seed cotton. Drop a letter, with return stamp, to the Agricultural and Mechanical College at Bryan, Texas, and ask them where you can get cotton seed and seed rice. Plant in January or February, in lard pails or tomato cans, in the schoolhouse. If in a city where a public conservatory is found in the park, agitate the placing of economic plants—coffee, tea, camphor, etc.—in conservatory. They can be obtained from the St. Louis Botanical Gardens, "Shaw's Gardens."

4. FIELD TRIPS—

(a) To an industrial plant.

(b) To study land forms.

a. Field trips to industrial plants are always accompanied with some element of risk, especially if there is machinery present. However, they connect the school work with the outside world, and, where possible, should be taken. They also—as in the case of a laundry, for instance—give an idea of the division of labor. Some trips that might be taken are to the grain elevator, threshing-machine, laundry, creamery, ice plant, and coal mine.

b. The field trip to study land forms is best taken just after a heavy rain. Then beach lines, deltas, alluvial fans, and terraces can all be studied in miniature.

5. GEOGRAPHIC READERS.—With the large number of excellent geographic readers written from the product's standpoint upon the market, the real information should be derived from them as reference-books rather than from the text-book, which, from its brevity, must necessarily form simply a skeleton outline.



## OUTLINE FOR COMMERCIAL GEOGRAPHY

## PRODUCTS—

## Mineral.

## Non-metallic.

Brick.

Pottery.

Petroleum.

Coal.

Cement.

Sand.

Building-stone.

Precious stones.

## Metallic.

## Precious metals.

Gold.

Silver.

Platinum.

Radium.

## Common metals.

Lead.

Zinc.

Copper.

Iron.

Nickel.

## Organic.

## Animal.

## Fibers.

Silk.

Wool.

Hair.

## Flesh.

Mutton.

Beef.

Pork.

## Plant.

## Plant Fibers.

Linen.

Hemp.

Cotton.

## Grains.

Rice.

Wheat.

Corn.

Oats.

Rye.

## Fruits.

## Tropical.

Orange.

Banana.

Pineapple.

## Temperate.

Apple.

Pear.

Peach, etc.

## Vegetables.

## Nuts.

## Beverages.

Tea.

Coffee.

Cocoa.

Mate.

## Drugs.

Opium.

Coca.

## CHANNELS OF TRANSPORTATION

(1) Railroads.

(2) Rivers.

(3) Canals.

a. Chief canals of United States—how they are constructed and how they carry goods.

b. Panama Canal.

(4) Lakes.

(5) Sea.

1. *Railroads*.—Methods of transportation:

a. Express.

b. Broken car lots of freight.

c. Carloads.



Chief railroad arteries in United States (secure time-tables for this) :

East-west :

New York Central lines.

Rock Island lines.

Santa Fe.

Great Northern.

Baltimore & Ohio.

Pennsylvania lines.

Burlington lines.

Union Pacific.

Southern Pacific.

Northern Pacific.

North-south :

Southern Railway.

Missouri, Kansas & Texas.

Illinois Central.

Iron Mountain.

Find rates from your railroad point in carload lots to chief points in United States.

COMMERCIAL SURVEY OF CONTINENTS

NORTH AMERICA—

*Alaska*.—Location. Products : salmon, gold, and sealskins.

*Canada*.—Location. Products : wheat, lumber, paper pulp, dairy products, apples, fish.

*United States*.—Make products map by pasting bits of corn, wheat, and cotton on outline map where they are produced.

*Mexico*.—Location. Products : sisal fiber, coffee, cattle products, tropical woods, gold and silver.

*Central America*.—Bananas, coffee, and tropical woods.

Make the same quick survey of the other continents, country by country.

SEVENTH GRADE

In the seventh grade we aim first of all to lay the foundations for the study of mathematical and physical geography. First we consider the general principles of physiography; then each continent will be taken up in detail, using North America as a model.

## I. THE EARTH AS A PLANET

1. Its relation to other members of the solar system.
2. Its size, shape, rotation and revolution, and proofs of these facts.
3. Poles, Equator, meridians and parallels, latitude and longitude.

## II. THE ATMOSPHERE

1. GASES OF ATMOSPHERE.—Pressure, height, and properties.
2. CLIMATE AND WEATHER—

## Permanent air circulation.

- Doldrum belt.
- Trade winds.
- Anti-trade winds.
- Horse latitudes.
- Prevailing westerlies.

## Periodic winds.

- Monsoons.
- Land and sea.
- Mountain and valley.

## Storm winds.

- Desert whirlwinds.
- Cyclonic winds.
- Anticyclonic winds.
- Thunderstorms.
- Tornadoes.

## Accidental winds.

- Land blast.
- Avalanche blasts.
- Volcanic winds.

3. MOISTURE OF ATMOSPHERE—

- a. *Dew*.—Condition of atmosphere. Cause.
- b. *Frost*.—How related to dew? Cause.
- c. *Fog*.—How related to cloud? Cause.
- d. *Clouds*.—How made, and kinds?
- e. *Rain*.—How made? Trace a drop from the ocean surface up to the cloud and back to the ocean.
- f. *Snow*.—How made? Compare with rain. Study snow crystals.



- g. *Hail*.—How made? How different from snow? Effects of hail in Colorado.
4. DISTRIBUTION OF RAINFALL IN THE WORLD.—Why light rainfall:
- Descending winds.
  - Mountain barrier.
  - Great distance from sea.
  - Prevailing winds from land.
5. TEMPERATURE.—Causes of differences in temperature:
- Latitude.
  - Distance from the sea and prevailing winds. (Note the erroneous idea that warm ocean currents have a great effect on climate away from the sea.)
  - Altitude.

### III. THE OCEAN

(1) Distribution of land and water. (2) Composition of sea water. (3) Depth of sea. (4) Temperature of sea. (5) Condition of sea-floor. (6) Tides and waves (simply descriptive, not attempting explanation). (7) Ocean currents.

### IV. LAND FORMS

(1) Work of water. (2) Work of wind. (3) Work of volcanoes. (4) Work of glaciers. (5) Movements of the earth's crust.

#### Detailed Physical Study of North America

(To be followed in other continents.)

- CONTINENT.—Form, size, and location.
- COAST LINE.—North, east, west. Compare as to usefulness. Which is rising? Which sinking?
- HIGHLAND REGIONS OF CONTINENT—
  - Rocky Mountain region—its divisions and plateaus.
  - Appalachian system—its divisions and plateaus. Compare them, telling how formed.
  - Other mountains and plateaus.
  - Volcanic and earthquake regions of North America.
- LOWLANDS OF CONTINENT—
  - Arctic slope.
  - Pacific slope.
  - Atlantic slope.

Compare in size, extent, and usefulness.

5. GREAT CENTRAL PLAIN.—Former sea-floor. Its drainage conditions.
6. RIVER SYSTEMS OF NORTH AMERICA.
7. CLIMATE OF NORTH AMERICA—
  - a. *Westerlies*—
    - Arctic climate.  
Cold all the year. Rainfall low.
    - Canadian climate.  
Short, hot summers; long, cold winters; rainfall less than twenty inches.
    - Alaskan climate.  
Oceanic: mild winters, cool summers; twenty inches' rainfall.
    - Oregonian climate.  
Mild winters, cool summers; winter rain.
    - Californian climate.  
Dry summers, wet winters; warm climate.
    - Nevadan climate.  
Cold winters, hot summers; rainfall less than twenty inches.
    - Mississippian climate.  
Hot summers, cold winters; plenty of rain and snow.
    - Coloradoan climate.  
High mountain climate; great daily change of temperature; small rainfall; 730 seasons.
  - b. *Trade Winds*—
    - Floridan climate.  
No dry season; most of rainfall in summer and autumn; rainfall less than eighty inches.
    - Arizonan climate.  
Always dry; very hot summers; rainfall less than ten inches.
    - Mexican climate.  
Dry winter; rainfall less than sixty inches.
    - Caribbean climate.  
Even temperature; tropical; dry and wet season.



## Europe

(Based on an outline similar to that of North America, so far as mountains, coast lines, and plains are concerned.)

## CLIMATES OF EUROPE

1. Northern part—*Arctic*.
2. Norway and northern Scotland—*Alaskan*.
3. England and Ireland, Holland and northern France—*Oregonian*.
4. Sweden and north central Russia—*Canadian*.
5. Central Germany, Austria, northern Italy—*Mississippian*.
6. Southern Spain, southern France, southern Italy, and Greece—*Californian*.
7. Volga, Russia—*Nevadan*.
8. Central Spain—*Arizonan*.

## GENERAL FACTS TO CONSIDER IN EUROPE

1. Most of Europe made up of arms.
2. Nearly all near the seas.
3. Except Russia, most of it cut up into little areas by sea and mountain.

## AREAL GEOGRAPHY OF EUROPE

BRITISH ISLES.—Cut off from continent. Saved from military invasion. Plenty of coal. Central location with reference to continent. Britain is the "corner store of the world's commerce."

SCANDINAVIA.—Norway: Worn down by the glacier. Little soil, good harbors, and cloudy climate discourage agriculture and encourage fishing. Sweden: Shallow harbors and frozen seas discourage fishing; good soil and hot, cloudless summer encourage agriculture.

FRANCE.—Four great rivers—Seine, Garonne, Loire, and Rhone—flow out from a central highland; connected by canals, so that water traffic is easy. Each of these river valleys very fertile. Climate genial. Little coal; hence much agriculture and little manufacturing.

GERMANY.—A tilted plain, sloping northward, down which run in parallel courses the Rhine, Weser, Elbe, and Vistula; connected by east-west canals. Soil: a sandy plain in north; a rough highland, with some fertile valley lands, in south. A great country because of its central position, its coal, and the education of its people.

ITALY.—Protected by Alps and Apennines—a double barrier against climatic and political invasion. Divided by the Apennines into two diverse regions, climatically, racially, and industrially.

SPAIN.—A sort of bowl, with a rim of mountains. Mild Californian conditions on the outside of the rim; desert and harsh conditions on the inside. No coal; no harbors; therefore few manufactures. Agriculture largely confined to coastal rim.

AUSTRIA-HUNGARY.—Rimmed in on all sides by high mountains, except where the Danube breaks through the rim at the Iron Gate. Looks eastward to Asia and shut off by high mountains from the rest of Europe.

BALKAN PENINSULA.—Shut off from rest of Europe by southern Carpathians and Transylvanian mountains. Cut up by many mountain ranges into little enclosed basins. Open on the Asiatic side. Influence on its culture.

RUSSIA.—Great plain; hence much greater uniformity of climate and social conditions than in more rugged countries.

#### AREAL GEOGRAPHY OF AFRICA

"Africa commences beyond the Sahara," is a statement that holds true, whether we speak of its typical plants—the baobab and oil palm; its typical animals—the giraffe, elephant, and rhinoceros; or its typical people—the negro. North Africa in these respects is more like southern Europe than central Africa. Africa is the "Dark Continent" for the following reasons:

1. It is shut off from other continents by a desert; and a desert is a greater barrier than a sea, for ships cannot cross it.
2. It has a narrow coastal belt in its central and southern part, and this coastal belt is swampy and pestilential.
3. All of its rivers—the Nile, Congo, and Zambezi—have waterfalls and rapids that impede navigation into the interior.
4. The climate is tropical, discouraging effort on the part of the natives and causing fever in white invaders from Europe.
5. It has few good harbors.

#### ASIA

Asia north of the Himalayas, in its plants—the oak, maple, beech, fir, etc.—and its animals—the horse, deer, bear, wolf—is allied to Europe; while Asia south of the Himalayas has in common with Africa the leopard, the elephant, and the jackal. The



primitive inhabitants of India were also of the black race, as in Africa.

#### AUSTRALIA

Australia is peculiar in several particulars:

1. It has been called "the continent without a backbone;" for we have no east-west range like the Alps or Himalayas, or north-south range like the Andes or Rockies. Instead, the mountains rim the coast, giving a shallow continent—like a pie-pan. This means no eternal snows to furnish perennial waters to great rivers; it also means no mountain wall in the interior against which the moist air may condense; instead, the air is robbed of its moisture by the coastal rim, leaving the interior a hopeless desert.

2. Long separated from Asia, Australia has flourishing today animals that lived in Colorado at the time the coal was deposited in any of our Colorado coal fields. These animals are like those that lived 2,000,000 years ago in this region. They are animals like the kangaroo, Tasmanian wolf, and kaoli, or native bear.

#### SOUTH AMERICA

1. Most of South America slopes toward the Atlantic, and the three great rivers—La Plata, Amazon, and Orinoco—drain an area that almost extends to the Pacific.

2. South America has a very even coast line and few harbors.

3. South America is broadest in the tropical, unhealthful part, and narrowest in the temperate part. Much of the temperate part is arid or semi-arid.

#### AMERICAN TYPE CLIMATES IN AFRICA, ASIA, AUSTRALIA, AND SOUTH AMERICA

##### *Africa*

South Africa and Barbary States—*Californian*.

Natal—*Floridan*.

Sahara and Kalihari Deserts—*Arizonan*.

Rhodesia, South Africa—*Mexican*.

Central Africa (excluding Congo valley and Guinea coast)—*Caribbean*.

Congo valley and Guinea coast—*Amazonian*.

##### *Asia*

Northern coast of Siberia—*Arctic*.

Forested part of Siberia—*Canadian*.



Turkestan to Desert of Gobi—*Nevadan*.  
Northern China—*Mississippian*.  
Southern China—*Floridan*.  
Arabia, northwestern India, southern Persia—*Arizonan*.  
Plateau of India—*Mexican*.  
Coast of Asia Minor—*Californian*.  
Valley of Ganges and Indo-China—*Caribbean*.  
Himalayas and elevated plateau—*Coloradoan*.  
Malay Peninsula—*Amazonian*.

#### *Australia*

Southern and western Australia—*Californian*.  
East coast up to  $23\frac{1}{2}^{\circ}$ —*Floridan*.  
Central and western Australia—*Arizonan*.  
Northern Australia—*Caribbean*.  
Southeastern Australia—*Oregonian*.  
New Zealand and Tasmania—*Oregonian*.

#### *South America*

Amazon valley—*Amazonian*.  
Venezuela and eastern Brazil—*Caribbean*.  
Paraguay and southern Brazil—*Floridan*.  
East slope of Andes—*Mexican*.  
Lower La Plata—*Mississippian*.  
Patagonia—*Nevadan*.  
Southwestern Chile—*Alaskan*.  
Central Chile—*Californian*.  
Northern Chile and coast of Peru—*Arizonan*.  
Andes Mountains—*Coloradoan*.

#### REFERENCE

These belts have been adapted, with some modifications of names, from Dwyer's "High School Geography," page 225.

#### EIGHTH GRADE

Our object is to give a final review of the continents, with the emphasis on the commercial side, using the correlation we have used in the seventh grade.

MISSISSIPPIAN CLIMATE.—Hot summers; cold winters; plenty of rain and snow; rainfall twenty to sixty inches. Vegetation: deciduous, or broad-leaved, forests—oak or maple, etc.



United States: north of Louisiana and east of 100th meridian. Foreign countries: central Europe, northern China, southern La Plata valley in South America.

*Southern Mississippian Products.*—Tobacco, cotton, corn, and hemp.

*Northern Mississippian Products.*—Corn, wheat, oats, hay, rye, potatoes, tomatoes, apples, peaches, pears, and plums.

FLORIDAN CLIMATE.—No dry season; most of rainfall in summer and autumn; rainfall forty to eighty inches.

United States: south of northern boundary of Louisiana and east of central Texas to the Atlantic coast. Foreign countries: southern China, east coast of Australia, southern Brazil and Paraguay, Natal (South Africa).

*Products.*—Rice, sugar cane, cotton, tea, oranges, camphor, grapefruit, lemons. Floridan provinces are well developed, because the white man can stand the climate and yet raise tropical products.

ARIZONAN CLIMATE.—Always dry; very hot summers; mild winters; rainfall less than ten inches; great daily range of temperature.

United States: lowlands of New Mexico and Arizona, interior of southern California. Foreign countries: Sahara, Arabia, north-western India, west coast of South America ( $0^{\circ}$  to  $30^{\circ}$  south latitude), central and western Australia, northern Mexico.

*Products.*—Sheep, cattle, goats, alfalfa, dates, and wheat.

NEVADAN CLIMATE.—Hot summers; cold winters; rainfall less than twenty inches.

United States: great basins and great plains west of 100th meridian. Foreign countries: eastern Russia, Asia from Turkestan to the Desert of Gobi, Patagonia.

*Products.*—Cattle, sheep, potatoes, apples, hay, alfalfa, sugar beets, wheat, and oats.

COLORADOAN CLIMATE.—High-mountain climate, cool throughout the year; great daily range of temperature rather than yearly change; rainfall usually low.

United States: high Rockies. Foreign countries: Andes, Alps, and Himalayas.

*Products.*—Hay, potatoes, cattle, sheep, and goats.

CALIFORNIAN CLIMATE.—Hot, dry summers and mild, wet winters; rainfall usually below thirty inches.

United States: State of California from coast to Sierra and southern portion east to mountains. Foreign countries: Mediterranean countries, Cape Colony, southwestern Australia, and central Chile.

*Products.*—Oranges, lemons, olives, English walnuts, raisins, wines, peaches, wheat, alfalfa, sheep, and goats.

OREGONIAN CLIMATE.—Cool, dry summers and mild, wet winters; great humidity; rainfall forty to 130 inches.

*Products.*—Dairy products, lumber, potatoes, hops, and temperate fruits.

United States: Northwest coast of California, Oregon and Washington west of the Cascades. Foreign countries: Northwestern Europe, New Zealand, Tasmania, south central Chile, and British Columbia.

CANADIAN CLIMATE.—Short, hot summers; long, cold winters; rainfall less than twenty inches. Rain largely in summer.

Forested eastern Canada, forested part of Siberia and Russia, Sweden.

*Products.*—Oats, barley, wheat, and potatoes.

ALASKAN CLIMATE.—Rainfall usually eighty to 120 inches; oceanic; short, cool summers; long, mild winters; much snow; little severe cold.

Southwest coast of Alaska, Norway, western Scotland, southwestern Chile, Iceland, Falkland Islands.

*Products.*—Hay, barley, potatoes, dairy products, sheep, and oats.

ARCTIC CLIMATE.—Cold throughout the year; little rainfall; no plant raised.

Greenland, northern Siberia, northern North America, and Antarctica.

*Products.*—Reindeer, muskox, fish, walrus ivory and skin, and whales.

MEXICAN CLIMATE.—Hot, wet summers; mild, very dry winters; rainfall less than sixty inches.

Central and eastern Mexico, southwestern India, interior and southern Brazil, Rhodesia in South Africa.



*Products.*—Sugar cane, tobacco, cattle, sisal hemp, corn, wheat, and cotton.

CARIBBEAN CLIMATE.—Wet and dry seasons in tropics; little change of temperature; rainfall thirty to seventy inches.

Region fringing Caribbean Sea, including West Indies. Foreign countries: eastern part of South America, Indo-China and eastern India, north-central Australia, west of tropical Africa outside of Guinea Coast and Congo River.

*Products.*—Tobacco, sugar cane, bananas and other tropical fruits.

AMAZONIAN CLIMATE.—Wet all the time; a tropical climate, with no dry season; rainfall eighty to 150 inches.

Amazon valley, Guinea Coast and Congo valley in Africa, South Sea Islands, and Malay Archipelago.

*Products.*—Oil, nuts, rubber, vanilla, pepper, chocolate, tropical woods.



## GOOD ROADS

Since the public roads so closely affect our commercial conditions, and our social and educational environment, there is every reason why the school boy and girl should be impressed with the importance of good roads, and be given an understanding of the elementary principles of road administration and construction.

A road is the means of internal communication and transportation between points in any country; a place where one may ride or drive; it is an open way appropriated for public passage and travel, for wagons or other vehicles, and is necessary to the good of every community.

Pupils in our public schools must be instructed in the elementary principles and practices of road-making, the beneficial effects of good roads to a community, and such other information on the subject of road construction and maintenance as will better fit them as men to help solve the perplexing road problem, now attracting the attention of our national, state and civic governments.

WHAT IS A ROAD?—The origin and extension of roads. Explain the "trail" or "foot-path" of the pioneers and how they were evolved, by demand of traffic, into the wagon earth-road, the corduroy road, the plank road, charcoal road, gravel road, rock road, and on to the brick and concrete roads of today. What are state roads, county roads, neighborhood roads?

VALUE OF GOOD ROADS.—What permanently improved roads, of whatever class, mean to a state, a county, a rural community. The spiritual, moral, social, commercial and educational benefits of good roads to the country neighborhood, and incidentally to the city. How it affects the rural mail delivery. How the purpose of good roads construction is to leave the imprint upon the child-mind—the man, contractor and road-builder of tomorrow—that good roads are an absolute necessity and must be built, as a church or schoolhouse must be provided for the public good.

WHAT MAKES A GOOD ROAD?—The proper location. Explain location. Why a map of a road is made and recorded. The necessity of a profile, and how a profile is made; its necessity in intelligently estimating costs. Explain the grade percentage and how they are determined, and show by tables and charts the great loss in hauling over steep grades, and why and how steep grades should be reduced.



**DRAINAGE.**—The vital importance of drainage to any road—earth, wooden or metal surface. What drainage means—the proper methods of diverting or carrying off surplus surface water with the least damage to a roadway. Explain sub-drainage, and what causes necessitate sub-drainage in certain places and under certain conditions. Waterways or outlets—how to estimate required sizes of culverts or bridge openings to carry off natural water-courses or rainfalls, etc. Drain ditches, side ditches, berm ditches. The importance of drainage to properly “crowned” road beds.

**CROSS-SECTION.**—Explain the cross-section of a roadway. Its relation to the profile of the length of the road. Explain the various terms used in referring to the cross-section of a roadway, such as crown, berm, side ditches, berm ditches. How the widths of road-beds are determined, etc., and why some states have laws governing the widths of road-beds for permanent improved roads.

**ROAD CONSTRUCTION AND MAINTENANCE.**—Explain methods of bidding on and letting road work by contract, etc. Why a bidder needs the map and profile of a road before bidding on same. How the cross-section helps a bidder. How let: by the whole or “lump,” or by the cubic yard. Specifications—map, profile and cross-section made a part thereof by reference thereto. Explain cubic yard and how to calculate it. Contract and bond. Why the contractor should be familiar with the terms and methods used for calculating earth, rock or other road work. Study the method of staking out road work; how lengths of roads are measured by “stations,” and why. Plus-stations, and why. The marking of center and side stakes. Draw diagrams of regular and irregular “cuts” and “fills.” Explain why and when “grade pegs” are driven. Explain various methods of road construction and study the secret of the successful contractor, and what causes “failures.” Necessity of rolling roadway, etc.

What is the meaning of road maintenance. The importance of prompt repairs, and why. What is meant by mechanical structures and the maintenance of same? The importance of opening drain ditches and other waterways. Mud holes and how treated. Necessity of keeping the crowned road-bed in shape. Explain the terms “tight roof” and “dry cellar” in road talk. The sub-grade and its importance. The “split-log” drag and its early origin and use; its universal use today; its solution of the earth-road problem. Explain the advantages and disadvantages of wide and narrow tires, and high and low wheels, on wagons.

IMPROVED ROADS.—Explain the meaning of the term “metal surface,” as used by road-builders. Tell of the several earth-roads—the wooden age in road-building—the corduroy, charcoal, plank road, pike road or “turnpike” road. Describe the “turnstile.” Tell of the old toll system, and for what the toll was used. Stone tramways, gravel roads, shale roads, shell roads, cobblestone roads; the macadam road; concrete roads. What is concrete, and how made? Proportions of cement, sand and rock, and why. Bituminous concrete; asphalt; how applied, etc. Binders and fillers in rock and brick roads, and what they affect. Oil as a preservative and dust-arrester in roads and streets.



## AMERICAN HISTORY

The purpose of history-teaching in these grades is to awaken interest, encourage supplementary reading, and present worthy ideals; it is not to prepare for any kind of examination. As the same characters will be presented in chronologic sequence in the seventh and eighth grades, no time in the fifth and sixth grades should be spent in general reviews. Text-books written from the biographic point of view may be used very sparingly in the fifth grade, more profitably in the sixth, but the great value of the work for these years will depend on the teacher's power of *story-telling*.

These stories should impress the fact that our civilization had its beginning far back in the history of another continent; that we are all emigrants to this country, and that the history of the country in which our forefathers lived is a part of our history; that England, Holland, Spain and France have a vital part in the story of our civilization. Tell of the ancient cities that still exist; how the ancients lived. Tell of Hercules and his labors, search for the Golden Fleece, siege of Troy, wanderings of Ulysses, etc.; how the Greeks lived; Greek colonies in Italy, Gaul and Spain; Roman conquest of Gaul, Spain and Britain; Viking voyages to Greenland and Vinland; Venetian trade with the East and Venetian voyages to London; Marco Polo's travels to China and the East; Portuguese voyages down the coast of Africa and about the Cape of Good Hope; and thus lead up to the discovery of America.

In the child-mind place precedes time; therefore it is proper to introduce map- or globe-work as a part of each lesson. Picture-study, whenever possible, should receive ample attention and should be skilfully directed by the teacher. Often a picture will prove the best introduction for the story.

These story-lessons should be reproduced by the pupils orally in the fifth grade, and written in the sixth grade; that is, if the children have acquired a vivid interest.

Ample time should be allowed to each life. One or two lessons may suffice for less important characters, but the greatest Americans should be presented in a series of biographic pictures. The moral value of history is so generally appreciated that a word of caution seems imperative. *History skilfully and truthfully told is its own preacher.* It is advised that rural schools



begin this work about October, and continue it to completion with two lessons a week.

### FIRST YEAR

This outline is written by years rather than by terms. The order of work chosen for the first year is: first, primitive life as represented in Longfellow's story of Hiawatha; second, primitive life as represented in (a) old Aryan shepherd life, (b) Colorado shepherd life.

For the first part of this work teachers are advised to use the outline given in Scott's "Organic Education" (D. C. Heath & Co.), if possible. However, with or without the above book, the teacher can use Holbrook's "Hiawatha Primer" and Longfellow's "Hiawatha."

Use only such stories as pertain to the childhood of Hiawatha. Place your emphasis on the home life of the child, and also what he learned from nature, the flowers, trees, water, birds, animals—in short, unite nature-study as much as possible with these stories. If the teacher has no other books than Longfellow's "Hiawatha," it will be advisable to transcribe the stories into prose, using only occasionally short quotations from the poem.

In all teaching tell the stories to the children. Don't read. Each story should be brief and within the child's ability to reproduce.

For the second part of this work use outline in Scott's "Organic Education" or Kemp's "History for Graded and District Schools." The outlines in the above books are sufficient for one-half a school year. If teachers wish to continue the work on Colorado shepherd life, Austin's "The Flock" is an excellent book.

### SECOND YEAR

The order of work is: first, Persian child life and Bible stories; second, old Greek home life and mythology.

For the first part of the work use Scott's "Organic Education." For the Bible stories any of the following books are good: Herbst, "Tales and Customs of the Ancient Hebrews" (Flanagan, Chicago); Guerber, "Story of the Chosen People" (American Book Company, Chicago); Baldwin, "Old Stories of the East" (American Book Company, Chicago). If the teacher does not wish to use the work on the Persian life, it is entirely possible to use only the Bible stories.



In the second part of the work Scott's "Organic Education" may be used as a guide. Kuck, "Milo, the Greek Boy" (C. W. Bardeen, Syracuse, N. Y.), is an excellent book of stories written expressly for this kind of work.

It is possible to use only Greek mythology stories, if the teacher so prefers. In such cases any of the following books are recommended: Burt, "Herakles" (Scribner's); Perry, "The Boys' Odyssey" (Macmillan); Church, "Pictures from Greek Life and Story."

Again the teacher is urged to tell stories rather than read them to the children. And, further, your purpose is not simply to tell the stories, but to tell them so well that their reproduction by the children shall aid both children and teacher in language and reading work.

### THIRD YEAR

The general plan for this year is as follows: first, Greek history stories; second, stories of Roman home life and mythology. The last part of the previous year was devoted to Greek child life and mythology. The children will now readily take simple stories from Greek history.

For the first part of this year's work any of the following books are useful: Baldwin, "Old Greek Stories" (American Book Company); Guerber, "Story of the Greeks" (American Book Company); Yonge, "Young Folks' History of Greece" (Lothrop, Lee & Shepard Company, Boston).

For the second part of the year's work Scott's "Organic Education" and Andrews' "Ten Boys" (Ginn & Co.) are both useful. The first of the above books gives a full outline of work. The following are, any of them, excellent for this period of history: "Story of a Roman Boy" (Pamphlet; published by Scott, Foresman & Co., Chicago); Becker, "Gallus" (Longmans); Church, "Roman Life in the Days of Cicero" (Macmillan); Church, "Two Thousand Years Ago" (Appleton).

If the teacher so desires, she may confine this period to Roman mythology. If this is done, the following book will furnish material: Brooks, "Story of the Aeneid" (Penn Publishing Company, Philadelphia).

By this time children ought to be able to do some written story work; but the teacher is cautioned to tell all stories and require oral reproduction before asking for written work. These



written stories ought also to be part of your spelling, language, and reading work.

#### FOURTH YEAR

The plan for this year is suggested as follows: first, Roman history stories; second, Germanic life and mythology. The first part of this work ties closely to the last work of the previous year. If previous teaching has been good, the children will be well prepared for the Roman history stories. There are many good books published on this period. Any good Roman history may be used, but if it is written for adults, the teacher should simplify and rewrite the stories.

All the following books are written for children, and any one of them will furnish ample material for this part of the year's work: Guerber, "Story of the Romans" (American Book Company); Yonge, "Young Folks' History of Rome" (Lothrop, Lee & Shepard Company, Boston); Beesley, "Stories from the History of Rome" (Macmillan); Butterworth, "Little Arthur's History of Rome" (Crowell & Co.).

The second part of the year's work can be found fully outlined in Scott's "Organic Education."

However, if the teacher prefers, work can be done by using Germanic mythology only, in which case either of the following books will furnish sufficient material: Baldwin, "Story of Siegfried" (Scribner's); Holbrook, "Northland Heroes" (Houghton, Mifflin & Co.). Stories of Viking life can be used in this grade. Hall's "Viking Tales" (Rand, McNally & Co.) is an interesting series of stories.

The outline for fifth grade in Kemp's "Outline of History for the Grades" or in Kemp's "History for Graded and District Schools" may be used for this year of work, at the option of the teacher.

#### FIFTH YEAR

The general topic for the year is chivalry and knighthood. It easily divides into two parts, as follows: first, the training of a knight; second, stories of the Crusades.

In the first part one book is specially recommended, viz., Pyle, "Men of Iron" (Harper's). This is a story of the training of an English boy for knighthood. It contains plenty of material for this part of the work.



The Arthurian legends are also excellent material for this grade. They may be used instead of the above work, if the teacher wishes. In this case any one of the following books is recommended: Brooks, "Story of King Arthur" (Penn Publishing Company, Philadelphia); Lannier, "The Boys' King Arthur" (Scribner's); Frost, "The Knights of the Round Table" (Scribner's); "Greene's Legend of King Arthur and His Court" (Ginn & Co.).

Material for part two of the work of this year may be obtained from any good history of the Crusades, but most teachers will save time by obtaining Crusade stories written specially for children. Either of the following books will furnish material ready for use in this grade: Douglas, "Heroes of the Crusades" (Lothrop, Lee & Shepard Company, Boston); Church, "The Crusaders" (Macmillan). Teachers will find excellent suggestions in Scott, Tennyson, or either of Kemp's books, already mentioned several times.

#### SIXTH YEAR

The subject for this year is concerned with, first, a study of English history and literature stories; secondly, the period of exploration and discovery in America.

The children have already studied chivalry, knighthood, and the Crusades, and all this has been taught from the viewpoint of English history. Hence the work concerned with the study of the English nation divides itself into two sections; viz., what preceded and what followed the Crusade period. What followed the Crusades is, of course, the more important of these two sections. Teachers are advised to use Wright's "Children's Stories from English Literature," Volumes I and II, in connection with any of the histories mentioned in the list of this period. Lamb's "Tales from Shakespeare" will also give some help. As to the English history, any of the following books are suitable for this grade: Harding, "Story of the English" (Scott, Foresman & Co.); Mowry, "First Steps in the History of England" (Silver, Burdett & Co.); Dale, "Landmarks of English History" (Longmans, Green & Co.).

#### UNITED STATES HISTORY

##### General Suggestions

NATURE OF HISTORY.—History is often superficially presented as a mere "record of events." Such teachers look upon the text



as the subject, which is to be mastered through the various processes of verbal memory. The result is that history appears to the student as a thing without life; it is hard to learn, uninteresting, and often positively distasteful. But history lies beyond events. It deals *with the life* of a people *in the process of growth*. Hence, events as recorded in books are to be viewed as manifestations of *ideas* which have a *living, progressive* existence. Nor does history repeat itself, "except in minor details," and move in a circle, as it were; but it moves forward in one grand sweep toward institutional freedom.

INSTITUTIONAL GROWTH.—The growth, change, or movement in the thoughts and feelings of a people manifests itself through institutions. Hence we speak of the *institutional life* of a people, of which there are five phases; namely, the political, the industrial, the social, the educational, and the religious. To present history in such light is to organize the facts, to make it more intelligible, more interesting, and thereby easier to learn.

INTERPRETATION OF HISTORY.—Interpretation in history may be defined as reading meaning or content into individual facts or events. By this process we discover the growth in institutional life, which, be it remembered, is the central principle in history. For example, the Non-Importation Act may be viewed as a result of the passage of the Stamp Act. So it was, but a larger meaning may be found in it; namely, a struggle of the colonists for the rights of Englishmen; or it may properly be viewed as a manifestation of their struggle toward union and independence. Students should be encouraged to express their individual judgment and draw their own conclusions, but they should be cautioned about using present-day standards as a measure of what was right or wrong in past centuries. Present conditions and tendencies of our institutions should be connected with past events to vitalize the subject and to show the progress of humanity.

THE CATEGORIES OF HISTORY.—The chief categories are time, place, cause and effect, purpose and means. *Dates* are important mainly as landmarks or as marking the change from one epoch to that of another. Only important dates, therefore, should be learned, but they should be thoroughly learned, with all of their significance. Many teachers neglect the *place* relation in history. The following illustration will show its valuable aid to the memory: Suppose you strive to remember a supposed familiar face.



Instantly the mind seeks to recall the place where the face was seen, and when it succeeds in doing so a whole train of circumstances are vividly brought to mind and the name or identity of the person is established. Hence much attention should be given to map study. The maps of the text should be supplemented by wall maps, and their use insisted upon until the student acquires the habit of referring to them as he would to a dictionary. Outline maps may be used most profitably, and may be secured from various publishing houses at a nominal cost. The *cause and effect* relation in history is all-important. Without it history is a series of disconnected facts. Events must be viewed as manifesting a result of something and as being a cause of something. The *purpose and means* relation in history is largely concerned with the actions of individuals, and is highly essential in stimulating the growth of character in the student.

THE BIOGRAPHICAL ELEMENT in history has been emphasized in the lower grades and should not be lost sight of in the seventh and eighth grades. Events, when related to great personages, have a living, personal significance. In this phase of the work we pass from the study of causes to the study of purpose and motives. Jefferson's broad-mindedness in the Louisiana Purchase may be contrasted with his narrow-mindedness in his plan of coast defense. When threatened by the Writs of Assistance, James Otis' high moral courage may be observed in his resigning a lucrative royal position to plead before the bar of justice the legal and commercial rights of the colonists. The attitude of Samuel Adams toward his domestic duties may be contrasted with his attitude toward public duties. Arnold's services at Saratoga may be contrasted with his overtures with the British; Burr's conspiracy, with those of certain sugar-trust magnates; etc., etc. In this way the ethical nature of the student can be strongly stimulated, and his judgment is developed by taking various points of view.

THE CHIEF AIM IN HISTORY.—The chief aim in teaching history is to give to pupils who study it strong moral characters and civic righteousness. They should be led to see how men and women have sacrificed their own interests to promote better institutions for humanity, and unconsciously these pupils should be brought to give what is best in them to their community, their state, and their nation for the good of all.



THE STUDY OF TYPES.—In the seventh and eighth grades in history the teacher should aim, whenever possible, to present masses of details or conditions through type lessons. In exploration a few men should be studied in detail, so as to lead the pupil to project himself into the life of these men. Typical colonies should be studied for the same reason, likewise typical battles in each war, and treaties, etc. Three objects are gained by such method of presentation: (1) the subject is made more real and interesting; (2) the student learns a method of investigation; (3) much time is saved.

Period of Discovery and Exploration, 1492-1588

Two central ideas are the dominating features of this period, and serve therefore as a guide to the teacher in grouping her facts. They are (1) the maintenance of trade relations between Europe and the Orient, and (2) the new land and its people. This period of American history, therefore, and indeed that of our later colonial history, should be presented mainly as a part of a larger whole; viz., the institutional life of European nations.

A. CONDITIONS IN EUROPE.—An age of general awakening in the fifteenth and sixteenth centuries.

1. The Renaissance; the new learning; how related to the Crusades.

a. An age of personal activity; of *conscious* individualism.

b. New standards of duty being applied toward institutions—church, state, guilds, etc.

c. An age of invention and discovery.

(1) In astronomy; in other sciences.

(2) Invention of gunpowder; overthrow of feudalism and chivalry; stimulus to democracy.

(3) Invention of printing—a new force for democracy.

(4) Invention of the mariner's compass (direction); of the astrolabe (position); navigation made safer.

d. Knowledge of geography.

(1) Journeys of Marco Polo; Prince Henry the Navigator and his school.

(2) Belief as to size and shape of the earth.

(3) Map-making, nautical tables, etc.



2. Trade with the East.
  - a. Controlled by Venice and Genoa.
  - b. Routes to East by way of Alexandria, Constantinople, etc.
  - c. Routes through Europe by way of France; also over the Alps and down the Rhine.
  - d. Robber barons from their castles collected tolls from merchant princes, who held fairs near them.
  - e. Articles of commerce: spices to cover up bad cooking; rich fabrics and ornaments for the church, etc.
  - f. European life dominated by these trade relations.
  - g. The Crusades a commercial and religious movement designed to hold these trade routes and Jerusalem.
  - h. Fall of Constantinople, 1453.
  - i. Improved ship-building, safer navigation, and the discovery of rich minerals in England and Germany tended to create trade centers—the Hanseatic League—in western Europe, and likewise to cause commercial Europe to face westward.
  - j. Western sea routes to India meant the decline of Italian cities and the growth of Spain, France, Portugal, and England. Why did Genoa refuse to aid Columbus?

B. PHYSICAL FEATURES OF NORTH AMERICA—

1. Eastern highland system.
  - a. Average height.
  - b. The three eastern gateways to the interior of our continent: Mississippi River, Hudson-Mohawk valley, St. Lawrence-Great Lake system. Compare their relative advantages, remembering that the Iroquois Indians were a barrier to the second. Other less important gateways.
2. Western highland system.
  - a. Average height.
  - b. Its gateways—not well defined.
3. The great interior regions.
  - a. Its natural waterways.
  - b. Its climate, soil, prairies, rainfall.
4. Atlantic coast plain.
  - a. Gradually widens from the north to the south.
  - b. Average width, 150 miles.



- c. Navigable rivers; coast line.
- d. Varieties of soil, temperature, rainfall.
- 5. Pacific coast region.
- 6. The West Indian islands.
- 7. Material resources.
  - a. Forest regions—then and now.
  - b. Mineral wealth. We lead the world in coal, iron, zinc, copper, lead, borax. Location of these fields.
  - c. Fur-bearing animals in relation to American history (important).
  - d. The fisheries in relation to trade and international law.
  - e. The buffalo and the deer.
- 8. Commercial advantages.
  - a. Our leading harbors.
  - b. Our waterways to the interior have no equals; cheap and easy communication.
  - c. Chief Indian portages, *e. g.*
  - d. Accessibility to Europe.
- C. EXPLORATION—
  - 1. Reasons for: new route to Indies; economic interests; love of adventure; to spread the gospel of Christ; north-west passage.
  - 2. Discoveries and explorations of the Northmen in the tenth century; why seemingly forgotten.
  - 3. Columbus: his early life; his knowledge of navigation; his search for aid; his first voyage, discovery (1492), and return; his other voyages, disgrace, and death.
  - 5. Pope Alexander VI's line of demarcation, 1493.
  - 6. International rules governing rights to new territory.
    - a. To discover and explore the new territory.
    - b. Plant a settlement at the mouth of the river system draining the territory.

NOTE.—Study the explorers in groups as to time, place, purpose, means, and results. Being guided largely by materials at hand, select one or two explorers as types for each group, and make such investigations as real as possible, from the child's point of view, through incidents, details, the use of pictures, maps, etc. Give brief notice to the work of the other explorers of the group, but noting carefully the results. Summarize the work of the group by having pupils draw maps for the year 1600, also for the year 1700, copying the names of the explorers in the places associated with them, and indicating the claims of European nations by various colors.



7. Spanish explorers in the footsteps of Columbus.
  - a. Ponce de Leon in Florida.
  - b. Balboa in Panama.
  - c. Magellan verified the rotundity of the earth.
  - d. Cortez in Mexico.
  - e. Pizarro in Peru.
  - f. De Soto discovered the Mississippi.
  - g. Coronado in Texas and the southwest.
  - h. Spain's position in the world in the first half of the sixteenth century.
  - i. Spain's twofold object in seeking gold: (1) to carry on the Inquisition; (2) to expel the Jews and the Moors from her realm.
8. The rivalry of nations. (James and Sanford's "American History," pp. 27-36, exceptionally good.)
  - a. English explorations.
    - (1) John Cabot, 1497 and 1498. For a half-century England failed to follow up his work because she was a weak nation and dared not oppose Spain; she was a Catholic nation and dared not oppose the papal bull of 1493; the Renaissance had not yet spread to her shores, etc. (James and Sanford, pp. 30-31.)
    - (2) Drake, Davis, Frobisher. Why these buccaneers became so active in the third quarter of the sixteenth century. (James and Sanford, pp. 31-32.)
    - (3) Sir John Hawkins and the slave trade; the writings of Hakluyt stirred the minds of Englishmen.
  - b. Dutch explorations.
    - (1) Henry Hudson, 1609.
    - (2) The aim of Holland—the commerce of the world, not colonial empire.
    - (3) Why hated by England? by Spain?
  - c. French explorations.
    - (1) Francis I, king of France, ignored the papal bull of 1493. Why?
    - (2) Cartier on the St. Lawrence, 1534.
    - (3) Period of little activity for the rest of the century, due to a civil religious war and to a war with Spain.

- (4) Champlain, 1603-1608. Activity interrupted again by the Thirty Years' War (1618-1648), etc.
- (5) La Salle.
- (6) Joliet; Marquette.
- 9. Spain and England in deadly embrace.
  - a. Causes: religious, political, and commercial.
  - b. Spain's attitude toward wealth led her people to speculating, to industrial neglect, and hence to national dependence and decay. In 1560 only one-twentieth of her exports to America was produced by her. Contrast with England's condition. (Tyler's "England in America," pp. 3-6.)
  - c. Spain's versus England's attitude toward religion. Contrast other causes of the conflict similarly. (Channing's "Students' History of the United States," pp. 51-53; Tyler, chap. I.)
  - d. The Spanish Armada, 1588. (This conveniently marks the close of the period of discovery.)
- 10. For more than a century Asia, not America, had been the goal; De Gama, 1498, had found a sea route to Asia for Portugal.
- D. THE INDIANS OF NORTH AMERICA—
  - 1. Lived in tribes.
  - 2. Number and distribution.
  - 3. Lived principally by hunting and fishing.
  - 4. Their knowledge of agriculture.
    - a. Clearing forests.
    - b. Tobacco, maize, use of herbs, etc.
    - c. Fish used as a fertilizer.
  - 5. Unsited to slavery.
  - 6. Their home life, manners, and customs.
  - 7. Their character; their stage of civilization.
  - 8. What we have learned from them.
  - 9. How we have generally treated them.
  - 10. Champlain's experience with the Iroquois; results.
- E. REFERENCES.

## SEVENTH YEAR

\* ALTERNATION.—In rural schools pupils of the seventh and eighth years may be put together for the study of United States

\* This is merely a suggestion.

(5)



history. They should begin the eighth year's work in September, 1914, and each alternate year thereafter; and the seventh year's work in September, 1915, and each alternate year thereafter.

#### Period of Colonization

This period reaches back into the period of discovery and exploration, and has three organizing ideas. They are: (A) rivalry between the papacy and various groups of European peoples who were seeking nationality and religious freedom; (B) rivalry between nations for colonial empires; and (C) America—a place for the oppressed, the fortune-hunter, the adventurer, and the missionary.

A. THE REFORMATION.—A series of revolutions, manifesting deliberate and rational *individualism*, and opposing, therefore, outside interference with conscience and self-government.

1. A consequence of the Renaissance and other forces.
2. Its leaders—Luther, Zwingli, Calvin, Knox, Loyola.
3. Charles V and Philip II of Spain—powerful sovereigns on the side of the Pope.
4. In England during the reign of the Tudors.
  - a. Henry VIII versus the Pope; confiscation of church property; Mary Tudor and Philip II; Elizabeth harmonized both factions; not so bitter as on the continent. Why? England a Protestant refuge; effects.
  - b. Social, industrial, and political effects.
5. The Inquisition and Holland's struggle for independence from Spain.
6. The Inquisition in Spain, and her expulsion of the Jews and the Moors. Effects on Spanish character, on national prosperity, etc.
7. In France the struggle of the Huguenots for religious freedom was fused with the struggle of the House of Guise against the House of Bourbon for royal supremacy (1559-1610). The renewal of persecution in 1685 was a political rather than a religious movement, but it led to a large emigration to America.
8. In Germany: Luther and its preliminary movement; how checked by the counter-Reformation of the Catholic church.



- a. The Thirty Years' War, 1618-1648. Causes; its horrors; effects on emigration to America.
- b. Treaty of Westphalia (1648) marked the close of the Reformation, the end of papal supremacy in politics, and consequently the introduction of the new theory of the "Balance of Power among nations."

B. COLONIZATION IN AMERICA AND NATIONAL RIVALRY—

- 1. Spanish colonization: Spain's motives (Thwaite's "Colonies," pp. 47-48) and policy (West, p. 121).
  - a. For two centuries after Coronado's expedition her colonizing efforts were directed south of the thirty-first parallel. Why? (Coman, pp. 8-10.)
  - b. National: directed through monopolies; effects. (Bogart, p. 20.)
  - c. Her efforts confined largely to the sixteenth century; why? Internal decay; Spanish sea power destroyed, 1588; etc.
  - d. Extent of her acquisitions in America. (Draw a map of her American claims in 1600, locating Santa Fe and St. Augustine.)
  - e. Ethical lessons drawn from her colonial policies and failure.
- 2. French colonization: mostly in the seventeenth century.
  - a. France's motives: patriotic, religious, economic. (West, p. 9.)
  - b. Largely a national movement.
  - c. Her commercial policy.
  - d. Her efforts turned northward through the fate of the Huguenot colony in South Carolina. Settlements determined mainly by considerations of water transportation.
  - e. Draw a map of her claims in 1750, locating Quebec, Montreal, New Orleans, St. Xavier, Fort Duquesne, and five other leading posts or settlements.
  - f. Stories of Champlain, La Salle; life of the fur-traders and Jesuit priests; fisheries on the northeast coast; relations with the Indians.
  - g. External and internal causes of her failure. (Thwaite, pp. 48-50; West, pp. 9-13, most excellent.) She, like Spain, planted none but mediæval institutions in America.



3. Dutch colonization.
    - a. Holland's motives and policy.
    - b. New York merely a trading post.
    - c. Internal and external causes of her failure. (Bogart, p. 28; Coman, pp. 17-19; Thwaite, pp. 50-51.)
  4. English colonization, 1607-1682.
    - a. French to their north, Spanish to their south; conflicting claims.
    - b. Policy of the crown (important). (West, p. 20.)
    - c. Preliminary attempts by Gilbert and Raleigh, the father of English colonization. Motives of the promoters and how a reflection of national feeling. The lost colony; cost of the enterprise; how success came from this failure.
    - d. Initiated by chartered commercial companies, by incorporated associations, or by individuals. Contrast with Spanish and French efforts. Effects upon the growth of American institutions and character.
    - e. Wide range of American settlements—thirty or more. (Andrews, pp. 13-18.)
- C. ENGLAND'S TWO PERIODS OF COLONIZATION AND THE CHARACTERISTICS OF EACH (Andrews, pp. 42-44; West, p. 118)—
- I. *First Period of English Colonization, 1607-1640*—
    1. Its English background: religious ferment and the "Reformation of the Reformation;" social and economic conditions—overpopulation, quest for new markets, spirit of adventure, etc.; arbitrary rule of the Stuarts and political conflicts with the people. Summarize motives for colonization. Attitude of sovereigns toward America. (Bogart, pp. 29-34; West, pp. 15-19; Thwaite, pp. 51-54, 65.)
    2. England for the first time an independent commercial nation; hence the formation of several trading companies.
    3. The London and Plymouth Companies—grantees, settlers' rights, territory, government (important). (West, pp. 21-24.)
    4. Settlement of Virginia, 1607. (Study this colony in detail as a type of the southern group. Give its neighboring colonies brief treatment.)

- a. Soil, climate, coast line, rivers, forests, etc.
  - b. Motives and character of settlers.
  - c. The starving time; John Smith.
  - d. Jamestown not a settlement; working for the company.
  - e. Governor Dale and the new system of land-ownership; effects (important). (Bogart, pp. 48-50; Coman, pp. 32-38.)
  - f. Their system of labor—indentured servants; introduction of slavery, 1619. Why necessary? (Coman, pp. 41-46.)
  - g. Importation of wives; a representative assembly (very important). (West, pp. 31-32.)
  - h. Tobacco—the chief export down to the Revolution. This valuable product and self-government the two basic conditions of Virginia's permanency.
  - i. Dissolution of the company (1624); Virginia a royal province; growth of the colony; Virginia and the Commonwealth—immigration of royalists. (West, pp. 34-40.)
5. Settlement of Massachusetts, 1620. (To be studied as a type of the northern colonies and contrasted in detail with the settlement of Virginia.)
- a. Soil, climate, coast line, fisheries, forests, Indians.
  - b. Political and religious differences between Puritans and Separatists. (West, pp. 52-53.)
  - c. Motives and character of the settlers.
  - d. The Pilgrims in voluntary exile. (Re-think the exile of the Israelites; also Holland's recent change to Protestantism. Make this a lesson in ethics.) Negotiations for a new location and the settlement of Plymouth. The "Mayflower" compact; the Indians; economic and political changes; growth of the settlement. (West, pp. 53-66.)
  - e. The Massachusetts Bay colony, 1628. Review political troubles in England. Boston settled by an incorporated association; character of the emigration 1630-1640; home life and self-government guaranteed by a charter; who could vote? Governor Winthrop; their first winter; their



economic life; settlements made in groups—why? The Puritans became Congregationalists. Maine and New Hampshire settled by Massachusetts; their later separation under a royal charter. Struggle for representative government (West, pp. 77-102); religious intolerance (West, pp. 102-109). Rev. Hooker and his congregation for economic, political, and religious reasons settle in Connecticut, 1633-1634 (West, pp. 111-114); their written constitution; their charter; their troubles with the Dutch and the Pequot Indians; growth of the colony. Roger Williams and his religious and political doctrines; his banishment and the founding of Rhode Island, 1636 (make this a lesson in ethics); his charter; a Baptist colony with religious freedom; growth of the colony; its economic life and development.

6. The New England Confederation—purpose; its lesson in national government.
  7. Massachusetts becomes antagonistic to English government.
  8. Education in New England; Harvard College.
  9. Settlement of Maryland, 1634.
    - a. Roman Catholics in England.
    - b. Lord Baltimore and his proprietary rights; how the colonists were ruled; contrast with feudalism.
    - c. Maryland and Virginia.
    - d. A representative assembly; religious toleration.
  10. Settlement of Bermuda. (A fruitful study can well be made of the settlement and growth of the West Indies, since they bore an important economic relation to the continental colonies.) (Andrews, pp. 17-19.)
  11. Summary of this period. (Andrews, pp. 28-40.)
- II. *Second Period of English Colonization, 1655-1682—*
1. Its European background: France succeeds Spain as dictator of European politics; Louis XIV of France and his persecution of the Huguenots; religious motives give way to personal power, territorial aggrandizement, and commercial interests. Eng-



land, as in the days of Elizabeth, faces outward. The Navigation Act of 1651 and war with Holland for commercial supremacy, 1652-1653; Cromwell's foreign policy; the Restoration, 1660.

2. England's change of policy toward colonization, and characteristics of this period. (West, p. 118; Andrews, pp. 43-44.) Carefully elaborate England's mercantile policy (important). (Bogart, pp. 90-94.) How it compared with other nations.
3. Establishment of the Carolinas, 1663; proprietary colonies. The promoters—their motives and conditions of their grant. North Carolina an offshoot of Virginia, 1653; other settlements. Separation of the two colonies, 1729. Culture of rice and indigo; growth of self-government.
4. Georgia founded, 1733; an isolated movement. Motives of the proprietor and the English government. His land grant and the plan of government. Silk culture. Failure of Oglethorpe's scheme of colonization; why?
5. Process of uniting the scattered fringe of English settlements.
  - a. Review of New Amsterdam as a Dutch trading post—not a colony, but a huge plantation till 1626; the patroon system of agriculture and government; religious toleration; Stuyvesant and popular discontent; England conquers New Amsterdam and it becomes New York, 1664.
  - b. New Jersey founded by proprietors, 1665; their motives and plan of government; land grants a bone of contention; the Quakers settle in West Jersey; surrender of the charter, 1688.
  - c. Pennsylvania founded, 1682. English Quakers and the Clarendon code. Penn and his grant of land from the king, also from the Indians; settlement of Philadelphia; self-government and religious toleration; growth of the colony.
  - d. Delaware founded by the Swedes, 1638. Conquered by the Dutch in New York; then by the English, 1664, under the rule of Penn, 1682-1703; independence.



6. English rivalry in the West Indies.
7. Summary of the political and social characteristics of the colonies down to the Glorious Revolution, 1688. (Andrews, pp. 62-89.)
8. England formulated a colonial policy in harmony with her mercantile system, and for colonial protection. (Bogart, pp. 90-100; West, pp. 119-124; Andrews, pp. 107-127.) Organization of a colonial department; the Navigation Acts of 1660, 1663, 1672.
9. Political tendencies in the colonies; liberal charters in Connecticut and Rhode Island; continued friction with Massachusetts; King Philip's War; attacks upon colonial charters; Governor Andros—England's purpose, and how received by the colonists; large influx of Cavaliers to Virginia, 1649-1670; their part in Bacon's Rebellion and attempts to overthrow popular government. (West, pp. 124-138.)

#### Development of the Colonies, and the Struggle for a Continent, 1689-1763

In this period we must be guided by the following viewpoints: (1) an isolated but conscious struggle in America for self-control; (2) Parliament began to usurp the king's power and to substitute an organized control of the colonies for his former "let alone" policy; (3) the beginnings of a common colonial life; France and England struggle for supremacy in America.

##### A. ENGLAND AND THE COLONIES—

1. Review England's mercantile policy, and constantly relate the actions of the colonists, the king, and Parliament to it. The English Revolution of 1688.
2. Material prosperity; non-English immigration, its causes and distribution (Louis XIV's persecution of the French Huguenots and his wars with the Dutch, famine in Ireland, etc.); population in 1690, in 1760; disputes as to colonial boundaries. (West, pp. 143-146.)
3. Our trade with the West Indies; rum the basis of New England's prosperity, as was tobacco in the South.
4. New England's products in competition with England's.
5. Parliamentary acts as to commerce; as to colonial manufacturing; as to the slave trade. (Bogart, pp. 90-101; West, pp. 147-148; Andrews, pp. 185-204.)

6. English Lords of Trade and Plantations established, 1695; its duties.
  7. England attempted to reorganize and direct our religious affairs in the interest of her established church.
  8. Charter and proprietary colonies were changed into royal provinces. (West, pp. 149-150.)
  9. Conflicts between the assemblies and the royal and proprietary governors. Who had the right of taxation in the colonies? The royal veto, and how avoided by the colonists. (West, pp. 151-152; Andrews, pp. 155-185.)
  10. Parliament's authority denied by the colonists, asserting that their charters made them answerable to the king. (West, 152-155.)
  11. England's restrictions upon colonial paper-money issues. Why? How it affected our balance of trade. (Bogart, p. 92.)
  12. Growth of ship-building, the fisheries, shipping; our exports and imports.
  13. How England fostered our industries. (Bogart, p. 101.)
  14. Smuggling. Were English commercial restrictions really harmful to the colonists? (Bogart, pp. 102-103.)
  15. Attempts at colonial union. (Andrews, pp. 205-228.)
  16. Summarize conditions in each of the three groups of colonies—northern, middle and southern—as to land tenure, their system of labor, education, religion, local government, industries, and social life.
- B. ENGLAND AND FRANCE—their rivalry in Europe and other parts of the world—
1. Westward movement of our frontiers—in 1690 only fifty miles from the coast and roughly parallel with it from Maine to Georgia. (West, p. 143.)
  2. Review French claims.
  3. French and English clashed in the Ohio valley.
  4. Summarize the earlier French wars: King William's War, 1689-1697; Queen Anne's War, 1702-1713; King George's War, 1744-1748.
  5. The French and Indian War, 1754-1763. Strength of the parties; the theater of the war; its leaders—Washington, Wolfe, William Pitt, Braddock, Louis XIV, Mont-



calm. Campaigns and events; the decisive battle; the Peace of Paris, 1763.

6. Why France failed in America.
7. Draw maps of North America, showing the geographical results of this war.
8. Royal proclamation of 1763 forbidding settlement west of the Alleghenies; how received by the colonists.
9. Pontiac's war reveals a weakness in colonial self-protection.
10. General results of the war; less need of English protection, military experience, etc.

#### Period of the American Revolution, 1763-1783

To interpret this period, we must constantly hold in mind: (1) that England had outgrown her constitution through her territorial and commercial expansion dating from 1651; (2) that in England as well as in America there was a struggle for civil rights, and hence this was really a civil war; (3) that the struggle was peaceful in England, but it divides itself into two phases here—namely, a period of constitutional discussion and resistance (1763-1775), and a period of actual warfare (1775-1783).

A. FUNDAMENTAL CAUSES OF THIS WAR. (West, pp. 182-196; Bogart, pp. 110-111; Fiske's "American Revolution," Vol. I, pp. 32-45)—

1. Economic causes. Review England's mercantile policy and its effects on the colonies, noting especially the controversy over the Sugar Act of 1733, the prohibition of manufactures, interference with the West Indian trade, the prohibition of paper-money issues, the king's proclamation of 1763.
2. Social causes: distance from England, and influence of a new country on character; effects of the early Stuarts' "let alone" policy and a later non-enforcement of English laws; America had been settled by "progressives" and undesirables.
3. Political causes: conflict between English and colonial theories of (1) representation and (2) the powers of Parliament; France no longer a menace to us.



## B. CONSTITUTIONAL DISCUSSION AND RESISTANCE, 1763-1775—

1. Colonial defense based on "the rights of Englishmen," as defined by our charters and established by custom.
2. England's new colonial policy: the character and policy of George III; enforcement of the navigation acts; the new Sugar Act of 1764; a standing army for America; English bishops to be sent to America; revision of the revenue system. (Bogart, pp. 105-106.)
3. England's real needs for increased revenues, and how the colonies looked upon her taxation of the colonies.
4. The Parson's Cause in Virginia.
5. Smuggling and the Writs of Assistance.
6. The Stamp Act, 1765—purposes, provisions, colonial opposition, claiming it to be an *internal* tax, etc.; riots, intimidation, and various forms of united action. Its repeal; why? (Bogart, p. 106.)
7. The Townshend Acts, 1767 (an external tax)—purpose, provisions. How a serious attack upon popular government. Opposition: New York's assembly refused to grant supplies; Dickinson's "Letters of a Farmer;" Massachusetts Circular Letter; non-importation agreement (the first step in revolutionary organization), etc. Partial repeal. The colonists now shifted their argument from "no taxation without representation," which they really did not want, to "no control by Parliament;" troops in Boston; the Boston Massacre; the burning of the "Gaspee;" the Committees of Correspondence—the second step in Revolutionary organization (important). (West, p. 203; Channing, pp. 179-181; Bogart, p. 107.) The Boston Tea Party; reception of the tea ships in New York, Charleston, etc.
8. The four Intolerable Acts of 1774.
9. The First Continental Congress, 1774—the third step in revolutionary organization (a congress only in name); colonies represented; its work, noting particularly the organization of "The Association" for enforcing the non-importation and non-exportation agreement. (Bogart, pp. 108-109.)
10. Provincial congresses and conventions took the place of assemblies and governors (1775)—the fourth step in



revolutionary organization; Massachusetts organized a provisional government. (West, pp. 205-213.)

11. Whigs and Tories, or Patriots and Loyalists in America. Who constituted the Loyalists? Their number; treatment during the war. (West, pp. 219-220.)
  12. The Second Continental Congress, May, 1775. Its organization, membership, immediate purpose, later functions. (West, p. 215.)
- C. CIVIL WAR IN AMERICA, 1775-1783—
1. Preparations for war by the colonies; Silas Deane, Arthur Lee, and Franklin as "Friends Abroad;" influence and secret aid of France; preparations by England; strength of the parties; Burke, Fox, and Pitt in Parliament; position of the English masses.
  2. Campaign in the North.
    - a. Around Boston; why? Lexington and Concord, Bunker Hill; Washington in command; character of his army; siege and evacuation of Boston.
    - b. In Canada; why? Ticonderoga and Crown Point; Arnold and Montgomery at Montreal and Quebec.
  3. Movements toward independence. Discussions turn now upon the *Rights of Man*. Formation of state constitutions, 1775-1776 (West, pp. 221-235); organization of a general government; Paine's "Common Sense;" Jefferson's "Summary View;" the Declaration of Independence (really in the nature of a campaign document)—its author and how it acted on the colonists. (Channing, pp. 198-206.)
  4. Struggle for the center.
    - a. Why the English made this movement.
    - b. New York captured; retreat of Washington up the Hudson and across New Jersey; Hessian soldiers, and why used by England; Washington's victory at Trenton and Princeton; Washington at Morristown Heights; weakness of Congress; noted volunteers from Europe.
    - c. Capture of Philadelphia; how this affected Burgoyne's campaign on the Hudson; Valley Forge.
    - d. Burgoyne's campaign; its object; his plan; his difficulties; his allies; Arnold at Saratago; why Burgoyne

- failed (very instructive when carefully traced). (Fiske's "American Revolution," Vol. I, pp. 260-344.)
- e. England offered conciliation.
  - f. Our alliance with France, and later through her with Holland and Spain; her objects; effects. (Fiske, Vol. II.)
  - g. Evacuation of Philadelphia and Howe's resignation; reason in each instance. Battle of Monmouth and Lee's treachery.
  - h. New York sheltered a large British army until the close of the war with Washington and his forces near by in a semi-circle "watchfully waiting."
  - i. Improved conditions of our army due to Steuben's training, to longer enlistments, etc.
5. How the war was being financed by us: by foreign loans, paper-money issues, confiscations, gifts of public land, private loans, state aid; the services of Robert Morris (afterwards permitted to die in a debtor's prison); Washington's gratuitous services. (Channing, pp. 223-224; West, p. 241; Hart, pp. 89-92; Bogart, pp. 111-118.)
  6. War in the West: our frontier was pushed beyond the Alleghenies into the Northwest and the Southwest; Indian outrages; the work of George Rogers Clark (important). (West, pp. 248-257; Spark's "Expansion of American People.")
  7. The treason of Arnold. His services in the field had been second only to those of Washington. Review carefully his many deeds of unselfish valor; his slights and humiliations by Congress. (Make this a lesson in ethics and let pupils arrive at their own conclusions.) (Arnold's "Life of Arnold;" Fiske's "American Revolution.")
  8. The war carried into the South by the British; why? Henceforth a war of devastation. New British generals. Campaigns in Georgia and South Carolina. If possible, read a full account of the battle of King's Mountain (Fiske's "American Revolution"). Cornwallis in Virginia and his capture at Yorktown.
  9. War on the sea.
    - a. American privateers.
    - b. John Paul Jones.
    - c. The French fleet, and why it made no better showing.



10. Reasons for American success. (Hart's "Formation of the Union," p. 89.)
11. The treaty of peace; its terms as to: (a) American independence; (b) boundaries; (c) the fisheries; (d) commercial concessions; (e) the surrender of western posts; (f) our treatment of loyalists, etc. Map-drawing. (Channing, pp. 225-232; West, pp. 243-247.)
12. The army disbanded; the Newburg Addresses, 1783; our attitude toward a standing army.

#### The Confederation and the Constitution, 1781-1789

This period has two dominating ideas underlying it: (1) a struggle for union, 1781-1787, on the basis of state sovereignty; and (2) a struggle for union (1787-1789) on the basis of national sovereignty. (Channing, pp. 236-237; Gordy, Vol. I, pp. 75-117—excellent.)

#### A. UNION ON THE BASIS OF STATE SOVEREIGNTY—

1. Formation and adoption of the "Articles;" their leading provisions. (Hart, pp. 104-105; Channing, pp. 236-240; West, pp. 278-282.)
  - a. Their defects. (West, pp. 288-293.)
    - (1) In organization: equal representation; limitations as to term of service; salary paid by states.
    - (2) In powers of Congress: as to foreign commerce, taxation, treaties, lack of control over individuals and states, divisions of labor.
    - (3) In impossibility of amendment.
  - b. Their value.
  - c. Why Maryland refused so long to accept the "Articles."
2. State governments.
  - a. Review their transition from provincial congresses and conventions, 1774-1776, to their adoption of state constitutions.
  - b. Their characteristics: strongly individualistic; why? Little confidence in governors, but trusted legislatures; why? Jealous of the central government; why? Their laws and court system based on those of England. (Channing, pp. 249-250.)
3. Forces fostering state sovereignty. (Gordy, Vol. I, chap. iv.)
  - a. Jealousy of the central government.
  - b. Interstate jealousy.



- c. Boundary disputes.
- d. Weakness of Congress.
- e. The financial situation.
- f. Influence of foreign affairs.
- g. Insubordination and lawlessness incident to the war and a long period of freedom from restraint.
- h. Prevalent political theories; viz., that liberty means license, etc.
- i. Thousands of loyalists, the conservative element, were in exile.
- j. Most people but dimly conscious of a national feeling.
- 4. Financial difficulties.
  - a. The paper-money advocates; debtors versus creditors in New Hampshire, in Rhode Island; Shay's Rebellion; seeds of anarchy. (Gordy's "Political History of the United States," Vol. I, chap. iv.)
  - b. National and state debts, and how they were being liquidated.
  - c. Sources of national revenues.
  - d. Work of Robert Morris. (West, pp. 283-288; Hart, pp. 109-111.)
- 5. Slavery (1777-1788). (Hart, pp. 113-115.)
  - a. Anti-slavery sentiment.
  - b. Emancipation acts.
  - c. Its economic significance.
- 6. Foreign relations. (Hart, pp. 115-117; Bogart, pp. 114-119.)
  - a. Powers of Congress as to treaties and foreign commerce.
  - b. England's commercial restrictions, and how we met them; compare with colonial times.
  - c. How Spain, Portugal, and France treated us as to trade.
  - d. Condition of our trade with the West Indies, particularly.
  - e. Holland's attitude.
  - f. Efforts to amend the "Articles."
  - g. Growth of the West; settlements; threats of secession in the Southwest. (West, pp. 248-259, 274-277.)
  - h. Efforts at treaty-making.



## B. UNION ON THE BASIS OF NATIONAL SOVEREIGNTY—

1. Forces tending to foster nationalism.
  - a. Review Clark's conquest in the Northwest. (West, pp. 260-267.)
  - b. Cession of western land claims.
  - c. Our scheme of western land surveys, 1785. (West, pp. 270-274.)
  - d. Influence of leaders like Washington, Madison, etc.
  - e. The Ordinance of 1787; its antecedents; its valuable provisions for intestate estates, for free schools, freedom of religion, personal liberty, for expansion into states. (West, pp. 267-270; Channing, pp. 246-249.)
2. Failure of the revenue amendments. (Hart, pp. 118-119.)
3. The Constitutional Convention, 1787.
  - a. Its membership. (West, pp. 293-304.)
  - b. Its distrust of democracy; why? (West, pp. 295-300; Smith's "Spirit of American Government.")
  - c. Factional parties: creditors versus debtors; small-state men versus large-state men; slavery versus anti-slavery; agricultural interests versus commercial interests; the North versus the South, etc. (Hart, pp. 122-123.)
  - d. Its object; plans submitted, and the merits of each.
  - e. The Connecticut compromise; other compromises. (West, pp. 304-312.)
  - f. Undemocratic features of the Constitution.
    - (1) Our autocratic judiciary.
    - (2) The system of checks and balances.
    - (3) Protection given to property rather than to men.
    - (4) Indirect election of the president. (West, pp. 312-322.)
4. Ratification of the Constitution. (Hart, pp. 128-131.)
  - a. Who opposed it, and why? (Channing, pp. 270-275.)
  - b. Its final adoption. (West, pp. 323-332.)
5. The Constitution.
  - a. Powers given to the states; to the general government; shared by both; denied to each. What of those not mentioned?
  - b. Organization of the functions of government under it—legislative, judicial, and executive.
  - c. Chief powers of Congress.

- d. The elastic clause.
- e. How it may be amended; number of amendments, and character of each.
- f. Its merits; memorize its preamble, the elastic clause, the first amendment.
- g. Our unwritten constitution.
- h. Contrast with leading provisions of the "Articles."

NOTE.—The teacher may make a more detailed study of the constitution here, if time permits, following the plan, say, of Andrews' "Manual of the Constitution."

#### Period of Conscious Nationality and Foreign Relations, 1789-1800

This period is pre-eminently concerned with political and administrative problems, both foreign and domestic. The industrial revolution had not reached us. We were prone to follow our colonial habits of trade, though we appeared to the world as a commercial outcast. The principles of the revolution of 1787 were being expanded and established by men strong in the faith of federalism.

#### A. REORGANIZATION AND ESTABLISHMENT OF NATIONAL GOVERNMENT—

- 1. Its undemocratic spirit. (West, pp. 333-336.)
- 2. Inauguration ceremonies.
- 3. Evolution of a "cabinet" from colonial days to the present. (West, pp. 338-339.) The lesson learned from Washington's "mixed" cabinet.
- 4. Organization of our judicial department; its assumed control over state courts and legislatures; the eleventh amendment. (West, pp. 341-343.)
- 5. Its bill of rights, the first ten amendments. Why adopted?
- 6. Hamilton's financial measures. (West, p. 343.)
  - a. His two-fold object.
  - b. Funding and assumption of national and state debts.
  - c. Revenue measures—tariff and excise.
  - d. The National Bank.
  - e. Government mint established, 1790.
  - f. Effects of.
  - g. Why our capital was placed in the South.
- 7. The rise of new political parties. (West, pp. 351-358.)
  - a. Review of earlier parties.



- b. Federalists and Republicans: how they differed; their leaders and party spirit.
  - c. Steps in party organization.
- 8. Sectional disputes (important). (West, pp. 348-351.)
  - a. Economic basis of these disputes—conflicting economic systems.
    - (1) In the North: Shipping—its importance; favorable legislation. Manufactures—Hamilton's report of; patent laws; favorable legislation; in the domestic stage; the labor system. The fisheries, etc. (Coman, pp. 132-154; Bogart, pp. 120-122, 148-159.)
    - (2) In the South: Agriculture—the system of labor, mainly hand labor; crops; methods; live stock, exports and imports. (Bogart, pp. 133-147.)
    - (3) In the West: Need of transportation facilities; frontier life; the cradle of democracy; constantly drained the East of its labor and surplus population, and hence a cause of high wages; its development 1789-1800; new states; threats of secession; Indian troubles. The growth of the West intensified sectional differences, culminating in our Civil War. (West, pp. 348-351.)
- 9. Status of slavery at this time.
- 10. The Whiskey Rebellion—a test of nationalism.
- B. FOREIGN RELATIONS, 1789-1900 (West, pp. 358-366)—
  - 1. The Industrial Revolution in England, and how we were affected by it. (Cheyney's "Industrial History of England," pp. 199-239.)
  - 2. The French Revolution (important): its causes, excesses, ambitions; Napoleon and his work. (Dale's "Landmarks of English History," pp. 185-205; excellent.)
  - 3. Relations with England as to our treaty of 1783; commercial privileges and the rights of neutrals on the high seas; Jay's treaty.
  - 4. Relations with Spain: western claims; right of deposit; the treaty of 1795, and what New England thought of it.



5. Relations with France: concerning our treaty of 1778; Citizen Genet; our proclamation of neutrality; France angered over Jay's treaty; she seized our merchant ships; how she received our ministers, and our preparations for war 1798; our treaty of 1800. (Bogart, pp. 120-122.)
6. Why the Federalists favored England and the Republicans favored France.
7. Campaign and election of 1792; of 1796; partisan politics.
8. Fall of the Federalists, 1797-1801.
  - a. Causes: factional fights in the party; unpopular taxes, etc., incident to the French war; the Alien and Sedition Acts (memorize the first amendment of our Constitution); the Naturalization Act; their enlargement of an unpopular court system, etc. In general, their theory of a federal government not suited to the time. (West, pp. 366-372.)
  - b. The Kentucky and Virginia resolutions, a protest against federalism. Their authors, doctrine, and precedent for evil.
  - c. Perpetuation of Federalism through the Judicial Act of 1801 and the appointment of John Marshall as chief justice of the federal court. (West, 372-377.)
9. The triumph of democracy in 1800; the election of Jefferson and the adoption of the twelfth amendment.
10. The Hamilton-Burr duel.

#### Democracy and Nationality, 1800-1876

This period of political adjustment between state and nation falls into three natural divisions: (A) nationality and democracy under Jefferson's influence, 1800-1829; (B) under Jackson's influence, 1829-1860; and (C) under Lincoln's influence, 1860-1876.

Industrially the period may be subdivided as follows: (1) fall of the domestic system and the rise of the factory system, 1808-1830; (2) the industrial revolution in America, 1830-1860; (3) the Civil War period, 1860-1870; (4) the period of "large-scale" production, 1870 to the present time. (Bogart, pp. 262-289.)

#### PRELIMINARY SURVEY—

1. America in 1800, and its six lines of development during this period.



2. How our territorial growth made us truly American. (West, pp. 378-379.)
  3. Physical conditions; population and its distribution; communication; occupations; wages and frugality; moral and intellectual conditions. (West, pp. 379-395; Bogart, pp. 148-161; Channing, pp. 317-330.)
- A. UNDER THE JEFFERSONIAN SYSTEM, 1800-1829—
1. Jefferson's biography; his views of government versus those of John Adams; versus those of Hamilton. (West, pp. 396-400.)
  2. In what sense was Jefferson's election in 1800 a revolution?
  3. Reform measures. (West, pp. 400-408.)
  4. Who had the right to vote? Contrast with present conditions in Colorado.
  5. Jefferson's interest in agriculture; causes of its progress, etc. (Bogart, pp. 133-147.)
  6. Purchase of Louisiana—demanded by the West, opposed by New England; why? Advantages to us; Jefferson and "strict construction;" Lewis and Clarke expedition; the boundary question. (West, pp. 408-419.)
  7. Growth of the West, 1800-1810; settlements; admission of Ohio, 1802; explorations of Zebulon Pike, 1805-1807. (Spark's "Expansion of the American People," chapters 12-19.)
  8. Foreign relations: England and France at war, 1803-1814; attacks on neutral trade; the enforcement by England of the Rule of 1756; how the world regarded impressment; decrees and orders in council, 1806-1810; the outrage on the Chesapeake, 1807; the embargo—its effects on the United States, on England, on France; the Non-Intercourse Act, 1809; the Erskine Treaty, 1809. (Channing, pp. 343-352.)
  9. The election of Madison.

#### EIGHTH YEAR

##### Democracy and Nationality, 1800-1876—Continued

#### A. UNDER THE JEFFERSONIAN SYSTEM, 1800-1829—

1. The War of 1812: Review its causes; Madison's efforts to keep peace; war with the Indians; Henry Clay and other

- "war hawks;" causes of the war in their order of importance—blockade, right of search, impressment, Indian troubles; why we went to war with England instead of with France; strength of the contestants; English plans of war; American plans of war, and how a lack of good roads frustrated our plans; war on the land; war on the sea; privateers; treaty of peace, 1814.
2. Our lack of preparations for the war (Channing, p. 358); how a war of paradoxes (Simon's "Social Forces in American History," p. 143).
  3. How a war for commercial independence? (Important.)
    - a. Primarily through domestic changes in our industrial life—the shifting of capital, the birth of the factory system, etc. (Coman, pp. 175-189.)
    - b. Secondarily through the growth of foreign respect for us incident to the war. (Bogart, pp. 162-165.)
  4. Other results of the war. (Channing, pp. 367-370.)
  5. New England and the Union, 1803-1815.
    - a. The "plots" of 1803 and of 1809.
    - b. Her treasonable attitude, 1812-1815, as to the president's use of her militia, her trade, purchase of British securities, swearing allegiance to England's king, the Hartford Convention, etc. (West, pp. 428-435.)
  6. How the war was financed.
  7. How the war stimulated the growth of nationality. (West, pp. 436-437.)
  8. Election of Monroe.
  9. Growth of the West, 1815-1829; emigration from the East and from Europe; why? The quieting of Indian titles and our improved public-land policy; the improved means of communication—the steamboat, canals, the Cumberland road and other turnpikes; Clay's "American System;" new frontiers and new states; the Missouri Compromise. (West, pp. 437-446.)
  10. Foreign relations: purchase of Florida; and our treaty with Spain as to the boundaries of Texas and Oregon; the "Convention of 1818" with England as to disarmament on our lake frontier, the northwestern fisheries, and boundary lines; the Triple Alliance; our claims on



Oregon; Spanish colonies in America in revolt; the Monroe Doctrine. (West, pp. 447-452.)

11. National policies as to internal improvements, as to protective tariffs. (Study the acts of 1816, 1824, and 1828, and how the various sections supported these measures.) (West, pp. 452-460.)
  12. Judicial decisions and nationality. (West, pp. 460-463.)
  13. Break-up of the era; factions and party politics; election of John Adams; reaction against the exalted power of the judiciary, of "King Caucus" and nationalism. (West, pp. 463-469.)
- B. JACKSONIAN DEMOCRACY AND NATIONALISM, 1830-1860—
1. Andrew Jackson: his biography; his political views; his election; the "spoils system" an offshoot from New York politics.
  2. Sectional divergence: number and distribution of population in 1830; social, political, and industrial differences among the sections. (West, pp. 470-472; Coman, pp. 193-198.) New political parties.
  3. The new democracy: who could vote, and the extension of suffrage; the growth of the West and its influence upon democracy; revision of old state constitutions; the awakening of labor and its new demands for shorter working hours, for free schools, etc.; literary progress and moral reforms. (West, pp. 473-506.)
  4. Nullification in 1832: Review the course of this theory from the adoption of the Constitution; Jackson's views of the presidency (Muzzy's "American History," p. 277); the protective tariff act of 1832; how the tariff hurt the interests of the South; the Webster-Hayne debate; Jackson and South Carolina (Muzzy, pp. 277-282).
  5. Treaties with foreign countries; Jackson's admirable foreign policy. (Channing, p. 427.)
  6. The government and the bank: Review its history since 1789 (Bogart, chap. 16); political character of banking interests then; the election of 1832; withdrawal of deposits; distribution of the surplus; the specie circular and the panic of 1837 (West, pp. 512-516; Muzzy, pp. 282-289); the Independent Treasury System, 1840.



## 7. Slavery.

- a. To 1829: on the defensive; state emancipation; general decline of pro-slavery sentiment; the foreign slave trade; emancipation by England and France; plans for negro colonization; the invention of the cotton gin and the growth of slavery; the Missouri Compromise; scarcity of any other kind of labor in the South; views of men like Washington, Jefferson. Clay, on slavery. (West, pp. 533-536; Muzzy, pp. 303-316.)
- b. From 1829-1860: on the aggressive; Lloyd Garrison and a free press; John Q. Adams and the right of petition; how abolitionists and anti-slavery men differed; Nat Turner's Insurrection; demands of the South, 1835-1838, as voiced by Calhoun; the Liberty party and the election of 1844; new cotton fields in the Southwest; northern business interests demanded no anti-slavery discussion; how slavery was adapted to cotton-growing and not to other crops (Bogart, chap. 21); King Cotton and its profits; annexation of Texas not an organized scheme of southern slave-holders (West, pp. 533-547); war with Mexico and its justification (Muzzy, pp. 338-347); the Wilmot Proviso, 1846; the Mexican cession; the Oregon Territory; gold in California; the Compromise of 1850; demands of each section; speeches of Webster, Calhoun, Chase—all for the sake of union, etc.; the underground railroad; personal liberty laws (note the idea of nullification) and the failure of sectional compromise policy; "Uncle Tom's Cabin;" Cuba and the extension of slavery; the Ostend Manifesto, 1854; the Clayton-Bulwer Treaty (1850) and the proposal of a Panama Canal; the Know-Nothing party of 1852; Stephen A. Douglas and the repeal of the Missouri Compromise; his probable motive; the struggle for Kansas; the Republican party, 1854-1858; the Dred Scott decision; Helper's "The Impending Crisis;" Lincoln-Douglas debates, 1858; John Brown's raid; and the election of 1860. (West, pp. 549-572; Channing, chap. 11.)



## 8. Problem.

- a. "William Jackson was born of a slave mother in Worcester, Mass., 1778.
  - b. "In 1785 he was taken by his mother's owner, Richard Jones, to Albany, N. Y.
  - c. "In 1786 he spent six months trapping with Jones on the western shores of Lake Michigan.
  - d. "From 1786 to 1817 he lived with Jones at Princeton, N. J.
  - e. "In 1817, and again in 1821, he went with Jones on hunting trips up the Dakota River.
  - f. "Returning to St. Louis in 1822, he was sold by Jones down the river to New Orleans.
  - g. "In 1840 his new master, Smart, took him to Texas.
  - h. "In 1844 Jackson ran away to Mexico.
  - i. "He was recaptured by Smart during the Mexican War, and was taken to a place near Topeka, Kan., where he lived with Smart till his death in 1870.
- "What changes in Jackson's legal status—slave or free—took place during his lifetime?"

## 9. Industrial expansion, 1815-1860.

- a. The frontier in 1820, 1830, 1850; emigration from Europe (Bogart, chap. 18); when and why they came, and where they settled; the frontier settled by Americans.
- b. Agriculture: its character prior to 1840 in the North and the South (Bogart, chap. 19); the substitution of horse power for hand power, about 1840 (Bogart, chap. 20); our inventive genius and results; improvements in live stock, seed selection, crop rotation; its character in 1860 in the South and the West; our public-land system, and how it affected wages and the growth of democracy.
- c. Manufacturing: the domestic system gives way to the factory system by 1830 (Bogart, chapters 12-13); growth of cities; development of the textile industries (Brook's "The Story of Cotton"—excellent for pupils); of the iron industry; compared with England in 1860; exports and imports; the use of woman labor, etc.; inventions. (Bogart, chap. 11.)

- d. Shipping in 1790, in 1810, in 1850, in 1860, and reasons for its development. (Bogart, pp. 222-230.)
  - e. Communication: our long coast line and interior lake and river systems; internal improvements at national expense (Bogart, chap. 15); constitutional limitations; state aid and bankruptcy; the western steamboat and its great service (Bogart, chap. 14); the era of canal-building, 1815-1850; the era of railroad-building, 1830-1860 (Bogart, pp. 230-235); turnpikes and routes of travel (Spark's "Expansion of the American People"); rival cities and ports of entry; the invention of the telegraph (Coman, chap. 8). Our domestic triangular trade in 1860 compared with our foreign triangular trade in 1760. (Interesting and profitable investigation.)
- C. LINCOLN AND THE TRIUMPH OF NATIONALISM, 1860-1876—
- 1. Biography of Lincoln—his mental, moral, and physical characteristics as a basis of his great work.
  - 2. The eve of our irrepressible conflict.
    - a. National prosperity: commercial fortunes and combinations; changes in domestic commercial routes and centers; how the railroads welded the East and the West into a North (1850-1860), thereby undermining the alliance of the West and the South through the use of the steamboat (West, pp. 577-578); new foreign markets and our foreign trade; our national debt; the panic of 1857 and the return to prosperity.
    - b. The "states rights" theory as held by Jefferson, Calhoun, Douglas, Taney, Greeley, and Davis. Review of principal state and federal relations (1789-1760); the tenth amendment; the Judiciary Act of 1789; Kentucky and Virginia resolutions (1798-1799); contest over the control of state militia in the War of 1812; the Hartford Convention, 1814; *McCulloch vs. Maryland* as to taxation, 1819; *Georgia vs. the War Department*, 1825-1827; the Webster-Hayne debate, 1830; nullification, 1832; personal-liberty laws passed in fourteen states following the Compromise of 1850; the *Dred Scott* decision and Lincoln's view of it; Lincoln's attitude toward slavery; why the



- South feared Lincoln; secession of South Carolina; the secession of other southern states; the Confederate government founded on slavery; the proposed division of federal property; Buchanan's attitude; Fort Sumpter and the Star of the West; hesitation in the border states; how the creation of new states had transformed the "old union" into a "new union." (Channing, pp. 497-504; West, pp. 587-598.)
- c. The causes of our conflict—social, economic, political. (To answer this question is to call out the highest discriminating historic sense of the student.) (Wright's "The Industrial Evolution of the United States," pp. 143-158; Channing, p. 501; Muzzy, p. 419; Coman, pp. 269-285; Wilson's "Division and Reunion," pp. 208-220.)
  - d. Proposed policies relative to seceding states: (1) compromise, as advocated by Crittenden and others; (2) to "let them go in peace," as advocated by Greeley and others; (3) resistance, as advocated by the "war governors." The South had a definite plan, the North had none.
3. The War of Secession (not truly a civil war).
    - a. The strength of the parties: population, cities, industries; military resources; attitude of foreign nations (West, pp. 610-614); their soldiery (Dodge's "A Bird's View of the Civil War," chap. viii); northern finances, 1861-1865, and our national banking system; southern finances, 1861-1865; the theater of the war. (Channing, pp. 513-523; Muzzy, pp. 430-436; West, pp. 579-586, 604-606; Wilson, chap. x.)
    - b. The call to arms; southern plans for the war—mainly defensive; northern plans—mainly offensive, and consisting of (1) the blockade of southern ports, (2) the opening of the Mississippi River, (3) the capture of Richmond, and (4) the cutting of the Confederacy into two parts, after which a large army was to march to the sea.

NOTE.—The teacher may conveniently follow her text in the military campaigns. The movement of armies must be constantly related to these plans in order to avoid confusion in the details. For further convenience, the war may be divided into four periods of one year each, beginning April.



1861, and closing April, 1865. The battles of the "Merrimac" and the "Monitor," of Vicksburg and of Gettysburg, may be worked out fully. Constant use of the map should be made.

(West, pp. 598-602.)

- c. Slavery and the war: Lincoln's first inaugural address; General Butler's seizure of negroes as contraband of war; Lincoln suggests (1862) gradual emancipation by the states, with national compensation to the slave-owners and the colonization of the negroes; abolition of slavery in the District of Columbia; the Emancipation Proclamation—effects in the North, in the South, and abroad; negro regiments enrolled; the thirteenth amendment. Name four ways by which slavery was abolished in the United States.
- d. The war and personal liberty: northern sympathizers; the writ of habeas corpus suspended; the Vallandigham case; draft riots. (West, pp. 614-616; Wilson, pp. 227-228.)
- e. The cost of the war in men, in money, in future burdens, in physical decline of manhood, in higher level of taxation and expenditures, in the assassination of Lincoln—a real blow to the South.
- 4. Political reconstruction of the South, 1865-1877. (West, pp. 618-638; Channing, pp. 560-570.)
  - a. Position of the seceding states after the war.
  - b. Lincoln's theory and policy.
  - c. Johnson's theory and policy.
  - d. The quarrel between Johnson and Congress: causes; the Freedmen's Bureau Act; the Civil Rights' Act; the Tenure of Office Act.
  - e. Congressional reconstruction as led by Thaddeus Stevens, Charles Sumner, and Henry Wilson.
  - f. The impeachment of Johnson.
  - g. The election of Grant.
  - h. Reconstruction completed: adoption of the fourteenth and fifteenth amendments; military rule in the South; carpet-bag government; the Ku-Klux Klan; restoration of white control in the South by 1878. (Muzzy, pp. 477-489.)



5. Foreign relations: the French in Mexico; the Alabama claims; the purchase of Alaska. (West, pp. 639-640; Channing, pp. 567-570.)
6. The election of 1876.

**Period of Special Privilege vs. the People, 1876-1914**

1. Characteristics of the period. (West, pp. 642-643.)
2. Economic and industrial reconstruction (1860-1914): how the war created an industrial revolution. (Bogart, pp. 306, 407; Wright, chap. 12—most excellent.)
  - a. The Homestead Act of 1862 and the growth of the Northwest; agriculture as a business; the "bonanza" grain fields; agricultural machinery for large-scale production; the breaking-down of the plantation system in the South following the war; the era of small farms; irrigation and reclamation; improvement of live stock; agricultural education; the Department of Agriculture. (Bogart, chaps. 22-23.)
  - b. Transportation and communication: the transcontinental railroads—how and why aided by our national government; the Credit Mobilier; railroad combinations and the pooling of interests; the Granger movement; freight rates and the Interstate Commerce Act of 1887 (important); the attitude of the people toward railroads and other large corporations; the growth of railroad-building; interurban lines. Water routes: our coastwise shipping; the Panama Canal; the Cape Cod Canal; the value of our lake and coastwise shipping; our foreign shipping—how the war and our high tariffs ruined it; its revival since the European war began (1914); our foreign markets. The telephone; wireless telegraphy and its special value to ocean traffic; automobiles; airships; subways; compressed-air tubes, etc. (Have pupils make a series of maps showing commercial routes.) (Bogart, chaps. 24-25, 32; West, pp. 643-652.)
  - c. Manufacturing: how the high war tariff affected this industry; factors favorable to its growth—our vast resources, our inventive genius, our flexibility of labor, our cheap means of communication, our high tariffs, large-scale production—advantages and disadvantages; the textile industries; iron and steel; labor-saving machinery; the standardization of machinery and of parts (wagons of the



same width, bolts, hats, shoes, lumber, etc., of fixed sizes); trusts and monopolies—how they have been favored; the Sherman Anti-Trust Law; the United States as a manufacturing nation; the industrial changes in the South; its changing attitude toward the tariff; what the future promises for manufacturing in New England, for the South, for the West. (Bogart, chaps. 27-29; West, pp. 652-670; Wright, chaps. 13-14.)

- d. The labor problem: how the Civil War affected labor both north and south; source, character, and extent of immigration, 1860-1885—since that time; the growth of population and of cities; employment of women and children; labor unions, strikes, boycotts, and lockouts since 1885; the Department of Labor; wages and the cost of living; our unequal distribution of labor and proposed remedies (special report). (Bogart, chaps. 30-31; Devine's "Misery and Its Causes;" West, pp. 701-720; Wright, chaps. 16, 21-26.)
3. Financial reconstruction: the national debt in 1866 and its rapid payment; the high level of the war tariff and of public expenditures retained; internal taxes largely abolished by 1883; the greenback controversy; the demonetization of silver, 1873; the panic of 1873; the Bland-Allison Act of 1878; the Sherman Act (1890); the panic of 1893; the free-silver campaign of 1896; the discovery of gold in Alaska and the adoption of the gold standard, 1900; the panic of 1907; banking reform, 1914. (Bogart, chap. 25; West, pp. 682-688.)
4. Political outline, 1876-1914.
  - a. Characteristics (West, p. 671); the low moral tone exhibited in Grant's administration; the Civil Service Act of 1871; the contested election of 1876; Garfield's election, 1880—the "Star Route" scandal; the assassination of the president; the election of Cleveland and the advancement of civil service; the accumulation of large surplus revenues; tariff agitation, 1884-1888; the pension bill and the beginning of other large expenditures, 1886; how our political life has been corrupted by such means; the presidential succession act, 1886; the tariff act of 1890; the election of 1892; tariff reform, 1894, and the panic of 1893-1896; the income tax declared unconstitutional, 1895; the election of 1896; the Dingley tariff law, 1897;



"billion-dollar" Congresses; the high cost of living; war with Spain; the United States becomes a world-power; Hawaii and other new possessions; the election of 1900; South American complications and our revised Monroe Doctrine; the election of 1904; the people demand greater publicity from corporations; the pure-food and drug acts; the election of 1908; the outrageous tariff act of 1909; the progressive movement; the election of 1912; the adoption of two constitutional amendments; the income-tax law; currency and tariff reform acts, 1914; the Mexican situation; the European war and our struggle for neutrality. (West, pp. 671-749.)

### HISTORY OF COLORADO

#### Early Inhabitants—the Cliff-Dwellers

NOTE.—The following facts are hard to obtain; few text-books contain them. The information given regarding the cliff-dwellers is from personal knowledge and research. No attempt has been made to give facts contained in the text-books in use.

The claim is often made that "America has no past;" but this is not true, for thickly scattered over the West are footprints of a vanished people, and southern Colorado is rich in ruins of laboriously built dwellings, which are of cut stone, with roofs, doors and windows. These ruins are found in groups in isolated and barren places, along ridges and knolls, and in the fertile valleys. A visit to these ruined homes tells a tale of Colorado in the prehistoric period, and no story is more interesting than that told by the bones of an extinct race, by their rude garments, tools and weapons. Hence we cannot truthfully say that "America has no past."

The Mesa Verde, the Montezuma and Mancos valleys, all located in southern Colorado—that Southwest that is said to be "beloved of the sun and bereft of rain"—are literally covered with bits of broken pottery, while all about are mounds, the sites of ancient villages and cemeteries. Ruins are also found in San Juan County, and as far north as the Shavano valley near Montrose. The area of the prehistoric ruins of the Southwest covers a tract of 6,000 square miles.

Visitors to the historic Southwest travel many miles without seeing a living thing, save a buzzard or coyote; and then in a land of tradition and perpetual sunshine, where broad acres dip away between towering cliffs, they find a city of a bygone time and



people, and realize that American history did not begin in 1492; that there were people—who, we have reason to believe, were white—living in our country before the great explorer landed upon our shores.

Little is known of these early inhabitants of Colorado. They left no records, no literature, and the hieroglyphics found, though deciphered by archæologists to the best of their ability, give little of their history. Indeed, the rude drawings of weapons, animals, and strange-looking men and women found can only be interpreted as stories of hunters, of journeys once made; and we are obliged to piece together, as we can, the story of a people who lived, loved and suffered when the cliffs echoed with human voices; for infinite days and nights have passed, peopled only by the silence, and the first white inhabitants of Colorado passed away, leaving only their ruined homes, and a few rude weapons and tools, as the legacy of a semi-civilized people.

The Mesa Verde is a canon made by the waters of the Rio Mancos, which winds its intricate way through the mesa at a depth of from 600 to 1,500 feet. Its sides are barren cliffs, jagged rocks and perpendicular walls of sandstone; and on these cliffs, high up among the rocks, in seemingly inaccessible places, we find the ruined homes of the cliff-dwellers, as these early Coloradoans are now called. The Cliff Palace—so named by its discoverers, "the Wetherill boys," cowboys then living at Mancos—the most remarkable group of cliff houses found, is there. The palace consists of a group of houses, containing 127 rooms upon the ground floor, and 350 in all, with the remains of twenty round and square towers. It occupies 500 feet of space, and is built beneath a grand overhanging crag or cliff in Cliff Canon. The shelving cliffs, which are studded with the ruins of human habitations, resemble cells in a honeycomb, and prove that Colorado's early inhabitants were wonderfully skilful in turning to practical use the protection offered by the cliffs and rocks. The houses are built in rows, one above the other. Each compartment has one opening, either a door or window, which is some thirty inches in height, and two or three feet from the floor. Some of these windows have lintels of cedar, round and unhewn, while others are of stone. The rooms are small, some are plastered, and there are still signs of primitive frescoing in dull red and black. The outer walls, which are from twelve to sixteen inches thick, are of sandstone, with mortar of a grayish white, cunningly built to



imitate the cliffs themselves, and it is possible to travel up and down the canon many times without detecting them. Upon the Mesa Verde, a green tableland principally located upon what was once the Ute Indian reservation, there are from 400 to 500 cliff houses, and these ruins, with those of Acowitz Canon, have yielded many wonderful relics, such as pottery of unique design, straw and rush matting, fragments of cotton cloth, feather cloth (the feathers are supposed to be those of the wild turkey), cord, moccasins, balls of salt carefully wrapped in corn husks and hung out of harm's way, and primitive implements of agriculture and warfare. The pottery found is earthenware of a rough gray, of which there is an endless variety, coiled ware, also gray, and the ware resembling wicker-ware. Water jugs are often found, and little lamps, with sometimes a bit of wick that has defied the ages. These little lamps are the rarest bits remaining. Besides the pottery found, there are a great many utensils; but there is not a trace of any metal, all the implements and utensils of this lost people being fashioned of clay, rock, wood or bone. Pieces of turquoise have been picked up among the ruins, but it is evident that the great bodies of gold, silver and copper that abound in the West were a sealed book to the early inhabitants.

It is due to the fact that the sun shines perpetually, and that nature has little time for tears in the Southwest, that we find these precious relics in such a perfect state of preservation. Little wood was used in or about the cliff houses, as it is a comparatively woodless country; yet, notwithstanding that fact, there are timbers upon which the ruins still rest, which once were the floor supports, forty feet in length. These timbers must have been brought from the distant mountains by the people themselves, and at terrible cost; for there is not a suggestion of a pack animal or horse. These beams must have been felled with stone axes, the ends looking as if they had been worn through. Corn cobs are frequently found, even primitive corn cribs, on whose contents the tooth of time has not alone been busy; and there are other evidences that the lost race was given to agriculture and peaceful living.

In these cliff homes the dead were laid to rest in the rear of the dwellings, in a space made by the floor and roof coming together within some four feet. A stone wall is always found as the dividing line, and there, covered by the dust of ages, are the bones of this lost race. Well-preserved mummies are found with an



outer wrapping of matting and an inner wrapping of feather cloth, but some have been found without such careful burial, and some in a position that speaks of sudden and possibly violent death.

Just why it has been taken for granted that these early settlers were a dark race it is hard to say, but even archæologists were agreed upon that point until several mummies laughed their theory to scorn with their red hair.

Near by the cliffs are the valley ruins, and many graves are found there over which a stone slab rests, and upon that slab, when it is uncovered, are nearly always found the remains of charcoal and burnt corn—mute testimony that the dead were speeded on their way with refreshments. When these valley graves are opened, they are usually found to contain pottery, war clubs and flint trinkets; for few members of this historic race went to their long rest without at least a single piece of choice pottery. As to the skeletons found, there is probably as great a variety as a cemetery of today would yield; but the skulls of these first Americans, though there are "long heads," "flat heads" and "short heads," tell no story. They are sightless and voiceless, and the question confronts us: Who were these people? Of what race? What was their relation to the Toltecs, the Aztecs, to Mokis or Zunis? It is generally held that the cliff-dwellers were related to the Aztecs, and it is a well-established fact that they were fire-worshippers; for there is always an immense inner room in a cliff village with a place that at one time contained the sacred fire, which, without doubt, was kept burning until their extinction. They also worshiped the sun as God, and on many cliffs rude pictures of sun-gods are found.

An inner chamber, which is usually circular in shape, and which is called by the Spaniards an *estufa*, is taken as evidence that this strange people had a place of worship, though it may have been merely a council chamber. However that may be, savages never built the stone houses in the cliffs. They never made pottery in so many shapes without the aid of a potter's wheel. They never wove cloth from wild cotton, flax and yucca, and they never made feather cloth from the down of birds, laid out roads of uniform grade, and made reservoirs for the storage of water. Yet all these things were done among the cliffs of southern Colorado, though "the memory of man runneth not back" to that time. How long ago was it? A great spruce tree, fully a



hundred feet high and nearly, if not quite, ten feet in circumference, grows from one of the ruined homes and echoes the question: "How long ago?"

The mound-builders sleep in the valleys; the strong cities of the cliffs are leveled; the tribes are extinct and their language lost; but the dead and gone tribes of valley and cliff were the first settlers of Colorado. They lived centuries before Cortez beheld the snow-capped mountains, and the Southwest of Colorado was the cradle of primeval humanity.

There is a legend that tells us that the Toltecs, with a civilization older than the pyramids, came from a remote country to our own; that theirs was followed by an Aztec dynasty, which, in turn, was overthrown by a fairer, larger people, the overthrow occurring about A. D. 900, when a primitive civilization, extending from the lakes of the North to the Gulf, was wiped out, and the stricken survivors fled to establish homes and defenses among the cliffs. This may be the story of the lost people who were making American history before the coming of the great explorer; but we cannot break the silence of the ages, and, year by year, sage-brush, pinon and scrub oak creep over the ruins, and spreading their green skirts try to hide the ruined homes from curious eyes.

The Indians who lived at one time in this section, and who still wander over their old hunting-ground, were never a menace to these ruins, as their superstition forbids them to molest the ruined homes of their remote predecessors. Ignacio, chief of the Utes, has always claimed these homes and graves as a legacy left by his ancestors, and urges that they be not disturbed by "the pale-face."

In the years since the discovery of these ruins there has been much exploring and digging in the cliff dwellings, but science has not animated the hand of the digger. Explorers have all been led on by the desire for relics, and scientific knowledge has been forgotten. Already treasures from these prehistoric homes have gone out to the world in large consignments; yet even the celebrated Swede, Nordenskiöld, who was first to arouse scientific interest in these ruins, and who carried away a priceless collection, failed to do any thorough or scientific work when digging and exploring, many relics being found later in the houses where he had excavated.



Appreciating that the slow-moving machinery of state and nation might eventually result in reserving a tract of land on which there was nothing to reserve, the club women of Colorado formed a society for the preservation of the ruins, and for a time were their custodian. But the ruins are now set apart as Mesa Verde National Park by act of Congress approved June 29, 1906. This park is placed under the control of the secretary of the interior, who is responsible for the care and management of it; also for the preservation from injury or spoliation of all ruins and relics within the limits of the reservation.—H. M. W.

#### The Coming of the White Man—the Early Pioneers

Looking back into Colorado's early history, we see little save mountain ranges and stretches of desert. But a misty column of human beings is moving westward. They tread the dusty plains and wind through the mountains. From the south came brave, visionary Spanish pioneers, who blazed their way with fire and blood, and raised their crosses and established their faith on Colorado soil under the Castilian flag.

Cautiously the French followed, and the native Americans kept tireless vigil as their territory was invaded.

Priests, savages and Christian knights! They are but phantoms to us, as they flit from mountain fastness to valley and plain, and are lost at last in the mighty shadow; yet they opened a trail across the western border that skirted the eastern base of the Rocky Mountains seventy-nine years before the Pilgrims landed on Plymouth Rock.

According to many authorities, the first white men to penetrate the wilds of Colorado were some 800 Spaniards and Mexicans under command of Francisco Vasquade Coronado. This was in 1540, and they sought the "Seven Cities of Cibola." These men were sent northward from Mexico by the Spanish viceroy in search of gold, and, failing to find it, returned, leaving Colorado again in undisputed possession of buffaloes and red men.

France, with little idea of the magnitude of her claim, once claimed the western region as far west as the Pacific Ocean, calling it the "Province of Louisiana," and in the same indefinite manner Spain set up ownership as far north as the southern boundary of Colorado. The history of this vast region, once known as the "Province of Louisiana," then as the "Territory of



Louisiana," and last as the "Louisiana Purchase," began shortly after the death of Christopher Columbus.

There are few events in the history of American progress so important as the purchase of Louisiana, although Thomas Jefferson said of the territory involved: "It is a barren sand, individuals will not buy. We gain nothing but peace."

After many history-making years as the Louisiana Purchase, the vast area was split into twelve states and one territory, Colorado falling heir in this way to two-fifths of her territory. At the close of the Mexican War, another large tract of country, consisting of the broad acres south of the Arkansas River, which, up to that time, had been claimed by Texas, was turned over to Colorado; but the greater part of Colorado's territory was ceded to the United States by Mexico at the close of the war of 1846-48.

Following the purchase of Louisiana, our government, deciding to investigate its new possessions, sent out an expedition of twenty-three men, under Lieutenant Zebulon Pike, to explore the region, and it was in 1806 that he caught his first glimpse of the towering peak that bears his name today. Resting under the sun of a November day, the Rocky Mountains seemed to that little band of hungry, weary men "Blue Mountains" indeed, and so they named them. The great peak, rearing its head so high in the clouds, was pronounced quite "inaccessible" by the explorers—one of the Almighty's "no thoroughfares." But that was a hundred years ago. Thousands have since wended their way to its summit, and but a few years ago a centennial celebration was held in honor of the intrepid explorer, Zebulon Pike, who, with his little detachment, was said to have been the first white visitor to the territory over which he traveled.

For many years after Zebulon Pike first saw the peak which bears his name, it was called "James Peak;" the name being given it in 1820 and continued until 1849—the year of the rush to the California gold fields. Then the pioneers, who had never liked the name, declared it should be "Pike's Peak;" and Pike's Peak it has since been, and will so carry the name of the great explorer down the stream of time. It was Zebulon Pike who first broke ground for a settlement where Pueblo now stands, raising there, for the first time on Colorado soil, the American flag. It was Zebulon Pike who first looked down from Music Pass upon the San Luis valley, calling it a "terrestrial paradise" shut in from the sight of man; and it was Zebulon Pike who said of our plains



that they might in time "become as celebrated as the deserts of Africa."

Thirteen years later, in 1819, a second expedition was sent out by our government under Major Stephen H. Long of the United States army. After much toilsome travel, this expedition struck the South Platte early in the year of 1820, and, footsore and weary, followed westward until in sight of a mountain range, where they halted, camped and named the highest peak in sight for their leader, Major Long.

John C. Fremont made a visit to what is now Colorado in 1843, reaching Fort St. Vrain on Independence Day. He made his third trip in 1845. At that time he came to explore and learn if a railroad could be built through the Rocky Mountains, such an enterprise being under serious consideration. Fremont's camp, called "Camp Starvation," was situated near Wagon Wheel Gap, and the first federal military post on Colorado soil was located at Fort Massachusetts, on Ute Creek, just at the western base of the Sangre de Cristo Mountains in 1852. Captain John W. Gunnison, who gave up his life in the exploration of the West, entered Colorado in 1853.

In our histories these early explorers are given credit to an extent that is hardly fair; for the great, impenetrable West was known to many trappers and other white men before the time of Fremont, Pike or Long. But it was the gold discovery, with its hope of speedy wealth, that drove thousands across the dreary ocean of dust and into the solitude of our mountains—some to reach the promised land of plenty, others to die of "hope deferred."

In 1821 the embargo upon trade with Mexico was lifted, and the old Santa Fe Trail, which for years had been only a trace across the desert, over which pack trains traveled, became a busy highway of commerce. Three years later the first wheels cut ruts in the Old Trail that threaded the lonely desert, and with the close of the Mexican War the old highway was thrown open to an enormous pilgrimage, and hundreds of white-topped wagons crept ceaselessly back and forth. On the original trail, leading through the Taos valley, Pueblo was located.

The old coaches and the men who handled the "ribbons" are gone these many years, but the Daughters of the American Revolution of Kansas, Colorado and New Mexico have marked with



granite slabs the old trail that in the early day made possible the "commerce of the prairies."

The first party of men to reach the vicinity of Cherry Creek is said to have been a party of nine sturdy sons of Georgia. They arrived with the spring of 1858, but close upon their heels came a second party, who chose to camp near what is Pueblo today. They set up their camp of twenty or thirty cabins, and promptly christened it "Montana City." Settlements began to spring up in many places at this time, and soon after the establishment of "Montana City" a settlement was formed near the present site of Boulder, and in September the first permanent settlers arrived at what is now called Denver, though at that time it was St. Charles, Arapahoe County, Kansas Territory. St. Charles was situated upon the east side of Cherry Creek, in what is now East Denver, and at once on the west side of the creek a rival camp sprang up. The new settlement boasted one hundred incorporators, and there was fierce rivalry between the two camps, the west side camp, which was called Auraria City, usually being in the lead. The boom of St. Charles blew away one gusty November day, but the abandoned site was soon taken possession of by General William Larimer and a party of forty, who organized the Denver Town Company, ignored the old name of St. Charles, and christened the new town Denver, in honor of James W. Denver, then governor of Kansas.

At this time the Territory of Kansas, to which Colorado was attached, extended as far west as the Rocky Mountain range, and the entire district was known as "the Pike's Peak Region." Adventurers were flocking in from every quarter of the globe to take up a residence upon one or the other side of Cherry Creek, in order to prospect the adjoining country, and from that early day to the present time Denver has been the point of arrival and departure for the multitudes that have followed.

The panic of 1857 left many men facing poverty. In the East was the spirit of unrest born of such a financial upheaval, and it was natural that new fields should be sought. The reports of gold discoveries in Colorado spreading, a continuous stream of humanity traveled westward from the Missouri River, the hope of a golden reward leading them to face the terrors of savage foes. And so the march of progress, that gave "the Domain of Gold to the World," began.

These early pathbreakers were made of stuff that could suffer hardship unflinchingly, and few less desirable followed in their



wake. Fifty thousand men are said to have journeyed to the land of gold at that time. It was, in that day, "Pike's Peak or bust," and, as has been said, the fact that the one-hundredth anniversary of the discovery of Pike's Peak has been celebrated proves that many reached their destination without "busting."

The first election held in Colorado was November 6, 1858. There were less than two hundred voters in all the broad expanse of country, and some were citizens by only a few weeks' residence; but upon the founding of Arapahoe County political enthusiasm began.

There was not a large amount of formality at that first election, and the election judges were not obliged to sit long after the sun went down to count the ballots, as there were but thirteen ballots cast and but one precinct. No doubt, however, caucuses were held and a vigorous fight made at Colorado's first election. The result was that H. J. Graham was elected delegate to Congress, and A. J. Smith representative to the Kansas legislature. Two days after the election was held, Mr. Graham was on his way to Washington to urge that a new territory, to be called "Jefferson Territory," be formed; but Congress failed to take Mr. Graham very seriously and he was not successful. Smith was more so and succeeded in having Arapahoe County officially established by the Kansas legislature, the new county including the entire region extending to the western limit of Kansas. When the Thirty-sixth Congress met in 1860, Arapahoe County was not popular, and the self-constituted "Territory of Jefferson," of which Robert W. Steele was governor, was in a dying condition. The delegate to Congress—Williams by name—was leading a strenuous life endeavoring to be recognized as such, and the edict had gone forth from his constituents that a new territory *must* be formed, "the home-made territory," as Historian Smiley has styled it, being little better than no government, and the jurisdiction of Kansas more a theory than a fact. A bill was presented to Congress setting forth the situation; but feeling ran high at the time between North and South, and rather than constitute a new territory pledged for or against slavery, all such bills were tabled. Nothing daunted, Delegate Williams, with several representatives from Colorado, was on hand at the opening of the following session to renew the battle; and upon February first, 1861, the Senate called up the bill organizing the "Territory of Idaho," which was the name decided upon. After several minor amendments, one at the request of Delegate Williams, striking out



the word "Idaho" and substituting the Spanish word "Colorado," the name suggested by Governor Gilpin, the bill passed the Senate. There was an effort made to reconsider, as there had been no declaration upon the slavery question, but the motion was lost, and on February ninth the bill passed the House. February twenty-eighth, 1861, President Buchanan signed the bill that created Colorado Territory. The bill went through easily at last. Any number of territories as far away might have been constituted during that tragic session, for senators and representatives alike were looking with tense faces and tenser nerves at the nearer problem that threatened the Union, and were hearing the sound of guns. The smoke of battle was upon them, and no man could foretell the end.

The different names proposed for the Territory of Colorado were Idaho, Montana, San Juan, Columbus, Lula, Lafayette and Jefferson.

The good news that the bill had passed and become a law was six days in reaching Colorado, and was not generally known until March fourth. Colorado Territory was created in the last days of the Buchanan administration, but President Lincoln made the first territorial appointments, and on March twenty-second he sent to the Senate for confirmation the name of William Gilpin, of Missouri, for governor; Lewis L. Weld, of Colorado, for secretary; William L. Stoughton, of Illinois, for attorney general; Francis M. Chase, of Ohio, for surveyor general; Copeland Townsend, of Colorado, for marshal; and B. F. Hall and S. F. Pettis for the Supreme Court.

The joy over the new territory soon dimmed, and Denver became the central point for the wrangling of territorial politics, and territorial misgovernment was soon found to be an intolerable burden, which, however, was borne for fifteen years. In that time there were eight administrations, two being under Governor McCook.

Governor John Evans, one of the great captains of civil life, was the second territorial governor, and Alexander Cummings, who gave an illustration of territorial politics, and of whom there is little good to be chronicled, followed him as the third governor. Then followed A. C. Hunt, Edward McCook, Samuel Elbert, McCook for his second term, and John L. Routt.

The second term of McCook was so offensive to the people that it was largely instrumental in determining them to throw off the



territorial yoke, and John L. Routt took office with the clear understanding at Washington that statehood was to be obtained as quickly as possible.

During the lifetime of Colorado Territory five delegates were sent to Congress, Senator T. M. Patterson being the last to serve in that capacity, his second election being for the regular term of member of Congress. The first territorial legislature consisted of nine members of the Council and thirteen members—for they were not superstitious—in the House.

For a time the location of the territorial capital was uncertain, there being three different locations in seven years. These were Denver, Colorado City and Golden. Colorado City was decided upon as the first capital November fifth, 1861, but it took only four days to change the minds of the locators, and the capital was transferred to Golden for the following session, and not until 1867 was it moved to Denver. In 1874 the legislature came near making Pueblo the seat of territorial government, such a bill passing the House. In the midst of unrest and dissatisfaction with the existing government, a State Constitution Convention was called October, 1875, and by March of the following year had completed its work. It was voted upon July first, 1876, and carried by an overwhelming majority, the vote in Denver alone being 5,591 to 37; and on August first came General Grant's proclamation declaring Colorado a state of the Union.

In this brief space it is impossible to speak of the many history-making details, or of the splendid heroism of the early pioneers who made it possible for this state to witness the most magnificent development of civilization and human progress that the world has ever known.

There was a time when Colorado was just a vague spot upon the United States map; when bounding it was like bounding a foreign land. Today the very name of Colorado, the world over, stands for splendid energy and progress. For this we must thank the men and women who triumphed over every obstacle; who made the desert "to blossom like the rose." And high on the honor roll of Colorado are the names of William Gilpin and John Evans, men of ability, lofty purpose and great integrity; Jerome B. Chaffee, George M. Chilcott, John L. Routt, William N. Byers, who established the *Rocky Mountain News* in 1859; John M. Chivington, Jacob Downing, Bela Hughes, E. O. Wolcott, James B. Grant, the first Democratic governor of Colorado; D. H. Moffat, N. P. Hill, James B. Belford, H. A. W. Tabor, Amos



Steck, and Rev. Father Machebeuf, who dared the hardship and peril of frontier life in order that his people might have the consolation of their religion. There are still in Colorado at this time men who lived through the years that lie between, and whose names will be added to the honor roll in days to come.

PHYSICAL CHARACTERISTICS OF COLORADO.—Situation, size, surface, altitude, soil, minerals, climate.

The Louisiana Purchase.

Land ceded Colorado at close of Mexican war.

Land ceded by Mexico in 1846-48.

EARLY INHABITANTS.—Cliff-dwellers (see page 158).

Indians.

Previous to the occupation of Colorado by the whites, the Arapahoe and Cheyenne Indians held undisputed sway over the plains country.

The Utes and Kiowas occupied the mountains.

Wandering Utes still live in southwestern Colorado.

The old Ute Reservation was closed, and the Southern Utes were removed to the Uinta Reservation, Utah, April 26, 1892.

The Southern Ute Agency is located at Ignacio.

The Southern Ute Indian Boarding School is maintained at Ignacio, with a capacity of fifty pupils.

The Allen Day School, also located at Ignacio, has a capacity of thirty pupils.

The school census of this tribe shows 113 pupils of school age.

In 1911 there were fifty-six pupils enrolled in the Boarding School, and twenty-three in the Allen Day School.

There is but one military fort in Colorado. It is located near Denver and is called Fort Logan.

There are approximately 200 Indian children of school age in the state.

The last report of the Indian superintendent, June thirtieth, 1911, gives 841 Indians now in Colorado.

WILD ANIMALS OF MOUNTAIN AND PLAIN.—Buffaloes in enormous numbers wantonly slaughtered and now practically extinct. The extinction of the buffalo was accomplished between 1860 and 1875.

Beavers, mountain lions, antelopes, wild horses, wolves, prairie dogs, elk, deer, mountain sheep.



FUR-TRADERS AND TRAPPERS.—James Purcell, an Indian trader, was, without doubt, the first white fur-trader in Colorado. The summer of 1803 found him on the South Platte.

Pike said of him: "He was the first American to penetrate the wilds of Louisiana."

Baptiste Le Grande was trapping in the state in 1804.

Nineteen fur-traders were doing business near Pueblo in 1811, and in 1812 a party of five Americans were trapping and exploring.

In 1814 a party of fur-traders from St. Louis visited Colorado to collect furs.

In the summer of 1815 August Pierre Chouteau and Jules de Munn formed a partnership for trading in the far West, and set out for Colorado the following month.

The present location of Pueblo was a popular resort for fur-traders in the early day.

The first families, consisting of men, women and children, in Colorado were found near Pueblo in the summer of 1846, a party of Mormons having settled there. The first child said to have been born in the state was born there.

TRADING-POSTS.—A small trading-post was built by Missouri traders on the upper Arkansas, not far from Pueblo, in 1822.

William W. Robert and George Bent, of St. Louis, built a trading-post on the north bank of the Arkansas in 1826.

In 1832 a trading-post was established on the upper Arkansas. Several were established between 1830 and 1845.

A French trader erected a trading-post at the junction of Adobe Creek and the Arkansas in Fremont County, in 1830.

On the western slope there was one log-built trading-post. It was located near what is now Delta. It was built by Antoine Roubidia, a Frenchman who roamed the western slope as early as 1825.

Fur-trading was in its prime in 1840.

William Bent was the last trader to maintain a post in Colorado.

The fur-traders and early explorers play an important part in the early history of Colorado, but they came and went with no thought of home-making.



PERIOD OF EXPLORATION.—Spanish exploration.

French exploration.

Colorado History, Beginning with the Rocky Mountain Expedition of  
Captain Pike in 1806-1807

Exploration of Pike, Long, Fremont, Gunnison.

FRONTIER FORTS.—Gault and Blackwell built a fort near Fountain Creek, October, 1842. This was succeeded by "Pueblo," ruins of which were found when the city of Pueblo was founded.

Fremont passed this fort in 1845.

A walled station or fort was built on the Arkansas, near the mouth of Hardscrabble Creek, some five miles north of Florence, in 1842.

Bent and St. Vrain constructed a trading-post and fort in Otero County in 1826, but later moved down the river and built the adobe fort called "Fort Williams." The name was later changed to "Fort Bent." This was the largest and most important fort in the Rocky Mountain region. It continued as a fort and trading-post until the autumn of 1852, when Bent, its owner, about to move to another location, tired of the negotiations he had been carrying on with the government for its transfer to them as a permanent fort, mined it with gunpowder and blew it to wreckage. The new Fort Bent, built by William Bent in Prowers County, was sold to the United States in 1859 and renamed "Fort Wise." Later it became "Fort Lyon."

Fort Lancaster was established in 1835. Later the name was changed to "Fort Lupton."

The largest and most important trading-post and fort on the South Platte was Fort St. Vrain. This fort was only second to Bent and Fort Laramie. It was built in 1838 by the Bent brothers and Cerau St. Vrain, for whom it was named.

MILITARY FORTS.—Fort Massachusetts, a federal military fort, was established in Colorado in 1852. It was located near the western base of the Sangre de Cristo range in what is now Costilla County. This fort was abandoned in 1858, and the garrison moved to Fort Garland, where the village of Fort Garland now stands.

Fort Collins, Fort Sedgwick, Fort Morgan, Camp Weld, Fort Lyons, now the naval sanitarium, were the forts of the early day.

**THE RUSH TO THE PIKE'S PEAK REGION.**—Occasioned by the discovery of gold in California, and the financial depression of the panic of 1857.

**FIRST DISCOVERY OF GOLD.**—Trappers and hunters were the first to find gold in the sandy creek beds.

Cherokees from Indian Territory prospected Cherry Creek and the Poudre in 1850, finding quartz bearing gold.

William G. Russell and a party of thirty men, who were prospecting in 1858, were joined by eight Georgians. Later this party was joined by a party of Jayhawkers, the united company numbering one hundred and more persons. The Georgians prospected the "Pike's Peak Country," Cherry Creek, the Platte and Poudre, but failed to find gold in paying quantities.

This band of gold-seekers dwindled until only thirteen were left, but they continued to prospect the tributaries of the Platte, making a rich strike in Dry Creek, a mile or two south of Denver, and soon succeeded in washing out several hundred dollars in gold.

This was the first important gold discovery in the state.

**FIRST DISCOVERY OF SILVER LODES.**—Silver lodes were first found in Summit County. Float ore, rich in silver, was found in 1864 in the McClelland Mountain near Georgetown. High-grade silver ore was shipped to Germany in 1872.

**EARLY GOLD SEEKERS.**—A teamster, who had traveled with Captain R. B. Marcy's command, washed a small amount of gold from the sands at the intersection of the Platte and Cherry Creek, and on his return to St. Louis in 1858 started with his tales the rush of gold-seekers from Missouri. Early in 1859 a party of men, on arriving in Omaha, created great excitement by displaying quills filled with gold from the "Pike's Peak Country."

**NEWS OF DISCOVERIES.**—News of these gold discoveries spreading, and losing nothing in repeating, a thousand or more men made their way to the eastern slope of the Rocky Mountains, during the summer of 1858, and a mining camp was established. With the coming of snow and frosty nights, tents gave way to cabins built of cottonwood logs. From this rude camp sprang Denver, "Queen City of the Plains."

**THE PIKE'S PEAK COUNTRY.**—In 1858 a party of men from Kansas camped for two months in the Garden of the Gods, pros-



pecting with indifferent success. From that time historic Pike's Peak came to stand for the entire gold-bearing region.

GOLD-SEEKERS OF 1859.—This year witnessed a great rush of gold-seekers to Pike's Peak. Some of the travelers came on foot, so eager were they; some in ox-carts, some in stages, and some rode in prairie schooners behind mules or horses of their own.

The trip from Omaha to what is now Denver, the point of arrival and departure then as now, consumed from six to seven weeks, provided the traveler met with no bad luck.

At that time every traveler, every prairie schooner, headed for Pike's Peak, its snowy crest being the loadstone that lured them on.

It is estimated that fully a hundred thousand gold-seekers traveled the dusty plains with the "Pike's Peak Country" as their destination. Of this great number many perished of hunger and thirst, finding graves along the highway which was marked, in many places, by broken-down prairie schooners bearing the suggestive label, "Busted, by thunder;" for the ignorant hosts, dazzled by the thought of gold, made little provision for the long, hard journey, the like of which they had neither knowledge nor comprehension, nor for the many misfortunes destined to overtake them.

TRAILS AND ROADS.—The Arkansas, the Platte and the Smoky Hill were the principal routes to the land of gold.

"The Old Santa Fe Trail" was the great thoroughfare that opened up "the commerce of the prairies."

STAGE LINES, PONY EXPRESS AND EARLY RAILROADS.—In 1859 the Pike's Peak Express Company established a stage line between the Missouri River and the Rocky Mountains. This line later became the property of Wells Fargo & Co.

A pony express was established in 1860.

In 1870 the Colorado Central Railway was built from Denver to Golden.

In 1871 the Denver & Rio Grande Railway was built seventy-five miles southward from Denver, and the town of Colorado Springs was established at its terminus.

The same year this road was extended to Pueblo, El Moro, and across the Sangre de Cristo range to San Luis Park.

The Atchison, Topeka & Santa Fe reached Denver in 1876.



In 1877 the Denver & Rio Grande reached Alamosa, and a railroad was built to Georgetown.

In 1878 Central City was reached by a railroad, also Silver Cliff, and the South Park was built to Morrison.

Denver was connected with the Union Pacific in 1870 by the Denver Pacific Railroad.

The same year the Kansas Pacific reached Denver.

**DANGER FROM INDIANS.**—While not in actual danger from Indians, travelers to the great West in the early day lived in constant dread of them. They were the "bandits of the plains," always lying in wait to steal oxen or horses, leaving the travelers to continue their journey as best they could.

The more serious trouble with the Indians came with the Civil War, when the United States troops were withdrawn from the frontier.

**THE RUSH TO THE "PIKE'S PEAK COUNTRY."**—Lasted two years. It was then followed by an eastern stampede, and thousands returned to their homes during the summer and autumn of 1859, sadder, if not wiser, men.

"The fifty-niners" who remained, pioneering in a new land, laid the foundation of Colorado's greatness.

**FIRST TOWNS IN THE STATE.**—In 1858 a thriving village called "Auraria City" sprang up on the west side of Cherry Creek, while another, called "St. Charles," was laid out on the east side of Cherry Creek. Shortly after a party of men from Leavenworth, Kansas, arrived and, liking the location of the proposed St. Charles, began to build the town that existed only on paper. St. Charles was discarded as a name, and Denver, destined to become the metropolis of the Rocky Mountain states, sprang into being.

For a time great rivalry existed between the towns on either side of Cherry Creek, Auraria leading, but one by one the business men crossed, casting their fortunes with Denver, which became an important city. Auraria also grew, and during 1858 the white inhabitants of Colorado increased from bare hundreds to upwards of twenty thousand.

Boulder and Fountain City were also founded in 1858.

Golden followed in 1859.

In Clear Creek County the leading town was Idaho.



In Gilpin County there was an important group, including Black Hawk, Mountain City, Central, Missouri City and Nevada, later Nevadaville.

Pueblo was settled temporarily in 1846. In 1850 a trading-post was established there. The present city was laid out in 1859, and was chartered in 1873.

Colorado Springs was founded in 1871.

Canon was a town of importance in 1860.

In 1872-73 attention was drawn to the San Juan region, and Silverton, Lake City and Ouray sprang up.

The populous city of Leadville was established in 1874.

In the summer of 1859 Fairplay and Jefferson were established.

FIRST NEWSPAPER.—William N. Byers came to the state in 1859. He then predicted that Denver would become a city of a hundred thousand, and be a railroad center between the Atlantic and Pacific.

He established the first newspaper in Colorado, calling it the *Rocky Mountain News*. The first number appeared April twenty-third, 1859, two days after his arrival.

On the same day the first and only edition of the *Cherry Creek Pioneer* appeared.

The early files of the *Rocky Mountain News* are to be found in the State Historical Department, having been presented the state—a priceless gift—by Mr. Byers.

FIRST LUMBER BROUGHT TO COLORADO.—It was brought to Denver in April, 1859.

FIRST STAGE-COACH.—It reached the frontier town of Denver May seventh, 1859.

VISIT OF HORACE GREELEY.—His visit was in 1859. He was accompanied by other newspaper men of the East. With his own hands he turned up a shovel of earth and washed a trace of gold from it. That particular bit of earth, so the story goes, had been first treated to a shot of gold by an enterprising miner.

Horace Greeley came at a time of great depression. His confidence in the future of Colorado did much to restore the failing confidence of the people, and many who intended returning to their former homes remained.

**DISTINGUISHED GUESTS.**—Other distinguished guests who came to Colorado in the very early day were: Louis Agassiz; Henry M. Stanley, the great African explorer, who visited Colorado in 1867; William H. Seward; the grand duke Alexis; Generals Grant and Sherman; and Albert Bierstadt, who painted his great canvas, "Storm in the Rocky Mountains," as a result of his visit.

**FIRST SCHOOL.**—Before Denver was a year old a school was established by a professor hailing from St. Louis. He made his first appearance in a high silk hat driving an ox-cart.

**THE PUBLIC-SCHOOL SYSTEM.**—It was established in 1861.

**STATE EDUCATIONAL INSTITUTIONS.**—By territorial enactment provision was made for a School of Mines at Golden in 1870; for a Deaf-Mute Institute at Colorado Springs at a later date; and for a State University at Boulder, and an Agricultural College at Fort Collins, in 1874-76.

The State University opened in 1877, and the same year the buildings of the Agricultural College were ready for use.

In 1876 the territorial legislature passed a bill for a school law, modeled after the systems of the East.

**CONSOLIDATION OF DENVER AND AURARIA.**—This consolidation occurred in April, 1860, the citizens meeting on the Larimer bridge to ratify the bond. Auraria became, by this act, West Denver.

**THE BOOM OF 1860.**—The Pike's Peak mining region experienced another boom in 1860, and prairie schooners crept across the plains in an almost unbroken line. The newcomers scattered in all directions. New discoveries were made and new camps were established, Denver becoming the supply point for Colorado City, Boulder, Golden, Central City, Georgetown, Breckenridge, Idaho Springs, and other places.

**FIRST TELEGRAPH LINE.**—The first telegraph line entered Colorado in January of 1862.

**BOARD OF TRADE.**—Denver organized a board of trade in 1867.

**MINING, SMELTING, AND THE OUTPUT OF GOLD.**—In 1859 the universal medium of exchange was gold dust. Paper money was rarely seen.

The gold produced in 1860 amounted to more than two million dollars.

The total yield from the beginning of 1871 to 1879 was \$45,556,124.57.



The first really great gold discovery was made by J. H. Gregory at the present site of Central and Black Hawk. - This mine, named for Gregory, yielded more money than any other Colorado fissure.

Primitive stamp mills were established in Gilpin County in 1859.

Colorado smelting works were established at Black Hawk in 1867-68. It was an epoch-making event.

The Boston & Colorado Smelting Works established their first workings at Argo in 1878.

The establishment of smelters in 1868 renewed mining interest, and set Colorado once more on the road to prosperity.

THE FIRST MINT.—A coining and assay department was added to a Denver bank in 1860. It was purchased by the government in 1862.

The location of a branch of the United States Mint followed.

The present United States Mint was completed in 1904, and coinage was begun in 1905.

OTHER MINERAL RESOURCES.—Colorado has other mineral resources of untold value.

Colorado stands fifth in rank as a coal-producing state.

Colorado is rich in lava stone, sandstone, granite and marble.

FIRST AGRICULTURE.—Mexicans who located in Fremont County in 1830 began to till the soil in a small way.

In 1847 good crops of wheat, corn, beans and pumpkins were raised near Pueblo by a mixed people then living in that region.

The year 1870 was marked by the coming of the advance guard of "the Union Colony" and the founding of Greeley. These colonists found the locality adapted to farming.

As early as 1867-69 ditching and the conservation of water were begun.

At an early day companies were engaged in farming in the counties of Arapahoe, Weld, Larimer, Jefferson, El Paso, Fremont and Las Animas, and in stock in Elbert, Bent, Pueblo, Huerfano and Boulder.

PLACER MINING.—Ended in most of the diggings in 1863.

EFFECT OF CIVIL WAR.—During the four years of the Civil War there was little emigration to the West. The growth of Colorado came to a standstill.



In 1864 Indian warfare almost cut Colorado off from the states.

HOME GOVERNMENT.—Its need was early felt, and a constitutional convention was held in Denver August ninth, 1859. In November, by a majority vote, a new territory, called "Jefferson," was organized. The territory embraced was much larger than the Colorado of today, taking in territory from Nebraska, Wyoming and Utah.

TERRITORIAL PERIOD.—February twenty-sixth, 1861, the Territory of Colorado was organized by act of Congress, with the boundaries of the present state. The census at that time was 25,329—4,484 being women. By this act the Territory of Jefferson came to an end.

William Gilpin became the first governor of the territory.

He was appointed by President Lincoln.

He reached Denver May twentieth.

The new territory consisted of thirteen counties, and had a population of 25,331.

Its capital was Denver.

The territorial legislature met in Denver September ninth.

TERRITORY PLUNGED INTO CONFLICT.—Pro-slavery, anti-slavery.

Strong element in sympathy with Confederate army.

Number of Union men leave territory to return to states and enlist.

Governor Gilpin raised regiment, equipping men as best he could.

First service of this Colorado regiment was the breaking-up of a band of secessionists led by a Texan.

Friction due to an attempt to establish a "Western Confederacy."

Services of Colorado cavalry.

Indian uprisings.

The Sand Creek fight.

Opening of hostility by Sioux in 1862.

Battle on Smoky Hill.

Territorial militia, with Henry M. Teller as major-general in command, ordered out.

Call issued for volunteers.



Message of Governor Evans to friendly Indians.

Governor Evans' appeal to Washington.

Council at Camp Weld, September twenty-eighth.

Battle of Beecher Island.

The Peace Commission.

The Fetterman Massacre.

General Phil Sheridan takes command in 1868.

With the surrender of Lee at Appomattox ended the struggle between the North and South, and there were soldiers to fight the redskins; but, according to Byers, the period between 1864 and 1868 was the darkest in the history of the territory.

Administration of Governor Gilpin. Other territorial offices.

Election of delegates to Congress.

Capitals of the territory.

Burden of territorial government borne for fifteen years, and during eight administrations.

The frequent changes in executive officers gave evidence of the unsatisfactory character of the territorial government.

NAMES PROPOSED FOR THE TERRITORY.—Arapahoe, Idaho, Lula, Montana, Nemara, San Juan, Tampa, Wapola, Tanosa, Lafayette, Colona, Columbus, Franklin.

The original Senate bill carried the name "Idaho."

Governor Gilpin gave to the new territory the name "Colorado."

There were but two Colorado men among the first territorial officers.

TERRITORIAL LEGISLATURE.—Five delegates were sent to Congress during the life of the territory.

The first territorial legislature was composed of nine members in the Council and thirteen members in the House.

TERRITORIAL GOVERNORS OF COLORADO:

William Gilpin, 1861-62.

John Evans, 1862-65.

Alexander Cummings, 1865-67.

A. Cameron Hunt, 1867-69.

Edward McCook, 1869-73.

Samuel E. Elbert, 1873-74.

Edward McCook, 1874-75.

John L. Routt, 1875-76.

CLOSE OF TERRITORIAL ERA.—Territorial intrigue and recrimination reached a climax in 1874, when the legislature proposed making Pueblo the seat of territorial government. By untiring effort the bill was defeated.

Soon after came the removal of Governor Elbert and his fellow-officers, and the reappointment of McCook as his successor. This act displeased the people more than anything that had been done under the territorial form of government, and, though his appointment was confirmed in June of 1874, McCook was obliged to give way to John L. Routt, February, 1875.

The appointment of Governor Routt was accompanied by an understanding at Washington that territorial misgovernment was to end, and that the first step in an immediate movement for statehood had been taken.

A state constitutional convention was called for October, 1875.

The work was completed by March of the following year and voted upon July first, 1876. It carried by an overwhelming majority.

Colorado was proclaimed a state by proclamation of President Grant, August 1, 1876.

THE CENTENNIAL STATE.—The last territorial legislature voted \$10,000 for the purpose of having Colorado represented at the World's Exposition held in Philadelphia in 1876.

At that exposition Colorado took her place as the thirty-eighth state. Colorado was called "The Centennial State" because admitted in the year that was the one-hundredth anniversary of the signing of the Declaration of Independence.

STATEHOOD.—Politicians began to agitate the statehood question as early as 1863.

Colorado admitted to Union as a state August 1, 1876.

John L. Routt, the last territorial governor, was the first state governor.

The constitution in its general provisions is similar to the organic laws of the states admitted to the Union since the Civil War.

The Bill of Rights is broad and comprehensive, a declaration of the principles of justice and liberty.



EQUAL RIGHTS.—From the beginning women were allowed a vote for school officers.

In 1893 women were admitted to full suffrage.

CAPITOL AND STATE SEAL.—The present state capitol building was occupied by the state executive officers in 1894, and by the state legislature in January, 1895.

The state retained the territorial seal, increasing its diameter to two and one-half inches, and substituting "State of Colorado, 1876," for the territorial legend.

## HUMANE EDUCATION

Humane education is now required by law. This law applies to all public schools.

The punishment for wrongdoing often falls upon the innocent—often the women and children who may be related to the wrongdoer. Education, when perfectly understood and applied, will remove the cause of wrongdoing, and thus prevent suffering of the innocent. The teaching of morals and humanity is of far greater value than much that is now taught. A being educated, but without moral and humane ideals, is worse and more dangerous than if he were to remain ignorant. The mainsprings of character and feeling lie deep in the human soul and must be touched by something more lasting than formal rules, "don'ts" and "must nots." Character must be formed in the days of childhood. The child is the molder's clay. The adult is the glazed, hardened, finished product. To cultivate kindness in children will be of greater value to them than all else. The central idea should be justice to all, including man and the lesser animals. The ideas of right and wrong, of justice and fair play, must be formed in early childhood. The child must be taught to feel for the sufferings of another. Teach children to apply their knowledge in personal conduct. Talk with children and have them talk with you. Reference: "Dumb Animals, How to Treat Them"—Whitehead.

### FIRST YEAR

Teach kindness by example. Doing kind things will gradually form a part of the child's very being. Show the child that animals, like himself, enjoy and suffer from the same causes. How to help the lesser animals to be happy, comfortable, clean and contented. How to make other children and people happy, and how to be happy ourselves. The proper care of pets and domestic animals with reference to affection, food, shelter and usefulness. Birds and their usefulness, their nests, eggs and young. Observe the eyes, ears, nose, mouth, feet and covering of animals. Give outdoor excursions for animal studies. Tell animal stories. How to relieve suffering; helpfulness.



## SECOND YEAR

Treat the lesser animals as you wish to be treated. Justice is the principle to be emphasized. This may be put in special forms for each animal: Treat the horse as you wish to be treated were you in his place and he in yours. How this can be done. The homes, food, liberty, play, young and good time of animals; what these mean to us and the animal. What we can do to make animals happy. What we can do to make people happy. How to be happy ourselves. How animals are abused or neglected. How children may be abused or neglected. Observe, investigate, and apply the knowledge obtained.

## THIRD YEAR

We are all animals and may help each other. How other animals help us: the horse, the cow, the birds, sheep, poultry and bees. How we may help the lesser animals: proper food and drink; sick or diseased animals, their care; good barns, stables, chicken-houses, bird-boxes, and their care.

Visit and discuss good buildings for the care of animals and the animals themselves. Being honest with the animal and not deceiving him; its effect on the animal. Being honest with people; its effect on others and on yourself.

Can we lie to animals? Do animals lie to us? Do animals deceive? What is the difference between deception by animals and deception by people? Which do these things to injure another?

How can we help sick, diseased and suffering children? Have children tell of good things done.

## FOURTH YEAR

Learn to control yourself, then you may train or control animals. The one who gets mad or cannot control his temper should not have charge of children or animals. One who gets drunk or cannot control his appetite is not fit to drive a team or care for animals or children. The animal is just what we make him by proper care or by abuse and neglect. Explain fully all these and ask children to give examples.

Careless people who do not keep their homes, their clothing and their bodies clean are not fit to care for animals. Sick or diseased people should not milk cows or care for animals in

dairies, as it endangers health. Study sanitary conditions in homes, schools, towns and animal homes.

How we should treat little children. In what ways they are like the animals.

#### FIFTH YEAR

Love makes us and our associates happy. Love will make us do good things for others and for animals. Have children name the good things for people that love will induce. What will it induce us to do for animals? Do animals love? Whom and why do they love?

Anger, hate and moroseness make us and those about us unhappy, even the animals. Do animals get angry, hateful and morose? What would make them so?

We are the educators, the teachers of animals. What can we teach them, and how can we do it?

Man could not live without other animals. Show why this is true. What traits in people cause you to love them?

#### SIXTH YEAR

To educate means to fit ourselves to be useful men and women, and to make the world better and happier.

Muscles grow strong by use. Show how to grow muscles.

Brains grow strong by use. Show how to grow brains.

Kind hearts grow strong by use. Show how to grow kind hearts.

Is it wrong to starve a child? Not supply him a good home and clothing? Not to educate him?

Is it wrong to starve one of the lesser animals? What effect would it have on the animal? On those who do it? On the community?

What is the difference between abusing a child and one of the lesser animals? What should be done in each case?

#### SEVENTH YEAR

An injury to the lesser animal is an injury to ourselves.

1. It causes a great loss of money; viz., in the horse, cow, sheep, hogs and poultry.



2. It causes disease and suffering of both animal and human beings. Tuberculosis, diphtheria, scarlet fever and other diseases spread in this way. Flies scatter disease from animal filth.

3. It makes those who neglect and abuse animals cruel and hard-hearted. It coarsens character and destroys the power to feel for the sufferings of another.

We should do right because it is right and not because of fear. Why have we laws for animal protection? Why have we laws for child protection? Which came first and why?

#### EIGHTH YEAR

Our every act leaves an increased power and tendency to act again in the same manner. Show that this is true of muscular action; of brain activity; and of our feelings for the sufferings and rights of others. Habits are formed in this way.

Show how a good habit is formed.

Show how a bad habit is formed.

What habits hurt the individual himself?

What habits may hurt others?

What habits may hurt the lesser animals?

What animals show gratitude, friendship, love, good-will, helpfulness and good sense? How? What animals show anger, hate, revenge, fear, jealousy, a dislike to men? Why?

Should animals be held responsible for their conduct, the same as people? We have reflex action of muscles and of brain. May cruel acts and kind acts become reflex?

## HYGIENE AND SANITATION

The laws of the State of Colorado require that instructions be given in all public schools in physiology and hygiene, with special reference to the effects of alcoholic drinks and narcotics upon the human system.

### FIRST TO FOURTH YEAR

Instruction along these lines should be given at regular periods; but teachers having Grades 1 to 4 should watch for opportunities to impress upon the minds of primary-grade children the principles of right living, as varying conditions of the schoolroom will suggest that instructions on these points are timely at that particular moment. For example, a drooping, sleepy child will afford opportunity for instruction on the need of rest at proper times, and the parts of the body affected can be explained at such a period. (All instruction, of course, in these grades should be oral.)

Detection of impure air by the teacher becomes an opportunity to explain the need for pure air, to describe the lungs and their workings, and to demonstrate methods of ventilation.

If, in any of the work of the schoolroom, dirt settles upon the hands of teacher or scholar, an opportunity is afforded to describe the skin, to show its uses, and to emphasize the necessity for cleanliness.

A simple calisthenic movement will give opportunity to tell the scholars something concerning the uses, movements and care of the different parts of the body.

Recess time will provide occasion to describe proper exercise; the approach of the noon hour will afford place for simple statements about food, the need for its proper care at the places where it is sold and at home, and the necessity for its proper preparation.

The posture of a pupil, particularly if the right position is observed, will give the teacher a chance to describe the benefit of sitting erect, its effect upon the diaphragm, and the consequent ill effect attending improper position.

The few minutes preceding dismissal at the close of the day will give chance for showing the importance of proper clothing for the season at hand, to describe the necessity for proper night



clothing, and the part that sleep plays in making strong, successful men and women.

In this instruction, teachers for these grades should avoid physiological names, using in their place common terms. The object of this instruction should be to fasten upon the children habits of right living, which will become second nature.

Avoid emphasis upon disease, showing rather the perfect type resulting from proper living.

It would be well for the teacher in these grades to list the parts of the body, particularly eyes, ears, nose, mouth, teeth, throat, lungs and stomach, and during the term to keep record of the number of occasions upon which instruction has been given, so that a well-distributed emphasis upon all the elements of right living may be secured.

#### FIFTH AND SIXTH YEARS

In these grades the instruction concerning the parts of the body is given from the point of view of health.

##### **First Month. THE EYES—**

- a. How to take care of them.
- b. Different kinds of light, the amount and direction.
- c. Right and wrong positions of book or paper.
- d. Print and why it differs in size.

##### **THE EAR—**

- a. Its work; how it is built; and proper care of it.
- b. Value of cultivated hearing.

##### **THE TEETH—**

- a. A clean mouth and health.
- b. Sound teeth and sound minds.
- c. The toothbrush and the dentist. Friends, not foes.

##### **Second Month. THE NOSE—**

- a. Proper breathing.
- b. Effect of air on the nose.
- c. Effect of improper breathing (mouth-breathing).

##### **THE LUNGS—**

- a. Pure air and how it is impaired.
- b. Air movement; how much air we need.

- c. Ventilation, proper and improper; even temperature; changing the air in school, living- and sleeping-rooms.

### Third Month. THE SKIN—

- a. What it is and what it does.
- b. Its proper care.
  - (1) The value of bathing.
  - (2) Various kinds of baths, and effects.
  - (3) Helpful and harmful soaps.
  - (4) The importance of airing clothing, bedding, draperies, rugs, etc.
  - (5) Clean hands and cooking.

### THE NAILS—

- a. Use; structure; care.
- b. The beauty of well-kept nails.

### THE HAIR—

- a. Use; structure; care.
- b. Shampooing and tidiness.

### Fourth Month. MUSCLES—

- a. Structure and use.
  - (1) Relation of muscle to food.
  - (2) Importance of special care of infants.
  - (3) Value and dangers of athletics.

### Fifth Month. BONES—

- a. Structure; use; form.
  - (1) The relation of food and exercise.
  - (2) Effect of pressure.
  - (3) Cause of round shoulders and of curved spines; the proper adjustment of desks and chairs.
  - (4) Injury and repair.

### Sixth Month. OTHER PARTS OF THE BODY—

- a. The use and care of ligaments, organs of digestion, and special senses.
- b. Facts concerning spine and muscular weakness.

### Seventh Month. EMERGENCIES AND HOW TO MEET THEM—

- a. Treatment of cuts.
- b. Treatment of burns.



- c. Use of handkerchief or piece of cloth for bandages.
- d. Court plaster.
- e. Treatment of frostbite, sunstroke, nose-bleeding, and fainting.

**Eighth Month. EMERGENCIES CONTINUED—**

- f. What to do in case of fits, drowning, choking, poisoning, sprains and bruises.
- g. Danger from illuminating gas, sewer gas. How to restore to consciousness a person overcome by these.

**Ninth Month. REVIEW—**

This should be conducted with a view to constant emphasis on personal and home hygiene.

**SEVENTH AND EIGHTH YEARS**

In these grades the instruction should be with a view, first, to show how to train the body for efficiency; and, second, to the establishment of habits.

**First Month. 1. DIGESTION—**

- a. Organs; describe their structure and give processes.
- b. Related subjects.
  - (1) Importance of mastication. The proper care of the teeth.
  - (2) Effect of rapid eating.
  - (3) When to eat.
  - (4) How to arrange the table, and "table manners."
  - (5) How to take care of food; of milk and butter; of the refrigerator and cellar.
  - (6) Economy of food.
  - (7) Waste and garbage.
  - (8) Preparation of food.
  - (9) The misuse of condiments.
  - (10) Danger in decaying fruit or food.

**Second Month. 2. CIRCULATION—**

- a. Organs; describe their structure and give their operations.
- b. Blood; what it is for; and its parts.
- c. Related subjects.
  - (1) The heart; its strength; taking pulse.

- (2) Overwork and effects.
- (3) Danger of excessive jumping and running.
- (4) General principles of physical training.
- (5) Effect of position on circulation.
- (6) Fainting.

**Third Month. 3. RESPIRATION—**

- a. Organs; describe their structure and give their operations.
- b. Related subjects.
  - (1) Pure air required.
  - (2) Dust, its effects, and how to protect from it.
  - (3) Impure and impoverished air; how caused, and preventive measures.
  - (4) Air in its relation to the sick; for themselves; for their associates.
  - (5) A clean body and clean clothing.
  - (6) Ventilation of schoolrooms and homes.
  - (7) The value of sunshine.

**Fourth Month. 4. THE NERVOUS SYSTEM—**

- a. The organs; describe their structure, their operation, and what they are for.
- b. How to protect them.
- c. Related subjects.
  - (1) Sleep; need of it; when and how much at different ages.
  - (2) Right conditions for sleep.
  - (3) Recreation.
  - (4) Relaxation.

**Fifth Month. 5. SPECIAL SENSES—**

- a. Describe them and what they are for.
- b. How to give them proper care.
- c. Related subjects.
  - (1) Care of eyes and ears after illness.
  - (2) Causes of habitual headache.
  - (3) Protection of eyes of infants.



**Sixth Month. 6. CONTAGIOUS DISEASES—**

- a. How these diseases are spread.
- b. Drinking-places in schoolhouses.
- c. Quarantine; isolation; health ordinances; why obey them.

**Seventh Month. THE PRINCIPLES AND PRACTICES FOR PROTECTION OF THE PUBLIC HEALTH—**

1. Get copies of rules of State Board of Health pertaining to health and disease. Get rules of Board of Education governing contagious diseases. Show that these are necessary and reasonable.
2. SCHOOL AND PUBLIC HYGIENE—
  - a. Requirements for public health; pure food; pure air; pure water, and protection from disease.
  - b. Duties of local Board of Health.
  - c. Dangers of Patent Medicines.

**Eighth Month.**

3. PROTECTING THE FOOD SUPPLY—
  - a. Get a copy of the Colorado pure-food law. Get officers of the State Board to talk to pupils.
4. PROTECTING THE WATER SUPPLY—
  - a. Where do we get our water?
  - b. What can spoil it, and how to prevent this.
  - c. Impure ice and its dangers.
  - d. Well water; danger from.
  - e. The danger following floods.

**Ninth Month.**

5. PROTECTING THE AIR FROM IMPURITIES—
  - a. Sanitary conditions in schoolhouses, other public buildings and halls, sidewalks, streets, cars, outhouses, back yards, alleys, etc.
  - b. Plumbing.
  - c. Dusting and cleaning rooms.
  - d. Where does our garbage go? Is it a safe way to dispose of it?
  - e. Soft-coal smoke.
  - f. Care of stables.
  - g. Sewerage; the right and wrong kinds; what we need.

6. PROTECTING THE WELL FROM EXPOSURE TO CONTAGIOUS AND INFECTIOUS DISEASES—

- a. Hospitals.
- b. Isolation of those suffering from contagious or infectious diseases.
  - (1) The duty to the community.
  - (2) The duty to those removed.
- c. Absence from school necessary.
- d. Prevention of epidemics.
- e. How disease is spread in the schoolroom: spitting on floor, putting pencils in mouths and ears, common drinking cup, etc.



## LANGUAGE

### FIRST YEAR

This course is outlined with the suggestion that the teachers select each month such parts of the work as the class will be able to accomplish. We have aimed to give a choice of material.

**First Month.** Talks with the children about their home life—the house, the baby, the cat, the yard, their toys, their games, etc.

Mother Goose Melodies to be used all through the year. Stories that have to do with child-life. Observance of the fall leaves; stories relating to leaves. "The Wee Wee Man;" "Story of the Little Red Hen."

Poem: "Wynken, Blynken and Nod."

Fables: "The Fox and the Grapes" (Aesop's Fables). Study of some picture suggestive of animal life.

**Second Month.** Study of autumn fruit. Paper-cutting and coloring. Form, color, size. Talks about the different occupations of people. Where have the insects and birds gone? Observe the short days and long nights. Mother Goose Melodies; "Little Boy Blue."

Poem: "The Rock-a-by Lady."

**Third Month.** Observe how nature prepares for winter. Getting ready at home for winter—putting in coal, making jelly, making warm clothes.

Note how animals and birds prepare for cold weather. Notice the putting on of more flesh.

Speak of the Eskimo.

Talks on Thanksgiving.

Poem: "The Winds."

**Fourth Month.** Work based on Christmas. Have children give account of their shopping trips. Christmas in other lands. Talks and observation of sun, stars, snowflakes, holly. Study the rabbit and winter birds.

Stories of the Christ Child.

Poem: Christmas poem to be selected by teacher.

**Fifth Month.** Talks about the New Year. Observe ice, freezing, winter sports.

Note correct use of "see," "saw;" "do," "does."

Poem: "My Shadow."

Talks on care of the body.

**Sixth Month.** Talks on Washington and Lincoln. Give stories of their early life. Have pictures.

Paper-cutting and stories relating to St. Valentine's Day.

Pussy willows.

Poem: "Stars and Daisies."

Arrange your questions so that the child must use correct expressions in his answers.

Ex.: Did you see the bird?

I saw the bird.

Did you eat your dinner?

I ate my dinner.

**Seventh Month.** Have children take notice of the signs of spring—bees, flowers, house-cleaning, birds, sap.

Plan the school garden.

Drill on correct expressions in language until they are the child's property.

Poem: "The Brook Song."

**Eighth Month.** Copy sentences; later answer questions by writing familiar sentences which the children have previously copied. Period at end of statements. Question mark after questions. Capitals at the beginning of sentences. Language work suggested by the school garden. Short outdoor excursions.

Poem: "Bunch of Golden Keys."

### THE LITTLE RED HEN

THE STORY NURSE BRIDGET TOLD

Once there was a little Red Hen.

She was a wise body and lived all alone. A nice quiet body was the little Red Hen! She worked hard on her farm all day. Can't you see her, children, driving her little horses and milking her little cows?

Over the hills and far away lived a bad old Fox. Oh, he was a very wicked old fellow, children! He lived in a den among the rocks. His wicked old mother lived with him. And she was even more wicked than her son.



Now, the Fox wanted to get the Red Hen to eat. He would lie awake nights to think how to get her. He thought and thought until he was only skin and bones. But at last a plan came to him. He took a big bag and said to his mother:

"Have the pot boiling. Be sure and have it boiling when I get home. I'll bring the Red Hen and we'll have her for supper."

Then he stole away over the hills to where the little Red Hen lived.

At last he came to the Red Hen's house. She was picking up sticks. "All right," said the Fox, stepping in at the door. He looked about for a place to hide. He hid under the bed, but his nose stuck out. Then he hid under the table, but his tail stuck out. At last he went behind the door.

The little Red Hen came in with her apron full of sticks. She locked the door and put the key in her pocket. Then she turned around. There stood the Fox. There lay his big tail spread out on the floor. Oh, how scared was the little Red Hen! She dropped her sticks and flew up on the beam that ran across the room.

"You won't get me now," she cried. "You may as well go home, you bad fellow!"

"All right," said the Fox; "I'll bring you down soon."

So he played a trick on the floor right under where she sat. He turned round and round after his tail.

Poor little Red Hen! She got dizzy looking at the Fox's tail. So she just dropped on the floor. The old Fox picked her up and put her into his bag. Then he set out for home.

Poor little Red Hen shut up there in the bag! She cried, and cried, and cried. She cried until she had wet her apron and six handkerchiefs with her tears. She did not want to be carried home by the Fox. She did not want to be eaten by him and his wicked old mother.

Then she thought of her scissors, and pulled them out. She cut a big hole in the bag. Before the old Fox could think, she had jumped out. She took a big stone and put it into the bag. Then she ran home and locked her door.

"You didn't get me this time, you wicked, sly old Fox," she said.

Well, the old Fox went home. The stone was heavy, but he did not mind.

Mother Fox was standing at the door. "Have you the pot boiling?" he said.

"Yes, my son. Did you get the little Red Hen?"

"Yes, mother, here she is in my bag. Now I'll cut the string and hold the bag over the pot. When I drop her in, you put on the cover."

"Yes, my son, I will."

The stone went in with a splash. The boiling water flew out on every side. It burned the Fox to death, and the old mother, too.

But the little Red Hen lived safe in her house. She drove her horses and worked in her fields.

And the old Fox never gave her any more trouble.

### WYNKEN, BLYNKEN AND NOD

Wynken, Blynken and Nod one night

Sailed off in a wooden shoe,

Sailed on a river of crystal light

Into a sea of dew.

"Where are you going, and what do you wish?"

The old moon asked the three.

"We have come to fish for the herring fish

That live in this beautiful sea.

Nets of silver and gold have we,"

Said Wynken, Blynken and Nod.

The old moon laughed and sang a song,

As they rocked in the wooden shoe.

And the wind that sped them all night long

Ruffled the waves of dew.

The little stars were the herring fish

That lived in that beautiful sea.

"Now cast your nets wherever you wish,

But never afraid are we!"

So cried the stars to the fishermen three—

Wynken, Blynken and Nod.



All night long their nets they threw  
To the stars in the twinkling foam.  
Then down from the sky came the wooden shoe,  
Bringing the fishermen home.  
'Twas all so pretty a sail it seemed  
As if it could not be,  
And some folks thought 'twas a dream they'd dreamed  
Of sailing that beautiful sea.  
But I shall name you the fishermen three—  
Wynken, Blynken and Nod.

Wynken and Blynken are two little eyes,  
And Nod is a little head,  
And the wooden shoe that sailed the skies  
Is a wee one's trundle-bed.  
So shut your eyes while mother sings  
Of wonderful sights that be,  
And you shall see the beautiful things  
As you rock on the misty sea,  
Where the old shoe rocked the fishermen three—  
Wynken, Blynken and Nod.

—EUGENE FIELD.

### THE ROCK-A-BY LADY

The Rock-a-by Lady from Hush-a-by Street  
Comes stealing, comes creeping.  
The poppies they hang from her head to her feet,  
And each hath a dream that is tiny and fleet.  
She bringeth her poppies to you, my sweet,  
When she findeth you sleeping!

There is one little dream of a beautiful drum—  
"Rub-a-dub" it goeth;  
There is one little dream of a big sugar plum;  
And lo! thick and fast the other dreams come,  
Of popguns that bang, and tin tops that hum,  
And a trumpet that bloweth!

And dollies peep out of those wee little dreams,  
    With laughter and singing;  
And boats go a-floating on silvery streams;  
And the stars peek-a-boo with their own misty gleams;  
And up, up and up, where the Mother Moon beams,  
    The fairies go winging!

Would you dream all those dreams that are tiny and fleet?  
    They'll come to you sleeping.  
So shut the two eyes that are weary, my sweet!  
For the Rock-a-by Lady from Hush-a-by Street,  
With poppies that hang from her head to her feet,  
    Comes stealing, comes creeping.

—EUGENE FIELD.

### MY SHADOW

I have a little shadow that goes in and out with me,  
And what can be the use of him is more than I can see.  
He is very, very like me from the heels up to the head;  
And I see him jump before me, when I jump into my bed.

The funniest thing about him is the way he likes to grow—  
Not at all like proper children, which is always very slow;  
For he sometimes shoots up taller like an India-rubber ball,  
And he sometimes gets so little that there's none of him at all.

He hasn't got a notion of how children ought to play,  
And can only make a fool of me in every sort of way.  
He stays so close beside me; he's a coward, you can see.  
I'd think shame to stick to nursie as that shadow sticks to me!

One morning, very early, before the sun was up,  
I rose and found the shining dew on every buttercup;  
But my lazy little shadow, like an arrant sleepy-head,  
Had stayed at home behind me and was fast asleep in bed.

—ROBERT LOUIS STEVENSON.



## THE BROOK SONG

Little brook! Little brook!  
You have such a happy look—  
Such a very merry manner, as you swerve and curve and crook;  
And your ripples, one and one,  
Reach each other's hands and run,  
Like laughing little children in the sun!

Little brook, sing to me;  
Sing about a humblebee  
That tumbled from a lily-bell and grumbled mumblingly,  
Because he wet the film  
Of his wings, and had to swim,  
While the water-bugs raced 'round and laughed at him!

Little brook, sing a song  
Of a leaf that sailed along  
Down the golden-braided center of your current swift and strong,  
And a dragon-fly that lit  
On the tilting rim of it,  
And rode away and wasn't scared a bit.

—JAMES WHITCOMB RILEY.

## STARS AND DAISIES

At evening, when I go to bed,  
I see the stars shine overhead;  
They are the little daisies white,  
That dot the meadow of the night.

And often, while I'm dreaming so,  
Across the sky the Moon will go;  
She is a lady, sweet and fair,  
Who comes to gather daisies there.

For, when at morning I arise,  
There's not a star left in the skies;  
She's picked them all and dropped them down  
Into the meadow of the town.

—FRANK DEMPSTER SHERMAN.

## THE WIND

Who has seen the wind?  
 Neither I nor you;  
 But when the leaves hang trembling,  
 The wind is passing through.

Who has seen the wind?  
 Neither you nor I;  
 But when the trees bow down their heads,  
 The wind is passing by.

—CHRISTINA ROSSETTI.

## BUNCH OF GOLDEN KEYS

A bunch of golden keys is mine,  
 To make each day with gladness shine.  
 "Good morning," that's the golden key  
 That unlocks every day for me.

When evening comes, "Good night" I say,  
 And close the door of each glad day.  
 When at the table, "If you please"  
 I take from off my bunch of keys.

When friends give anything to me,  
 I'll use the little "Thank you" key.  
 I'll often use each golden key,  
 And so a happy child I'll be.

—SAMUEL TAYLOR COLERIDGE.

## SECOND YEAR

**First Month.** Conversation on simple fables and oral reproduction; sentences from copy and from dictation; original sentences from familiar words.

CAPITALS.—Months, days of week, cities, streets.

Poem: First and second months, "September," by Helen Hunt Jackson.

**Second Month.** HIAWATHA'S CHILDHOOD.



## MODEL LESSON

Read the story of Hiawatha's childhood. Explain, as the poem is read: big sea water (lake), cones, wigwams, firs, linden, moss, rushes, reindeer sinews, pine tree, owlet, fireflies, brakes, rainbow, flecks and shadows on the moon. Show pictures to assist in explanation of the foregoing. Meaning of: "stilled his fretful wail," "lulled him into slumber," "Ewayea," "lapping of the water," "flitting through the dusk of the evening," "rippling," "angry," "fade and perish," "hooting," "native." After reading the poem to the children, ask questions on it similar to the following: Who was Hiawatha? Tell something about his appearance. In what kind of a cradle did he swing? With what was it lined? Who rocked it? What do we call an Indian baby? What do we call an Indian woman? Who was Nokomis? What did she do for Hiawatha? What stories did she tell him? What did he see as he lay in his cradle? What did he call the firefly? Did Hiawatha ever get frightened? Was he afraid of the dark? What did Nokomis tell him to make him go to sleep? What sound did the owl make? What did Nokomis think the rainbow was? In what kind of a house did Hiawatha and Nokomis live? What grew behind it? What color was the water before it? What kind of trees grew near? What grew upon the fir trees?

Answers to the foregoing should be given orally, and sentences should be written on the board to read and copy, as follows:

Hiawatha was an Indian boy. His skin was red and his hair black. He had a linden cradle. It was lined with moss. His grandmother rocked it. She sang songs to him and told him stories. She told him about the moon and stars. He saw the fireflies. They were his candles. He heard the owls hoot and was afraid. Nokomis thought the rainbow was made of flowers. Hiawatha and Nokomis lived in a wigwam. The lake was before it. Cones grew on the trees.

Have pupils of the first grade draw, cut and paste the wigwam, canoe, cradle, trees, lake, rainbow, moon and stars, firefly, owl, bear, bird. Paint with water-colors or colored pencils. Pupils may be given sticks or seeds to lay the outline of the wigwam, cradle, pine trees, moon and stars.

Correct the use of: "has," "have;" "is," "are;" "each," "all."

Stories, fables, conversation lessons, picture-study.



**Third Month.** STUDY OF MONDAMIN ("Hiawatha," Chapter V).  
—Give the experiences of the different days, the burial, the sprouting.

Stories suitable for Thanksgiving.

Let the children dramatize these stories and have the conversation lesson in keeping with Thanksgiving.

Poem: "The Wind and the Leaves."

**Fourth Month.** HIAWATHA'S SAILING.—Memorize a few lines.  
Have the children describe the canoe.

Stories suitable to Christmas.

Teach a short Christmas poem.

Correct: "I done it," "I seen it," "I didn't do nothing," etc.

**Fifth Month.** HIAWATHA'S FISHING (Chapter VIII).

Stories pertaining to the New Year.

Conversation lesson on winter and life in the far north.  
Eskimo life and reindeer.

Poem: "The Wind."

**Sixth Month.** HIAWATHA'S WOOING.—Let the children dramatize several of the lines.

Stories of spring and her helpers.

NATURE-STUDY.—Require observation as to the changes in the season and in all nature. Lead the child to notice putting on thicker fur and feathers in winter, the storing of food by squirrels, the snow, the twigs, winter games in other countries, etc.

Pictures and stories of Washington, Lincoln and Longfellow.  
Stories of the flag.

Let the child reproduce stories. Lead the child to say what he means.

Stories and paper-cutting. St. Valentine.

Poem: "Toast to the Flag."

**Seventh Month.** HIAWATHA'S WEDDING FEAST.—Memorize a few lines of the song of Chibiabos.

Story of the North Wind.

Have pupils prepare soil and get boxes ready for planting seeds.

Observation lessons on the chicken.

**Eighth Month.** HIAWATHA'S PICTURE-WRITING (Chapter XIV).



Make a bird calendar. House-cleaning. Plans for vegetable and flower garden. Building of nests. Insects.

Poem: "Calling the Violet."

**Ninth Month.** Review of the year's work. Outdoor excursions. Description of walks.

Correct use of: "sleep," "slept;" "awake," "awoke," "awaken;" "swell," "swelled."

### SEPTEMBER

The goldenrod is yellow,  
The corn is turning brown,  
The trees in apple orchards  
With fruit are bending down.

The gentian's bluest fringes  
Are curling in the sun,  
In dusky pods the milkweed  
Its hidden silk has spun.

The sedges flaunt their harvest  
In every meadow-nook,  
And asters by the brookside  
Make asters in the brook.

From dewy lanes at morning  
The grapes' sweet odors rise.  
At noon the roads all flutter  
With golden butterflies.

By all these lovely tokens,  
September days are here,  
With summer's best of weather  
And autumn's best of cheer.

—HELEN HUNT JACKSON.

### THE WIND AND THE LEAVES

"Come little leaves," said the wind one day,  
"Come o'er the meadows with me, and play.  
Put on your dresses of red and gold;  
Summer is gone, and the days grow cold."

Soon as the leaves heard the wind's low call,  
Down they came fluttering, one and all;  
Over the brown fields they danced and flew,  
Singing the soft little songs they knew.

"Cricket, good-bye, we've been friends so long!  
Pretty brook, sing us your farewell song;  
Say you are sorry to see us go.  
Oh! you will miss us, right well we know.

"Dear little lambs, in your fleecy fold,  
Mother will keep you from harm and cold;  
Fondly we've watched you in vale and glade;  
Say, will you dream of our loving shade?"

Dancing and whirling, the little leaves went;  
Winter had called them, and they were content.  
Soon fast asleep in their earthy beds,  
The snow laid a coverlet over their heads.

—GEORGE COOPER.

### CHRISTMAS BELLS

I heard the bells on Christmas Day  
Their old, familiar carols play,  
    And wild and sweet  
    The words repeat  
Of peace on earth, good-will to men!

Then pealed the bells more loud and deep:  
"God is not dead; nor doth he sleep!  
    The Wrong shall fail,  
    The Right prevail,  
With peace on earth, good-will to men!"

—HENRY WADSWORTH LONGFELLOW.

### THE WIND

I saw you toss the kites on high  
And blow the birds about the sky;  
And all around I heard you pass,  
Like ladies' skirts across the grass—  
    O wind, a-blowing all day long,  
    O wind, that sings so loud a song!



I saw the different things you did,  
 But always you yourself you hid.  
 I felt you push, I heard you call,  
 I could not see yourself at all—

O wind, a-blowing all day long,  
 O wind, that sings so loud a song!

O you that are so strong and cold,  
 O blower, are you young or old?  
 Are you a beast of field and tree,  
 Or just a stronger child than me?

O wind, a-blowing all day long,  
 O wind, that sings so loud a song!

—ROBERT LOUIS STEVENSON.

### TOAST TO THE FLAG

Your Flag, and my Flag!  
 And here it flies today  
 In your land and my land  
 And half a world away.  
 Rose-red and blood-red,  
 Its stripes forever gleam;  
 Soul-white and snow-white,  
 The good forefathers' dream.  
 Sky-blue and true blue,  
 With stars to gleam aright,  
 A gloried guidon in the day,  
 A shelter through the night.

Your Flag, and my Flag!  
 And oh, how much it holds!  
 Your land and my land  
 Secure within its folds.  
 Your heart and my heart  
 Beat quicker at the sight,  
 Sun-kissed and wind-tossed,  
 The red and blue and white.  
 The one Flag, the great Flag,  
 The Flag for me and you—  
 Glorified all else beside,  
 The Red and White and Blue.

—W. B. NESBIT.

## CALLING THE VIOLET

Dear little Violet,  
 Don't be afraid!  
 Lift your blue eyes  
 From the rock's mossy shade.  
 All the birds call for you  
 Out of the sky;  
 May is here waiting,  
 And here, too, am I.

Come, pretty Violet!  
 Winter's away;  
 Come, for without you  
 May isn't May.  
 Down through the sunshine  
 Wings flutter and fly;  
 Quick, little Violet,  
 Open your eye!

—LUCY LARCOM.

## THIRD YEAR

**First Month.** Oral reproduction of lessons and stories.

Use of "their," "there," "to," "two" and "too." Composition on subjects with which the child is familiar. Be sure that the child has been given enough facts and is interested in the subject before calling for the written work. How statements and questions begin and end.

Poem: "The Barefoot Boy."

**Second Month.** By means of sentences fix the correct use of the simple personals; as, "Mary and I go to school."

Poem: Finish poem of first month.

**Third Month.** Make sentences using: "here," "hear;" "new," "knew;" "hole," "whole;" "grate," "great;" etc.

Use of "saw," "seen;" "did," "done."

Composition: Thanksgiving. Give description of early life in the colonies.

Use of capital letters.

Composition: "What Will I Do on Thanksgiving?"



Poem: "The Tree."

**Fourth Month.** Use of "sit" and "set."

By imitation teach use of possessive forms and paragraphing.

Composition work relating to Christmas in other lands: England, Germany, Norway.

Poem: "New Year's Eve."

Letter-writing.

**Fifth Month.** Teach period, interrogation point.

Correct use of "may," "can," "might," "could," "between," "among."

History of Robinson Crusoe.

Conversation and story-telling.

Reproducing stories found in readers.

Poem: "The Mountain and the Squirrel."

**Sixth Month.** Use of "teach" and "learn."

Story of Sir Galahad.

Stories of Washington and Lincoln.

Poem: "If Ever I See."

Teach the use of the comma in a few simple constructions.

Use of "I" and "me," "she" and "her," "he" and "him."

**Seventh Month.** Quotation marks, exclamation point.

Use of "good" and "well."

The birds are returning. Make a bird calendar.

Memorize the Twenty-third Psalm.

**Eighth and Ninth Months.** Teach spelling of simple homonyms. Use in sentences. Use of "these" and "those."

Review letter-writing carefully.

Watch the paragraphing in composition. Have pupils correct errors.

Poem: "Little Brown Hands."

## THE BAREFOOT BOY

Blessings on thee, little man,  
Barefoot boy with cheeks of tan,  
With thy turned-up pantaloons  
And thy merry whistled tunes;  
With thy red lips, redder still,  
Kissed by strawberries on the hill;  
With the sunshine on thy face,  
Through thy torn brim's jaunty grace;  
From my heart I give thee joy—  
I was once a barefoot boy!

Oh, for boyhood's painless play,  
Sleep that wakes in laughing day,  
Health that mocks the doctor's rules,  
Knowledge never learned in schools,  
Of the wild bee's morning chase,  
Of the wild flower's time and place,  
How the tortoise bears his shell,  
How the woodchuck digs his cell,

How the robin feeds her young,  
How the oriole's nest is hung,  
Where the whitest lilies blow,  
Where the freshest berries grow,  
Where the ground-nut trails its vine,  
Where the wood-grape's clusters shine,  
Of the black wasp's cunning way,  
Mason of his walls of clay.

Oh, for boyhood's time of June,  
Crowding years in one brief moon,  
When all things I heard or saw  
Me, their master, waited for!  
I was rich in flowers and trees,  
Humming-birds and honey-bees;  
For my sport the squirrel played,  
Plied the snouted mole his spade.



Laughed the brook for my delight,  
 Through the day and through the night,  
 Whispering at the garden wall,  
 Talked with me from fall to fall.  
 Mine the sand-rimmed pickerel pond;  
 Mine the walnut slopes beyond;  
 Mine, on bending orchard trees,  
 Apples of Hesperides.

I was monarch; pomp and joy  
 Waited on the barefoot boy!

—JOHN GREENLEAF WHITTIER.

### THE TREE

The Tree's early leaf buds were bursting their brown;  
 "Shall I take them away?" said the Frost, sweeping down.

"No, leave them alone  
 Till the blossoms have grown,"

Prayed the Tree, while he trembled from rootlet to crown.

The Tree bore his blossoms, and all the birds sung;  
 "Shall I take them away?" said the Wind as he swung.

"No leave them alone  
 Till the berries have grown,"

Said the Tree, while his leaflets quivering hung.

The Tree bore his fruit in the midsummer glow;  
 Said the girl: "May I gather thy berries now?"

"Yes, all thou canst see;  
 Take them; all are for thee,"

Said the Tree, while he bent down his laden boughs low.

—BJORNSTJERNE BJORNSEN.

### NEW YEAR'S EVE

Ring out, wild bells, to the wild sky,  
 The flying cloud, the frosty light!  
 The year is dying in the night;  
 Ring out, wild bells, and let him die!

Ring out the old, ring in the new;  
 Ring, happy bells, across the snow!  
 The year is going—let him go;  
 Ring out the false, ring in the true!

Ring out old shapes of foul disease;  
 Ring out the narrowing lust of gold;  
 Ring out the thousand wars of old;  
 Ring in the thousand years of peace!

Ring in the valiant man and free,  
 The larger heart, the kindlier hand;  
 Ring out the darkness of the land;  
 Ring in the Christ that is to be!

—ALFRED TENNYSON.

#### THE TWENTY-THIRD PSALM

The Lord is my shepherd; I shall not want.  
 He maketh me to lie down in green pastures:  
 He leadeth me beside the still waters.  
 He restoreth my soul:  
 He leadeth me in the paths of righteousness for his name's  
 sake.  
 Yea, though I walk through the valley of the shadow of death,  
 I will fear no evil:  
 For thou art with me; Thy rod and Thy staff they comfort  
 me.  
 Thou preparest a table before me in the presence of mine  
 enemies;  
 Thou anointest my head with oil; my cup runneth over.  
 Surely goodness and mercy shall follow me all the days of  
 my life:  
 And I will dwell in the house of the Lord for ever.

#### THE MOUNTAIN AND THE SQUIRREL

The mountain and the squirrel  
 Had a quarrel,  
 And the former called the latter "Little Prig."  
 Bun replied:  
 "You are doubtless very big;  
 But all sorts of things and weather



Must be taken in together  
 To make up a year  
 And a sphere.  
 And I think it no disgrace  
 To occupy my place.  
 If I'm not so large as you,  
 You are not so small as I,  
 And not half so spry.  
 I'll not deny you make  
 A very pretty squirrel track.  
 Talents differ; all is well and wisely put;  
 If I cannot carry a forest on my back,  
 Neither can you crack a nut."

—RALPH WALDO EMERSON.

### LITTLE BROWN HANDS

They drive home the cows from the pasture,  
 Up through the long shady lane,  
 Where the quail whistles loud in the wheat fields  
 That are yellow with ripening grain;  
 They find in the thick, waving grasses,  
 Where the scarlet-lipped strawberry grows;  
 They gather the earliest snowdrops,  
 And the first crimson buds of the rose;  
 They toss the new hay in the meadow;  
 They gather the elder bloom white;  
 They find where the dusky grapes purple  
 In the soft-tinted October light;  
 They know where the apples hang ripest,  
 And are sweeter than Italy's wines;  
 They know where the fruit hangs the thickest  
 On the long, thorny blackberry vines.  
 Those who toil bravely are strongest;  
 The humble and poor become great;  
 And so from these brown-handed children  
 Shall grow mighty rulers of state;  
 The pen of the author and statesman—  
 The noble and wise of the land—  
 The sword, and the chisel, and palette  
 Shall be held in the little brown hand.

—M. H. KROUT.

## FOURTH YEAR

**First Month.** Dictation—not more than three or four lines on interesting topics.

Use of pictures as basis of conversation lessons.

Letter-writing. Hyphen. Formation of plurals in -es, -ves, without s; formation of possessives continued.

Reproduction of what pupil has been taught in geography, history, etc.

This month give special attention to the subject of wheat and the manufacture of flour.

Poem: "The Village Blacksmith."

**Second Month.** Correct use of "guess" and "think," of "queer" and "funny."

The use of apostrophe to denote omitted letter ("isn't," "won't," "don't," etc.).

Composition and conversation lessons on Columbus.

Continue drill on verb forms and personal pronouns.

Poem: Continue study of "The Village Blacksmith."

**Third Month.** Uses of the article "a" before a consonant sound, and "an" before a vowel sound.

Note the birds that stay in winter.

Compositions and conversations on Thanksgiving Day.

Write an invitation to a friend to spend Thanksgiving with you.

Comma, quotation, question mark, exclamation point. Formation of plurals.

Correct use of "go," "went," "gone."

Poem: "October's Bright Blue Weather."

**Fourth Month.** Read Dickens' "Christmas Carol" to the class. Question to bring out the ideas received by the class.

"Like." Never use "like" before a statement.

Composition: "Christmas in Other Lands." Furnish outlines for letters, that the arrangement may be orderly. Write letter of thanks for gifts received. Correct carefully the few lines of dictation given each day. Review by dictation, punctuation, capitalization, correct forms of the verbs and pronouns.

Poem: "Christmas Everywhere."



**Fifth Month.** Compositions and stories, illustrated by drawings, of the beaver. Talks on fur-bearing animals. Use of "in" and "into." Require more exact work as the year advances. Teacher tells a story and lets the class suggest the finish.

Principal words of abbreviation.

Correct use of "stop," "stay," "carry," "bring," "fetch," "real," "awful," "very," "this," "that," "these," "those."

Correlate the geography with grammar in conversation lessons concerning the long nights, short days, why it is cold in winter. Notice the changes that cold weather brings.

Study the forms of the snowflakes.

Poem: "The Sandpiper."

**Sixth Month.** Tell stories of animals. Study the habits of home animals and lead the children to love the dog, the cat, the horse.

Stories of their devotion to their masters.

Use of "got" or "have got" for "have."

Conversation and composition. Washington and Lincoln. Stories of Washington and Lincoln that will interest the child. Reproduction. Dictate short letters.

Poem: "The Landing of the Pilgrims."

**Seventh Month.** Study and write short compositions on sugar.

Show how nature is getting ready for spring.

Notice where the sun rises, sets. Watch capitals.

Use of "swarm," "flock" and words that name a collection of animals.

Poem: "Paul Revere's Ride."

**Eighth Month.** A study of trees. Note different kinds of wood. Uses.

Protection of forests. Why?

Correct the common use of the double negative.

Composition carefully corrected.

Use of word "O" and "Oh."

By this month child should know short selections from many good poems.

Poem: Continue poem of seventh month.

**Ninth Month.** Review principal facts in this year's work.

Child should be able to give the substance orally or in writing of a carefully selected reading lesson, to write a paragraph from dictation, to write a letter, to use the new words learned in his ordinary speech.

Written work should be accurately done so far as pupils have been instructed.

Poem: "The Yellow Violet."

### THE VILLAGE BLACKSMITH

Under a spreading chestnut tree  
The village smithy stands;  
The smith, a mighty man is he,  
With large and sinewy hands;  
And the muscles of his brawny arms  
Are strong as iron bands.

His hair is crisp, and black, and long;  
His face is like the tan;  
His brow is wet with honest sweat;  
He earns whate'er he can,  
And looks the whole world in the face,  
For he owes not any man.

Week in, week out, from morn till night,  
You can hear his bellows blow;  
You can hear him swing his heavy sledge,  
With measured beat and slow,  
Like a sexton ringing the village bell,  
When the evening sun is low.

And children coming home from school  
Look in at the open door;  
They love to see the flaming forge,  
And hear the bellows roar,  
And catch the burning sparks that fly  
Like chaff from the threshing-floor.



He goes on Sunday to the church,  
 And sits among his boys;  
 He hears the parson pray and preach;  
 He hears his daughter's voice,  
 Singing in the village choir,  
 And it makes his heart rejoice.

It sounds to him like her mother's voice,  
 Singing in Paradise!  
 He needs must think of her once more,  
 How in the grave she lies;  
 And with his hard, rough hand he wipes  
 A tear out of his eyes.

Toiling—rejoicing—sorrowing,  
 Onward through life he goes;  
 Each morning sees some task begin,  
 Each evening sees it close;  
 Something attempted, something done,  
 Has earned a night's repose.

Thanks, thanks to thee, my worthy friend,  
 For the lesson thou has taught!  
 Thus at the flaming forge of life  
 Our fortunes must be wrought;  
 Thus on its sounding anvil shaped  
 Each burning deed and thought.

—HENRY WADSWORTH LONGFELLOW.

#### OCTOBER'S BRIGHT BLUE WEATHER

O suns and skies and clouds of June,  
 And flowers of June together,  
 Ye cannot rival for one hour  
 October's bright blue weather;

When loud the bumblebee makes haste,  
 Belated, thriftless, vagrant,  
 And goldenrod is dying fast,  
 And lanes with grapes are fragrant;

When gentians roll their fringes tight  
To save them for the morning,  
And chestnuts fall from satin burrs  
Without a sound of warning;

When on the ground red apples lie  
In piles, like jewels shining,  
And redder still on old stone walls  
Are leaves of woodbine twining;

When all the lovely wayside things  
Their white-winged seeds are sowing,  
And in the fields, still green and fair,  
Late aftermaths are growing;

When springs run low, and on the brooks,  
In idle golden freighting,  
Bright leaves sink noiseless in the hush  
Of woods, for winter waiting.

O sun and skies and flowers of June,  
Count all your boasts together:  
Love loveth best of all the year  
October's bright blue weather.

—HELEN HUNT JACKSON.

### CHRISTMAS EVERYWHERE

Everywhere, everywhere, Christmas tonight!  
Christmas in lands of the fir tree and pine;  
Christmas in lands of the palm tree and vine;  
Christmas where snow peaks stand solemn and white;  
Christmas where corn fields lie sunny and bright!

Christmas where children are hopeful and gay;  
Christmas where old men are patient and gray;  
Christmas where peace, like a dove in its flight,  
Broods o'er brave men in the thick of the fight;  
Everywhere, everywhere, Christmas tonight.

For the Christ Child who comes is the master of all;  
No palace too great and no cottage too small.

—PHILLIPS BROOKS.



## THE SANDPIPER

Across the lonely beach we flit,  
One little sandpiper and I;  
And fast I gather, bit by bit,  
The scattered driftwood bleached and dry.  
The wild waves reach their hands for it,  
The wild wind raves, the tide runs high,  
As up and down the beach we flit—  
One little sandpiper and I.

Above our heads the sullen clouds  
Scud black and swift across the sky;  
Like silent ghosts in misty shrouds  
Stand out the white lighthouses high.  
Almost as far as eye can reach  
I see the close-reefed vessels fly,  
As fast we flit along the beach—  
One little sandpiper and I.

I watch him as he skims along  
Uttering his sweet and mournful cry;  
He starts not at my fitful song,  
Nor flash of fluttering drapery.  
He has no thought of any wrong;  
He scans me with a fearless eye;  
Stanch friends are we, well tried and strong—  
The little sandpiper and I.

Comrade, where wilt thou be tonight,  
When the loosed storm breaks furiously?  
My driftwood fire will burn so bright!  
To what warm shelter canst thou fly?  
I do not fear for thee, though wroth  
The tempest rushes through the sky;  
For are we not God's children both—  
Thou, little sandpiper, and I?

—CELIA THAXTER.

## THE LANDING OF THE PILGRIMS

The breaking waves dashed high  
On a stern and rock-bound coast,  
And the woods against a stormy sky  
Their giant branches tossed.

And the heavy night hung dark  
The hills and waters o'er,  
When a band of exiles moored their bark  
On the wild New England shore.

Not as the conqueror comes,  
They, the true-hearted, came;  
Not with the roll of stirring drums,  
And the trumpet that sings of fame.

Not as the flying come,  
In silence and in fear;  
They shook the depths of the desert gloom  
With their hymns of lofty cheer.

Amidst the storm they sang;  
And the stars heard, and the sea;  
And the sounding aisles of the dim woods rang  
With the anthems of the free!

The ocean eagle soared  
From his nest by the white wave's foam,  
And the rocking pines of the forest roared—  
This was their welcome home!

There were men with hoary hair  
Amidst that pilgrim band;  
Why had they come to wither there  
Away from their childhood's land?

There was woman's fearless eye,  
Lit by her deep love's truth;  
There was manhood's brow serenely high,  
And the fiery heart of youth.



What sought they thus afar?  
Bright jewels of the mine?  
The wealth of seas, the spoils of war?  
They sought a faith's pure shrine!

Aye, call it holy ground,  
The soil where first they trod;  
They left unstained what there they found,  
Freedom to worship God.

—MRS. HEMANS

### THE YELLOW VIOLET

When beechen buds begin to swell,  
And woods the bluebird's warble know,  
The yellow violet's modest bell  
Peeps from the last year's leaves below.

Ere russet fields their green resume,  
Sweet flower, I love, in forest bare,  
To meet thee, when thy faint perfume  
Alone is in the virgin air.

Of all her train, the hands of Spring  
First plant thee in the watery mold,  
And I have seen thee blossoming  
Beside the snow-bank's edges cold.

Thy parent sun, who bade thee view  
Pale skies, and chilling moisture sip,  
Has bathed thee in his own bright hue,  
And streaked with jet thy glowing lip.

Yet slight thy form and low thy seat,  
And earthward bent thy gentle eye,  
Unapt the passing view to meet,  
When loftier flowers are flaunting nigh.

Oft, in the sunless April day,  
Thy early smile has stayed my walk;  
But midst the gorgeous blooms of May  
I passed thee on thy humble stalk.

So they who climb to wealth forget  
 The friends in darker fortunes tried;  
 I copied them—but I regret  
 That I should ape the ways of pride.

And when again the genial hour  
 Awakes the painted tribes of light,  
 I'll not o'erlook the modest flower  
 That made the woods of April bright.

—WILLIAM CULLEN BRYANT.

#### FIFTH YEAR

**First Month.** Review the subject of punctuation.

Give drill upon the correct use of "is," "are," "was," "were."

Read "Barbara Frietchie" to class. Study the poem. Notice new words. What words would you have used in place of these new words? Do you think the author's words better? Why?

Brief composition on familiar subject. Correct syllabication at end of line.

Poem: "To the Fringed Gentian."

**Second Month.** Pupils should learn to talk freely. Encourage by all means possible the child's ability to stand before his class and to express his thoughts clearly. Make each lesson a language lesson. Form habit of consulting dictionary. Placing of new words, written and oral, in sentences, in letters.

Insist on accurate work; therefore have the written work brief.

Drill on correct use of "has," "have," "did," "done," "doesn't," "don't."

Poem: Selections from the "Birds of Killingworth."

Talks on treatment and protection of birds.

**Third Month.** Drill on "see," "sit," "set," "isn't," "aren't."

Write business letter ordering a bicycle or a picture.

Teach subject and predicate. Distinguish between assertive, interrogative, imperative, and exclamatory sentences.

Poem: Continue study of previous month.

Composition: "How Animals Prepare for Winter."

**Fourth Month.** Correct use of "shall" and "will," "wrote" and "written," "spoke" and "spoken."



Distinguish between the simple and complete subject and predicate; the noun.

Review formation of plurals. Use of the apostrophe. Forming of possessive, singular, plural, annotation marks.

Write an invitation to a Christmas party. A letter thanking someone for a gift. Invitation to parents and friends to attend Christmas exercises.

Have the class familiar with the life of Bryant.

Poem: "Abou Ben Adhem."

**Fifth Month.** Correct "learned" for "taught;" "can" for "may;" "had went" for "had gone."

Review work of previous months.

Commit to memory ten prepositions.

Composition: "Story of William Penn."

Poem: "A Sermon for Young Folks."

**Sixth Month.** Drill upon personal pronouns, adjectives. Pay some attention to the comparison of adjectives.

Composition: "Early History of Colorado." See page 158.

Poem: "Old Ironsides."

**Seventh Month.** Secure recognition of the verb and the direct object.

Poem: "The Arrow and the Song."

Composition: "Circulation," noting circulation of blood, of sap, etc.

Correct: "It is me," or "him," or "her," or "them."

As the year advances, pupils should depend less and less upon the teacher for their composition subjects.

**Eighth Month.** Use dictation exercises until the child distinguishes between "capitol" and "capital;" "chews" and "choose;" "except" and "accept."

Study the frog. Composition on frog, with drawing to illustrate the different stages in life-history.

Poem: "The Flag Goes By."

**Ninth Month.** Review technical work of the preceding eight months.

A carefully corrected composition.

Poem: "The Thristle."

## TO THE FRINGED GENTIAN

Thou blossom bright with autumn dew,  
And colored with the heaven's own blue,  
That openest when the quiet light  
Succeeds the keen and frosty night.

Thou comest not when violets lean  
O'er wandering brooks and springs unseen,  
Or columbines, in purple dressed,  
Nod o'er the ground bird's hidden nest.

Thou waitest late and com'st alone,  
When woods are bare and birds are flown,  
And frost and shortening days portend  
The aged year is near his end.

Then doth thy sweet and quiet eye  
Look through its fringes to the sky,  
Blue—blue—as if the sky let fall  
A flower from its cerulean wall.

I would that thus, when I shall see  
The hour of death draw near to me,  
Hope, blossoming within my heart,  
May look to heaven as I depart.

—WILLIAM CULLEN BRYANT.

## THE ARROW AND THE SONG

I shot an arrow into the air;  
It fell to earth, I knew not where;  
For, so swiftly it flew, the sight  
Could not follow it in its flight.

I breathed a song into the air;  
It fell to earth, I knew not where;  
For who has sight so keen and strong  
That it can follow the flight of song?



Long, long afterward, in an oak  
 I found the arrow, still unbroke;  
 And the song, from beginning to end,  
 I found again in the heart of a friend.

—HENRY W. LONGFELLOW.

## SELECTIONS FROM THE BIRDS OF KILLINGWORTH

The robin and the bluebird, piping loud,  
 Filled all the blossoming orchards with their glee;  
 The sparrows chirped as if they still were proud  
 Their race in Holy Writ should mentioned be;  
 And hungry crows, assembled in a crowd,  
 Clamored their piteous prayer incessantly,  
 Knowing who hears the ravens cry, and said:  
 "Give us, O Lord, this day our daily bread!"

Thus came the jocund Spring in Killingworth,  
 In fabulous days, some hundred years ago,  
 And thrifty farmers, as they tilled the earth,  
 Heard with alarm the cawing of the crow,  
 That mingled with the universal mirth,  
 Cassandra-like, prognosticating woe;  
 They shook their heads and doomed with dreadful words  
 To swift destruction the whole race of birds.

And a town-meeting was convened straightway  
 To set a price upon the guilty heads  
 Of these marauders, who, in lieu of pay,  
 Levied blackmail upon the garden beds  
 And cornfields, and beheld without dismay  
 The awful scarecrow, with his fluttering shreds;  
 The skeleton that waited at their feast,  
 Whereby their sinful pleasure was increased.

The thrush that carols at the dawn of day  
 From the green steeples of the piny wood;  
 The oriole in the elm; the noisy jay,  
 Jargoning like a foreigner at his food;  
 The bluebird balanced on some topmost spray,  
 Flooding with melody the neighborhood;  
 Linnet and meadow lark, and all the throng  
 That dwell in nests, and have the gift of song.

You slay them all! And wherefore? For the gain  
 Of a scant handful more or less of wheat,  
 Or rye, or barley, or some other grain,  
 Scratched up at random by industrious feet,  
 Searching for worm or weevil after rain,  
 Or a few cherries that are not so sweet  
 As are the songs these uninvited guests  
 Sing at their feasts with comfortable breasts.

Do you ne'er think what wondrous beings these?  
 Do you ne'er think who made them, and who taught  
 The dialect they speak, where melodies  
 Alone are the interpreters of thought?  
 Whose household words are songs in many keys,  
 Sweeter than instrument of man e'er caught!  
 Whose habitations in the tree-tops even  
 Are half-way houses on the way to heaven.

Think every morning, when the sun peeps through  
 The dim leaf-latticed windows of the grove,  
 How jubilant the happy birds renew  
 Their old melodious madrigals of love!  
 And when you think of this, remember, too  
 'Tis always morning somewhere, and above  
 The awakening continents, from shore to shore,  
 Somewhere the birds are singing evermore.

\* \* \* \* \*

The summer came, and all the birds were dead.  
 The days were like hot coals; the very ground  
 Was burned in ashes; in the orchards fed  
 Myriads of caterpillars, and around  
 The cultivated fields and garden beds  
 Hosts of devouring insects crawled, and found  
 No foe to check their march till they had made  
 The land a desert without leaf or shade.

But the next spring a stranger sight was seen—  
 A sight that never yet by bard was sung;  
 As great a wonder as it would have been  
 If some dumb animal had found a tongue!



A wagon overarched with evergreen,  
 Upon whose boughs were wicker cages hung,  
 All full of singing birds, came down the street,  
 Filling the air with music wild and sweet.

From all the country round these birds were brought,  
 By order of the town with anxious quest,  
 And loosened from their wicker prisons, sought  
 In woods and fields the places they loved best,  
 Singing loud canticles, which many thought  
 Were satires to the authorities addressed,  
 While others, listening in green lanes, averred  
 Such lovely music never had been heard.

—HENRY WADSWORTH LONGFELLOW.

#### ABOU BEN ADHEM

Abou Ben Adhem (may his tribe increase!)  
 Awoke one night from a deep dream of peace,  
 And saw, within the moonlight in his room,  
 Making it rich, like a lily in bloom,  
 An angel, writing in a book of gold.  
 Exceeding peace had made Ben Adhem bold,  
 And to the presence in the room he said:  
 "What writest thou?" The vision raised its head,  
 And, with a look made of all sweet accord,  
 Answered: "The names of those who love the Lord."  
 "And is mine one?" said Abou. "Nay, not so,"  
 Replied the angel. Abou spoke more low,  
 But cheerily still, and said: "I pray thee, then,  
 Write me as one that loves his fellow-men."  
 The angel wrote and vanished. The next night  
 It came again, with a great awakening light,  
 And showed the names whom love of God had blessed,  
 And, lo! Ben Adhem's name led all the rest.

—LEIGH HUNT.

#### A SERMON FOR YOUNG FOLKS

Don't ever go hunting for pleasures—  
 They cannot be found thus, I know;  
 Nor yet fall a-digging for treasures,  
 Unless with the spade and the hoe!

The bee has to work for the honey;  
 The drone has no right to the food;  
 And he who has not earned his money  
 Will get out of his money no good.

The ant builds her house with her labor;  
 The squirrel looks out for his mast;  
 And he who depends on his neighbor  
 Will never have friends, first or last.

To conscience be true, and to man true;  
 Keep faith, hope and love in your breast;  
 And when you have done all you can do,  
 Why, then you may trust for the rest.

—ALICE CARY.

#### OLD IRONSIDES

Ay, tear her tattered ensign down!  
 Long has it waved on high,  
 And many an eye has danced to see  
 That banner in the sky;  
 Beneath it rung the battle shout  
 And burst the cannon's roar:  
 The meteor of the ocean air  
 Shall sweep the clouds no more.

Her deck, once red with heroes' blood,  
 Where knelt the vanquished foe,  
 When winds were hurrying o'er the flood  
 And waves were white below,  
 No more shall feel the victor's tread,  
 Or know the conquered knee:  
 The harpies of the shore shall pluck  
 The eagle of the sea!

Oh, better that her shattered hulk  
 Should sink beneath the wave!  
 Her thunders shook the mighty deep,  
 And there should be her grave.  
 Nail to the mast her holy flag!  
 Set every threadbare sail,  
 And give her to the god of storms,  
 The lightning, and the gale!

—OLIVER WENDELL HOLMES.



## THE FLAG GOES BY

Hats off!

Along the street there comes  
A blare of bugles, a ruffle of drums,  
A flash of color beneath the sky.

Hats off!

The flag is passing by!

Blue and crimson and white it shines,  
Over the steel-tipped, ordered lines.

Hats off!

The colors before us fly;  
But more than the flag is passing by.

Sign of a nation, great and strong,  
To ward her people from foreign wrong;  
Pride and glory and honor—all  
Live in the colors to stand or fall.

Hats off!

Along the street there comes  
A blare of bugles, a ruffle of drums;  
And loyal hearts are beating high.

Hats off!

The flag is passing by!

—HENRY HOLCOMB BENNETT.

## THE THROSTLE

"Summer is coming, summer is coming,  
I know it, I know it, I know it.  
Light again, leaf again, life again, love again!"  
Yes, my wild little Poet.

Sing the new year in under the blue.  
Last year you sang it as gladly.  
"New, new, new, new!" Is it then so new  
That you should carol so madly?

"Love again, song again, nest again, young again."

Never a prophet so crazy!

And hardly a daisy as yet, little friend;

See, there is hardly a daisy.

"Here again, here, here, here, happy year!"

O warble, unchidden, unbidden!

Summer is coming, is coming, my dear,

And all the winters are hidden.

—ALFRED TENNYSON.

#### SIXTH YEAR

**First Month.** Note speech of children, and prepare exercises to correct errors.

Review the technical work of fifth grade.

Compositions based on child's experience. If a text-book is used, have the lesson orally before assigning the same to be learned from the book.

Poem: "Gradatim."

**Second Month.** Teach parts of speech.

Review subject and predicate.

Composition from outline.

Dictation, reviewing punctuation and the correct use of different verbs: "sit," "set," "sat," "lie," "lay," etc.

Poem: "The Ship of State."

**Third Month.** Use of "don't," "won't," "can't," "haven't," "doesn't."

Letter inviting a friend to spend Thanksgiving with you. Write a letter of acceptance.

Have short reviews of previous work; each day use a few minutes in review. Review the various forms of sentences. Some knowledge of the phrase and clause.

Poem: "A Song."

**Fourth Month.** Dictation containing phrases and clauses (short paragraph carefully corrected).

Write invitation to parents to Christmas exercises.

From phrases and clauses lead to complex and compound sentences.

Poem: "The Love of Country."



**Fifth Month.** Exercises reviewing personal pronoun.

Dictation. Give parts of speech of words used.

Composition pertaining to the New Year.

Poem: "Concord Hymn."

**Sixth Month.** Review the parts of speech, as the pupil should have a fair knowledge of the parts of speech by the end of this year's work.

Composition based on stories of Washington.

Poem: "Gladness of Nature."

**Seventh Month.** Talk on the attribute complement and object complement. Draw the pupil's attention to sentences containing attribute complement.

Dictation, reviewing the different forms of sentences.

Composition: Have each child in the class write a letter addressed to president of Audubon Society, 165 Buenna Avenue, Chicago, requesting him to send literature on the protection of birds.

Poem: "The Heart of the Tree."

**Eighth Month.** Express qualities in three different degrees: "long," "longer," "longest."

Give the rule for second and third forms.

Compositions: Plans for the garden, or a written lesson on the care of young chickens.

Poem: Same as seventh month.

**Ninth Month.** Review technical work of the year.

Report of the outdoor excursions, oral and written.

Conversation lessons on vacation plans.

Note the use of the verb, and endeavor to accustom the pupil through the eye and the ear to correct forms of "see," "saw;" "come," "came," etc., and to the correct form of the personal pronoun in: "It is I," "he," or "she."

#### GRADATIM

I count this thing to be grandly true,  
That a noble deed is a step toward God—  
Lifting the soul from the common sod  
To a purer air and a broader view.

We rise by things that are under our feet;  
 By what we have mastered of good and gain;  
 By the pride deposed and the passion slain,  
 And the vanquished ills that we hourly meet.

Wings for the angels, but feet for the men!  
 We may borrow the wings to find the way—  
 We may hope, and resolve, and aspire, and pray;  
 But our feet must rise, or we fall again.

Heaven is not reached at a single bound;  
 But we build the ladder by which we rise  
 From the lowly earth to the vaulted skies,  
 And we mount to the summit round by round.

—JOSIAH GILBERT HOLLAND.

#### THE SHIP OF STATE

Sail on, sail on, O Ship of State!  
 Sail on, O Union, strong and great!  
 Humanity, with all its fears,  
 With all the hopes of future years,  
 Is hanging breathless on thy fate!  
 We know what Master laid thy keel;  
 What Workmen wrought thy ribs of steel;  
 Who made each mast, and sail, and rope;  
 What anvils rang, what hammers beat;  
 In what a forge and what a heat  
 Were shaped the anchors of thy hope!

Fear not each sudden sound and shock—  
 'Tis of the wave, and not the rock;  
 'Tis but the flapping of the sail,  
 And not a rent made by the gale!  
 In spite of rock and tempest roar,  
 In spite of false lights on the shore,  
 Sail on, nor fear to breast the sea!  
 Our hearts, our hopes, are all with thee.  
 Our hearts, our hopes, our prayers, our tears,  
 Our faith, triumphant o'er our fears,  
 Are all with thee—are all with thee!

—HENRY WADSWORTH LONGFELLOW.



## A SONG

There is ever a song somewhere, my dear;  
There is ever a something sings alway:  
There's the song of the lark when the skies are clear,  
And the song of the thrush when the skies are gray.  
The sunshine showers across the grain,  
And the bluebird trills in the orchard tree;  
And in and out, when the eaves drip rain,  
The swallows are twittering ceaselessly.

There is ever a song somewhere, my dear,  
In the midnight black, or the midday blue;  
The robin pipes when the sun is here,  
And the cricket chirrups the whole night through.  
The buds may blow and the fruit may grow,  
And the autumn leaves drop crisp and sear;  
But whether the sun, or the rain, or the snow,  
There is ever a song somewhere, my dear.

There is ever a song somewhere, my dear,  
Be the skies above or dark or fair;  
There is ever a song that our hearts may hear—  
There is ever a song somewhere, my dear—  
There is ever a song somewhere.

—JAMES WHITCOMB RILEY.

## THE LOVE OF COUNTRY

Breathes there the man with soul so dead,  
Who never to himself hath said,  
This is my own, my native land?  
Whose heart hath ne'er within him burned,  
As home his footsteps he hath turned  
From wandering on a foreign strand?

If such there breathe, go, mark him well!  
For him no minstrel raptures swell;  
High though his titles, proud his name,  
Boundless his wealth as wish can claim,

Despite those titles, power and pelf,  
 The wretch, concentrated all in self,  
     Living, shall forfeit fair renown,  
     And, doubly dying, shall go down  
 To the vile dust, from whence he sprung,  
 Unwept, unhonored, and unsung.

—SIR WALTER SCOTT.

### CONCORD HYMN

By the rude bridge that arched the flood,  
     Their flag to April's breeze unfurled,  
 Here once the embattled farmers stood,  
     And fired the shot heard round the world.

The foe long since in silence slept;  
     Alike the conqueror silent sleeps;  
 And Time the ruined bridge has swept  
     Down the dark stream which seaward creeps.

On this green bank, by this soft stream,  
     We set today a votive stone,  
 That memory may their deed redeem,  
     When, like our sires, our sons are gone.

Spirit, that made those heroes dare  
     To die, and leave their children free,  
 Bid Time and Nature gently spare  
     The shaft we raise to them and Thee!

—RALPH WALDO EMERSON.

### THE GLADNESS OF NATURE

Is this a time to be cloudy and sad,  
     When our mother nature laughs around;  
 When even the deep blue heavens look glad,  
     And gladness breathes from the blossoming ground?

There are notes of joy from the hangbird and wren,  
     And the gossip of swallows through all the sky;  
 The ground-squirrel gaily chirps by his den,  
     And the wilding bee hums merrily by.



The clouds are at play in the azure space,  
And their shadows at play on the bright green vale;  
And here they stretch to the frolic chase,  
And there they roll on the easy gale.

There's a dance of leaves in that aspen bower;  
There's a titter of winds in that beechen tree;  
There's a smile on the fruit, and a smile on the flower,  
And a laugh from the brook that runs to the sea.

And look at the broad-faced sun, how he smiles  
On the dewy earth that smiles in his ray,  
On the leaping waters and gay young isles!  
Aye, look, and he'll smile thy gloom away!

—WILLIAM CULLEN BRYANT.

### THE HEART OF THE TREE

What does he plant who plants a tree?  
He plants the friend of sun and sky;  
He plants the flag of breezes free,  
The shaft of beauty towering high;  
He plants a home, to heaven anigh,  
For song and mother-croon of bird  
In hushed and happy twilight heard,  
The treble of heaven's harmony;  
These things he plants who plants a tree.

What does he plant who plants a tree?  
He plants cool shade and tender rain  
And seed and bud of days to be,  
And years that fade and flush again;  
He plants the forest's heritage,  
The harvest of a coming age,  
The joy that unborn eyes shall see;  
These things he plants who plants a tree.

What does he plant who plants a tree?  
He plants, in sap and leaf and wood,  
In love of home and loyalty,  
And far-cast thought of civic good,  
His blessing on the neighborhood.

Who in the hollow of his hand  
 Holds all the growth of all our land,  
 A nation's growth from sea to sea,  
 Stirs in his heart who plants a tree.

—H. C. BUNNER.

### TEN RULES

Never put off until tomorrow what you can do today.  
 Never trouble another for what you can do yourself.  
 Never spend your money before you have earned it.  
 Never buy what you don't want because it is cheap.  
 Pride costs more than hunger, thirst and cold.  
 We seldom repent of having eaten too little.  
 Nothing is troublesome that we do willingly.  
 How much pain the evils have cost us that have never happened.

Take things always by the smooth handle.  
 When angry, count ten before you speak; if very angry, count a hundred.

—THOMAS JEFFERSON.

## GRAMMAR

### SEVENTH YEAR

When a pupil reaches this grade he should be able to recognize the parts of speech, to select subject and predicate, to know phrase and clause, something of capitalization and punctuation.

Definitions should follow, not precede, the teaching of the thing to be defined. Use diagrams to aid pupils getting the thought through seeing. Diagramming is fascinating and useful, if used judiciously. Help children to voice their thoughts clearly; to make themselves heard when they speak, not by raising the voice, but by distinct enunciation. Train them to cut their words clear of each other, and not to shorten the last syllable, as "runnin'" for "running." Give exercise in narration, description or letter-writing once a week throughout the year.

**First Month.** Simple sentence, complete subject, complete predicate, simple subject, simple predicate, attribute.

Objective complement.

Poem: "Polonius' Advice to Laertes."



**Second Month.** Classification of sentences according to use: declarative, interrogative, imperative, exclamatory. Change interrogative and imperative sentences to declarative, and analyze. Classify sentences according to their structure: simple, complex, compound.

Have regular form for analysis of simple sentences.

Poem: Same as first month.

**Third Month.** Select nouns and pronouns found in sentences. Study how nouns are used in sentences (subject, predicate, attribute complement, object, objective complement).

Rule: The pronouns "I," "he," "she," "we," "they," "who," should be used as subjects and attribute complements.

The pronouns "me," "him," "her," "us," "them," "whom," should be used as objects.

*Interest* pupils in the application of this rule in their speech.

Special attention to "it," "there" and "that" as introductory words.

Teach the natural and the inverted order of sentences.

Drill on phrases and clauses.

Poem: "The Building of the Ship" (two months).

**Fourth Month.** Adjuncts (modifiers): according to use, adjective and adverbial; according to form, word, phrase, clause.

Note in each sentence why the adjunct has been used.

Analyze easy sentences to illustrate above.

Compound subject, predicate, object. Review.

**Fifth Month.** Ordinary sentences to be analyzed and diagrammed.

Select the essential elements. Mention the adjuncts, telling what they modify, and tell if the adjunct is phrase or clause.

Prepositional phrase. What pronouns are used as objects of prepositions?

Letter-writing, receipts, checks.

Review social and commercial notes.

Poem: "Winter" (two months).

**Sixth Month.** Before leaving this work, be sure that pupils can analyze simple sentences according to the formula you have given them. Keep up the knowledge that the pupil has acquired in the sixth grade about the parts of speech.

Begin the analysis of complex sentences. Determine which are principal and which are subordinate clauses. Classify these clauses according to use, as noun clauses, adjective clauses, and adverbial clauses. Select many sentences and classify clauses as suggested.

**Seventh Month.** Begin study of compound sentences.

Make special study of connectives.

Analyze and diagram short compound sentences.

In composition work notice punctuation of adjective clause.

Poem: "Recessional."

**Eighth and Ninth Months.** Note independent construction, exclamation, parenthetical expressions.

Review of the year's work. This can be accomplished by analysis, diagramming definitions.

Exercises to correct errors in speech of pupils.

Poem: "The Year's at the Spring."

## WINTER

(From the Prelude to Part II, "Vision of Sir Launfal.")

Down swept the chill wind from the mountain peak,  
 From the snow five thousand summers old;  
 On open wold and hilltop bleak  
 It had gathered all the cold,  
 And whirled it like sleet on the wanderer's cheek;  
 It carried a shiver everywhere  
 From the unleaved boughs and pastures bare.  
 The little brook heard it and built a roof  
 'Neath which we could house him, winter-proof;  
 All night by the white stars' frosty gleams  
 He groined his arches and matched his beams;  
 Slender and clear were his crystal spars  
 As the lashes of light that trim the stars;  
 He sculptured every summer delight  
 In his halls and chambers out of sight;  
 Sometimes his tinkling waters slip  
 Down through a frost-leaved forest-crypt,  
 Long, sparkling aisles of steel-stemmed trees  
 Bending to counterfeit a breeze;  
 Sometimes the roof no fretwork knew



But silvery mosses that downward grew;  
 Sometimes it was carved in sharp relief,  
 With quaint arabesques of ice fern-leaf;  
 Sometimes it was simply smooth and clear  
 For the gladness of heaven to shine through, and here  
 He had caught the nodding bulrush-tops  
 And hung them thickly with diamond-drops,  
 That crystallised the beams of moon and sun,  
 And made a star of every one.  
 No mortal builder's most rare device  
 Could match this winter-palace of ice;  
 'Twas as if every image that mirrored lay  
 In his depths serene through the summer day,  
 Each fleeting shadow of earth and sky,  
 Lest the happy model should be lost,  
 Had been mimicked in fairy masonry  
 By the elfin builders of the frost.

—JAMES RUSSELL LOWELL.

### POLONIUS' ADVICE TO LAERTES

(From "Hamlet")

Give thy thoughts no tongue,  
 Nor any unproportioned thought his act.  
 Be thou familiar, but by no means vulgar.  
 The friends thou hast and their adoption tried,  
 Grapple them to thy soul with hooks of steel;  
 But do not dull thy palm with entertainment  
 Of each new-hatched, unfledged comrade.

Beware

Of entrance to a quarrel; but being in,  
 Bear it that the opposed may beware of thee.  
 Give every man thine ear; but few thy voice;  
 Take each man's censure; but reserve thy judgment.  
 Costly thy habit as thy purse can buy,  
 But not expressed in fancy; rich, not gaudy;  
 For the apparel oft proclaims the man;  
 And they in France, of the best rank and station,  
 Are most select and generous, chief in that.  
 Neither a borrower nor a lender be;  
 For a loan oft loses both itself and friend,  
 And borrowing dulls the edge of husbandry.

This above all—to thine own self be true,  
And it must follow, as the night the day,  
Thou canst not then be false to any man.

—WILLIAM SHAKESPEARE.

### THE BUILDING OF THE SHIP

“Build me straight, O worthy Master!  
Staunch and strong, a goodly vessel,  
That shall laugh at all disaster,  
And with wave and whirlwind wrestle!”

\* \* \* \* \*

Then the Master,  
With a gesture of command,  
Waved his hand;  
And at the word,  
Loud and sudden there was heard,  
All around them and below,  
The sound of hammers, blow on blow,  
Knocking away the shores and spurs.  
And see! she stirs!  
She starts—she moves—she seems to feel  
The thrill of life along her keel,  
And spurning with her foot the ground,  
With one exulting, joyous bound,  
She leaps into the ocean's arms!

And lo! from the assembled crowd  
There rose a shout, prolonged and loud,  
That to the ocean seemed to say:  
“Take her, O bridegroom, old and gray!  
Take her to thy protecting arms,  
With all her youth and all her charms!”  
How beautiful she is! How fair  
She lies within those arms, that press  
Her form with many a soft caress  
Of tenderness and watchful care!  
Sail forth into the sea, O ship!  
Through wind and wave right onward steer!  
The moistened eye, the trembling lip,  
Are not the signs of doubt or fear.



Sail forth into the sea of life,  
 O gentle, loving, trusting wife,  
 And safe from all adversity  
 Upon the bosom of that sea  
 Thy comings and thy goings be!  
 For gentleness and love and trust  
 Prevail o'er angry wave and gust;  
 And in the wreck of noble lives  
 Something immortal still survives!

Thou, too, sail on, O Ship of State!  
 Sail on, O Union, strong and great!  
 Humanity, with all its fears,  
 With all the hopes of future years,  
 Is hanging breathless on thy fate!  
 We know what Master laid thy keel;  
 What Workmen wrought thy ribs of steel;  
 Who made each mast, and sail, and rope;  
 What anvils rang, what hammers beat;  
 In what a forge and what a heat  
 Were shaped the anchors of thy hope!

Fear not each sudden sound and shock—  
 'Tis of the wave, and not the rock;  
 'Tis but the flapping of the sail,  
 And not a rent made by the gale!  
 In spite of rock and tempest roar,  
 In spite of false lights on the shore,  
 Sail on, nor fear to breast the sea!  
 Our hearts, our hopes, are all with thee.  
 Our hearts, our hopes, our prayers, our tears,  
 Our faith triumphant o'er our fears,  
 Are all with thee—are all with thee!

—HENRY WADSWORTH LONGFELLOW.

### RECESSIONAL

God of our fathers, known of old—  
 Lord of our far-flung battle line—  
 Beneath whose awful hand we hold  
 Dominion over palm and pine—  
 Lord God of Hosts, be with us yet,  
 Lest we forget—lest we forget!

The tumult and the shouting dies—  
The captains and the kings depart;  
Still stands thine ancient sacrifice,  
An humble and a contrite heart.  
Lord God of Hosts, be with us yet,  
Lest we forget—lest we forget!

Far-called our navies melt away—  
On dune and headland sinks the fire—  
Lo, all our pomp of yesterday  
Is one with Nineveh and Tyre!  
Judge of the nations, spare us yet,  
Lest we forget—lest we forget!

If, drunk with sight of power, we loose  
Wild tongues that have not Thee in awe—  
Such boasting as the Gentiles use,  
Or lesser breeds without the law—  
Lord God of Hosts, be with us yet,  
Lest we forget—lest we forget!

For heathen heart that puts her trust  
In reeking tube and iron shard—  
All valiant dust that builds on dust,  
And guarding calls not Thee to guard—  
For frantic boast and foolish word,  
Thy mercy on thy people, Lord!  
Amen.

—RUDYARD KIPLING.

#### THE YEAR'S AT THE SPRING

The year's at the spring,  
And day's at the morn;  
Morning's at seven;  
The hillside's dew-pearled;  
The lark's on the wing;  
The snail's on the thorn;  
God's in His heaven—  
All's right with the world.

—ROBERT BROWNING.



## EIGHTH YEAR

Pupils should prepare each month, except September, a composition of not less than two hundred words upon a subject assigned by the teacher or selected by the pupil with the approval of the teacher. After the pupil has corrected all errors that he can discover, the teacher should carefully note the remaining errors and return the composition for the pupil's final draft. One short paragraph should be written each day and corrected by teacher and rewritten by pupil. Make use of blackboard to learn words. Letter-writing, business letters to be emphasized.

**First Month.** NOUN.—All that is given about nouns in the text-book used. Have pupils parse noun. Analyze and diagram sentences containing nouns in their different constructions: subject, predicate attribute, object, principal term of prepositional phrase, appositive, possessive modifier, independently in address.

Poem: Prelude to the first part of the "Vision of Sir Launfal."

**Second Month.** PRONOUNS.—Definitions of the classes of pronouns. Parsing. Agreement of pronouns with their antecedents; placing of pronouns with their antecedents; placing of pronouns to make their application clear.

Special attention to the relative pronouns. Give the construction or use of each pronoun parsed.

Teach how to organize and conduct a society; nomination and election of officers, order of business, keeping minutes.

Analysis of sentences containing pronouns in their different constructions.

Memory work: From the Second Inaugural Address of Abraham Lincoln.

**Third Month.** ADJECTIVE.—Comparison. Adjectives that are compared. Irregular adjectives that should not be compared. Parse nouns, pronouns, and adjectives in the sentence analyzed.

**Fourth Month.** VERBS.—You will need to spend much time on this subject. Make the outline for the study of verbs, infinitives and participles, to agree with the text-book used.

Memory work: "The Chambered Nautilus" (two months).

**Fifth Month.** Continue study of the verb. Parse the verb. Correct errors in the use of verbs and pronouns. Analyze and



diagram sentences containing forms of pronouns and verbs that are often used incorrectly.

**Sixth Month.** Continue study of verb. Drill on the participle and infinitive. Give many sentences to teach correct use of verbs.

Poem: "Mercy."

**Seventh Month.** ADVERB.—Classification; comparison. Review adjectives. Analysis of sentences containing adverbs. Parsing.

**Eighth Month.** PREPOSITION, CONJUNCTION, INTERJECTION.—Use the preposition that expresses the exact shade of meaning desired.

Teach pupils how to prepare a debate, and have the pupils debate some question of interest to them.

Poem: "Work."

**Ninth Month.** Review all difficult technical points, giving special attention to the following:

1. The classes, inflection and syntax of the parts of speech.
2. The syntax of words, phrases and clauses.
3. The use of the text-book in grammar as a book of reference.
4. The use of the rules of grammar as an aid in composition and in the interpretation of literature.

## SUMMER

(From the Prelude to Part 1, "Vision of Sir Launfal.")

What is so rare as a day in June?

Then, if ever, come perfect days;

Then Heaven tries the earth if it be in tune,

And over it softly her warm ear lays.

Whether we look or whether we listen,

We hear life murmur or see it glisten;

Every clod feels a stir of might,

An instinct within it which reaches and towers

And, groping blindly above it for light,

Climbs to a soul in grass and flowers.

The flush of life may well be seen

Thrilling back over hills and valleys;

The cowslip startles in meadows green,

The buttercup catches the sun in its chalice,

And there's never a leaf nor a blade too mean

To be some happy creature's palace.



The little bird sits at his door in the sun,  
 Atilt like a blossom among the leaves,  
 And lets his illumined being o'errun  
 With the deluge of summer it receives;  
 His mate feels the eggs beneath her wings,  
 And the heart in her dumb breast flutters and sings;  
 He sings to the wide world and she to her nest—  
 In the nice ear of nature, which song is the best?

The breeze comes whispering in our ear  
 That dandelions are blossoming near,  
 That maize has sprouted, that streams are flowing,  
 That the river is bluer than the sky,  
 That the robin is plastering his home hard by;  
 Joy comes, grief goes, we know not how;  
 Everything is happy now,  
 Everything is upward striving;  
 'Tis as easy now for the heart to be true  
 As for grass to be green or skies to be blue—  
 'Tis the natural way of living.

Who knows whither the clouds have fled?  
 In the unscarred heavens they leave no wake;  
 And the eyes forget the tears they have shed;  
 The heart forgets its sorrow and ache;  
 The soul partakes of the season's youth,  
 And the sulphurous rifts of passion and woe  
 Lie deep 'neath a silence pure and smooth,  
 Like burnt-out craters healed with snow.

—JAMES RUSSELL LOWELL

### THE CHAMBERED NAUTILUS

This is the ship of pearl which, poets feign,  
 Sails the unshadowed main—  
 The venturous bark that flings  
 On the sweet summer wind its purpled wings  
 In gulfs enchanted, where the Siren sings,  
 And coral reefs lie bare,  
 Where the cold sea-maids rise to sun their streaming hair.

Its webs of living gauze no more unfurl;  
Wrecked is the ship of pearl!  
And every chamber cell,  
Where its dim dreaming life was wont to dwell,  
As the frail tenant shaped his growing shell,  
Before thee lies revealed—  
Its irised ceiling rent, its sunless crypt unsealed!

Year after year beheld the silent toil  
That spread his lustrous coil;  
Still, as the spiral grew,  
He left the past year's dwelling for the new,  
Stole with soft step its shining archway through,  
Built up its idle door,  
Stretched in his last-found home, and knew the old no more.

Thanks for the heavenly message brought by thee,  
Child of the wandering sea!  
Cast from her lap, forlorn!  
From thy dead lips a clearer note is born  
Than ever Triton blew from wreathed horn!  
While on mine ear it rings,  
Through the deep caves of thought I hear a voice that sings:

Build thee more stately mansions, O my soul,  
As the swift seasons roll!  
Leave thy low-vaulted past!  
Let each new temple, nobler than the last,  
Shut thee from heaven with a dome more vast,  
Till thou at length art free,  
Leaving thine outgrown shell by life's unresting sea!

—OLIVER WENDELL HOLMES.

#### FROM THE SECOND INAUGURAL ADDRESS

Fondly do we hope, fervently do we pray, that this mighty scourge of war may speedily pass away. Yet, if God wills that it continue until all the wealth piled by the bondman's two hundred and fifty years of unrequited toil shall be sunk, and until every drop of blood drawn with the lash shall be paid with another drawn with the sword, as was said three thousand years ago, so still it must be said: "The judgments of the Lord are true and righteous altogether."



With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in: to bind up the nation's wounds; to care for him who shall have borne the battle, and for his widow and his orphan—to do all which may achieve and cherish a just and lasting peace among ourselves and with all nations.

—ABRAHAM LINCOLN.

### MERCY

The quality of mercy is not strained—  
It droppeth as the gentle rain from heaven  
Upon the place beneath; it is twice blessed—  
It blesseth him that gives, and him that takes;  
'Tis mightiest in the mightiest; it becomes  
The throned monarch better than his crown;  
His scepter shows the force of temporal power,  
The attribute to awe and majesty,  
Wherein doth sit the dread and fear of kings;  
But mercy is above this sceptered sway—  
It is enthroned in the hearts of kings,  
It is an attribute to God himself;  
And earthly power doth then show likest God's,  
When mercy seasons justice.

—WILLIAM SHAKESPEARE.

### WORK

Let me but do my work from day to day,  
In field or forest, at the desk or loom,  
In roaring market-place or tranquil room;  
Let me but find it in my heart to say,  
When vagrant wishes beckon me astray:  
"This is my work; my blessing, not my doom;  
Of all who live, I am the one by whom  
This work can best be done in the right way."  
Then shall I see it not too great, nor small,  
To suit my spirit and to prove my powers;  
Then shall I cheerful greet the labouring hours  
And cheerful turn, when the long shadows fall  
At eventide, to play and love and rest,  
Because I know for me my work is best.

—HENRY VAN DYKE.

## MANUAL TRAINING

"We believe that the time is rapidly approaching when both industrial and commercial education shall be introduced into all schools and made to harmonize with the occupations of the community. We believe that it is the duty of the state not only to qualify its children to be good citizens, but also as far as possible to be useful members of this community."

It is not expected that present conditions will permit performing all the work in this outline. It is hoped, however, that every teacher will find something in it which she can use.

The outline in cooking and sewing will be found in another part of this course of study.

Perhaps the best way to manage is to give a quarter of a day per week; say, after recess, on Friday afternoon.

Practice in making simple repairs, such as occur about the home, on the farm and in the shops, is a valuable exercise, and some of the time of every public school might well be spent in learning how to keep ordinary household articles in repair.

### FIRST YEAR

Braiding cords; making raffia strings for tying parcels, weaving paper mats for cornucopias; weaving rag mats for doll-houses.

Word-book of unfolded sheets, with paper covers, leaves punched and laced; book for paper cuttings, of folded sheets sewed through the fold, flexible cover.

### A PICTURE BOOK

Bright-colored cambric, twenty-seven inches. Use coarse needles and thread. Have some pretty pictures to paste in the book, cut by the children from magazines.

1. Fold cloth through center with warp, and cut on fold.
2. Fold both strips into three equal pieces with woof, and cut.
3. Fold each piece through center parallel with selvedge edge.
4. Pin two pieces together at fold and pink edges.
5. Do same with other pieces, then fasten all together, as directed below.
6. Mark three holes—one in the middle of fold, one two inches above it, and one two inches below it.
7. Insert needle at lowest hole from the inside, and draw it through, leaving two inches of thread; pass over middle hole, down through upper one, out through middle hole on one side



of the long thread, and back through the same hole on the other side of the thread, and tie the two ends of the threads together.

8. Select a pretty picture for the outside, and paste the pictures in the book.

### CLAY

Clay-modeling from familiar objects: corn, fruits, vegetables, animals, etc.

As the first-grade language deals with the home life of the child, develop the likenesses and differences in relation to the life of children in the city or town. The following problems, worked out in connection with the sand table, will furnish a live interest for several weeks:

NOTE.—A very good sand table can be made by the school children of older grade, and will be itself excellent manual work. The table top may be made of ordinary flooring, and supported by ordinary saw-horses. The flooring should be nailed to the top of the horses, and a rim of flooring run around so as to hold in the sand. Several coats of white paint would improve the table, but this is not essential. Three by six feet would be a very satisfactory size.

On the sand table lay out the farm, showing roads, streams, fences, etc. Streams and ponds should be marked with white paper if the table is not painted; the roads may be indicated by ruts of a little darker sand; the fences may be made of tooth-picks (worm fence) or sticks and strings (wire fence.)

The farm building may be built of blocks, of cardboard or of sticks (log-house fashion). Cardboard may be used for the roof in all cases.

The various animals should be modeled of clay.

Another problem that follows naturally after the one above is the making and furnishing of the doll-house. All the pieces of furniture may be made of cardboard.

### SECOND YEAR

Use of scissors in cutting out pictures; sewing little books; finger crocheting; spool knitting; rugs for dolls.

As the second-grade language work is based upon the story of "Hiawatha," on the sand table may be planned a landscape consisting of hills and streams, forests (twigs) and meadows (grass), etc.

The wigwams should be made of cloth and sticks, and should be ornamented with Indian patterns.

The household utensils should be made of clay; the blankets, woven on little looms, which can be made of ordinary boards with headless tacks; the moccasins, made of cloth and decorated with beads; the head-bands, made of cloth and decorated with chicken or turkey feathers; tomahawks, fashioned of wood.

#### WEAVING

Weaving-frames can be made from one-inch boards, eight inches by eight inches. Three-fourths of an inch from, and parallel to the top and bottom, drive a row of nails one-half inch apart, leaving on both sides an inch margin. After tying a knot in the end of the wicking, put it over one of the corner nails. The wicking should be passed back and forth around the nails, first on one side and then on the other. This forms the warp of the cloth. Do not draw the threads too tight, and tie them around the last nail. Thread the other color of wicking into the netting needles. Weave across the warp threads, alternately taking up and passing over them. Take from the frame and fasten the loose ends by weaving them back into the cloth. Work a brass ring with the blanket stitch, using a strand of the wicking, and sew it to one of the corners.

#### THIRD YEAR

In this grade, pupils make drawing on the material out of which the project is to be constructed.

Suggested projects: pin-wheel, book-mark, cornucopia, match-scratchers.

#### DIRECTIONS FOR MAKING CORNUCOPIAS

Material: cardboard six by six inches.

Draw a five and a half inch square; one-half inch from the left side and one-half inch from the bottom draw light construction lines as a help in locating the holes. Place first dot three-quarters of an inch from the intersection of the construction line; then place one every three-quarters of an inch. Draw very small circles around each point. Cut out the square, punch hole, and lace with ribbon. Punch can be made by filing off an 8d nail.

In the third grade, a pueblo, built of brick made of clay, takes the place of the wigwam, and the landscape of the sand table takes on a barren aspect of cliff and canyon, for the interest



has shifted from the wild Indians of the plains and forests to the more civilized pueblo Indians. The blankets should be woven with more care, and the design should be made more important. The clay utensils should be decorated with water-colors. Simple baskets of raffia should be made to meet the needs of the pueblo family.

Or the work of this grade may be connected with home geography. A farm in a sparsely settled region may be represented on the sand table. The community begins to "settle up." First the farmer has one neighbor far away, then another moves in, and another. Then roads are built; a little village springs up, grows into a town, etc.

#### FOURTH YEAR

Pupils make a mechanical drawing of the models made.

Suggested projects: berry box, scrolled picture-frame, lamp shade, lantern. The above are purely suggestive, as showing the proper scope of the work of the year.

##### DIRECTIONS FOR MAKING A BERRY BOX

To teach measuring with the ruler.

Material: cardboard one and three-fourths by three and one-half inches.

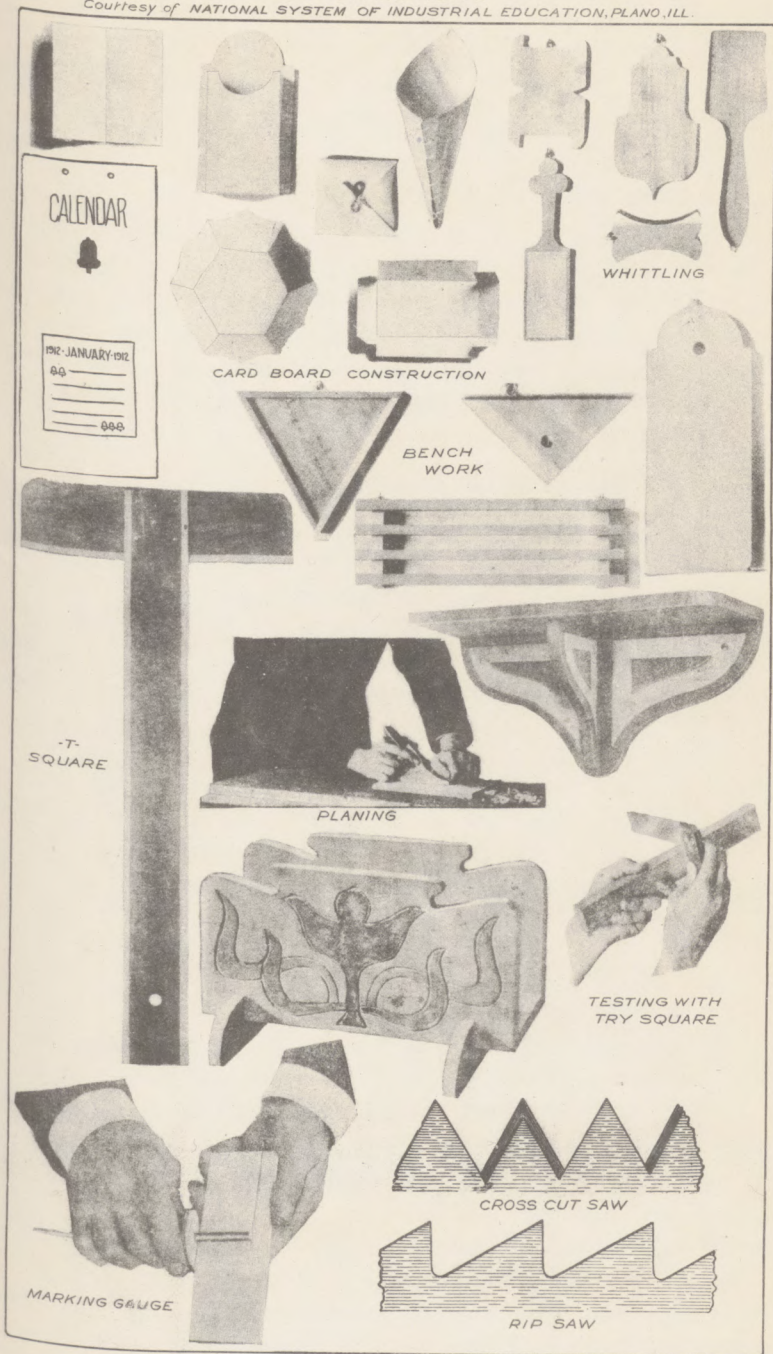
Measure up from center of bottom two and a half, four, five and six and a half inches, and place points. Draw light horizontal lines through these points, making the lower two about four inches long and in middle of page.

On the upper line place points one and a half, two, two and a half, three, three and three-eighths, three and seven-eighths, six and three-eighths, six and seven-eighths, seven and three-fourths, eight and one-quarter, and ten and three-quarters inches from the left edge. Draw vertical construction lines through the remaining points. One-fourth inch up from the bottom of the upper figure draw horizontal solid lines, connecting the second and third, fourth and fifth, sixth and seventh, eighth and ninth vertical lines.

The space between the first and second vertical lines will be used as a flap; so cross-hatch. Connect third and fourth horizontal lines with solid lines four and three-quarters and seven and five-eighths inches from left edge.

# INDUSTRIAL ARTS

Courtesy of NATIONAL SYSTEM OF INDUSTRIAL EDUCATION, PLANO, ILL.





Model: Make a drawing on cardboard, cut, score, place bottom in, and glue. Be sure to fold model *away* from the score lines, keeping the lines on the inside of the model.

Basketry is interesting work for this grade, especially for the girls.

#### BASKETRY

Round reeds in sizes from No. 0 to No. 8. Hemp cord may be used if a very flexible basket is desired. Sharpen the reed to a flat point, beginning about two inches from the end. Coil the other end, leaving ten or fifteen inches uncoiled, and tie securely. Soak the reeds in water until they are very pliable; wipe before using. For large baskets use coarse strands. For finer stitches split to any desired size.

#### DIRECTIONS FOR MAKING A ROUND BASKET

Between the thumb and finger draw the sharpened end of the reed into as small a coil as possible. Lay the end of the raffia to the point and along the sharpened end of the reed, and hold it in place with the left hand. By making a sharp turn in the thread, begin winding over the reed and raffia to the point. Then shape into the coil by sewing through the center.

#### OVAL BASKET

The end of the reed is not sharpened. Lay the end of the raffia to the end of the reed along the reed and around the bend, and by a sharp turn of the thread wind four or five times over the raffia, covering the bend in the reed. The two reeds may then be caught together by the stitch selected for the basket. The navajo or the figure 8 stitch could be used.

#### SPLICING A REED

Sharpen the top side of one reed and the underside of the other to a long, flat point, and slip one past the other until the two together form the uniform size of the reed.

All the reeds in a coiled basket are wound fast with the raffia. The colored raffia is introduced in the same manner that the thread is spliced, by laying it along the reed and sewing over it. When working out designs in color, do not cut the thread when changing from one to another, but lay the thread not in use along the reed and sew over it, bringing it out when ready to use again. In finishing the basket, cut the end of the reed to

a flat point, two inches in length, and taper the stitching off so that it shows as little as possible where it ends.

The stitching proceeds along a continuous coil, so that each stitch is passed under the stitches of the coil beneath. In analyzing these stitches, the two reeds will be spoken of as loose reeds and fastened reeds.

#### NAVAJO STITCH

1. Hold the commenced coil in left hand.
2. Proceed from right to left.
3. Pass the thread between the two reeds toward you.
4. Over the loose reed from you.
5. Between the two reeds toward you.
6. Down between the stitches of the fastened reed from you.
7. Beginning again, pass the thread between the two reeds toward you, completing the figure 8.
8. Draw the two reeds firmly together.

#### LAZY SQUAW STITCH

1. Hold the commenced coil in the left hand; work from right to left.
2. Wrap the thread toward you over and around the loose reed once.
3. Over the loose reed again.
4. Down from you between the stitches of the fastened reed and back to 1.

#### MARIPOSA STITCH (KNOTTED)

1. Same as Lazy Squaw Stitch.
2. Wrap the thread toward you over and around the loose reed once.
3. Over the loose reed again.
4. Down from you between the stitches of the fastened reed; this will bind the reeds together.
5. Bring needles up between the two reeds at the left side of the long stitch.
6. Cross over this stitch, going down between the two reeds at the right of the long stitch.
7. Bring the thread over the loose reed and begin wrapping again as at 2.



## FIFTH YEAR

Tools are used for the first time in this grade. When the school board is unwilling to supply tools for manual-training work, it is suggested that the pupils organize an Arts and Crafts Club, having a small membership fee. In some schools the club gives a series of entertainments, having an exhibit showing what they have been able to do with the few tools brought from home, and giving an idea of what they could do if properly equipped. You will be surprised at the appliances you will have on hand for this work at the close of the year. For teachers who have had no special work in manual training, we would advise the course as given by the National System of Industrial Training, Plano, Illinois. This system explains and illustrates the separate steps in each model in a very clear, and concise manner.

## TOOLS GIVEN IN ORDER IN WHICH THEY SHOULD BE EXPLAINED AND EXERCISES GIVEN

1. Rip-saw, to cut with grain of wood; cross-cut saw, to cut across grain of wood.
2. Try-square—used to obtain straight, square surfaces.
3. Jack-plane. It is necessary to take apart and explain how a plane is constructed. Call attention to the method of holding plane: pressure when starting with left hand, and toward end of board press down with right hand.
4. Whittling with knife, marking-gauge.
5. Brace and bit.
6. Chisel.
7. Block-plane.
8. Hammer.

(Pupils have by this time completed at least eight projects and have a sufficiently thorough knowledge of the tools to be taught sharpening on the oil-stone.)

9. Oil-stone.
10. Spoke-shave.
11. German twist-bit for boring a hole in thin hard wood; use this twist-bit to start hole, then use regular bit.
12. Counter-sink.
13. Screw-driver.

14. One-eighth inch chisel.

15. Hack-saw.

A manual training shop, if properly equipped, should contain a bench and stool for each pupil. The benches should contain the following: drawing-board, compass, T-square, rule, drawing pencil, 45 degree triangle, 60 degree triangle, eraser.

#### TOOLS

Saw	Hammer
Try-square	Screw-driver
Jack-plane	Vise
Block-plane	Bench-hook
One and one-half inch chisel	Bench-dog or
One-half inch chisel	Bench-stop
One-eighth inch chisel	

If only one saw is given to each bench, better have it a cross-cut, as this can also be utilized for ripping, while a rip-saw cannot be used as a cross-cut.

Projects suggested for the fifth, sixth, seventh and eighth grades:

#### FIFTH YEAR

Buzzer	Dart
Line-winder	Wind-wheel
Pencil-sharpener	Cutting-board
Bird-house	Settle

#### SIXTH YEAR

Match-striker	Strop
Calendar	Thread and needle board
Necktie-rack	Key-rack
Photo-frame	Thermometer

#### SEVENTH YEAR

Trefoil calendar	Bracket-shelf
Necktie-rack	Book-rack
Photo-frame	Hat and coat-rack
Strop	

#### EIGHTH YEAR

Strop	Book-rack
Match-safe	Pen-tray
Thermometer	Towel-roller
Elliptical necktie-rack	



## MUSIC

THE AIM.—It should not be the aim of the teacher of music to make a musician of this or that child, but to make a nation of music-lovers.

THE SONG.—Make the song the basis of instruction from the first to the last lesson. The singing of beautiful songs of home and country is a far more potent factor in creating a love for good music than the everlasting drill work in developing the technicalities of musical notation.

ROTE-SINGING.—The work in the primary grades should begin with simple rote-songs which appeal directly to the imagination and come within the interest and experiences of the natural development of the child's activities.

THE SCALE.—The children should first be taught to sing the scale by rote, then from the staff. Get them to notice how the melody rises and falls as the symbols called notes are strung upon the staff at different intervals of pitch.

EAR-TRAINING.—The child should be taught to listen to his own voice and learn to distinguish tone-relationship through the singing of simple intervals, of which the octave is the most practical, followed by the fifth, fourth, second, sixth, third and seventh.

SIGHT-SINGING.—Music-reading includes a knowledge of rhythm, intonation, expression, musical form, notation and the keyboard; and the children must learn to read music, if they would have any broad experience and largeness of musical culture.

THE KEYBOARD.—The invention of play-blocks in the nature of the pianoforte keyboard, as used in the Training School of the State Teachers' College of Colorado, is a new and splendid process of correlating the eye, hand, ear and voice in the study of music.

NOTE.—Any number of sets of these play-blocks may be had by addressing the Director of Music of the State Teachers' College, Greeley, Colorado.

HOW TO TEACH A SONG.—Choose a song that is in keeping with the season; for example, "Autumn." Talk to the children about it; get expressions from them regarding the ripening of the fruit and grain, the coming of Jack Frost, the falling of the leaves, withered flowers and the migration of the birds; and the children will interpret and sing the song with surprising ease and correctness.

**THE TALKING MACHINE.**—The children in the village and rural schools never hear good concerts, great artists or orchestras. With the invention of the mechanical player and the perfection of the talking-machine, the best music is brought into the school and the children of the most remote districts are given an opportunity to hear and enjoy the great singers, orchestras and bands. Through this medium they become familiar with the voices of the master-singers, and come to know selections from the famous operas and oratorios just as they know their Longfellow, Whittier, Tennyson and Shakespeare.

At present there are records suitable for the primary grades, a fine collection of songs for the little folk by the best artists, and music for the different folk-dances.

**THE NEW VICTROLA No. 4 (\$15)** is best adapted for all school purposes. It is loud enough for the average schoolroom or chapel. With this machine and a few well-chosen records a school will be richer in its emotional life and intellectual appreciation of the beautiful in music.

**SONG MATERIAL.**—The following songs are suitable for the whole school:

*Patriotic.*—"America;" "Star-Spangled Banner;" "Columbia, the Gem of the Ocean;" "Battle Hymn of the Republic;" "Hail Columbia."

*Folk Songs.*—"Old Folks at Home;" "Old Black Joe;" "Old Kentucky Home;" "Maryland, My Maryland;" "Massa's in the Cold, Cold Ground."

*Sacred Songs.*—"Lead, Kindly Light;" "Rock of Ages;" "Abide with Me;" "Nearer, My God, to Thee;" "Onward, Christian Soldiers;" "He Leadeth Me;" "Sun of My Soul;" "The Holy City;" "I Need Thee Every Hour;" "Shall We Gather at the River;" "Calvary;" "Jesus, Savior, Pilot Me."

*Special Songs.*—"Farewell to the Farm;" "The Shadow March;" "Windy Nights;" "Cotton Dolly and Other Songs;" "Old Christmas;" "The Swing."

#### GENERAL SUGGESTIONS

Seat older pupils according to parts—soprano, alto and bass—and younger pupils in front of the sopranos. While the latter will not always comprehend all that the others do, their interest will be aroused and they will make real progress if they are



encouraged to follow the printed page with the eye and to sing, though their early singing may be almost wholly by rote.

Fresh air is a prime *essential to successful singing*. An erect position of the body, whether sitting or standing; light, buoyant tones, without effort of the throat, and an instrument of pitch for establishing the key and for testing adherence to key will result in attractive voice quality and safe use of the voice. A moment or two of the daily recitation devoted to special exercises for training the voice should lead to legato tones, head-tone quality and flexibility in all singing.

#### FIRST MONTH

**First Week.** Teach a number of *songs by rote*. Do not teach all verses of one song before teaching another. Have several songs in process of learning at the same time.

Imitate calls of the home or street.

Indicate phrases in the rote-songs as they are sung; teacher and class sing alternate phrases; compare the phrases, noting the likenesses or differences in melody; note the initial tones of successive phrases; the final tones.

Sing rote-songs, observing the accent.

Discover whether the rote-songs are in two-part or in three-part measure.

Mark the measure, "beat time," as familiar songs are sung.

**Second Week.** Introduce *the scale* through rote-songs.

Apply scale names and syllables making the scale a familiar melody to be sung as the teacher directs: down; up; in two-part measure; in three-part measure; according to various rhythmic figures—two 1's in the first measure, two 2's in the second, etc.

Dictate melodic phrases, thus: 1 3 5—, pupils respond by singing do mi sol —; teacher dictates 8 5 8 —, pupils respond by singing do sol do —. In the beginning employ the tones of the tonic chord, 1 3 5 8, in all possible combinations, thus: 1 3 1 —; 3 5 3 —; 8 5 8 —; 8 5 3 —; 3 5 1 —; 5 3 1 —; 5 3 5 —; 1 8 1 —; 3 1 3 —; 5 8 5 —; 1 3 5 —; 5 3 8 —. From this time forward melodic dictation should occupy a brief part of each day's recitation, the phrases employing finally all intervals of the scale.

Sing phrases with a neutral syllable, pupils singing the phrases in turn with the syllables.

Establish the key. Give the pitch of the key-tone from a pitch pipe or instrument of some sort, and "establish the key;" that is, sing the arpeggio up and back, 1 3 5 8 5 3 1 — to emphasize tonality or key-feeling. Demand careful listening to the tone sounded before allowing it to be sung. In the key of F and higher keys use the melodic progression 1 3 5 3 1 5 1 — to establish the key.

**Third Week.** Sing *very simple sight-singing melodies* in the keys of C, G, F and D.

Let the signatures of the various keys be memorized and the scale written upon the staff in each key.

Do not repeat exercises until they are memorized. If the problem found in the exercise is properly presented by the teacher, pupils should find no difficulty in singing an exercise quite perfectly the first time. When they do, do not repeat.

**Fourth Week.** *Easy sight-singing melodies* in the keys of B-flat, A, E-flat, E and A-flat.

Do not hesitate to allow pupils to refer to their books for information as to key signatures and the corresponding position of 1 of the key. These should all be memorized in time. In the beginning, however, it is more important that pupils should be able to sing the notes of a key with their proper syllables, because they know the position of 1 of the key, than that they should know the position of 1 from the key signature. In other words, let the teacher tell them the position of 1, if necessary, or give them a device for finding the same, until they have had considerable experience in singing from the various keys and have had time to memorize the signatures.

## SECOND MONTH

**First Week.** Sing *simple songs* which apply the problems in rhythm and melody that have been presented in the introductory sight-singing melodies of the first month. While "sight-singing" of songs means singing them with words at sight, that can hardly be expected at this time. The intermediate steps—that is, singing them first with the sol-fa syllables, then with a neutral syllable such as loo or lo—will probably be necessary. A different song studied each day, rather than the same song repeated until it is



familiar and can be sung artistically, is advisable until pupils begin to feel some independence in music-reading. Let it never be forgotten, however, that all songs presented for study should be worthy of the most artistic rendition possible, and they should always be interpreted according to the sentiment expressed in the words and music.

For example, one song may be marked to be sung *allegro*; another, *andante*. Whether the sol-fa syllables or the words of these songs are being sung, the interpretation suggested by the terms of expression, found just above a song at the left, should govern the singing.

**Second Week.** Study three *new songs*.

**Third and Fourth Weeks.** Continue sight-singing of *simple songs and exercises*.

Select two or three *simple songs in the minor mode*. Sing them and observe how often the tone 6 or la seems the dominating tone; observe, too, that 6 is the closing tone of each song. Whenever a melody is thus constructed it is said to be in the minor mode, and the closing tone is the key-tone. To appreciate minor tonality or key-feeling, sing the melodic progression  $\begin{matrix} 6 & 1 & 3 & 6 \\ 3 & 1 & \underline{6} & - \end{matrix}$ .

### THIRD MONTH

**First Week.** Teach a melody in which two equal tones are sung to each beat for some of the words. This is a new rhythmic type—*two equal sounds to the beat*—represented by two eighth-notes. The melodies for the week should apply the two types—the quarter-note sung to the beat and two eighth-notes sung to the beat.

**Second Week.** Accurate and conscious singing of *two equal sounds to the beat continued* in this week's work will obviate future rhythmic difficulties.

**Third Week.** A rhythmic figure is a combination of rhythmic types. The dotted quarter-note followed by the eighth-note represents *two tones sung to two beats*—one long and one short tone. The dotted quarter-note is sung with the two beats, the eighth-note after the second beat. Drill upon this rhythmic figure until it is thoroughly appreciated by every student in the class as being two tones to two beats, the second a short tone sung *after* the second beat.

**Fourth Week.** Select songs for this week which contain *the dotted quarter-note followed by the eighth-note*. Let them be taught by rote or by note, as the teacher may choose, with attention to proper interpretation and distinct enunciation as well as to correct tone-lengths.

#### FOURTH MONTH

**First Week.** Teach that 5  $\sharp 4$  5 — sol fi sol — sounds like 8 7 8 — do ti do — sung from the same pitch.

In the key of C and in keys having sharps in the signature, *sharp-four* ( $\sharp 4$ ) is represented by a sharp ( $\sharp$ ).

In keys having flats in the signature, *sharp-four* ( $\sharp 4$ ) is represented by a natural ( $\natural$ ).

**Second Week.** Teach that 6 *b* 7 6—la te la—sounds like 3 4 3—mi fa mi—sung from the same pitch. Choose songs which employ this melodic progression.

In the key of C and in keys having flats in the signature, *flat-seven* (*b*7) is represented by a flat (*b*).

In keys having sharps in the signature, *flat-seven* is represented by a natural ( $\natural$ ).

**Third Week.** Let the songs of this week employ the *three rhythmic types*—one sound to the beat, two equal sounds to the beat, and four equal sounds to the beat. Master these in the melodies of the week before the rhythmic type, one long and two short sounds to the beat, is introduced.

**Fourth Week.** Employ a *new rhythmic type*—two short and one long sound to the beat. Master the rhythmic combinations in exercise melodies, omitting songs, if necessary for want of time. This will make future music-reading easy.

#### FIFTH MONTH

**First and Second Weeks.** Introduce *the dotted eighth-note followed by the sixteenth note*— $\text{♪. ♪}$ —. The number and relative length of tones sung to each beat must be clearly heard and appreciated by every pupil. Succeeding melodies can then be sung without difficulty.

**Third and Fourth Weeks.** Introduce *the triplet*, and thus complete the rhythmic types found in common use.



## SIXTH MONTH

**First Week.** The bar removes the effect of a *chromatic sign*. It is customary, however, to employ the character representing the original pitch, whenever return to such pitch is made. For example, in any melody a sharp on the second line in any measure affects all notes on that line in that measure, making them g-sharp. Beyond the succeeding bar the pitch represented by the second line is what it was before the chromatic sign was introduced, namely, g. By way of emphasizing this return to the original pitch, the cancel or natural sign (  $\natural$  ) is employed.

**Second Week.** Study melodies employing the *double-sharp* (  $\times$  )—the character used to represent a pitch a half-step higher than a sharped staff-degree.

**Third and Fourth Weeks.** Select songs which represent *types of national music*.

## SEVENTH MONTH

**First Week.** Divide the chorus into sections and have *rounds* sung as rounds, after they have been learned as one-part songs. Avoid the disposition of one group of singers to outsing the others. Emphasize the necessity for singing softly enough to hear the other parts.

**Second Week.** Continue the singing of *rounds*. The more nearly perfect the balance of parts in the singing of rounds, the more musical the effect and the better the training toward part-singing for which this is the preparation. To teach pupils how to listen to music is as important as to teach them how to sing.

**Third Week.** Continue *two-part singing*. Two-part song should contain no difficulties which have not been mastered in one-part song. Divide the class into two groups and have both parts of the two-part selections sung at once—not one part first, then the other. Let the groups exchange parts frequently.

**Fourth Week.** *Santa Lucia* (pronounced Lu-che'-a) should be memorized. It is one of the best-known and most widely sung folk-songs.

## EIGHTH MONTH

**First Week.** Continue *two-part singing*. Humming melodies, while thinking their syllables or words without pronouncing them, is good drill, especially if classes are inclined to loud singing or to falling from pitch.

**Second Week.** Select *songs* for this week which are heard where good music is sung, and commit them to memory.

**Third Week.** Give information concerning the great staff, and sing unison melodies from the *bass staff*. Singing from the bass staff, like singing from the treble, depends simply upon keeping in mind the position of 1 of the key.

Unchanged voices sound an octave higher than changed voices in unison singing.

**Fourth Week.** At this point *voices* may be *assigned* to soprano, alto and bass, according to their range and quality. All parts should be sung at once in taking up a selection having more than one part. Drill in chords.

#### NINTH MONTH

**First Week.** Simple *selections for soprano, alto and bass*.

Observe how the tones 1, 4 and 5 of the key make up almost the entire bass. This is because these tones are the roots of the principal triads or chords of the key.

**Second Week.** Occasional *singing of the bass by all voices* is valuable practice. This should come after a selection has been sung as a whole by all parts.

**Third Week.** Memorize a *Schubert melody*. "Am Meer" is suggested as a type of the most simple, yet most perfect of melodies.

**Fourth Week.** Select for this week's work *hymns* which are sung in churches of all denominations.

It is hoped, as a result of music-study according to the above outline, that song-singing at school and at home has been one of the pleasures of the school year which will never be forgotten.



## NATURE STUDY

"If I were a teacher, I would make excursions into the country with my children; we would picnic together under the trees, and I would contrive some way to give them a little live botany. They should see how much a flower meant to me. What we find out ourselves tastes so good! I would, so far as possible, let the child be his own teacher. The spirit of inquiry—awaken that in him if you can."—JOHN BURROUGHS.

The purpose of this work is to teach the child to *observe* and to become interested in the everyday things that he meets, and to develop a love for animals and a desire to protect them. The following course is only suggestive, as the teacher's environment will have much to do with her selection of subjects. This plan outlines the work for the first six grades of the public schools; the seventh and eighth grades being united for what is termed agriculture.

### FIRST GRADE

Short excursions, especially in spring and autumn; the purpose being to see flowers and grass, to touch the grass and the bark of trees, to gather pods and seeds, to watch clouds, to feel winds, to fly kites and feel the force of the wind, to feed the birds.

Have a small garden, if possible. Commence early to teach children that animals must have care; that the dog and cat at home must be fed, must have water, etc. Note the color of leaves, flowers, sky. Note wind-blown seeds of goldenrod, dandelion, etc. Notice how far seeds travel.

Draw attention to how the earth and its people get ready for winter.

### SECOND GRADE

Experiences with pets; autumnal changes; raising flowering plants in window gardens; planting and caring for winter flowering bulbs. Note which birds are flying southward; which winds are cold and which warm; study fruits brought by children. Show how nature prepares for winter by studying potatoes, cabbages, squash, etc. As winter advances, draw attention to the change in the home life, in all animal life; how the water changes to clouds, rain, fog, frost, ice, snow; study snowflakes.

The awakening of nature: Have children report first leaf, fruit, bird, etc., and different things indicating that spring is coming. Keep bird calendar to record the arrival of the birds.



Study insect life; feeding caterpillars; watching change from caterpillar to pupa.

Study horses that pass the school. Find out how much the child knows about their habits, care: teach proper treatment. Have boys count the heart-beats of a horse per minute; the number of breathing times per minute, when rested and when tired. Rapid breathing wears the horse out.

Experience with sheep: Sheep's relatives—Rocky Mountain goat, deer, antelope, chamois. Compare the sheep with the cow. They are much alike. (For a full lesson see McMurray's "Special Method in Science.") Both have cloven hoofs (walk on toe nails); both lack teeth in front part of upper jaw; both chew the cud. Compare the wool coat of the sheep with the hair coat of the cow. Compare the horns—where they grow and how they curve. Why this difference? How can sheep keep away their enemies? Compare the noses; the cry of the cow, sheep, calf and lamb. Explain how the shearing is done. Examine woolen cloth. What things are made of sheepskin? (Book-covers, gloves.) The flesh of the sheep is called mutton; the fat, tallow, used for candles. Compare the care given to the cow and sheep.

Make list of known trees; add to it as pupils learn others; have it in mind during the first five years of pupil's life in school to teach him to know the trees of Colorado. (See page 93 for list of trees.)

### THIRD GRADE

Tree studies for autumn: leaf studies, reproduced in cuttings, drawings and clay.

Community life of ants or bees; outdoor studies of ant nests.

Study the cow: the cow, or animal that gives milk, meat, cheese and butter. Notice the heavy body, broad head, hollow horns, short legs, cloven hoofs. Let the children tell what they can about the cow. Where does it live? Where does it stay in winter? In summer? What is the winter food? Hay, corn, bran, mash, vegetables, salt. What does it eat in summer? How does it eat? When the cow first nibbles the grass and hay it does not eat it, but stows it away in a big bag inside its body. When the bag is full the cow lies down to rest, and the food it has eaten comes up into its mouth, little bit at a time, and is then chewed and eaten.



Talk about the care of the cow; the milking, and care of the milk. What do we call the flesh of the cow? Of the young cow? The fat is called tallow, and is used for making soap, wagon grease and candles. The milk is made into cheese; the hoofs into glue; the horns into buttons, knife-handles and combs; the hair is used to put in plaster; the skin is made into leather. The horns are for defense. Notice that the cow has no front teeth on the upper jaw, how she chews her cud, and the lower jaw moves from side to side.

Studies with milk: the separation of cream from milk, the making of butter and of cottage cheese. Countries noted for dairy products.

Winter conditions of buds and twigs; the results of placing in water the twigs of the willow and poplar. Tree studies for spring; the development of leaves and flowers on trees near the school and homes; the formation of next year's buds, best seen in June.

Life-history of the house fly: the egg, the larva, the pupa, the fly. The fly carries germs both inside and outside of its body. You will notice that its body and legs are covered with thousands of fine hairs. Its feet are especially adapted for collecting germs, and there are present in and upon each fly from 1,000 to 6,600,000 germs. Flies carry the germs of tuberculosis, scarlet fever, diphtheria, smallpox and other dangerous diseases.

*Protection against the House Fly.*—Keep stables and other breeding-places clean, and thus prevent the pests from multiplying. Each female fly lays from 120 to 150 eggs. These hatch and become active in ten or twelve days. Do not allow decaying matter of any sort in or near your premises. Sprinkle kerosene or chloride of lime in your garbage can and over all decaying matter.

Experiment in window gardens to determine the essential conditions for seed germination and growth.

Make list of known flowers that grow in the vicinity. This can be put on the wall of the schoolroom, with a specimen of the flower, and add to the list as new flowers are discovered.

Make list of the birds that the children know. Note in your bird calendar the arrival of the birds in the spring. Have pupils describe them and be interested in finding new ones.



## FOURTH GRADE

The planting of seeds of rapid growth, in order to study their life-cycle; seeds and seed-dispersal.

Change of air needed in burning; change accompanied by upward moving currents; provision for regulating currents by use of such device as lamp chimneys and draft arrangements of stoves and furnaces; simple experimental studies of natural and artificial ventilation in school and at home. Simple experiments with water; evaporation—why we sometimes see our breath, why the pitcher sweats, etc. Condensation; water as a solvent, effects produced by freezing and thawing substances containing water; running water as a soil-mover.

Collect pebbles of various forms and of different mineral composition. Explain fossils; different color of stones; why some springs are greenish in color; why some springs are called copper springs or iron springs. Show crystals, salt, sugar, sulphur, quartz. Make strong solution of salt or sulphur, and allow slowly to cool and then evaporate. Place a string to remain in the water, that the crystals may adhere to it. Study the shape of the crystals. Review snow crystals.

In December make a careful study of evergreens, putting emphasis on those found near the school. As the children are popping corn at this season, study corn. Also ask why it pops. Give other examples of expansive force of steam.

## FIFTH GRADE

Study of bark, wood and pith in order to determine the basis of their usefulness; textile fibers; woods used in furniture, finishing and manufactured articles. Follow the building of a house in the neighborhood: source of each material used; duties of workmen engaged.

Make a weather chart for each month. Note direction of winds, and the relation of weather to this fact.

Do not fail to impress upon youth the beauty of a starry night. Teach the Great Dipper, Pole Star. Show how to distinguish a fixed star from a planet star. Find Venus—evening star, then morning star. Study phases of moon; record phases on chart: moon, no moon, crescent moon, half moon, full moon. How far the moon is from the earth.



Study the dog: use to man, faithfulness, obedience, keen sense of smell, courage, strength, endurance. Dog relatives: wolf, fox, hyena, jackals, etc. (from stories and pictures).

Have the class tell stories of St. Bernard dogs. Teacher read or tell stories, having in view humane treatment of one of the most loyal of friends.

Observe erosion by rain and running water; deposit of sediment; formation of valleys. (Correlate with geography.)

#### SIXTH GRADE

Study the game laws of the state.

Draw attention to the advantages of good roads, and how each person can help in securing them.

Study the soil, looking forward to the agriculture work of the seventh grade. Underground work of water, caves, etc..

Correlate closely the work of this year with the geography. Atmosphere; wind belts; rain belts; heat; light; electricity. Teach the relation and dependence of plants, lower animals and human beings. Develop the proper care, respect and sympathy for plants and animals.

Study a few insects and animals more intensively than you have done.

## PENMANSHIP

### POSITION OF THE BODY

Sit in the center of the seat, with body erect and close to the desk, but not against it. Turn body just a trifle to the left so that right arm will have plenty of room on the desk. Place both feet flat upon the floor, keeping left foot a few inches to the left and in advance of right foot. Put both arms upon the desk, forming approximately right angles at elbows. Bend body forward slightly at hips, and allow the weight that rests upon the desk to be upon left arm, so that right arm will be free and easy. Permit head to droop a trifle to secure a restful angle of vision. Relax the entire body. If the left arm is kept well upon the desk at all times, it will not only assist in forcing the shoulders to fall equally, keeping the body erect, but it will be convenient for holding and adjusting the paper. Eyes should be between ten and fourteen inches from the writing.

### POSITION OF ARM, HAND AND PEN

The elbow of the right arm may extend off the desk about an inch, but the preferred position is to have the entire forearm rest its full weight on the desk, touching it at two places only; viz., the arm rest (writing muscle) and nail of little finger. Keep back of hand almost flat, so that penholder will be directed toward or over right shoulder. Allow no part of arm or hand to touch the paper or desk except at the points designated. If the wrist and fleshy part of hand are lifted clear of desk, the wrist muscles will soon be trained to hold that joint straight and firm, but not rigid. Close fingers against each other firmly and bend well under the hand. With the left hand take the penholder and place it in right hand between the thumb and second finger, allowing it to rest upon side of second finger nail. The inside of thumb and first finger should rest flat upon penholder in a loose manner. Holder should form an angle of about forty-five degrees, which will place it opposite or in rear of knuckle joint of first finger. Relax the entire body, especially the arm and hand, so that they will be free from any strain and remain in a loose-jointed condition at all times. Use only sufficient strength to keep the holder from falling out of the hand. See that both nibs of the pen rest evenly on the paper. It is most important that a beginner should watch the position of his hand. Other mistakes



may be rectified gradually, but the position of the hand must be established at once, if the pupil is to do good work.

### POSITION OF PAPER

The sides of the paper should lie parallel with the right forearm. As the writing progresses down the page, move the paper upward, and not the right arm downward. The arm should rest at a point near the middle of the paper, laterally, but rather toward the right of the middle than toward the left. The right arm should lie with its full weight upon the paper, and the weight of the upper body should be placed on the left arm. Cleanliness of the paper should be preserved by using a blotter underneath the right hand. If the desk surface is not smooth, three or four sheets of paper should be kept under the sheet being written upon.

### MOVEMENT

Muscular movement is produced by causing the arm to roll upon the large bunch of muscles of the forearm, located just forward from the elbow, where the arm rests upon the desk, with the nail of the little finger gliding upon the paper. The nail of the little finger should describe every movement the pen makes, and the motion of the pen should be governed exclusively by the arm. In all movement practice and in all written work the forearm should act as a unit. The propelling muscles are located in the shoulder, but the muscles in the skin of the forearm, at the arm rest, must stretch and contract as the movement is exercised. This stretching and contracting is of supreme importance in learning to write. Practicing Exercise 1 will do that which cannot be accomplished in any other way. Rapid exercise of the rolling and propelling movements will perform a kneading process upon the skin muscles that will free them of all resisting qualities, and then develop the proper degree of elasticity and lightness. Improvement is always determined by the quality of the movement that is developed.

Without a practical means of execution, no style of writing can meet the demands of modern commercialism. As soon as a good position is understood, it is not difficult to develop an excellent movement. During the process of movement development, do not emphasize form. Master one subject at a time. Do not allow improper movement in any written work. Prohibit writing that cannot be supervised.



## MATERIALS

Use pens. Discourage the use of pencils in any writing, and do not permit pupils to use fountain pens of any make. Medium-pointed pens are the best for teaching a free, elastic movement. Pupils are to supply themselves with blotters and pen-wipers. If pens are handled carefully, a pupil should not use more than one pen a week. Inkwells should be cleaned and filled twice a week.

## COUNTING

Count, or mark time with an instrument, until a rapid and regular movement is mastered. This is applicable especially to the movement drills, and can be used advantageously in all writing at different times, throughout the text. Rhythm is of supreme importance. Rapid practice of the movement drills, using large forms, will soon destroy inept muscular and nervous substance, which will be replaced immediately by new substance that is adapted for pen-work.

## FORM

As soon as movement is developed sufficiently, strive for form. Require every member of the class to qualify on each line as the lessons are covered. Do not permit pupils to fall behind in order to qualify. When a pupil fails to qualify on a lesson, he must do outside work until he does qualify, and not neglect the succeeding lessons. Keep the class together.

The capitals are evolved in order of principle and simplicity as follows: *O, A, C, E, N, M, W, H, X, G, K, Z, V, U, Y, P, B, R, L, S, T, F, D, G, I, J*. The small letters are similarly evolved, as follows: *t, i, u, w, e, n, m, x, v, y, z, o, c, a, d, g, q, r, s, j, p, l, b, h, k, f*.

Make a close study of every letter before presenting it. Get clearly in mind what should be the relative widths of parts and lengths and where should be slight or intense curves. Observe angles and turns. It is lack of definiteness in this respect that is the stumbling-block of many teachers.

Capitals are practiced at a full space high to avoid too much mental effort in regard to form during the period of movement development. Often a beginner will apply the movement to large forms when he would persistently use his fingers if he were compelled to write smaller. As soon as the movement is controlled sufficiently, reduce the height of capitals to three-fourths of a



space. Small *t*, *d* and *p* are one-half space high. Extended loops, *l*, *b*, *h*, *k* and *f*, are the height of capitals. The minimum letters are one-fourth space high. Small *r* and *s* are a trifle higher than the minimum letters.

In making the capitals, use a rapid, dashy, elastic movement. Try to produce the finest quality of hair lines. Speed is necessary. Roll off pages without restriction in the movement. Do not pay much attention to form until the movement becomes automatic. Practice the small letters rapidly, but use a more restricted motion. Concentrate your power on each letter. Do not spin off small letters in rapid succession, as if you were practicing movement drills. The movement should be slightly restricted, but not drawn. There is a certain measure and exactness in making small letters that is unknown to capitals. Make each letter as nearly perfect as possible, without reference to the one that follows. Look at the copy frequently. Always have in mind a very definite aim. Never practice for general results.

Slant is natural. While the approximate slant given in the text should be emphasized, the course is planned so that everyone will develop his individual slant.

Throughout the entire course specific movement drills should be given frequently.

Post qualified work of pupils in the room once a week.

At first, practice paper should be ruled with vertical lines dividing the paper into halves and fourths. Use a pencil and ruler for the purpose.

As soon as a pupil advances sufficiently, he should practice without the vertical lines.

Learn to write half-way across the page without lifting the pen.

In writing, the speed is three down strokes a second. Movement drills are written more rapidly. To determine how many times a letter can be made in a minute, divide three times sixty by the number of counts in that letter.

The entire class should write on the same lesson at the same time. Permit no one to go ahead or to fall behind.

This does not mean, of course, that in the recitation one pupil must stop at the end of a line and sit idle until a slow pupil catches up with the class.

Individual instruction is necessary.



Walk about the room continually with an alertness that prohibits poor position, improper movement, slow speed, etc. Require every pupil to be busy every minute of the time. Criticise judiciously and commend at every opportunity. Pupils usually do as poorly as the teacher permits and as well as she demands.

Before beginning the penmanship course, require every pupil to submit a specimen of his writing, as follows: "This is a specimen of my business writing at this time. . . . ., Colo., September . . . ., 191..." Signed. Compare this specimen with a similar specimen at the end of the year. Specimens should be filed by the teacher.

#### ANALYSIS

Ex. 1: The compact oval is made by a vibratory movement which is explained under "Movement." The first practice of this oval is for the purpose of stretching and contracting the muscles in the skin of the forearm, so as to secure a large range of movement. As this is being accomplished, a tearing-down and rebuilding process will take place in the muscles. For some students it requires many weeks of persistent practice on movement drills to develop sufficient muscular and nervous adaptability for good execution. Practice the oval at the rate of 200 revolutions a minute. The retraced oval at the beginning of the line is made by eight revolutions. The width of the oval is equal to two-thirds of its height. By continuing the retraced oval, gradually moving to the right until seventy-two revolutions are made, a compact oval is almost completed, as shown in the second exercise on the line. The oval made in the direction that the hands of a clock move is called the indirect oval, and the one made in the opposite direction is called the direct oval. Change directions after each line, so that the practice will be about equally divided. Rapid practice is especially conducive to stimulating thought and concentration. Hold the pen lightly, and make the holder slant so as to form an angle of about forty-five degrees. Keep both nibs of pen resting evenly upon the paper, and think intently upon the work. Make the exercises compact and regular, without a drawn or blurred appearance. Strive for a fine hair line.

Ex. 2: Apply instructions regarding the oval and practice the retraced oval given at the beginning of the line. Fill several pages of this exercise before beginning the *O*. Make twenty-five to the minute, each being retraced eight times. The *O* has the



same slant and height as the oval, and the horizontal curve that forms the finishing loop is begun in the center of the letter. Watch the slant, roundness, close at the top, and do not make the finishing stroke too long. The letter is made in two counts. Come to a stop at the end of the first count until the letter is understood and the movement controlled. As soon as possible, make the letter without a check in the motion, and write at the rate of seventy-five to the minute, with no pause between letters. Persevere until a decided improvement is shown.

Ex. 3: *A* is similar to *O*. Study the analysis closely. It is made in two counts. The first part consists of a downward curve and upward straight line. The curve is pronounced. The second part is a left curve extending just a trifle below the line. Notice the slant and width. Practice liberally on the *A* exercise before beginning the *A*. Stop at the end of each count and close at top as explained for *O*. Write seventy to the minute.

Ex. 4: *C* is another oval-like letter. Practice the exercise freely before beginning the letter. It is begun with a small oval and finished with a larger one. Observe the slant of the letter. Make the entire letter without pausing, and do not check the motion between letters. It is made in two counts. Write seventy-five to the minute. Study and practice.

Ex. 5: The two parts of *E* are portions of an oval. The upper part is just one-half as large as the lower one. Make each part rounding, and slanting the same as an oval. The small loop connecting the parts of the letter lies in the direction of an imaginary line that is perpendicular to the main slant of the letter. *E* is more difficult than the other capitals given thus far, and more practice will be necessary to master it. It has the same slant as *O*, *A*, *C*, and is made in two counts. After practicing the exercise until it can be made easily and well, begin the letter. Make seventy-five to the minute. Fill many pages.

Ex. 6: The motto of the penmanship student should be "Review." It is the constantly repeated effort to improve that counts. In Exercise Six are all of the capitals thus far studied. Review each one separately at first, until it can be made well and uniformly, and then practice *O*, *A*, *C*, *E*, in groups. Try to make each letter perfectly, as though you were preparing it for engraving. Strive especially for uniformity in slant, height, width and spacing. Remember the speed. Write four groups on a line at the rate of four lines to the minute.



Ex. 7: This exercise introduces and analyzes *t*, the first lower-case letter. Notice how it is evolved from the straight line movement drill. The beginning and ending strokes are pronounced right curves, and the down stroke is straight. The down stroke retraces half the height of the letter. It is made with a quick up-and-down movement, with a slight pause on the base line. Make the letter one space high at first. Practice it singly until it is understood and the movement controlled; and then join in groups of eight, at the rate of twenty groups to the minute. As soon as satisfactory proficiency has been reached, reduce the height to one-half space.

Ex. 8: The *i* resembles *t* in reduced form. The down stroke does not retrace. Write with a rapid movement, pausing on the base line. The height is one-fourth space. Watch slant and spacing. After the letter has been practiced singly, join it in groups of three, and later join sixteen on a line without lifting the pen, at the rate of 180 a minute. Dot carefully.

Ex. 9: *u* is composed of double *i*. The width of the letter is equal to its height. Observe parallelism in the straight lines and also in the curves. Make a strong finish to all letters. Practice singly, and then join in groups as explained for *i*, at the rate of from ninety to one hundred a minute. Remember that the nail of the little finger inscribes every letter the pen makes. Be sure that the forearm acts as a unit. Keep the top of the *u* sharp and the base rounding. Exercise care, freedom and grace.

Ex. 10: The *w* is begun like *u*, and finished with a short, horizontal curve. Start the finishing stroke with a dot, and slightly retrace at the height of the letter. Follow previous instructions. Write sixteen on a line at the rate of eighty a minute.

Ex. 11: Small *e* is made like *i*, excepting a loop is formed. Curve the down stroke as little as possible. Theoretically, *e* has a straight down stroke the same as *i*, but it is not objectionable to make a slight curve. Instructions relative to *i* apply to *e*.

Ex. 12: *n* is directly evolved from the preceding exercise. It has three rounding turns and one sharp turn. Down strokes are straight and parallel. Write in groups of eight at the rate of fifty a minute. Use the wide-spacing principle, writing six on a line without lifting the pen.

Ex. 13: *m* is analyzed, studied and practiced in accordance with instructions given for *n*.



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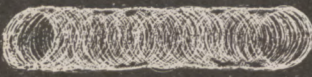
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# MOVEMENT EXERCISE



Exercise 3: A series of circles and loops, labeled '3'.

Exercise 4: A series of circles and loops, labeled '4'.

Exercise 5: A series of circles and loops, labeled '5'.

Exercise 6: A series of circles and loops, labeled '6'.

Exercise 7: A series of circles and loops, labeled '7'.

Exercise 8: A series of circles and loops, labeled '8'.

Exercise 9: A series of circles and loops, labeled '9'.

Exercise 10: A series of circles and loops, labeled '10'.

Exercise 11: A series of circles and loops, labeled '11'.

Exercise 12: A series of circles and loops, labeled '12'.

Exercise 13: A series of circles and loops, labeled '13'.

Exercise 14: A series of circles and loops, labeled '14'.

Exercise 15: A series of circles and loops, labeled '15'.

Exercise 16: A series of circles and loops, labeled '16'.

Exercise 17: A series of circles and loops, labeled '17'.

Exercise 18: A series of circles and loops, labeled '18'.

Exercise 19: A series of circles and loops, labeled '19'.

Exercise 20: A series of circles and loops, labeled '20'.

Exercise 21: A series of circles and loops, labeled '21'.









*t, i, u, w, e, n, m*, should be reviewed thoroughly before proceeding farther. Join them, writing crosswise on the page of other writing, thus utilizing worthless paper, and securing another valuable drill.

Ex. 14: Letters in these words have been analyzed. Do not join *O* and *A* to the small letters. Write four lines in a minute. Fill many pages practicing this line.

Ex. 15: Join the capitals to the small letters. Follow previous instructions relative to height, width and slant of each letter, and spacings.

It is presumed that students who have followed instructions diligently are now able to apply the movement properly in all of their writing. During the remainder of the course instructions will be confined to a brief analysis of each form as it is presented.

Ex. 16: Small *x* is composed of the last part of *n*, with a straight line intersecting the down stroke, as shown on the second line. Be careful to make the straight line intersect properly.

Ex. 17: Small *v* is composed of the first part of *n* and the finishing stroke in *w*.

Ex. 18: The initial stroke in *N* is used in eleven capital letters. The oval is quite rounding and is outside of the hook formed by the curve and down stroke. The up stroke in the second part of the letter is a trifle lower than the first part, and retraced very little. Both down strokes are almost straight and parallel. It is the same in width as the small *n*. Write forty-five to the minute.

Ex. 19: *M* is similar to *N*, with a third part added. The height gradually slopes to the right. Write thirty to the minute.

*M* and *N* may be joined to any small letter. From the standpoint of speed they should be joined, but oftentimes it is desirable to disconnect them.

Ex. 20: The first part of *y* is similar to the first part of *v*, with a lower loop added. The loop is full, the down stroke is rather straight, and the crossing is on the base line.

Ex. 21: The small *z* is directly evolved from *y*. Make the first down stroke straight and slanting the same as the second down stroke.

Ex. 22: Begin small *o* on the line of writing. It is a miniature oval finished like small *w*. Close at the top and finish with a retraced compound curve.

Ex. 23: The beginning stroke of *W* is like the first stroke of *N* and *M*. The second part consists of an upward right curve, downward straight line, and upward left curve. The last stroke is retraced just a trifle. Do not retrace in the second and third strokes.

Ex. 24: *H* is begun like *W* and finished with a downward left curve and small loop. The small loop is made by a horizontal curve the height of small letters. *H* should be joined to small letters.

Ex. 25: *X* is similar to *H*. The second down stroke touches the first part at half the height of the letter. Make a slight pause on the base line.

Ex. 26: *Q* begins like *X* and ends with a compound curve. The loop it forms with the down stroke is horizontal, and rests upon the base line.

Ex. 27: The second stroke in *K* is compound, starting up and leftward, with a pronounced left curve. The tiny loop should tie with the first down stroke. Make the finishing curve narrow.

Ex. 28: *Z* ends like small *z*, excepting that it forms a small loop on the base line.

Ex. 29: Small *c* begins and ends like *n*. The down stroke begins with a dot, and is curved like the down stroke in *o*. Come to a stop on the base line.

Ex. 30: Small *a* is begun and finished like *c*. The second upward and second downward strokes are straight. The letter should be equal in size to *o*.

Ex. 31: Small *d* is exactly like *a*, with a short loop on its top.

Ex. 32: Small *g* is also like *a*, with an extended loop underneath.

Ex. 33: Small *q* begins like *a* and ends with a lower direct loop. The loop is the same in size as *g*, and closes on the base line.

Ex. 34: The first part of *V* is like *Z*, and it is finished with a compound upward curve. Keep the finishing stroke a trifle lower than the first part.

Ex. 35: *U* starts like *V* and finishes like *A*.

Ex. 36: *Y* begins like *V* and ends like small *y*.



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Businessmen want good writing





Ex. 37: Small *r* begins and ends like *i*. Make a pause at the shoulder of the letter. It is one-fourth higher than the other minimum letters.

Ex. 38: Small *s* begins and ends like *r*, and is the same in height. The down stroke is a short compound curve. *r* and *s* are peculiar letters, and require special study.

Ex. 39: *j* begins like *i* and ends like *g*.

Ex. 40: *p* begins like *t* and ends like the first part of an inverted *d*. Close the finishing stroke on the base line.

Ex. 41: *P* begins like the straight line exercise and ends with an oval at the top.

Ex. 42: *B* begins like *P*. The two ellipses are the same in size. The small loop connecting the ellipses is directed at about right angles with the main slant of the letter. The finished stroke makes a sharp angle with the second ellipse.

Ex. 43: *R* starts like *P*. The last stroke begins with a small loop that touches the first down stroke, and finishes like *A*.

Ex. 44: The *l* loop begins with a pronounced upward curve and downward straight line, and ends like *i*. Make the loop full and slanting properly.

Ex. 45: *b* begins like *l* and finishes like *w*.

Ex. 46: Small *h* begins like *l* and ends like *n*.

Ex. 47: *k* begins like *l* and ends with a short right curve and combined straight line and left curve. Study the analysis of the finishing part.

Ex. 48: *f* begins like *l* and ends like *g*. Penmen are free to state that the loops are more difficult than all other small letters combined. Practice the joining of *l*, *b*, *h*, *k*, *f*, until they can be made well and rapidly.

Ex. 49: These words are for extended practice on the loops. Watch height, width, slant and spacing.

Ex. 50: *L* begins with a dot and a slanting, downward, compound curve, and ends like *Q*. It is more difficult than any other capital, and usually requires a great deal of study and practice. The letter is made in two styles. The second style is begun with a horizontal curve as an initial stroke.

Ex. 51: *S* starts like the first up stroke in *l*, and has a downward compound curve like *L*, and ends with a horizontal curve that forms a sharp angle with the downward stroke.



Ex. 52: *T* begins like the latter part of *S*. The stem hook is made by a small loop inside of a right horizontal curve which is placed directly over the main stem.

Ex. 53: *F* is made exactly like *T*, with the closing and crossing added.

Ex. 54: The compound curves *L*, *S*, and *T*, *F*, should be strong and uniform. Study height, width, slant and spacing of all letters in these words.

Ex. 55: *D* begins with a downward compound curve like the latter part of *S*, forms a small horizontal curve on the base line, and ends similarly to *O*. Close the letter at the top, and see to it that the toe and heel both rest on the base line.

Ex. 56: *G* is made like *S*, with the downward stroke crossing horizontally to the right and forming a sharp angle at one-half the height of the letter. It has the same relative width as *H*.

Ex. 57: *I* begins with an indirect upward curve, forms a loop with a downward straight line, and ends like *G*. In order to have a natural slant in the letter, it is necessary to make the first upward curve almost vertical.

Ex. 58: *J* begins like *I* and finishes like *Y*. The lower loop is about half as wide as the upper one.

Ex. 59: Beginning with this exercise and extending to Exercise 72, words containing eight letters each are given, in which all of the capital letters are reviewed. Practice three words on a line. Study and be cautious about slant, width, height and spacings. Uniformity in writing is of vital importance.

Ex. 72: Exercises 59 to 68 gave word practice in which the capital letters were reviewed, and also included nearly all of the small letters. Exercises 68 to 72 are for additional word and sentence practice, and give a review of the remainder of the small letters.

Ex. 73: Fill a page practicing each capital, separately at first. If you are not able to make good capitals, cover many pages in this manner. Practice unceasingly on the entire alphabet as it appears in the text. Work rapidly. If any part of the alphabet is especially difficult, give it an unusual amount of study and practice.

Ex. 74: Business men want good, legible figures. Oftentimes it is necessary to write them rapidly. 4, 7 and 9 are the only figures that cut the line. 2 is a miniature of *Q*. 3 resembles a



reversed *E*. The finishing of 5 is like the finishing of 3. The downward stroke in 6 is almost straight. The first stroke in 7 is a compound curve. 8 resembles an inverted *S*. 9 begins like *a* and ends with a downward straight line. Study these figures and practice them with the muscular movement until they can be made satisfactorily.

The Syllabus for Teachers of Penmanship prepared by J. E. Huchingson would be invaluable to the teachers of the state in carrying out this course. Each pupil should have upon his desk J. E. Huchingson's Progressive Lessons in Business Writing. Sold by Herrick Book Company.

## POULTRY CULTURE

**September.** BREEDS AND BREEDING.—Breeds: Mediterranean, Asiatic, American, miscellaneous. Breeding: heredity; line breeding; age of breeders. Records and accounts.

**October.** POULTRY HOUSES.—Essentials of a good house: open front; fresh-air types. Poultry-house appliances. Poultry yards.

**November.** DISEASES AND ENEMIES.—Causes and prevention of diseases. Common, local diseases; colds, catarrh, roup, etc. Insect enemies: lice, mites, etc. Other enemies: skunks, magpies, hawks, etc.

**December.** FEEDS AND FEEDING.—Nutrition: digestive process. Kinds of feed: grain foods, animal foods, vegetable foods.

**January.** MARKETING EGGS.—Cleaning and grading eggs; special markets or the store.

EXHIBITING.—How to prepare fowls for the show; scoring, judging.

**February.** INCUBATING AND BROODING.—How the egg is made. Artificial incubation: an ancient art; place for incubator; heat, ventilation, moisture; record cards. Natural incubation: the nests; select the eggs; daily duties.

**March.** CHICKS.—Coops for hen and chicks; crowding; exercise; feeding.

EGGS.—Preserving eggs for winter use.

**April.** GROWING AND MARKETING.—Care of growing stock: shade, shelter, storms, feed. Marketing poultry: preparing for market; size to market; retail or wholesale; culling.

### BULLETINS SUGGESTED FOR TEXT-BOOKS

#### BREEDS

Farmers' Bulletin No. 51, "Standard Varieties of Chickens," United States.

Reading Course, Lesson 1, \* "Breeds of Chickens," Oregon.

#### HOUSES AND APPLIANCES

Reading Course, Lesson 2, \* "Housing of Chickens," Oregon.

Circular No. 4, "A Colony House," Oregon.

Farmers' Bulletin No. 227, United States.



Bulletin No. 284, "Labor Saving Poultry Appliances," New York.

## DISEASES AND ENEMIES

Farmers' Bulletin No. 287, United States.

Farmers' Bulletin No. 309, United States.

Colorado Agricultural College has a bulletin on local diseases.

## FEEDS AND FEEDING

Reading Course, Lesson 3, \* "Feeding for Eggs," Oregon.

Reading Course, Lesson 17, "Feeding of Laying Hens," New York.

Farmers' Bulletin No. 84, United States.

Farmers' Bulletin No. 186, United States.

Farmers' Bulletin No. 244, United States.

## EXHIBITING—SCORING

"Standard of Perfection." This book could probably be had of the American Poultry Association at cost or less.

## MARKETING EGGS

Farmers' Bulletin No. 128, United States.

Extension Bulletin No. 8, "Marketing of Eggs," Ohio.

Reading Course, Lesson 20, "Marketing Poultry Products," New York.

## INCUBATION AND BROODING

Farmers' Bulletin No. 236, United States.

Reading Course, Lesson 5, \* "Incubating and Brooding Chickens," Oregon.

## CARE OF LITTLE CHICKS

Farmers' Bulletin No. 237, United States.

Reading Course, Lesson 19, "Raising Chickens," New York.

## PRESERVING EGGS

Bulletin No. 55, "Infection and Preserving of Eggs," Storrs.

"Preserving Eggs," by Edgar Warren.

Bulletin No. 67, "Water Glass a Preservation for Eggs," Storrs.

"Brigham's Progressive Poultry Culture." State College of Agriculture, South Dakota.

#### CARE OF GROWING STOCK

Will be found in above bulletins.

#### MARKETING POULTRY PRODUCTS

Will be found in above bulletins.

In addition to these bearing directly on the lessons, the following would be found interesting and helpful:

Farmers' Bulletins No. 200, "Turkeys;" No. 117, "Squabs and Geese."

For United States Bulletins, address United States Department of Agriculture, Washington, D. C.; or request your congressman to send them.

For Oregon Bulletins, address Oregon Agricultural Experiment Station, Corvallis, Ore.

For Storrs Bulletins, address Storrs' Agricultural Experiment Station, Storrs, Conn.

For New York Bulletins, address Cornell University Agricultural Experiment Station, Ithaca, N. Y.

For Ohio Bulletins, address Ohio State University, Columbus, Ohio.

For Colorado Bulletins, address State Library, State Capitol, Denver.

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\* These Bulletins were written especially for boys' and girls' clubs, and could probably be had in numbers at cost of printing and mailing. Arrangements might be made whereby all above Bulletins could be had for each scholar.



## READING

### GENERAL INSTRUCTIONS

Reading is by far the most important subject in education; by it and through it comes knowledge of all things. An enthusiastic teacher will prepare himself as fully as life will permit, finding ever-increasing pleasure in this pursuit. Teaching is a *profession*, and in no profession can one hope to succeed without a wide knowledge of the best books of his profession. Therefore get books and *know* them.

Following is a list of good books for the teacher:

"Teaching the Language Arts," Hinsdale.

"Special Method in Reading for the Grades," McMurray.

"Teaching to Read," Hughes.

"Reading in the Public Schools," Clark.

"Enunciation and Articulation," Boyce.

"How to Tell Stories to Children," Bryant.

"Reading in the Public Schools," Briggs and Coffman.

"Outline Lessons for Classics," English Leaflet Company.

### AIM

The teaching of reading should aim for the following definite things:

- a. A well-defined knowledge of the mechanics of reading, and the ready application of them.
- b. The power to extract quickly the information from the printed page, taking in entire thoughts at a glance.
- c. The art of reading aloud in a pleasing voice, with correct pronunciation, articulation and enunciation, and with *natural* expression.
- d. A cultivation of a taste for good literature.
- e. Ethical culture and general information.

The real reading lessons from the first grade up include three distinct types of work:

- a. *Study* reading (intensive), involving preparation increasing in complexity as the grades advance. This should be enough ahead of the pupil to require good, hard work. Fuller explanations are given under Grades V, VI, VII and VIII.



b. *Sight* reading (extensive), requiring the pupil to read easily and intelligently without direct preparation. This should be chosen from books that are easy for him, as the end in view is fluency and the power to catch the author's meaning almost intuitively.

c. *Silent* reading, cultivating the library habit under supervision. Supplementary readers, library books, and books from home or other sources, are read by early comers before school, by quick workers rewarded in school, and by all at regularly appointed periods.

#### METHOD

The principles underlying the first-grade work hold good all *through the grades*, and it is recommended that teachers of all grades familiarize themselves with them and make daily application of them. In all things, knowledge comes to us through seeing, hearing and doing; hence the sense-training of the first grade has its value everywhere. To read anything well, one must see the picture, hear the sound, or actually do or imagine the action—he must feel it all. Theoretically, the mechanics of reading are mastered by the end of the fourth year; but in a public school receiving pupils from all places and conditions of life, the teacher will find it worth while to continue systematic drill in them all along the line.

In the first grade the phonic work, with rare exceptions, is confined to lessons apart from the reading, lest the attention be diverted from thoughts to words. In the blend work of the lower grades and the spelling of the upper grades, keep the word as a *whole* before children; for this is the way they will meet it in their reading. By arranging the spelling of the upper grades with a view to continuing the drill on phonics, phonetic families, derivation and analysis of words, together with diacritical markings, syllabication and accent, the teacher will give to his pupils a knowledge of words and their correct sounds which will inevitably bring out more clear, fluent and appreciative readers.

The *sentence*, *word*, *phonic* and *synthetic* methods combined seem to bring the best results. These will be presented somewhat in detail under the first grade. The sentence is the unit of thought; therefore pupils are started with a sentence, and in all grades they should be led to the habit of glancing through to the end of the thought before attempting to give it out to others. As



mentioned above, the word and phonic drills should not break into the reading itself.

In all grades correlate reading, spelling and language.

Try for *good expression* by the following means:

a. See that the reader has a perfectly clear understanding of the meaning of what he is to read. To help him, use objects, pictures, stories, questions.

b. Have him imagine how things look or sound, and how people feel and why. Let him make believe he is one of the people in the story. Fill out the thought in all directions; create an atmosphere.

c. Ask him to let his *voice* show to his teacher or classmates just how everything was; and to try to look at them when he tells them.

In the first four grades frequently *dramatize* or "play" the story, and occasionally in the upper grades. This must always be done very simply, lest time be wasted.

d. Have pupils tell the entire story in an interesting way for the class. *Tell stories yourself*, and let children reproduce them.

e. Read occasional passages, entire poems or stories to the children in the most interesting, effective way possible, taking care to be always natural.

f. Encourage reading aloud at home.

Try for clear *articulation* and *enunciation*, as follows:

a. Listen without a book yourself, or have one child read to the class. Good sight-reading may often be accomplished with only one book in the class.

b. Say: "I did not understand that. What was it?"

c. Have pupils read sometimes from the front of the room, sometimes from the rear, or at other times from their seats, the teacher moving about to distant parts of the room to see if she can understand.

Do not tell children to talk loudly, and in no wise countenance a rasping voice.

d. Practice vocal drills, or phonic exercises in *all* grades.

Example: Whisper such words as *paint, took, kite, bate*, and repeat, changing the order.

Pronounce several times in a clear, gentle voice, *take, kept, taste, rate, bite, harm, hit, own*, changing the order with each repetition.

Pronounce vowels in changing order.

Call attention to first and last sounds of words.

Repeat such exercises as, "He thrusts his fists against the posts," etc.

To develop a taste for *good literature*:

- a. Make the reading lesson a happy time.
- b. Call attention to the special beauty and fitness of certain words or passages.
- c. Ask pupils to select the finest passages, telling why they judge them to be so.
- d. Refer them to other good books which you think they will like.
- e. Tell them stories, introducing them to good books.
- f. Post library lists from which they may choose if they are going to buy, or use some library.
- g. Start a school library, and by every means in your power add to it from time to time.
- h. Teach children to reverence and love a good book, and so to take care of it.
- i. If books are accessible, have a book review from each child every month or two; have these read aloud and discussed. Pupils will thus introduce one another to good books.
- j. Talk about bad books only incidentally, as occasion requires, and briefly; let children forget them.
- k. And again, *read aloud* to your pupils, read good things, and read your *level best*.

In concluding hints on method, we emphasize: *Never* allow a pupil to recite a memory gem, tell a story, or read a sentence in any connection whatsoever without clear articulation and enunciation, and correct expression.

In the sixth, seventh and eighth grades subscribe to *Current Events*, or some such paper, to interest pupils in the news of the day.



## FIRST GRADE

The work with beginners should be preceded by conversations about things at home with which they are most familiar, getting them to talk freely.

For many reasons, story-telling and dramatization, "playing or acting out," are among the very best helps to teaching reading.

The order of teaching phonograms, blends and family names will depend upon the books used. Those given below are from the "Gordon Readers" and are suggestive. Take the primer or reader to be used and make a list of words. Note down the objects, pictures and other materials you will need. Make cards with phonograms, families and key-words on them for seat-work. Begin phonic lessons the first week, teaching each sound by a little story; see "Education Reader," Book I, and the "Gordon Manual." Give the sound and its sign, but not its name, as this adds confusion. Beginning with the sentence method, teach two new words a day, gradually increasing to five a day by the second month. As phonograms are formed and blended into families and words, use the words thus acquired for reading in sentences. Do much rapid drill-work in reading the words in different sentences, and in lists on the board and charts. Begin sounding gradually the second month, and increase as knowledge of phonograms increases. Always use script upon the board. Change from script to the book by the third month or sooner, according to the manual followed.

## PRESENTATION TO BEGINNERS

Distribute objects to the children.

"What have you?" "I have an apple."

"See me make the chalk say it." The teacher writes it on the board.

"Tell me what it says." "I have an apple."

"What have *you*?" "I have a doll." The teacher writes it.

"Tell me what this says." "I have a doll."

"Find the word that says *apple*." The child points to the word *apple* and pronounces it. Do the same way with *doll*.

The teacher writes *doll* and *apple* in various places on the board, having the children find each and pronounce it.

"Find *I have*." "What does it say?" "I have."

"Tell me again what you have." "Find the sentence that says it."

After this take action lessons, as: *go, run, jump*, etc. If the teacher prefers, she may begin with them.

Whatever book you use, study it through very carefully, making yourself master of the "Manual" or "Directions to Teachers."

Use instructions from several books.

Teach the first third of several primers or readers; return and take the second third of the same books; then finish them. It is preferable to have much easy reading at first. Keep one set for sight-reading; by which we mean, let the child read his sentences without previous direct development, but *not* without thinking each sentence *through to the end* before he tries to tell it (or read it).

Begin sight-reading as soon as books are taken.

### First Month.

- I. Teaching of *sight* words in sentences.
- II. Phonic work.
  - a. Teaching of sounds and their symbols (in phonograms).
  - b. Teaching of blending sounds learned.
  - c. Teaching of word-families through blending.

We suggest the "Teachers' Manual" which accompanies the "Gordon Readers" as the most complete in all details needed for teaching beginning reading, and a fine book for a teacher in any of the grades with which to be familiar. The work in reading, phonics and family names is here mapped out from day to day, with pictures and other excellent devices. The plan following is from this "Manual":

- I. Simple phonograms: *ā, f, l, n, m, o, ō, r, s, t, w, g, ch* and *sh*.
- II. Blended phonograms.
 

Initials: *fl, fr, sl, sm, sn, st, sw, tr, tw, shr*.

Family names: *am, an, ann, as, ash, at, atch, ant; oll, om, on, oss, ot, off, oft, ost, otch*.
- III. Addition of *s* to words and families.



IV. Sight-words: *may, I, see, like, run, find, look, baby, to, play, sister, my, name, jump, brother, this, is, boy, come.*

V. Seat-work.

1. Write known phonograms on the board. Each child has a box or envelope containing cards with phonograms in script large and heavy. He finds the ones which are on the board and arranges his in the same order.
2. Sort into piles, placing duplicates above each other.
3. Write blended phonograms on board. Pupils make these, arrange in order on desks, piling up duplicates.
4. Write sentences containing sight-words. Pupils build sentences with sight-word cards. Allow children to whisper these sounds as they make them.
5. Trace phonograms with coffee beans. Trace pictures of objects read about.

## Second Month.

I. Simple phonograms: *b, c, d, g, h, i, j, k, p, q, ee.*

II. Blended phonograms.

Initials: *bl, cl, gl, pl, br, cr, dr, gr, pr, sc, sk, sp, dw.*

Family names: *ab, ad, ag, ap, ack, amp, and; ob, od, og, op, ock, omp, ond, ont; id, ib, if, ig, im, in, ip, is, it, ich, ick, iff, ift, ilk, ill, ilt, imp, inch, ind, int, ish, iss, ist, itch; eech, eed, eef, eek, eel, eem, een, eep, eer, eet.*

III. Placing of initial consonant.

IV. Sight-words: *rose, ball, leaves, kitty, have, are, little, yes, pretty, with, where, what, for, oh, girl, old.*

Key-words: *my, me, go, you, find.*

V. Seat-work.

1. Continue as in first month.
2. Place phonograms in large writing on the blackboard for each pupil. He traces copy a number of times, then writes it beside the copy.

## Third Month.

I. Simple phonograms: *ng, th, ẽ, ũ.*

II. Blended phonograms.

Initials: *scr, spl, spr, str, thr, thw.*

Family names: *aug, ank; eb, ed, em, en, ep, et, eck, eff, eft, egg, ell, elk, elt, emp, ench, end, ent, esh, esk, ess, est, etch, eth; ild, ink, ing; old, oll, olt, ong, onk, ost, oth; ub, ud, ug, um, un, up, ut, uch, uck, uff, uft, ull, ulk, ult, ump, unch, und, ung, unk, unt, ush, uss, ust, utch.*

### III. Dissyllables and compound words.

IV. Derivatives formed by adding the suffix *-ing* to known words, when such addition does not require a change in the primitive word.

V. Sight-words: *they, give, live, says, said, many, one, two, read, hear, were, apple, up.*

### VI. Seat-work.

1. Continue seat-work for first and second months.
2. Paste upon a strip of cardboard for each child printed letters making his name. Give him a box of letters. He matches the letters and makes his name a number of times upon his desk.
3. Silent reading on some specified text.

## Fourth Month.

I. Simple phonograms: *ōō, ōō, ow, ou, x.*

### II. Blended phonograms.

Family names: *ax, ex, ix, ox; aff, aft; ance, anch, ant, ask, asp, ass; ood, ook, oot, ooch, ood, oof, ool, oom, oon, oop, oor, oost, ooth; ow, owl, own; oud, ound, our, out.*

### III. Short Italian *a*.

IV. Suffix *-ed* where a syllable is added, and no change is made in the primitive word.

V. Names of the vowels.

VI. Effect of final *e* upon the next preceding vowel separated by a single consonant.

VII. Sight-words: *Papa, Mamma, write, school, shine, eyes, there, was, saw, work, four, horse, shoe, watch.*

Key-word: *may.*

### VIII. Seat-work.

1. Extend the name-cards used last month to include the name of school, town, state, teachers, streets. Have script on some of the cards.



2. Write family words in a column on the board. Pupils build these words on the desk with letters.
3. Use word-drill cards for study.
4. Read silently from supplementary readers.

### Fifth Month.

- I. Simple phonograms: *v, oi, oy*.
- II. Blended phonograms.  
Endings: *by, dy, ly, my, ny, py, ry, sy, ty, zy, y, ble, dle, fle, gle, ple, zle, tle*.  
Family names: *ar, are, av, ave, arb, arch, ard, arf, ark, arl, arm, arn, arp, arse, arsh, art, arce; er, ere, eve, erb, erd, erk, erm, ern, erse, ert, erve; ir, ire, iv, ive, ird, irk, irl, irst, irt; or, ore, orch, ord, ork, orm, orn, orp, orse, ort; ur, ure, urd, url, urn, urse, urt, urve; oy, oil, oin; oint, oise, oist*.
- III. Two sounds of *y* not initial; also *i* final.
- IV. Effect of double consonants upon a preceding vowel.
- V. The digraph *ow*.
- VI. The suffix *-er*.
- VII. *o* like short *u*.
- VIII. Sight-words: *all, walk, know, meadow, could, would, should, laugh, music, Santa Claus, Christmas, young, again*.
- IX. Seat-work.
  1. Silent reading in Book I and in supplementary reading.
  2. Continue exercises of previous months. Have pupils write words and phonograms on the blackboard.
  3. Place alphabet in order on desk, choosing script or print from the envelope as teacher directs, or as they are on the board. Require the alphabets, when finished, to be all script or all print.

### Sixth Month.

- I. No new phonic facts developed this month. Review thoroughly all previous facts.
- II. Sight-words: *buy, who, guess, word, large, Mrs., cow, view, head, ears, once*.
- III. Review the names of letters used in the spelling lesson.

## IV. Seat-work.

1. Continue silent reading, also writing.
2. Sentence-building from word-cards.
  - a. Like sentences on board.
  - b. Made up.

## Seventh Month.

- I. Simple phonograms: *y* initial; *a* after *w*; equivalents of *a, i, e, o*; *c* and *g* before *e, i* or *y*.
- II. Blended phonograms: *ed* after any consonant.
- III. Sight-words: *wolf, Alice, lambs, want, door, stalk, heart, through*.
- IV. Seat-work.
 

Continue work of preceding months.

## Eighth Month.

- I. Simple phonograms: *aw, au, iu, ew*.
- II. Blended phonograms: *ar*, preceded by *w*; *or*, preceded by *w*; *ear*.
 

Family names: *awl, awk, awn, aub, auce, aud, aul, ault, ause; ald, all, alk, alt; uice, uit*.
- III. Sight-words: *comb, tongue, build, beauty*.
- IV. Suffix *-es*.
- V. Seat-work.
  1. Silent reading.
  2. Cut up stories from old primers; arrange on desk like duplicate pages. Use the pictures also.
  3. Copy spelling words.
  4. Continue phonogram blend work.

## Ninth Month.

- I. Simple phonograms: *augh, ough*.
- II. Blended phonograms: *qu, mb, sten, ften*.
- III. Seat-work.
 

Review previous work.

*At least* three readers should be completed in class, and it will usually be found possible to do more in view of the great number of words which the family work and blending presents. Drill thoroughly, but avoid dallying. Allow children to have books to take home to read.



Use games as far as possible in drill-work. (See "Games, Seat-Work and Sense Training Exercises," A. Flanagan & Co.) Here are some suggestions:

#### FISHING GAME

Children stand in circle. Place cards irregularly upon the floor in center. Three or four children take pointers or sticks and catch fish by naming words as the pointer is placed upon the card. Fish until the pond is empty. The winner then passes the rod to other pupils.

#### CROSSING THE BROOK

Children stand in circle. Arrange words in circle on floor about one foot apart. One child steps over them, naming them as he steps. If he succeeds in crossing all, he may sit in the seat of honor (a small chair placed near the last word) until the next successful one comes. If he fails, he must return home because he has slipped into the water and has wet feet.

#### SECOND GRADE

a. Continue drill in all phases of phonics taken the first year, basing spelling upon families learned in both first and second years.

b. Add:

Simple phonogram: *ph*.

Blended phonograms: *tion, sion, ous, tious, cious, stle*.

With silent letters: *kn, gn, gu, bu, wr, mn*, and initial silent *h*.

See word lists in "Gordon Manual" for additional phonic facts; also words at head of lessons in readers.

c. Know vowels and consonants as such, and the alphabet in order.

Copy words from readers, using two vowels or three vowels, ending with a vowel, beginning with a consonant, etc.

d. From words select phonograms, and make words.

Find family names in words.

Find words having same family name.

Find words containing double letters.

Note again the short vowel preceding double letters.

Note:

- (1) Family names with different sound and same spelling—as: *now, crow; croup, pout; cough, trough, plough, bough, enough;* etc.—through all the family names studied.
- (2) Family names having same sound and different spelling: *ite, ight; ay, eigh; ote, oat; o, ow,* etc.
- e. Use initial letters on squares for placing before family names for rapid spelling.
- f. Pupils should do much sounding out of new words, until at the end of the year they are able to sound almost any new word they meet in their reading.
- g. Drill in quick reading of phrases from the board.
- h. New lessons must be taught or developed by stories and otherwise as in the first grade, but gradually lessen the amount of help given.
- i. Teach pupils to use words in sentences to bring out meanings.
- j. Use seat-work and games as suggested under First Grade.
- k. Do much story-telling, reproduction and dramatizing.
- l. Use "Second Readers;" also, when possible:  
 "Sunbonnet Babies' Primer."  
 "Brownie Primer."  
 "Story of Hiawatha."  
 "Boy Blue and His Friends."  
 "Folk-Lore Reader," II.

Many books given under Grade I are excellent for sight-reading in the second grade. A. Flanagan & Co., Chicago, publish many cheap, paper-covered classics for all grades. These may be found very useful for rural schools.

### THIRD GRADE

- a. Continue phonic drill in addition to spelling work from phonograms.
- b. Sound new words. *Teach* the lesson a certain amount before pupils study it, as in previous grades.
- c. Begin very gradually a little dictionary work.



d. Teach diacritical markings, and drill upon them in various ways.

e. Use *only one* at a time in a spelling lesson, except in review; then only one in a word. Use drill-cards, charts, board, voice.

f. Do much story-telling and dramatizing.

g. Remember sight-reading, silent reading, and study-reading.

h. Complete two "Third Readers," and at least two others from this list when possible:

Andersen's "Fairy Tales."

Stevenson's "Child's Garden of Verse."

Mulock, "Little Lame Prince."

"Graded Poetry," Books I and II, III and IV.

"Robinson Crusoe."

"Animals at Home."

Aesop's "Fables."

#### FOURTH GRADE

By the time the pupils reach the fourth grade they should be able to study fairly independently. Yet the teacher still needs to "develop" somewhat and give phonic drills on the words of the lessons.

a. Continue phonic work, diacritical markings, syllabication, accent, family words. (See "Guilford Speller," "Gordon Manual" and the "Manley-Bailey Spelling Book.")

b. Drill on articulation and enunciation.

c. Require meanings of some words from the dictionary.

d. Have pupils tell the story in their own words.

e. Have supplementary books for silent reading.

f. Complete one "Fourth Reader" and at least three books from the following list when possible:

"Fifty Famous Stories."

Cook's "Story of Ulysses."

"Myths of the Red Children."

Pyle's "Merry Adventures of Robin Hood."

Stockton's "Fanciful Tales."

## FIFTH GRADE

- a. Continue phonic drill and syllabication.
- b. Drill in use of diacritical markings.
- c. Drill for articulation.
- d. Require almost independent study now and intelligent use of the dictionary.
- e. Aim to familiarize children with classics in complete form; cultivate the dictionary habit, enlarging vocabulary and increasing general knowledge.
- f. Use every means possible to make work interesting; pictures, stories, dramatizing (in a very small way). Arouse an interest in outside reading, and by timely and interesting suggestions and talks supervise it.
- g. Have single copies of good books on the shelves for reading in spare time.
- h. Induce pupils to finish work quickly in order that they may read.
- i. Use much poetry in both reading and language, and lead them to observe and enjoy artistic and musical language.
- j. Insist on *good* execution of memory work.
- k. Use one "Fifth Reader" for drill-work, and select at least three from the following when possible:
  - Lansing, "Tales of Old England."
  - "Black Beauty."
  - Hawthorne, "Wonder Book."
  - Mabie, "Norse Stories."
  - "King of the Golden River."
  - "Eugene Field Book."
  - "Stories of Our Country."
  - "Paul Dombey."
  - "David Copperfield" and "Oliver Twist."

## SIXTH GRADE

- a. Read silently an entire selection before beginning its study.
- b. Give special attention to phrasing, the foundation of which is laid in the sentence method of the first grade, and should be continued through all the grades.



c. In the longer, more complex sentences met in the upper grades, cultivate the habit of glancing through and grouping certain parts of the thought together.

d. Pay due regard to subordination, whereby certain parts taken together lead up in importance to one central or important thought.

e. The quick grasp of thoughts in units is a great aid to smooth sight-reading and rapid silent reading.

f. Interpret a sentence in view of what comes before and after.

g. As occasion arises, sound and syllabicate words.

h. Review systematically diacritical markings.

i. Study word-analysis and synthesis. Do this in the spelling lessons.

j. In this grade analysis need generally go no farther than is necessary to sustain interest and bring out a fair idea of the author's meaning.

k. The year's work should include at least three of the following books, studied well, and as many more as may be used for sight-reading. Bear in mind that *sight*-reading must be easier than studied reading.

l. The *reading* lessons should be *confined from now on to pure literature*.

m. History and travel may here be read as supplementary to other lessons, or as silent reading.

n. Keep one "Reader" as a drill-book. (See fifth-grade books.) Read at least three of the following when possible:

"Tales of the Wayside Inn."

"Miles Standish."

Ruskin's "King of the Golden River."

"Story of the Thirteen Colonies."

Cook's "Story of Ulysses."

"King Arthur and His Knights."

Church's "Greek Heroes."

#### SEVENTH GRADE

a. See instructions under Grades VI and VIII.

b. If you find pupils poor readers, take easier work of preceding grades, and first of all interest them. It will be found that

the classification of books by grades here given will need to be varied to suit needs of different sets of pupils.

c. The amount of critical analysis should increase from now on. Let it be for the purpose of furnishing sidelights to the beauty and meaning, rather than to dwell upon word-derivations and grammatical dissections; although occasional reference to grammatical relations may be made when it will prove to be a definite aid to getting the meaning. The uppermost idea always must be *getting* and *expressing thought*.

d. Do not neglect drill in mechanics, based on the work of the preceding grades. (See General Instructions.)

e. Read at least three of the following when possible:

"Docas, the Indian Boy of Santa Clara."

"Evangeline."

"Snow Bound."

Church, "Stories from Herodotus."

Dickens, "Christmas Carol."

"Stories of King Arthur's Court."

Hawthorne, "Tales of the White Hills."

"Rip Van Winkle" and "Legend of Sleepy Hollow."

Clark's "Stories from the Arabian Nights."

"The Courtship of Miles Standish."

#### EIGHTH GRADE

In the eighth year's work some texts are to be analyzed and discussed at length; some are to be read with considerable expedition, leaving the meaning to come as a natural result. "Silas Marner" should be discussed at certain points only. "Christmas Carol" requires very little analysis. "Lady of the Lake" and "Merchant of Venice" may be carefully studied, the meaning, spiritual and ethical, being brought out rather than figures of speech, although some appreciation of these should be developed. Some attention may be given to the beauty of sound in "Lady of the Lake," and to the famous quotations in Shakespeare. Analyze and compare characters briefly in passing. A preliminary reading of Church's "Story of the Iliad," Tappan's "Stories of Greek Life" is an invaluable introduction to Pope's "Iliad." Take in class-work at least three of the following when possible:



"The Talisman."

"The Man Without a Country."

"Lady of the Lake."

"Cricket on the Hearth."

"Jean Valjean," arranged from "Les Miserables."

"Stories from Dickens."

"Story of Little Nell," from "Old Curiosity Shop."

Dickens' "Christmas Carol."

"Enoch Arden."

"Silas Marner."

"Vision of Sir Launfal."

"Merchant of Venice."

#### ILLUSTRATIVE PLANS

##### Synopsis of the Treatment of "Miles Standish"

(SIXTH OR SEVENTH GRADE)

1. Read the entire piece for theme.
2. Get the setting of the piece by studying the colonial customs.
  - a. Their social life.
  - b. Their indoor industries.
  - c. Their mode of warfare.
  - d. Their attitude toward Indians.
  - e. Their religious feeling.
  - f. Their hardships.
  - g. The education of the times.

The correct conception of the entire setting is necessary that the reader may see the pictures represented and present them to others in his vocal reading.

3. Divide the piece into its separate unities, getting the theme of each or the thought expressed in the unity.
  - a. Each unity or paragraph must be studied intensively, seeing all the pictures separately, studying all the characters separately.
  - b. Read out loud so that the hearers will get the thought brought out in the lines. See the pictures; realize the characteristics of the people. The oral reading of "Miles Standish" should bring out in the

First unity—The nature of the two men and their relation.

Second unity—The test of friendship.

Third unity—The struggle of love and friendship.

Fourth unity—The faithful fulfillment of the commission and the result.

#### Illustrative Plan for "Snow Bound"

(SEVENTH OR EIGHTH GRADE)

A study of a home in general, this poem, when subdivided, becomes a fine analysis of character and an appreciation of homely virtues.

Selections from the "Biographical Sketch" and Whittier's "Dedication," read before taking up this study of the poem, will give valuable assistance to an understanding of the environment of the "dear home circle" and the inner workings of their hearts.

Require each pupil to have a notebook in which shall be kept in an orderly way the words requiring study. Individually expect references to be found in the Bible, encyclopedia and dictionary. Assign the entire poem as a silent reading before beginning the analytical study. Afterwards apportion a definite amount to be covered by each day's preparation outside of class-work.

Explain what an idyll is. Touch lightly the introductory quotations, as to meaning and reason for being there. A blackboard analysis will materially aid the study. The poem easily divides itself into these four parts: "The Storm," "The Circle Around the Fire," "After the Storm," "Whittier's Farewell to His Task." These again naturally separate into parts, each having a perfect unity of its own.

#### 1. The Storm:

##### a. Before the Storm.

The mute and ominous prophecies.

The nightly chores.

Effect of the weather on the inmates of the barn.

The beginning of the storm.

##### b. "Snow Bound."

The world unknown.

The fun they had.

Greetings from the prisoned brutes.



Things that gave the peculiar feeling of loneliness to everything.

c. The Fire.

Its preparation.

What things made the "coldness visible"?

What things added to the feeling of coziness?

A reflection from the poet's heart.

2. The Circle around the Fire:

a. Our Father.

His hunting experiences, his haying and his fishing.

b. Our Mother.

The Indian hordes.

Her talent.

Her young days:

The conjuring book.

Outdoor life.

The Quaker books.

c. Our Uncle.

His teachers and his wisdom.

A contented life.

His nature-stories.

d. The dear Aunt.

Love in her life.

Her girlhood memories.

Youthfulness.

e. The Elder Sister.

A life of sacrifice.

Her nature.

f. Our Youngest and our Dearest.

In Paradise.

The loss in all familiar things.

When the sunset gates unbar.

g. The Master of the District School.

His charm with us.

Boyhood.

Boarding around.

Story-telling.

What kind of a teacher.

As Freedom's young apostle.

- h. The Not-Unfeared, Half-Welcome Guest.

Personal appearance.

Striking contrasts of her character.

Her pilgrimages.

A lesson in charity.

- i. Bedtime.

Our mother's last thought.

As sleep stole on.

3. After the Storm:

Breaking roads.

The charm which Eden never lost.

The doctor.

Our reading.

All the world was ours once more.

4. Whittier's Farewell to his Task.

To be read by the teacher and briefly explained.

#### WHAT MAY BE FOUND IN THE DICTIONARY

1. The Spelling of Words.

a. The preferable form.

b. Other allowable forms, if any.

c. Obsolete forms varying from present usage (these for reference and not for use).

d. Forms recommended by and peculiar to the "Simplified Spelling Board."

2. The Capitalization of Proper Nouns and Adjectives.

3. The Division of Syllables.

4. The Position of the First and Secondary Accents.

5. The Pronunciation of Words. Inclosed in parentheses after the Spelling.

a. Preferable pronunciation.

b. Other allowable pronunciations, if any.

6. The Diacritical Markings. Over words respelled. Key at bottom of each page.



7. The Parts of Speech. Found after the Pronunciation.
8. The Irregular Plurals of Nouns. Found after the Parts of Speech.
9. The Irregular Forms of Verbs. Found after the Parts of Speech.
10. The Degrees of Adjectives. Found after the Parts of Speech.
11. The Comparisons of Adverbs. Found after the Parts of Speech.
12. The Etymologies (showing the origin of words). Inclosed in brackets following the Parts of Speech.
13. The Definitions of Words Arranged in Their Historical Order, so that the sense development is traceable right down to the most modern meaning.
14. Quotations Illustrating the Definitions. Found after the Definitions.
15. Synonyms, Discriminated and Compared. Found after the Definitions.
16. Encyclopedic Information.
  - a. GUIDE TO PRONUNCIATION. Found in Introduction.
  - b. ORTHOGRAPHY AND RULES FOR SPELLING. Found in Introduction.
  - c. HISTORY OF THE ENGLISH LANGUAGE. Found in Introduction.
  - d. NAMES NOTED IN FICTION.
  - e. SCRIPTURE PROPER NAMES.
  - f. ENGLISH CHRISTIAN NAMES.
  - g. CLASSICAL AND MYTHOLOGICAL NAMES.
  - h. HISTORICAL NAMES AND SUBJECTS.
  - i. RELIGIOUS NAMES AND SUBJECTS.
  - j. LATIN AND FOREIGN PHRASES.
  - k. ABBREVIATIONS.
  - l. GEOGRAPHICAL DICTIONARY. Found in the Supplement.
  - m. BIOGRAPHICAL DICTIONARY. Found in the Supplement.
  - n. SIGNS USED IN WRITING AND PRINTING. Found in the Supplement. (Astronomical, Botanical, Chemical, Mathematical, Medical, Meteorological, Miscellaneous, Monetary and Commercial, Musical, Typographical and Proof-Reading.)

O. ILLUSTRATIONS, GROUPED ACCORDING TO SUBJECTS. Found  
in the Supplement.

Reference: Webster's New International and Webster's  
Academic Dictionaries.



## SCIENTIFIC TEMPERANCE

This course in scientific temperance and outline is offered by the Chicago Training School. It is intended to give a comprehensive review of the most important phases of the present temperance movement, together with the social and moral issues involved.

The course is planned to cover a period of four months, and the work presented falls naturally into four divisions, as follows: (1) physiological; (2) social and moral; (3) political and economic; (4) corrective—agencies and organizations.

The course is closely related to the other courses in the department of social service, giving the student, by its broad and sympathetic treatment, the true relation of the liquor question to social problems in general.

### I. Preparatory reviews in—

1. Anatomy.
2. Physiology.
3. Psychology.
4. Eugenics.

### II. Alcoholism.

1. The effects of alcohol upon the physical organization.
  - a. The alimentary tract.
    - (1) Food value.
    - (2) Poison effect.
  - b. The circulatory system.
  - c. Muscles.
  - d. Nerves.
  - e. Lungs.
  - f. Generative system.
  - g. Special organs.
    - (1) Heart, kidneys, etc.
    - (2) Organs of sense.
2. Its effect upon mental operations.
  - a. General efficiency.
  - b. The judgment.
  - c. Concentration.

- d. Accuracy.
- e. Memory.
- 3. Its effects, social and moral.
  - a. Lowering of ideals.
    - (1) In the family.
    - (2) In the neighborhood.
  - b. Menace to public health.
    - (1) In general.
    - (2) To mothers and children.
  - c. Pauperism.
  - d. Crime.
- III. Temperance pedagogy.
  - 1. Use of text, chart and lecture.
  - 2. Use of illustrative experiments, tests, etc.
- IV. Political and economic aspect of the liquor problem.
  - 1. The saloon in politics.
  - 2. The brewer in municipal politics.
  - 3. The liquor problem in its legislative aspects.
    - a. Federal action.
    - b. State action.
      - (1) Regulation.
      - (2) Prohibition.
    - c. Local option.
  - 4. The economics of prohibition.
    - a. As to employment of capital.
    - b. As to relation between capitalists and wage-earners.
    - c. As to national revenues.
  - 5. A study of Denver as a typical city; liquor and immorality.
- V. Corrective agencies.
  - 1. Educative.
    - a. In public schools.
    - b. In general literature.
    - c. Through clubs and organizations.



2. Legislative.
  - a. Federal.
  - b. State.
  - c. Local.
3. Substitutive.
  - a. Coffee-houses and other meeting-places.
  - b. Clubs, etc.
  - c. Amusement centers.
  - d. Religious centers.

VI. Topics for written work.

1. Alcohol and tuberculosis.
2. Alcohol and the laborer.
3. Alcohol and the child.
4. Alcohol and social impurity.
5. The public schools and scientific temperance instruction.
6. National policies.
7. Alcohol and the public health.
8. Political influence of the saloon.
9. Personal liberty—public obligation.
10. Alcohol a poison.
11. Alcohol and crime.
12. Alcohol and tobacco.

## SEWING

The specific aim of a sewing course should be to interest the students in their school-work by relating it to their homes.

Start the girl upon some article within her powers, rather than keep her on abstract exercises until she can do them perfectly. Every girl should have some article or several articles which she herself needs or which are needed at home, and from the first these ought to furnish the basis of the work.

Every home can furnish an abundance of actual sewing and darning as the basis of school-work, and the parents will feel a new interest in the school when they find how closely the work is related to the home.

Compositions on cotton, flax, wool, weaving, etc., may be correlated with this work; also problems in arithmetic based upon the cutting of articles from a certain amount of material, the cost of garments, etc., thus bringing a number of subjects in close relation with the everyday home life.

SEWING BASKET should contain a pair of shears, a thimble, a paper of assorted needles, a spool of No. 60 white and a spool of red basting-thread, a tape-line, a paper of medium-sized pins, and an emery bag.

POSITION.—Sit erect, well back in the seat, both feet on the floor. Do not lean over the work, but hold the work up to the eyes. Do not fasten the work to the knee, as a stooping position soon becomes a habit.

GENERAL DIRECTIONS.—Buy the different makes of paper patterns so that the pupil may learn to read and use a pattern intelligently. Teach economic placing and cutting.

Place the thimble upon the second finger of the right hand.

Measure the thread from shoulder to shoulder.

BASTING.—Put the needle through both pieces of cloth about one-eighth inch from the right side and one-eighth inch from the edge.

Do not baste on the line where you expect to stitch, but as near it as possible.

Take up one-fourth of an inch and skip one-fourth. In loose basting a long stitch and two short ones may be used.



**RUNNING STITCH.**—Hold the work in the left hand between the thumb and forefinger, and with the right hand take small stitches of even length.

Use the wrist motion.

Conceal the knot on the wrong side. Fasten the thread by passing the needle through the wrong side and taking two back-stitches.

**OVERCASTING.**—The purpose of overcasting is to keep raw edges of cloth from raveling.

Trim off edges after the seam has been run.

Begin at the left and work to the right.

Use slanting, loose stitches, twice as far apart as they are deep.

Do not overcast a selvedge edge. Care should be taken not to draw the edges of the cloth.

**OVERHANDING.**—This is used in sewing together selvedge edges or folded edges.

The seam is held between the thumb and forefinger of the left hand. Commence at the right to sew. Put the needle through both edges of the seam at right angles to the seam, the needle pointed to the chest. Do not take the stitches too deep. Careful basting is necessary.

**HEMMING.**—Turn down about one-eighth inch along the side to be hemmed. Crease it with the thumb and forefinger. Bend the hem over the desired width. Turn the edge of the cloth before turning the hem. It is well to use a gauge of the required width. Begin at the right to hem. Take up a few threads of the cloth and a few threads of the fold, and draw the needle through. Put the needle in almost straight with the hem. Take up as little cloth as possible.

**BACKSTITCHING.**—This form of stitching is used when strength is required. It resembles machine-sewing.

Take two stitches in the same place when starting to fasten the thread. Do not use a knot.

Advance the needle a stitch's length in front of the first stitch, then put the needle back in the same and advance the needle again.

**COMBINATION STITCH.**—This stitch consists of three little running stitches and a back-stitch over the last running stitch. It is a little stronger than the running stitch.

**FRENCH SEAM.**—You have learned all the stitches needed for French seam. Baste; run the seam; turn the seam to the wrong side; crease on the stitching with thumb-nail and forefinger of the right hand; baste along the edge to hold the seam in place; backstitch the seam; begin stitching far enough away from the turned edge so that the raw edge will not show on the right side.

**BUTTON-HOLES.**—Button-holes require a great deal of practice; allow the girls to practice on them at odd times. Cut a slit straight with the threads of the cloth. Determine how deep a stitch is necessary so that the threads will not pull out. The first stitch begins one thread beyond the end of the slit. Place the needle into the slit under the lower edge of the button-hole and draw the needle half-way through; with the needle pointing toward the chest, take up the double thread at the eye of the needle and place it under the point, passing from right to left; draw the needle and thread out, and from you, so that the twist comes to the edge of the slit; repeat; do not draw thread too tight. At the opposite side of the button-hole from where you started, spread the stitches like the sticks of a fan. Five stitches will work around the end, the third stitch being straight with the button-hole; gradually turn the button-hole while turning the corner until the opposite side is parallel with the forefinger; button-hole the opposite side, and stop when you have reached the point opposite the first stitch. Put the needle down through the first stitch taken, bringing it up on the opposite side through the last stitch. Draw the stitch tight, bringing the sides close together. To make the bar, sew four of these stitches across the end of the button-hole; then, slipping the needle under these four stitches, work button-hole stitches very closely together across the bar, having the purl or twist toward the button-hole. Put the needle down through the cloth very close to the last stitch, and fasten on the wrong side.

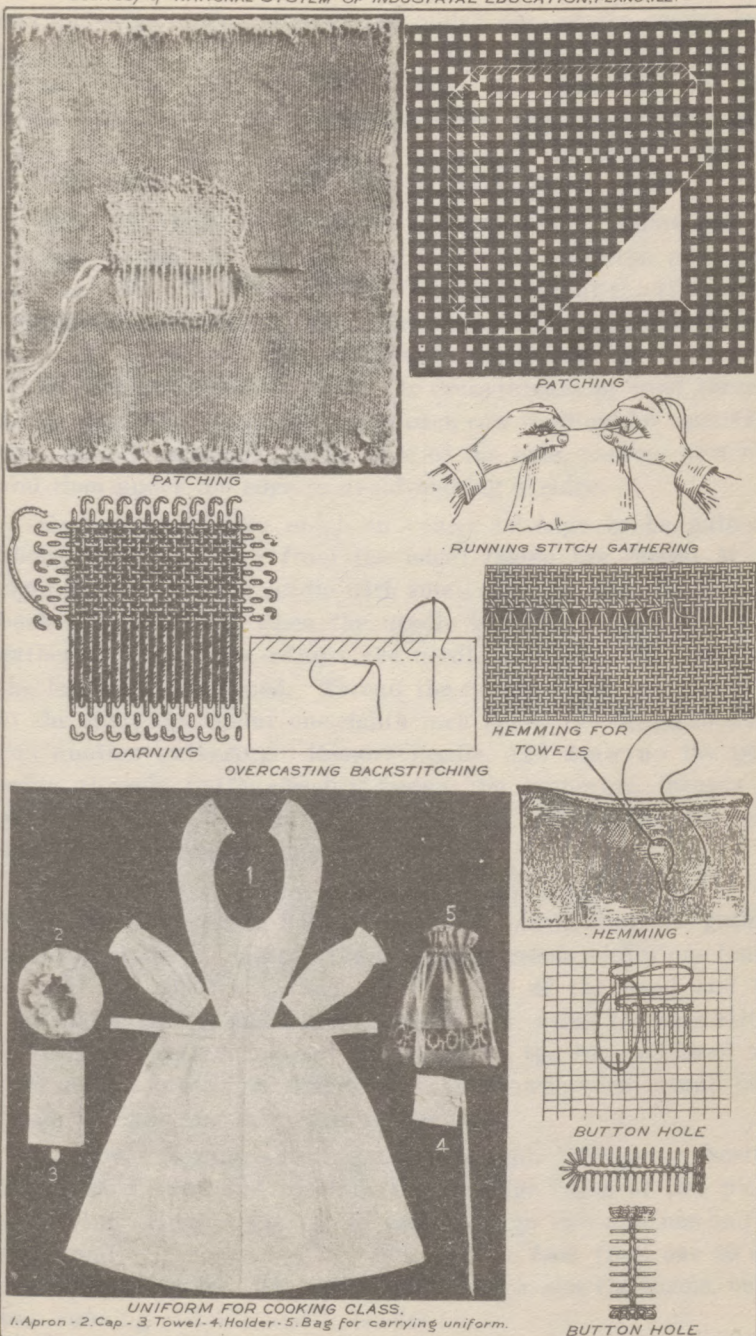
**PATCHING.**—All the worn parts which surround the parts to be patched should be cut away.

Have the warp threads of the patch run with the warp threads of the garment. Match checks, stripes or figures; clip off the corners of the patch diagonally about one-eighth inch; crease down the edge of the patch where it is to join the goods, and baste



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one fold edge of the patch to the folded edge of the goods; overhand the edge of one side to the patch, beginning well into the corner; remove basting and crease out the seam with the forefinger and the thumb-nail; crease down edges, baste and overhand each of the three remaining sides of the patch. Overcast the raw edges on the wrong side of the patch.

**STOCKING-DARNING.**—Darn on the wrong side; square hole for the legs, round hole for heel and toe. Cut away the parts that are badly worn or weak; hold the stocking so that the ribs will be lengthwise, and begin at the right side about one-half inch from the hole; put in the warp threads; begin one-half inch below the lower part of the hole to put in the cross-threads or woof threads. Loops should be left at the end of each row to allow for shrinkage. Give special attention to the edge of the hole, passing first over and then under the edge to avoid making a ridge.

**GATHERING.**—Place notch in center of edge to be gathered about one-eighth inch from the edge; fasten the thread at the right side and fill the needle with small stitches; slide the stitches back off the needle when the needle is filled. When you have gathered once across, remove the needle and leave the thread on the left side unfastened. Thread the needle again, and, starting at the right side about one-eighth inch below the first gathering, run another gathering. Remove needle, and draw up the gathering threads quite closely; fasten the gathering threads by placing a pin at the end of the gathering and winding the loose ends of the threads around it.

**PUTTING ON A BAND.**—Cut band on the length of the goods. Place pin in center of band; remove the pin holding the gathers as directed above. Spread the gathers to reach within one-fourth inch of the edges of band; pin the edge of the band and the material gathered, and baste together; sew, using the back-stitch, holding the gathers toward you; turn in the edge of band and fold over to cover the gathers, and hem down; turn in and overhand the ends and raw edges of the band.

**SHEETS.**—Regular sheeting can be bought. If regular sheeting is not used, overhand together the selvedge edges of two pieces of muslin. Hem at the top is usually from two and one-half to three and one-half inches in width; at the foot, from one to one and one-half inches. In making pillow-slips, sew the seams, using two running stitches and a backstitch.



**FLANNEL SEAMS.**—Place together the right sides of two pieces of material, and baste one-eighth inch from the edge; stitch one-fourth inch from the edge with two running stitches and a back-stitch; open the seam and press it flat; make herringbone stitch over the raw edges at each side.

Herringbone stitch is a cross-stitch used to finish raw edge of flannel and other heavy materials. The stitch consists of single, alternating running stitches made first to the right and then to the left, working from you; point the needle toward you in taking up a stitch, but work away from you; do not take too deep a stitch; the stitches on each side must be in straight rows.

**PLACKET FOR UNDERSKIRTS.**—On the left-hand side of the opening make a narrow hem; turn the hem toward the front, or, in other words, hem on the right side of the material instead of the wrong side; on the right-hand side of the opening make a deep hem, hemming on the wrong side of goods; place the wide hem over the narrow one, and finish at the bottom with two rows of stitching.

**PLACKET FOR DRESS SKIRT.**—Leave ten inches for opening; tear piece of cloth with the warp, twenty-two inches long and two inches wide; baste this piece all around the opening; stitch; on the right-hand side of the opening fold the piece over, crease through the center, and baste along seam to cover raw edge. This forms extension piece. On the left-hand side of opening crease the piece along the center, and turn the fold over on the skirt and baste to the skirt. It is desirable to cut out one thickness of the cloth. This placket is difficult at first. Practice folding on paper.

## SPELLING

Since upon a knowledge of words and the ready recognition of them depends the acquisition of information in all lines, it is very important that definitely planned, thorough work in this subject be done *every day*. For this reason we recommend that the teacher, at least, shall have a *good spelling-book*. It not only offers systematic work, but is also a great time-saver.

From the first grade up special attention must be given to *sounds and values of letters*, to *syllabication*, to *correct pronunciation*, to *word-building and word-analysis*, the latter starting in the first grade with the blending of sounds into words and word-families, and continuing through the upper grades with the study of roots, prefixes and suffixes, in the derivation of words.

*Always select words whose meaning is or can be brought within the child's experience.*

Insist on exact pronunciation and clear articulation. Call into use the eye, the ear, the hand and the voice.

When words are placed upon the board for children to spell, write them as *units*, as they will be afterwards. Indicate syllables, if desired, by a slight, unobtrusive mark.

Require words to be spelled by syllables, occasionally pronouncing syllables.

In all lessons, spell, incidentally, difficult words which are important.

Let the spelling lessons, as far as possible, correlate with the other lessons, not losing sight of a definite central idea in the *spelling plan*. The spelling lesson should very decidedly build to the reading lesson.

### FIRST YEAR

After the phonograms used in the first family have been learned, begin the formal work in spelling. Take up ten words a week, repeating the drill from day to day, adding something each day, as suggested below. Thus, aside from the sight-words learned in the reading lesson, forty new words are learned and spelled every month by the use of the word-families. We give below a suggestion as to the method of procedure.

**First Day.** Teach by the blending or synthetic method the *an* family, telling a little story to connect them, as:



"Today we are going to learn about a family whose name is *an*. Your family name is Smith and yours is Brown, and this family name is *an*. *An* is the father. There are several children in this family. One is named *c-an, can*; then there is *N-an, Nan*; *D-an, Dan*; *p-an, pan*; *f-an, fan*; *r-an, ran*; *m-an, man*; *t-an, tan*; *v-an, van*."

Give only the *sounds*, not names of letters.

Drill thoroughly on the pronunciation of the sounds and words, and their recognition, repeatedly changing the order. Use this work in seat-work and in games for the day. For seat-work, let pupils build words of this family on their desks, as they see them on the board, whispering the sounds and words as they place them. For games we suggest:

**CROSSING THE BROOK.**—The words are placed on cards at irregular intervals on the floor. The child steps over each, calling its name and taking the card. If he fails to call a word correctly, he has wet his feet and must go back, letting someone else try.

**FISHING GAME.**—Place word-cards on the floor in the center of a circle formed by the children. Let them point in turn to a word, calling its name and taking the card if the word is called correctly. The one who catches the most fish wins the game.

**WORD GAME.**—"Who wants to be *m*?" (Giving the sound.) Choose a child. Let him take his place in the front, holding up a card with this sound on it. "Who wants to be *a*?" "*n*?" After they are all placed, each in order tells his name. Why, what word does that make? Then children guess the word.

**Second Day.** Drill again on pronunciation and sounding of the same words. Copy them on the board for each child of the class, letting him trace over the letters with the crayon, sounding to himself as he does so. For seat-work, let him trace over the same words written large on cards, or written with wet crayon on the desk. He may trace with seeds, coffee or pencil.

**Third Day.** Drill on the same words for pronunciation and sounding. Spell them from the board with the children. Review seat-work and games and board-work, bringing in the *spelling* now.

**Fourth Day.** Drill on sounding, pronunciation and spelling. Have pupils copy on board and spell to themselves as they write. Continue seat-work and games bearing on these words.

**Fifth Day.** Use pictures, actions and other suggestions for the words, and require children to spell from memory.

On this day do board-work and seat-work from memory.

**Second Week.** Take up another very simple family, as, for instance, the *at* family. However, this may be determined largely by the manual followed in the reading lesson.

*a-t, at*

*b-at, bat*

*f-at, fat*

*h-at, hat*

*m-at, mat*

*N-at, Nat*

*p-at, pat*

*r-at, rat*

*s-at, sat*

*v-at, vat*

Review previous words, a very few at a time.

**Third Week.** From now on take up a new family each week, reviewing frequently. Keep a list of words taken, so that in the second year's work unnecessary repetitions may be avoided.

## SECOND YEAR

Continue teaching ten words a week as in the first grade, using the more difficult phonograms arising in the second-grade reading lessons arranged by the course of study. Review frequently.

## THIRD YEAR

From now on a spelling-book is of great value. Begin a systematic course of training in diacritical markings, taking them up very simply and attractively by using poetry whenever it is available, showing how these various sounds give beauty to the lines. (The "Guilford Speller" is particularly good for this work; also Rand, McNally's "Speller and Word Book.") Take long and short vowels first.

Take words grouped around a common interest, whether of sound or meaning.

Continue word-building and *sounding*.

Teach syllabication.

Teach the application of common prefixes and suffixes, as: *re*, *un*, *mis*, *less*, *er*, *ed*, *let*.

Teach simple synonyms and antonyms.

Take five words a day the first half of the year, increasing to ten in the latter half. Use words within the child's understanding. Have oral and written spelling every day.



TESTS.—Give pupils a picture; let them write all the words which the picture suggests to them.

Given a word, let pupils make as many words from it as they can. Make these competitive games.

#### FOURTH YEAR

Continue systematic drill on *all phonic facts* learned in previous grades.

Drill on diacritical markings, taking only one sound to a lesson.

Drill on syllabication and accent. Without giving names, take monosyllables, dissyllables and trisyllables.

Review previous prefixes and suffixes, adding *in, ab, ad, en, ful, like, ly, some*. Use them in word-building and word-analysis.

Take more difficult work in antonyms and synonyms. Here a good speller gives information as to the best selections to be made.

Teach homonyms—as *bare, bear*, etc.—correlating spelling with language lessons. Begin the teaching of the few rules which a child should know, as:

- a. The effect of final silent *e* on the vowel directly preceding the consonant which it follows, as *rate, mute*, etc.
- b. Effect of doubling a letter.
- c. Dropping final *e* before a syllable beginning with a vowel, as in *liking, likable*, etc.

Take ten words a day, reviewing on Friday.

#### FIFTH AND SIXTH YEARS

Continue drill in sounding, syllabication, accent, word-analysis and word-building.

Review previous prefixes and suffixes learned. Teach the names: *roots, prefixes and suffixes*; also *monosyllables, dissyllables, trisyllables* and *polysyllables*.

Review the prefixes and suffixes learned, and add to them *semi, circum, con* or *cum, pre, e* or *ex, able, ant, or, ion*, and similar ones.

Repeat work in diacritical markings, using poetry for teaching the sounds.

Review previous synonyms, antonyms and homonyms, adding to them from the spelling and language-book used.

Review rules learned, and add:

- a. Rules for doubling a letter. (See Sixth and Eighth Years.)
- b. Changing of *y* to *i*.
- c. *c* and *g* soft before *e*, *i* and *y*.
- d. *c* and *g* hard before *a* and *o*.

#### SEVENTH AND EIGHTH YEARS

Devote some time to a brief history of the English language, leading to an appreciation of the force of the Anglo-Saxon, Latin and Greek words, as well as those arising from other sources. This can be done in the language lessons with a great saving of time.

Continue a consistent study of diacritical markings, syllabication and accent.

Continue sounding words. Even in the eighth grade pupils will be found whose knowledge of the sounds and values of letters is deficient; moreover, the sounding of words in the spelling lessons will very greatly improve *pronunciation and articulation* in the reading lessons.

Word-building and word-analysis may be carried to a very interesting extent in these grades, especially after some work has been done in the history of the language. New roots, prefixes and suffixes may be learned as being Anglo-Saxon, Latin, Greek, etc., and words may be built or analyzed in view of this knowledge. Words grow in significance; words never seen before are pronounced and interpreted without difficulty; the choice of words in speaking and writing is more apt; and thus efficiency in spelling is greatly increased.

Homonyms, antonyms, synonyms and words whose meaning centers around a common interest are reviewed from previous grades, and others added requiring greater maturity of understanding.

When studying sounds and diacritical markings of letters, it is well to adapt words from other lessons. Work on one or two sounds only in one lesson. Take ten or twenty words a day (as the situation warrants), and review Friday; but take spelling and word-study systematically every day.



Before leaving these grades, the pupil should by the *inductive* method become master of the few simple rules which have a wide bearing on spelling, as:

a. Singular nouns ending in *y* preceded by a consonant change *y* to *i* and add *es* to form plural.

b. Singular nouns ending in *y* preceded by a vowel form the plural by adding *s* to the singular.

c. Words ending in silent *e* drop the *e* before taking on a new syllable beginning with a vowel; as, *cultivate*, *cultivator*; unless it be necessary to retain the *e* to keep the sound of the preceding consonant, as in *changeable*, or to retain the character of the word, as in *hoe*, *hoeing*.

d. Words ending in a silent *e* retain the *e* when taking on a syllable beginning with a consonant; as, *move*, *movement*.

e. In monosyllables and words accented on the last syllable, a final consonant preceded by a single vowel is doubled before a suffix beginning with a vowel; as, *run*, *running*; *occur*, *occurring*.

f. The preceding rule does not apply when the word ends with a double consonant, or when the consonant is preceded by two vowels; as, *weak*, *weaken*.

Teach vowels, consonants, digraphs, diphthongs, triphthongs, and the use of equivalent letters.

See that the pupils can spell, pronounce and abbreviate properly the names of all the United States; see also that they can spell the counties and cities of Colorado.

## HIGH-SCHOOL COURSE

### I. GENERAL

A most common and fundamental misconception relative to the high school is that it is a prolongation of the elementary school, merely with new subjects added. Types of teachers, division of work between them, methods of instruction, standards of discipline, the social organization of the school, its relation to community life, the material equipment of the institution, even its architectural arrangement, and the size and character of the school site—all these are to be more or less differentiated for elementary and high schools. The observations of the following pages are designed to bear briefly, but practically, upon a number of these problems as they confront the high school of less than three teachers on full time.

### II. BUILDING AND SITE

Ambitious, growing communities which are planning full-course high schools in even rural portions of the state should find it comparatively easy to provide a proper site. Sometimes this will mean only an enlargement of the cramped, but well-situated, site that serves the graded school. Simply because a school is in the country, it is for several reasons not wise to rely upon adjacent private grounds for play or team athletics. After the building has been located on the site as may be deemed advisable, in the center, or well to one side, the *unobstructed level space* for organized games should be not less than *two and a half acres*, in as nearly the form of a square as it is possible to make it. The only justification for not making this provision is the belief that the high-school and grammar grades will never enroll enough boys to make a baseball or football team. It may occasion surprise, but it is nevertheless a fact that the largest and most efficient rural high schools in the state are taking a strong interest in athletics and contesting successfully with urban high schools several times their own size. The power of clean, virile athletics to popularize the high school for country as well as city boys is unquestionable.

Just as the school ground may thus be made a center for neighborhood sports and outings, so the school building may, if properly designed, become the center of community social gather-



ings. The continuance of the older students in school will normally mean commencements and other special occasions for which considerable crowds will gather. High-school buildings in the country or small town should have at least one large room for the handling of assemblages that usually cannot be housed elsewhere. One room, seated with folding chairs, may be used for both public gatherings and indoor games. But if a district can afford a building of two stories, the gymnasium may be placed directly beneath this large room. The laboratory should be large enough to accommodate at once either the largest class in the high school or the senior and junior classes combined. Places for a minimum of fifteen or twenty would be safe. This room might be on the same floor as the larger study hall or assembly room, and directly over the room for household arts, which, with the gymnasium and the quarters for manual training, would take up the basement. This would decrease expense for plumbing and utilize valuable space. Manual-training benches can be made secure by imbedding their legs in the concrete floor. However, if there is a concrete floor in the gymnasium, it should be covered with a wooden one to remove danger of serious accident.

In other respects the requirements for a high-school building are not unique. Lighting, heating, ventilation, water supply, and toilet accommodations are covered by rules that have been repeatedly formulated. An important principle to be apprehended by boards of education, that all our school buildings may be better fitted to the demands, is the necessity of a co-operation of three parties: (1) the school board, which presumably knows the financial capacity and future educational needs of the district; (2) the architect, whose technical knowledge should guarantee the safety and permanence of the building; (3) the superintendent, or principal, who knows the difference between a school-house and other structures. Architects and school directors often ignore school people completely in the execution of building plans, and proceed to most costly and glaring mistakes.

### III. FURNITURE AND EQUIPMENT

Many types of school furniture are obtainable. Funds will determine whether the more costly adjustable seats and desks shall be purchased; but this expense is unwarranted unless the adjustment to the pupil is made intelligently at stated intervals. Pupils ordinarily will not request that desks or seats be adjusted,



since through their whole school life they have learned to take things much as they find them. The use of chairs with stationary arms for writing, or recitation benches with stationary writing-arms at intervals, is increasing for recitation rooms. For the study hall single desks should be arranged for, in three different sizes, on account of the wide physical range of the students. Blackboards can profitably run much higher than in the grammar grades.

Tables for the sewing or for the science work, the chemistry desk, and perhaps manual-training benches can be built more cheaply at home in isolated localities than they can be shipped in from factory or retailer. Fifty per cent has been saved in this way by some districts where labor and lumber are plentiful. Home-made benches for manual training sometimes do not give satisfaction, because they are not constructed in a thoroughly substantial manner.

Apparatus of much value for physics especially can be contrived by student, teacher, or janitor. Some schools hire a competent carpenter to care for the building, and he proves a great asset. It is not suggested that the students shall in any large degree manufacture apparatus for their experiments. Teachers in charge must decide how far to carry this plan. Students may waste a great deal of time in making apparatus that yields very poor results.

For the biological sciences, one compound microscope is probably enough. A few slides prepared by students, if not highly satisfactory, are reported by those who have tried this method as meaning much to the students. There should be enough dissecting sets and hand microscopes to go around. For agriculture, a Babcock tester should occupy the central place. For chemistry, sets of chemicals are furnished by the various supply houses. The work in physiography or geology will be helped by the collection of four hundred minerals sent free by the State Geological Survey to high schools which will furnish a suitable case for it. Bulletin No. 6 of the Survey, and the topographic and geologic maps of the state, all forwarded at low cost, are other important aids.

Physics shows the worst blunders in the expenditure of money for apparatus. Not a few schools have started by investing their whole appropriation for this purpose in a frictional machine and an air-pump. These mechanisms are very interesting for some class demonstrations, but they easily get out of order. At best



they can aid in the exemplification of a very few principles; yet for their joint cost apparatus could have been bought that would take a student through a very fair course in experimental physics. The instructor must fight constantly the temptation to use his appropriations for this department on high-priced apparatus that will yield spectacular results in class demonstration. The real demand, as the class enlarges, is for duplicates of the simple pieces used in laboratory experiments. The custom of assigning at once as many experiments as there are pairs of students in the class, and compelling each pair to work the experiments through in a different order because there is only one piece of each kind of apparatus, is highly wasteful of a teacher's time and energy. It requires him to do several times what he should do only once.

All standard school furniture and scientific equipment are manufactured by many firms. Some careful comparison of their products and prices has its advantages, financially and otherwise.

#### IV. THE COURSE OF STUDY

The length and breadth of the course of study will depend on the distance from other schools and the ability of the district to assume additional financial burdens for education. A high school worthy the name is a costly article. The smaller the school, the greater the cost per student. Its teachers are the highest-paid in the school; they teach the fewest, and normally the smallest, classes. Unless the elementary schools of a district are above the average of their neighbors, the expediency of a high school is doubtful. It is wrong to impoverish or rob the great body of the children for the benefit of a few.

The distance from other high schools, as complicated by topography and transportation facilities, is very important. Local pride, the determination to have everything brought to our very doorstep, is responsible for some poor and uneconomical high schools in Colorado. Cost of transportation to another school is to be compared with that of instruction at the home school. If neighboring schools are too far for children to be transported daily, a short-course high school may be established, at the completion of which students are urged to attend the school in an adjacent district. Only the more mature will then have to forego home influence. Generally speaking, there is no warrant for a two-year school within five miles of a similar or larger school, or for a small four-year school within ten miles of a similar or



larger school. Theoretically, if zones be laid off, parcels-post fashion, from standard high schools, one would, in traveling outward across these zones, first reach one-year and two-year schools, later on four-year ones.

A typical difficulty in short-course schools is the tendency to expand year by year and to disregard fixed courses of study. Many have never had a course of study. Students are carried on from year to year as long as they desire to come, and taught whatever they elect. Schools with only one or two teachers in the district cannot afford to do this. Classes for less than three students are rarely justified, and no high-school classes whatever should be taught in one-teacher districts where there are over four different grades to handle. Of course, if the enthusiasm of teachers leads them to do these things outside of the regular school day, nothing should be said about it by county superintendents or others in authority. The teacher is the only one who then can object, and must be left to protect herself. A course of study should be adopted and adhered to fairly rigidly. There should be a suitable correlation of the course in a little school with that of its larger neighbors, to the end that transfers of students from school to school may be made without loss. Like texts in adjacent schools can also be argued for, but not so strongly. Uniformity and vitality have been introduced into seven one-year schools and two two-year ones in one county by a county superintendent who has secured the adoption of a course which fits in with that of the large high school at the county seat. Monthly outlines of the ground to be covered have been sent out with the assistance of the teachers in the larger school, and the questions in their monthly examinations have also been placed before the students in the little schools. Possibly this procedure involves a trifle too much of centralization and too little of adaptation, but it is far better than the framing of courses each fall by accident.

Small high schools appear disposed to offer too many rather than too few subjects. To illustrate, one Colorado high school of two teachers and about forty students offers seven sciences; another with nearly forty teachers and over a thousand students offers three. With a few certain sciences chosen, teachers can be selected with reference to their preparation for those subjects. Investment in equipment can be effectively centered, instead of being spread over perhaps twice the ground it can cover. Diversity of curriculum is defended by some teachers in small schools,



because it allows the majority of the class to elect what they please. It is pertinent to inquire, in such a case, what shall be said of the minority of the class who must be governed by the choice or whim of the majority, and whether a class is better served by a subject chosen by themselves, and for which the teacher and laboratory are not equipped, than by one selected for them and handled by a well-prepared teacher with good material equipment.

In the curricula suggested below, parentheses are employed to indicate options to be exercised, not by students, but by those who frame the course of study. All subjects continue a year, unless connected by the word "and," which means that they continue a half-year each. Students will be expected to take only four full subjects. Those which are required are preceded by asterisks.

The following one-year course could be given by a teacher who has approximately half-time for high-school work:

\*English.

\*Algebra.

\*Ancient History.

One elective:

A foreign language (Latin, German, Spanish in some sections).

A science (General Science, Physiography, Agriculture, Physiography and Agriculture).

This outline would call for five high-school recitations per day.

If one teacher can spend approximately full time on high-school branches, a second year could be given also, as follows:

\*English.

\*Geometry.

Two electives:

A foreign language (continuation of one begun in preceding year).

A science (Biology, Botany and Zoology).

Mediaeval and Modern History.

This outline would call for ten high-school recitations per day.

Communities which push their high schools past the two-year stage almost always contemplate advancing at once to the four-



year basis. It therefore seems unnecessary to outline a program for a three-year school. Such an institution is not economical, since by careful alternation a given teaching force can manage a four-year school almost as easily.

With two teachers on full time in high school, and perhaps a third on part time, so that the principal might be relieved a portion of the day for supervisory work, third and fourth years could be added, as follows:

## THIRD YEAR

\*English.

Three electives:

Mathematics (Algebra and Solid Geometry).

History (English History and Commercial Geography).

A foreign language (preferably one not offered in first two years).

Physics.

## FOURTH YEAR

\*English.

\*United States History and Civics.

Two electives:

Commercial subject (Bookkeeping and Commercial Arithmetic).

A foreign language (continuation of one taken in preceding year).

Chemistry.

Not all of the twenty units of work offered would be taught at one time. Alternations could be made of third- and fourth-year English, third-year mathematics and fourth-year commercial, third- and fourth-year history, third- and fourth-year foreign language, and third- and fourth-year science. If two years were being offered of each of two different languages, instead of four years of one language, first- and second-year language might be alternated. The same might be done with the science.

Two teachers would not then be overworked, and should they have half the time of another, household arts and manual training might be added. These subjects have not been mentioned in the courses laid out, since they are to be organized rather differently. They should be opened to pupils as soon as they enter the high school, and continued as long as teaching force and equipment can keep them advancing. Since they are most often pur-



sued as only a two-fifths study, they may be taken in addition to the four regular studies. It is not too much to require two years of the one of all girls, and two years of the other of all boys.

The general requirement for graduation should be not less than fifteen units, and very properly may be sixteen. Above the eight marked with an asterisk, all students should be asked to present two units of one foreign language and two units of science. This, with the four-fifths of vocational training, makes twelve and four-fifths. The remainder can safely be left purely elective; but students should be advised regularly at the beginning of each half-year regarding college-entrance requirements, that they may not suffer later on.

Pressure will be felt in many rural communities to put in a great deal of commercial work. It has already been yielded to in numerous schools. Nothing can do more to educate boys away from the farm and girls away from the home. The purpose of the introduction of the one unit of commercial work was to give some practical experience in keeping accounts—farm accounts, if you please—and to review and strengthen arithmetic for those desiring to enter teaching, no less than to sharpen it anew for those who will use it in every-day life, on the farm or elsewhere. In last analysis, household arts should always come first in the introduction of vocational training into a school, because it will touch the after-life of more than can any other type of vocational education.

Where two languages are given, Latin should be one of them. In case the teacher expects to teach the German principally by the natural method, or to emphasize conversation, that language may best come first. Otherwise the Latin is probably best placed first.

In mathematics, after several years of unrest, in which almost every imaginable scheme was tried, the course that has been suggested above seems to be easily in the greatest favor. Solid geometry is placed after advanced algebra because it can be handled better if the student is familiar with advanced algebra. Advanced algebra comes after plane geometry because of the demonstrated psychological principle that the longer one is learning a thing, the better he retains it. The course in mathematics suggested herein extends the algebra over two years and a half of the pupil's life, and the geometry over two years. To complete algebra before taking up geometry would extend algebra over only



a year and a half, and geometry over the same length of time; barring, of course, the applications of algebra that are frequent in geometry.

The present writer is aware that he is deciding large questions very rapidly in these paragraphs, but space forbids that this manual be lengthened into a treatise on high-school pedagogy and administration. Many large points cannot be mentioned, but must be taken for granted.

No provision has been made in this section for a four-year high school operated by one teacher. Such a condition is not a dream; it is a reality in several places in Colorado. It is unfair to teacher and to student. The courses that have been outlined on the preceding pages have in every case provided for a fair amount of election, on the theory that no body of high-school students is homogeneous in interests. But when one teacher must attempt so much, the first consideration is a crippling of the school by the removal of all election. This is not done sometimes, but when it is not, the resulting condition is worse still.

It is advised that under such necessity the course consist of three units of English, three of mathematics, and one of commercial (with an alternation of advanced mathematics, and book-keeping and arithmetic), four of history (with alternation of third- and fourth-year work), two of science, followed by two of one foreign language (with alternation in each). This allows fifteen units on a basis of eleven classes per day, which could be reduced to ten in alternate years by the omission of third-year English.

## V. THE DAILY SCHEDULE

The recommendations in the preceding sections have been based upon a recitation period of from thirty to forty minutes. In small high schools, with recitation sections of fifteen or less, this is sufficient. Slightly longer periods are in vogue in larger schools, but they are for larger classes. High-school recitations of twenty minutes degenerate into double-quick exercises in repeating what has been memorized. The pupil gets a splendid drill on a few fundamental facts, but has no time for reflection or reorganization. The teacher does not teach; he hears lessons.

Better results can usually be secured by having daily meetings of all classes. The college plan of courses that meet twice or three times a week allows too much leakage between successive



recitations. An exception can be made for household arts and manual training. For these little or no outside preparation is required, so that nearly all is in the nature of laboratory work. Students cannot get out material, tools, and utensils for starting, and then "clear decks" at the close of the hour, so as to make satisfactory progress in a single period. Double periods\* twice a week are more profitable. Physics and chemistry, too, should be placed on a sound basis by giving double periods twice a week in the laboratory, and single periods the other days in recitation. Students may then be expected to prepare note books immediately after each experiment is performed, and to a great extent under the eye of the instructor.

Much has been said and written on the arrangement of the different subjects in the daily schedule. Less is known about it now than was thought to be known ten years ago. A good program for some schools might be a very poor one for others. Recitations should be distributed fairly over the whole day for all pupils, since there is a tendency to waste time and to become fatigued during long study periods. The afternoon session should be the lighter, if not the shorter. Double periods in laboratory or vocational studies can well come the last of the day, holding, if necessary, somewhat after dismissal of students not concerned. Practical considerations—such as the habit of tardiness in a student body, or frequent requests from parents that children be excused after their last class—may dictate the arrangement of a program that shall give nearly all pupils, or pupils from certain families, a recitation at the first and last hours of the day. A morning session from about 9 to 12 o'clock, and an afternoon one from 1 to 3:30 p. m., will fit in most places.

Since pupils elect subjects in various combinations, no daily program can make study and recitation periods alternate regularly for all students, nor is it desirable that such condition be brought about. But the least mature students can stand least inconvenience in this respect. Hence, the schedule for the ninth grade might be worked out first in well-balanced form. Some investigation will show that many high-school boys and girls have no regular study program of their own. Supervision along this line may be made very beneficial.

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\*The expression "double periods," as used herein, always means two successive periods.



## VI. THE TEACHER

The requirement of the equivalent of the A. B. degree—i. e., approximately four years of college work above graduation from a four-year high school—is receiving increasing recognition as the minimum academic qualification of a high-school teacher. It is no longer looked upon as an arbitrary requirement of colleges and universities, but as the standard upon which progressive high-school people are agreeing. Teachers who received their education several years ago, when departments of pedagogy were not the most popular places around a college, and who have had successful experience, may not have taken professional work; but the novice of the present has small right to consideration unless he has pursued professional study for as much as a year.

The salaries in small high schools, however, are not often such as to retain a teacher with these qualifications; if he has much teaching power, he is soon promoted to larger responsibility. One cause for this constant change is the absence of salary increases in little schools. Boards would hold their teachers longer, and receive more earnest service, if, instead of paying invariably a set sum, as \$75 per month, they should pay \$70 for the first year, \$75 for the second, and \$80 for the third. Little, if any, more money would be spent on salaries, but teachers would have something to which to look forward. There would not be such a host of registrants with teachers' agencies, calling for a "change of location."

Teachers are often hired for high-school work without any inquiry as to their fitness for the special post given them. With definite courses of study in all high schools, it should become a rule to learn whether an applicant has made specific preparation for the subjects to be assigned him. Division of subjects between teachers should follow departments of knowledge—as English, mathematics, or history; and not grades of the course—as ninth, tenth, or twelfth.

Boards are not forced to hire teachers by "taking a leap in the dark," as one director recently characterized his action. There is wonderful virtue in boards hunting teachers instead of teachers hunting boards. Boards knowing that they have vacancies could delegate their principal or superintendent, or the county superintendent, or a member of their own body, to visit likely candidates at their work and investigate thoroughly their standing in their



communities. This would minimize that unprofessional flocking toward jobs by aspirants armed with a handful of unqualified endorsements, headed "To Whom It May Concern," which, with good looks and modish clothes, play a dominant role in winning the necessary votes. It would avoid some unpleasant awakenings during the first month of the term. It would sacrifice no great amount of time or money—probably not nearly so much as it would in the long run save. Boards who are unable to see candidates in action should remember that detailed and reliable information regarding them can be gained through the office of the State Superintendent or the higher educational institutions of the state.

#### VII. THE LIBRARY

Most printed suggestions for libraries, while valuable for large schools, are so far beyond the reach of small ones as to be almost worthless. A recent bibliography, entitled "A List of Books Suited to a High-School Library," reads in its Introduction:

"One star indicates that the work is of unusual value; two or more emphasize this worth. The starred titles alone are not considered sufficient for a well-stocked library, though they suggest books suitable for early orders."

Computation shows that over \$575 worth of books are double-starred, and about \$875 worth are single-starred. "For early orders," this standard is more than ambitious for small high schools—it is ridiculous. Moreover, it seems to have been prepared by a group of specialists without the subsequent unifying touch of any person. Yet this is only the conventional mistake. The most that the present manual can suggest is a reasonable balance between different sides of the library.

A good encyclopedia, which, with a standard dictionary, will cost \$100, is the foundation of a high-school library. Competently handled by instructors, it goes far to supply gaps in the various departments. A cheaper, less exhaustive work may be purchased at first and then turned over to the grammar room when finances permit the purchase of a more elaborate work. Encyclopedias soon are classed as out-of-date nowadays; so only very recent editions should be purchased. Another \$100 on general literature will purchase about two hundred volumes. An equal amount must go to science, because books in that field are more expensive. History, civics, and economics can rightly claim \$200.



It is not expected that any school will regard this total of \$500 as either a maximum or minimum amount for a library. It represents a reasonable minimum for four-year high schools to be built up to gradually through annual appropriations distributed among the different lines approximately in the proportions suggested. Until a library is satisfactory, it is entitled to annual additions. Part of the money can suitably go to subscriptions for good periodicals—some general, some of special interest to boys, others that attract girls. The nearer the approach to a community reading-room, open to the public at stated hours, in the absence of a public library, the stronger its support and the greater the sympathy and contact between school and community.

Advice on the expenditure of a limited amount will be gladly furnished by the office of the State Superintendent, which will answer detailed inquiries regarding the division of a given appropriation, or particular books which might be added as most useful for certain purposes. Many list prices can be shaved by jobbers.

Boards ought never to purchase library additions on their own initiative.

### HIGH-SCHOOL COURSE OF STUDY

ALGEBRA.—Inclusion of simple quadratics, pure and affected, in the work of the first year, because nearly all applications of algebra to geometry call for a knowledge of quadratics.

HISTORY.—Greater use of historical fiction, which is recognized as very important in historical study in some parts of the country.

Avoidance of works of maturest scholarship, unless high-school boys and girls read them. Ten pages of John Fiske will usually be read to one of Schouler's "United States."

Historical notebooks not to be made a fetish. Outline maps, to be filled according to the direction of the teacher during the study of a special epoch, are better than arbitrary lists of places to be noted.

GERMAN.—The German script is passing rapidly. All students should know how to read it, but it is unnecessary to know how to write it. Many letters written by Germans in *Germany* to people in this country are in our own script. Sometimes the two are found in the same letter.

PHYSICS AND CHEMISTRY.—The use of the inductive method in this and all laboratory science must be limited. University students cannot induce a principle in the the laboratory some-



times, so their instructors tell us. Certainly high-school students must not be expected to go very far thus. Usually the laboratory work should follow and clinch the principles laid down in the text or got by induction during class demonstration. Students may be slowly trained to frame principles inductively, however, and it is doubtless the business of the course to teach them to do this.

Do not assign boys to work with girls in the physics laboratory. Three times out of four the boy performs the experiment and the girl writes down the results.

AGRICULTURE.—In some schools a general course in agriculture may be best. In others emphasis should be laid upon those special phases of agriculture that apply to community interests, stock-raising, horticulture, beet production, etc.

## **AN OUTLINE OF STUDY IN LITERATURE AND ENGLISH FOR HIGH SCHOOLS**

### **THE AIM**

This outline of study very frankly discards the idea of a chronological study of the great pieces of English and American literature which is implied in the present arrangement of College Entrance Requirements in English. In the selection of pieces for class study, the following specifications have been kept in mind: (1) The selections must be within the range of comprehension and enjoyment of the adolescent mind. (2) They must be capable of holding the thought, quickening the emotional life, and exalting the ideals of young people. (3) They must be of real value. (4) They must include all the types of literature which are likely to be read by adults, if these types can be taught to boys and girls in their "teens."

While the selections are made without reference to the present College Entrance Requirements in English, it will be observed that most of the pieces in that list which are prescribed for careful study are included here, and that the literary study is further enriched by the addition of many other pieces better suited to the adolescent student than the suggested "classics." The interpretation of the College Entrance Requirements is now so liberal that no school doing conscientious work, covering a period of four years, need have any fear of falling short because of a failure to meet the prescriptions in exact detail.



The aim in the composition work is to teach the students to speak and write idiomatic English simply, clearly, and with force, variety, and dignity—to mean what they say, and say what they mean. This implies that the students must become familiar with the simple mechanics of writing and the technique of ordinary speech.

#### THE ORDER OF ARRANGEMENT

Instead of taking the pieces of literature in a chronological order, as has been the custom, they are here grouped together on the basis of *type*. It is assumed that, if literature is to be studied for *meaning*, a knowledge of the technique employed by the author to produce his effects will be an aid to the student in understanding the thought. Each literary type is used as a unit of study, and some examination of the technique of each form of literary expression is recommended.

#### THE TIME REQUIRED

The arrangement of courses which follows is planned to cover four full years of work; but by eliminating certain of the courses it may be compressed so as to come within three years. This has been done to make the course meet the needs of two classes of high schools—four-year schools in which only three years of English is required, and three-year schools. The outline is arranged by semesters, but a scheme is shown by means of which it can be adapted to schools which divide their year into three terms of approximately twelve weeks each. It is assumed that each of the courses is to have five recitation periods a week. Where both composition and literature are taught under the same course number, the teacher may divide the time to suit his own notion as to how it may be done to secure the best results. A suggestion regarding this matter will be given in the comment on one of the courses in a section following this general introduction.

#### THE METHOD

The teaching of English implied in carrying out this course of study involves a change of attitude toward the method of class instruction. The monotonous drone of questions and answers called forth by the detailed notes on textual matters in the current editions of school classics must be discarded, to make way for a more vital response from the students. Instead of ques-



tions and answers, the teacher must learn to substitute *expression* as a test of appreciation. Literature is an art, like music, dead if studied *about*, but emotionally alive if effectually *voiced*—and “effectually voiced” means rendered so as to make another feel the author’s emotion and understand his meaning. If expression is made the core of the recitation, then lively conversation—the informal interchange of thought between teacher and pupil—will naturally follow the oral reading of the portions of the assignment from the literary unit selected for class use, and the teaching and study of English will become a delight instead of a “job,” as it very often seems to be under prevailing conditions.

When this kind of teaching comes to be a common thing in high schools, there will be no reason to maintain distinct departments for English, reading and dramatics, and public speaking. The English course would cover all three. In the larger schools special teachers might give time in preparing students for public performances in dramatics and declamation, but the ordinary class work in reading would be done in the English classes.

#### TEXT BOOKS

There are many excellent text-books covering the ground of this course. The longer pieces may be had in school classics, ranging in price from fifteen to sixty cents. These are published by a number of the well-known school publishing houses. In a few cases where a course is unusual and the book required is new, or at least not well known, a suggestion is made concerning books that would be suitable, two or more being named if there are as many as that in print.

#### THE OUTLINE

*Arranged by Semesters for a Four-Year High School Requiring English Throughout the Whole Time*

##### FIRST YEAR

**First Semester:** Course 1. Narratives in Prose and Verse. Composition.

**Second Semester:** Course 2. Plays. Composition.

**Elective:** Course 3. Word Study.

**SECOND YEAR**

**First Semester:** Course 4. Grammar and Composition.

**Second Semester:** Course 5. A History of English and American Literature.

**Elective:** Course 6. Oral Composition.

**THIRD YEAR**

**First Semester:** Course 7. Lyric and Narrative Poetry.

**Second Semester:** Course 8. The Short Story.

**Elective:** Course 9. The Essay and Narrative Prose.

**FOURTH YEAR**

**First Semester:** Course 10. The Novel.

**Second Semester:** Course 11. The Drama.

**Elective:** Course 12. The Epic.

NOTE 1.—The elective courses for the first two years are to be taken by students who are in need of special drill in word study and oral composition. In the last two years the essay and the epic are to be studied by students who have more than the usual interest and ability in literary studies.

NOTE 2.—Schools having the year divided into three terms can easily accommodate this arrangement to their needs by taking in the elective courses for the third term of each year.

**THE OUTLINE**

*Arranged by Semesters for a Three-Year High School*

**FIRST YEAR**

**First Semester:** Course 1. Narratives in Prose and Verse. Composition.

**Second Semester:** Course 2. Plays. Composition. Or Course 3. Word Study (for those who are deficient in vocabulary or in a knowledge of sentence structure).

**SECOND YEAR**

**First Semester:** Course 4. Grammar and Composition. Word Study.

**Second Semester:** Course 5. A History of English and American Literature.



**THIRD YEAR**

**First Semester:** Course 7 (nine weeks). Lyric and Narrative Poetry. And Course 8 (nine weeks). The Short Story.

**Second Semester:** Course 10 (nine weeks). The Novel. And Course 11 (nine weeks). The Drama.

**ANOTHER ARRANGEMENT**

For the three-year high school the material falls into a better arrangement if the year is divided into three *terms* instead of two *semesters*. The plan would be as follows:

**FIRST YEAR**

**First Term:** Course 1. Narratives in Prose and Verse. Composition.

**Second Term:** Course 2. Plays. Composition.

**Third Term:** Course 4. Grammar. Composition (oral and written). Word Study.

**SECOND YEAR**

**First Term:** Course 5. A History of English and American Literature.

**Second Term:** Course 7. Lyric and Narrative Poetry.

**Third Term:** Course 8. The Short Story.

**THIRD YEAR**

**First Term:** Course 10. The Novel.

**Second Term:** Course 11. The Drama.

**Third Term:** Course 9. The Essay. Or Course 12. The Epic.

**A DESCRIPTION OF THE COURSES**

**Course 1. NARRATIVE LITERATURE.**—If a later study of the essay and prose narrative is not to be taken up, this course might very profitably begin with one of the following books as a foundation for the study of the more extensive narratives which is to follow:

Ashmun, "Prose Literature for Secondary Schools" (Houghton, Mifflin & Co.).

Wells, "A Book of Prose Narratives" (Ginn & Co.).



The pieces which form the body of the work of this course are interesting narratives in prose and verse, such as "Guy Manner-  
ing," "Ivanhoe," "Kenilworth," "The Sketch Book," "Treasure  
Island," "Kidnapped," "David Balfour," "The Coming of Arthur,"  
"Gareth and Lynette," "The Passing of Arthur," "Enoch Arden,"  
and "Sohrab and Rustum." The amount of reading offered would  
suggest that no very deep study of details is to be undertaken.  
The teacher should be thankful if the pupils understand the words,  
and can read the pieces with intelligence and pleasure. This does  
not give the teacher much opportunity to display his technical  
knowledge of allusions, textual minutiae, and such like; and he  
may feel a want of "something to do" in the class period. The  
pupils will be better off for the "nothing to do" if the teacher is  
alive and willing to have a happy time with his class as they,  
teacher and class, read to each other and informally elucidate  
and comment upon what they read. The kind of teaching re-  
quired in all these courses demands a well-informed teacher who  
can read very well orally.

Two themes a week are required, and one of the recitation  
periods of each week is set aside for assignments and directions  
relating to the composition work. The teacher should have a  
consultation period in which he may see his students and give  
them individual help and criticism upon their themes. This can  
usually be arranged without taking a class period, but it is so  
important that a recitation period should be given for it, if it  
cannot be arranged in any other way. Each student doing com-  
position work should come to the teacher for individual help  
once in two weeks. He would then have four themes marked and  
ready for correction.

**Course 2. PLAYS.**—The work of this course is the same as  
that of *Course 1* in every particular except the kind of pieces  
studied. *Plays* that are easy to read, lively in dialogue, interest-  
ing in situation, and that embody themes well within the com-  
prehension of boys and girls of fourteen, are used. Such plays as  
"The Merchant of Venice," "Julius Caesar," "Henry the Fourth,"  
"The Rivals," "The Good Natured Man," and "She Stoops to Con-  
quer" are available in inexpensive school editions. Two or three  
recent plays, such as Stephen Phillips' "Ulysses," Galsworthy's  
"The Silver Box," Peabody's "The Piper," Maeterlinck's "The  
Blue Bird," and Kennedy's "The Servant in the House," should  
be brought to the class and read by the teacher to show the play



of today in comparison with the plays of the seventeenth and eighteenth centuries. Until recently it was impossible to get modern plays for class use in inexpensive form, but now many of the best of these plays may be had for fifty cents or less. A list of these may be obtained from the Drama League, Chicago. Where schools furnish the text-books, it is entirely possible to have two or three of these plays of today in sets for class use. This is, of course, much better than the plan of having the teacher read the play from a single copy, without the pupils having any opportunity of making a study of the piece for themselves.

The composition here is the same as for *Course 1*. Topics may be drawn from the reading, if that is the most interesting material for the pupils to write about. Sometimes it is not. Any other material that will call forth a more spontaneous expression of thought should be freely used.

Many teachers will want a text-book in composition. There are a number of good books to choose from, which would carry this work through the two first two years of the high school. Some teachers prefer to do the composition work without a book in the hands of a teacher. It can be done in that way by a live teacher with entire success.

**Course 3. WORD STUDY.**—In every school there are pupils deficient in the knowledge of the necessary technical elements of speech and writing. An elective course to be substituted for, or given in addition to, the usual courses is recommended for each of the first two years, to help those who need instruction in the mechanics of expression. A study of words—roots, prefixes, suffixes, spelling, etymology, exact meanings, connotations, the parts of speech and their inflections, sentence structure, etc.—is the elective formal work offered for the ninth grade. There is no regular theme work required with this course.

**Course 4. GRAMMAR AND COMPOSITION.**—Somewhere in the high school a semester's work is needed in which there shall be a careful drawing-together of the grammar facts possessed by most boys and girls of fifteen. Some teachers prefer to have this grammar review in the ninth grade, at the time the students are just beginning the study of a foreign language. It is expected that all students will come to the high school with a knowledge of formal grammar sufficient for the beginning of foreign-language studies. In that case the systematic organization of the English grammar had better be put into a year in which greater maturity



can be expected of the pupils. The second year is recommended. The course should be much more than a review of the grammar of the eighth grade. It should treat the English sentence in such a way as to give the student the power accurately to judge his own speech and writing for correctness.

Composition is taught again as in the first year. Use both oral and written composition. If you succeed in keeping lively subjects before your students, and employ interesting points of view and "snappy" treatment, the long apprenticeship will not be a dull one.

**Course 5. A HISTORY OF ENGLISH AND AMERICAN LITERATURE.**—Students of the theory of education frequently object to a history of literature unless it is used as a background for a chronological reading course. No such reading course is offered here, and none is wanted. It is desirable, however, that the students should become familiar with the periods and movements of our literature, and of the civil history, the art, the architecture, and the social customs of time and country that have influenced the makers of literature and in a measure determined its forms. This study should be a rapid, superficial sketch covering in one semester both English and American literature. A text-book can be had which in one inexpensive volume covers the literature of both countries. Many illustrative examples should be read as the course proceeds.

Themes again, of course.

**Course 6. ORAL COMPOSITION.**—This is a practice course in oral expression used in the second year for those whose speech is ungrammatical or poorly organized. Work is assigned for preparation outside the class. The recitation consists of the oral telling of stories, the composition of paragraphs in the forms of narration, exposition, description, and argument, etc. All of this work is subject to the criticism of the teacher and fellow-students.

**Course 7. LYRIC AND NARRATIVE POETRY.**—In the beginning of this course the teacher, without the aid of a student's text-book, should give some instruction in the technique of poetry. Then the students should read and study for their meaning a large number of poems, chiefly lyrical. There is no text-book now in print including the technical instruction in poetics and also the pieces to be studied, but classes can do very well with such a book as Seward's "Narrative and Lyrical Poems," or



Gayley and Flaherty's "Poetry of the People," supplemented by Long's "American Poems" and Hutchison's "British Poems."

**Course 8. THE SHORT STORY.**—The study of the short story follows the same plan as that of the lyric and narrative poetry—first a concrete study of technique, and then the application of the knowledge thus acquired to a number of stories, both classic and recent. The teacher is a little more fortunate in the matter of a text-book for this course than in the poetry course. There are half a dozen collections of stories, chiefly the older classic stories, and two or three books on the art of the short story. One of the books contains all the material for the course—the study of form, the older stories, and a liberal number of the masterpieces of today. This book is: Cross, "The Short Story (A. C. McClurg & Co.).

**Course 9. THE ESSAY.**—The work on the essay is similar to that on the story. Thus far no single book for the use of high-school students can be had which will meet the requirements of the course, but one or more are in preparation. The essays to be studied are mostly of the "familiar" type, both classic and modern; but there should be included two or three of the serious essays dealing with large problems of life. The authors to be studied are such as: Addison, Steele, DeQuincey, Lamb, Hazlitt, Hunt, Arnold, Ruskin, Stevenson, Holmes, Crothers, Bennett, Repplier, Deland, Dallas Lore Sharp, and other modern writers.

**Course 10. THE NOVEL.**—The novel is studied for theme and technique. One novel, "Silas Marner," is studied very carefully for both; and then as many others as possible, including one or two recent novels, are read during the remainder of the semester.

**Course 11. THE DRAMA.**—The technique and themes of a number of serious dramas are much more carefully studied in the fourth year than when plays were read in the first year for enjoyment and a comprehension of the meaning alone. "Macbeth" is the play selected as a foundation for the course. One other play by a seventeenth-century writer other than Shakespeare is recommended. The work of the semester might be completed by adding a translation of a play by Molière and one by Victor Hugo, concluding with a careful study of a representative play of the twentieth century. Suggestions for the study of modern plays and a list of available plays may be found in a little pamphlet on "The Drama in the High School," issued by the Drama League of America (736 Marquette Building, Chicago).



**Course 12. THE EPIC.**—Somewhere the high-school student should have an opportunity to become acquainted with the great epics—"The Iliad," "The Odyssey," "The Aeneid," "The Nibelungenlied," "Beowulf," "The King Arthur Cycle," "The Song of Roland," etc. So far as the pupil's interest is concerned, these might be read earlier than the fourth year, but mechanical complexities will probably consign them to students a little more mature than those of the first or second years. Good prose translations are more successfully taught in the high schools than the poetic translations. For the "Iliad" either the rhythmic prose translation of Lang, Leaf, and Myer, or the blank verse of Bryant, is preferable to Pope's "Iliad." Palmer's "Odyssey" is ideal for class use.

**COMPOSITION.**—Nothing has been said about the composition work to accompany these advanced courses for the third and fourth years. The practice of writing and effective speaking is never allowed to lapse, but for the upper years the compositions are less frequent, but longer and more carefully prepared, than before.

## ETHICS AND HUMANE EDUCATION

### A HIGH-SCHOOL COURSE

Ethics is the science of conduct. It means about the same as morality. It means a knowledge of the way we should act in order to be happy and useful citizens.

Science is knowledge systematized, and the application of science is art. To apply the principles of ethics is as much an art as is the application of the principles of mathematics, language, penmanship, or music.

Humane education is ethical education. The right and just treatment of the lesser animals, for example, which is a part of humane education, has the very essence of ethical training in concrete form—it cannot be neglected without bad results.

Every act of ours leaves an increased power and tendency to act again in the same manner. This is true in muscular development, in brain growth, and in heart culture, or the power to feel for the suffering of others.

Ethics, then, includes a knowledge of right and wrong ways of acting in all our relations in life—in the home, in the school, in business, and in society in general.

The education of the Greeks was chiefly physical culture. After the Greek came the Roman system, which was a military



education; and still later came the education of the Middle Ages, which was almost exclusively religious. At the present time we are dwelling especially upon manual training, which will soon be merged into vocational training. The real purpose of an education should be to take children and in every possible way make happy, useful, thoughtful, healthful citizens. They should not only be able to do useful things and make a living, but be strong, healthful citizens, physically, mentally, and morally. We should strive to turn out, not a few trained athletes, but a race of normal, strong, healthful, lively, and beautiful beings. And, above all else, they should be trained and educated in character.

Moral training should do for the mind what physical culture should do for the body. It should produce a race of honest, kind, justice-loving men and women who feel for the suffering of others, and who sympathize with all life, realizing that we are but a part of a stupendous whole.

If instruction be a valuable element in moral training, it would seem to follow that it should not be crowded into a corner and given the "odds and ends" of school time. It should have an assigned place in the weekly program, and thus receive its due share of attention. (From "School Management," by White.)

The lessons given in the graded school should be extended into the high school. The psychological chain has been given as follows: knowledge, sympathy, perception of justice, action. When the child fully understands, his sympathy is aroused; then follows in his mind a demand for justice, and this is followed by some action to secure the relief necessary.

The following outline is suggestive only—the teacher must use his own methods. Each lesson should be prepared before the time of recitation, and be illustrated by concrete cases when possible.

For teachers' use: "School Management," by White; "Ethics and Education," by J. Howard Moore.

For text-books use: "High School Ethics," by J. Howard Moore; "Dumb Animals and How to Treat Them," by Whitehead.

#### FIRST YEAR

Study these character traits and the methods of developing them in those who are deficient: kindness, courtesy, honesty, truthfulness, industry, self-control, obedience, accuracy, helpfulness, unselfishness, sympathy, usefulness, perseverance, self-

reliance, courage, ambition, friendship, punctuality, temperance, optimism, justice, benevolence.

Kindness to animals not only brings out the best in the animal, but strengthens the character of those who exercise this trait.

The danger of developing the opposite of these traits should be shown, and contrasts made.

The value of these traits in the home, in the school, in business, in society, and in all the relations of life should be emphasized.

Biographical sketches of men and women whose success in life illustrates one or more of these character traits, and historical events in the evolution of society, should be used.

## SECOND YEAR

### CIVIL GOVERNMENT—

The laws for animal protection.

History of the humane movement.

Why animals should be protected by law.

Loss by neglect and abuse of animals.

Value of bird protection.

Diseases of animals, their causes and effects.

Diseases communicated between animals and from them to the human animal.

Flies, mosquitoes, fleas, ticks, and other insect vermin—how to prevent them among animals and so protect man.

The State Bureau of Child and Animal Protection—its duties, powers, and work.

Sanitation in barns, dairies, and poultry houses—its necessity.

Animal characteristics worthy of our imitation.

Game laws. Why have such laws?

Open and closed seasons.

Hunting a savage custom.

The cruelty of hunting and trapping.

The ethical value of justice and kindness to all living creatures.

Hunting with the camera versus the gun.

Treating the animal as you would want him to treat you if you were in his place and he in yours.



## THIRD YEAR

State institutions for the care, education, and protection of children.

Give location of each in this state, and tell how children are sent to each, how treated, and how managed. (See Statutes.)

State Home for Dependent Children.

State Industrial School for Boys.

State Industrial School for Girls.

State School for Mental Defectives.

State School for Blind and Deaf.

State Reformatory.

State Workshop for the Blind.

What should be done with each of the following classes of children: the abused and neglected child, the dependent child, the delinquent child, the defective child? (See Statutes.)

The physical examination of school children; why?

School and home sanitation: heat, light, air, cleanliness.

## FOURTH YEAR

Review the preceding three years' work.

Humane institutions for the care of the sick, insane, aged, and infirm.

Orphanages and asylums, sanitariums.

Heredity and environment: in plants; in animals; in the human race.

The value of good ancestry and stock in each.

The danger of bad ancestry and poor stock.

Heredity of feeble-mindedness and diseases.

We breed from the best plants and animals and get the best results.

What can we do to improve the human race in such ways?

The peace movement: international arbitration versus war; disarmament; economic loss by wars; eugenic loss by wars; militarism versus civil government.

An international court of arbitration.

The State Bureau of Child and Animal Protection employs a state superintendent of moral and humane education, with his office in the Capitol. It is his duty and pleasure to assist teach-

ers, and to give lectures in the schools and to teachers' organizations on ethical and humane ideals. His services are at the command of teachers and school officers. Any teacher who desires further information or assistance in using this suggested outline should apply to the State Bureau of Child and Animal Protection, State Capitol, Denver, Colorado.



## DAILY PROGRAM—MONTROSE COUNTY HIGH SCHOOL

Time	Wiedmann	Brown	Chaney	Berg	Kansgen	White	Eades	Lanning	Walker	Frazier	Young	Middleton
9:00	Office....	.....	Study H...	Ger. 3....	Algebra 9...	Chem.....	Shorthand..	Physics ..	Eng. 11..	Eng. 9...	Latin 3...	Manual
9:45	Office....	S. Geom..	Gen. Hist...	Study H...	.....	Chem.....	Shorthand..	Physics ..	Eng. 12..	Eng. 10..	Latin 2...	Training
10:30	Office....	Pl. Geom..	Com. Geog..	Ger. 2....	Pl. Geom..	Chem.....	Bookkpg....	Physics ..	Eng. 11..	Study H..	Latin 9...	Grades
11:15	Office....	Method..	Com. Geog..	Ger. 1....	Algebra ....	Chem.....	Bookkpg....	Physics ..	Study H..	Eng. 9...	.....	.....
Noon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1:15	Office....	.....	Botany.....	Ger. 1....	Pl. Geom..	Botany.....	Civics.....	Am. Hist.	Eng. 12..	Eng. 9...	Study H..	Manual
2:00	Office....	H'sehold	Gen. Hist...	.....	Study H....	Agriculture.	Typewr'tng	Com. Ar..	.....	.....	Latin 9...	Training
2:45	Office....	Arts.....	Com. Geog..	Ger. 1....	Algebra 9...	Agriculture.	Typewr'tng	Study H..	.....	Eng. 10..	Latin 9...	High Sch.

Courses offered: College Preparatory, Normal, Commercial, Agriculture and Mechanical Arts.

## DAILY PROGRAM—FORT LUPTON CONSOLIDATED HIGH SCHOOL

Time	Teacher—Miss Fry	Year	Teacher—Mr. Johnston	Year
9:00- 9:45	Geometry.....	Soph.....	Physics.....	Junior
9:45-10:30	English Literature...	Senior....	Ancient History.....	Fresh.
10:30-10:45	*Recess.....	.....	.....	.....
10:30-11:00	.....	.....	English III.....	Junior
10:45-11:25	Algebra.....	Fresh.....	.....	.....
11:00-11:30	.....	.....	First Semester—Com. Geog....	Senior
.....	.....	.....	Second Semester—Economics...	Senior
11:25-12:00	Caesar.....	Soph.....	.....	.....
11:30-12:00	.....	.....	First Semester—Civics.....	Senior
.....	.....	.....	Second Semester—Am. History..	Senior
12:00- 1:00	Noon.....	.....	Noon.....	.....
1:00- 1:45	First-Year Latin....	Fresh.....	First Semester—Com. Geog....	Junior
.....	.....	.....	Second Semester—Bookkeeping..	Junior
1:45- 2:30	English II.....	Soph.....	Chemistry.....	Senior
2:30- 2:45	Recess.....	.....	.....	.....
2:30- 3:15	.....	.....	Botany.....	Soph.
2:45- 3:30	English I.....	Fresh.....	.....	.....

\*One teacher only has recess, as will be noted.

## DAILY PROGRAM—ALAMOSA HIGH SCHOOL

Time	Grade VIII	Grade IX	Grade X	Grade XI	Grade XII
9:00	Roll Call.....	Roll Call.....	Roll Call.....	Roll Call.....	Roll Call
9:05	1. Arithmetic...	1. Anc. History.	Biology.....	.....	German
.....	2. Algebra.....	2. Biology.....	.....	.....	.....
9:50	.....	Bus. Arithmetic.	P. Geometry..	Physics.....	Eng. Hist.
10:35	1. U. S. History.	1. Algebra.....	Caesar.....	Physics.....	Chem.(Lab.)
.....	2. Anc. History.	2. P. Geometry..	.....	.....	.....
11:20	1. Reading.....	English.....	Pen., Spell., & Dictation....	German.....	Chemistry
.....	2. Comp. & Eng.	.....	.....	.....	.....
1:30	General Exercises and Singing...	.....	.....	.....	.....
1:40	1. Grammar....	.....	English.....	1. Coml. Law.	Shorthand
.....	2. Latin 1.....	.....	.....	2. Economics .	.....
2:20	.....	Latin.....	Bookkeeping..	Economics...	Cicero
3:00	.....	Pen. & Corres...	Bookkeeping..	English.....	English
3:40	Athletics and Glee Club Practice...	.....	.....	.....	.....

Eighth and ninth grades, five teachers in the high school.

1. First Semester.
2. Second Semester.

This plan has been working two years. When the pupils in the eighth grade reach the senior year, they are to take the common branches for the last half year.



## COURSES OF STUDY—BRUSH UNION HIGH SCHOOL

## College Preparatory Course

## FIRST YEAR—

\*English I—Grammar and Composition.  
 Ancient History.  
 Beginning Latin or German.  
 Botany, one-half year.  
 Zoology, one-half year.  
 Vocal Music.  
 Band.

## SECOND YEAR—

\*English II—Rhetoric.  
 Mediæval and Modern History.  
 Second-year Latin or German.  
 Algebra.  
 Vocal Music.  
 Band.

## THIRD YEAR—

\*English III—English Literature and Classics.  
 Plane Geometry.  
 Chemistry.  
 Beginning Latin or German III.  
 Vocal Music.  
 Band.

## FOURTH YEAR—

English IV—American Literature and Classics.  
 Solid Geometry, one-half year.  
 Advanced Algebra, one-half year.  
 Physics.  
 Economics, one-half year.  
 Reviews, one-half year.  
 Beginning Latin or German IV.  
 Vocal Music.  
 Band.

## Scientific Course

## FIRST YEAR—

\*English I—Grammar and Composition.  
 Ancient History.  
 Botany, one-half year.  
 Zoology, one-half year.  
 Beginning Agriculture.  
 Sewing.  
 Manual Training.  
 Vocal Music.  
 Band.

## SECOND YEAR—

\*English—Rhetoric.  
 Mediæval and Modern History.  
 Algebra.  
 Physical Geography, one-half year.  
 Geology, one-half year.  
 Agriculture II.  
 Sewing.  
 Manual Training.  
 Vocal Music.  
 Band.

## THIRD YEAR—

\*English III—English Literature and Classics.  
 Plane Geometry.  
 Chemistry.  
 Beginning Latin or German.  
 Manual Training.  
 Sewing.  
 Vocal Music.  
 Band.

## FOURTH YEAR—

English IV—American Literature and Classics.  
 Solid Geometry, one-half year.  
 Physics.  
 Latin or German II.  
 Advanced Algebra, one-half year.  
 Economics, one-half year.  
 Manual Training.  
 Sewing.  
 Vocal Music.  
 Band.

**Business Course****FIRST YEAR—**

\*English I—Grammar and Composition.  
 Ancient History.  
 Botany, one-half year.  
 Zoology, one-half year.  
 Typewriting.  
 Penmanship and Spelling.

**SECOND YEAR—**

\*English II—Rhetoric.  
 Typewriting.  
 Bookkeeping.  
 Algebra.

**THIRD YEAR—**

\*English III—English Literature and Classics.  
 Shorthand.  
 Bookkeeping.  
 Business Arithmetic.  
 Plane Geometry.

**FOURTH YEAR—**

\*English IV—American Literature and Classics.  
 Shorthand.  
 Commercial Law, one-half year.  
 Economics, one-half year.  
 Chemistry or Physics or Commercial Geography.

\* Required.

**General Information**

Three years of English is required, and four is urged, for graduation from the college preparatory and scientific courses, and four years is required for the business course.

A nine-weeks' course in "farm bookkeeping" will be offered to those who desire such a course, at the last of the school year.

Students intending to enter universities or colleges must have from two to four units of language other than English.

Manual training, sewing, and agriculture are accepted for college entrance, provided they do not exceed three units. Typewriting, bookkeeping, and shorthand are not accepted.

Students are encouraged to participate in athletics, since a sound body is necessary to the proper working of a sound mind; but to represent the school on a team they must be carrying three studies and must have carried three studies during their previous term in school.

It takes two periods of manual training, two of band, and four of vocal music to equal one hour of ordinary class-room work.

The business department is furnished with the best equipment that money can buy, and the instruction will be equal to that of any business college in the West.

One unit is given for one full year's work in one subject.

One-half unit is given for one-half year's work in any half-year subject.

Sixteen units are required for graduation.

Credits from other high schools are given full recognition, if work is of equal rank.

Students are expected to carry four subjects, unless different arrangements are made with the principal.

Students who have completed the eighth grade are admitted on certificate. Other candidates must pass a satisfactory examination.



## COURSE OF STUDY—OURAY COUNTY HIGH SCHOOLS

## Commercial

## FIRST YEAR—

English.  
Physical Geography, Agriculture.  
Algebra.  
Commercial Arithmetic, Commercial Geography.

## SECOND YEAR—

English.  
Plane Geometry (elective).  
Ancient History.  
Bookkeeping.  
Biology (elective).

## THIRD YEAR—

English.  
Stenography.  
Commercial Law, Economics.  
Typewriting.  
Mathematics or Science (elective).

## FOURTH YEAR—

English (elective).  
United States History, Civics.  
Stenography.  
Typewriting.  
Elect.

## Scientific

## FIRST YEAR—

English.  
Physical Geography, Agriculture.  
Algebra.  
Elect Language or Commercial.

## SECOND YEAR—

English.  
Plane Geometry.  
Ancient History.  
Biology.  
Elect Language.

## THIRD YEAR—

English.  
Chemistry.  
Algebra, Solid Geometry (elective).  
Mediaeval and Modern History (elective).  
Elect one.

## FOURTH YEAR—

English (elective).  
United States History, Civics.  
Physics.  
Geology.  
Elect.

## College Preparatory

## FIRST YEAR—

English.  
Physical Geography, Agriculture.  
Algebra.  
Latin of German.

## SECOND YEAR—

English.  
Plane Geometry.  
Ancient History.  
Biology (elective).  
Language.

## THIRD YEAR—

English.  
Chemistry (elective).  
Algebra, Solid Geometry (elective).  
Mediaeval and Modern History (elective).  
Latin or German.

## FOURTH YEAR—

English (elective).  
United States History, Civics.  
Physics (elective).  
Geology (elective).  
Latin or German.

## Explanatory Notes on the Course of Study

1. Fifteen credits are required for graduation. A pupil must make a grade of 75 per cent in order to get credit in a subject.
  2. An average of 90 per cent in all subjects shall be required to entitle a pupil to take more than four subjects during the next semester. Exceptions to this rule require consent of the faculty.
  3. All electives are subject to faculty approval. A strong effort will be made to arrange a daily program such that pupils may take advantage of the above electives offered.
  4. One-half credit is given for one-half year's work in any half-year subject. For full-year subjects credit is given only when subject is completed, though semester grades are recorded as soon as made.
  5. As a rule, credit will not be given for outside work, unless that work is done under approved instruction. In all cases a higher examination grade will be required where regular class-room instruction has not been had by the pupil. Pupils absent because of sickness or other unavoidable cause will be permitted to make up lessons missed.
  6. Three credits on record in September entitle a pupil to be a second-year pupil, seven credits a junior, and eleven credits a senior. As a rule, classifications are made only in September.
  7. A pupil on entering the high school should enroll as a Commercial, Scientific, or College Preparatory, and then continue the subjects of that course in the order given. The approval of the superintendent shall be necessary for a pupil to change his or her course, especially after the first two weeks of school. Parents and pupils are urged to examine the courses and decide which best suits the needs of the pupil. The commercial course will appear to many as a practical and useful line of work, but you must not elect this course if you are bound for college. The scientific course will prepare for certain college courses if you elect the language offered. The college preparatory column will, of course, admit to even a classic course in the university. College preparatory students elect physics or chemistry.
  8. The large number of subjects offered is made possible by the combination of certain classes. Note the following:
    - Biology and chemistry alternate. Sophomores and juniors take chemistry together this year, biology next year.
    - Junior mathematics and senior physics alternate, the mathematics coming this year.
    - Bookkeeping and commercial law alternate with economic courses. Both will be offered this year.
    - Junior and senior Latin alternate; Virgil this year.
    - English and American literature alternate in junior years.
- The superintendent will be in his office from 3 to 4 o'clock each afternoon of the first two weeks, to meet those who have school interests to consider.



## DAILY PROGRAM—OURAY COUNTY HIGH SCHOOL

Time	Mr. Keplinger	Mr. Gold	Mrs. Morrison	Miss Book
9:00	General Exercises...	General Exercises....	General Exercises....	Gen. Exercises
9:15	Geometry II.....	Economics.....	English I.....	.....
10:00	Geometry III.....	.....	Med. & Mod. History	German IV
10:45	Algebra I.....	Stenography.....	Assembly Room....	Latin IV
11:50	.....	Com'l Geography...	Civics.....	Ancient Hist.
1:30	Agriculture.....	Typewriting.....	English III.....	Latin II
2:15	.....	Bookkeeping.....	English II.....	German III
3:00	Chemistry.....	Bookkeeping.....	Assembly Room....	Latin I

The above is the program in use the second semester. The first semester program has: Commercial Law in place of Civics; Physical Geography in place of Agriculture; United States History in place of Civics. In place of Geometry III (Solid Geometry) we had a class completing Plane Geometry.

## COURSE OF STUDY—LOVELAND HIGH SCHOOL

## College Preparatory Course

## NINTH GRADE

*English .....	5
*Algebra .....	5
*Latin .....	5
*Ancient History .....	4
*Manual Training .....	1
or	
Domestic Science .....	1

## TENTH GRADE

*English .....	5
*Algebra ( $\frac{1}{2}$ year).....	4
*Latin .....	5
Mediaeval and Modern History...	5
Biology .....	5
*Manual Training .....	1
or	
Domestic Science .....	1
Commercial Arithmetic ( $\frac{1}{2}$ year)...	5
*Rhetoricals .....	

## ELEVENTH GRADE

*English .....	5
*Plane Geometry .....	5
*Latin or German.....	5
English History .....	5
Biology .....	5
Physics .....	5
*Rhetoricals .....	

## TWELFTH GRADE

*English .....	5
*Latin or German.....	5
Chemistry .....	5
Solid Geometry ( $\frac{1}{2}$ year).....	5
Trigonometry ( $\frac{1}{2}$ year).....	5
American History ( $\frac{1}{2}$ year).....	5
Civics ( $\frac{1}{2}$ year).....	5

## General Course

## NINTH GRADE

*English .....	5
*Algebra .....	5
*Physical Geography .....	5
*Ancient History .....	4
*Manual Training .....	1
or	
Domestic Science .....	1

## TENTH GRADE

*English .....	5
*Algebra ( $\frac{1}{2}$ year).....	4
Mediaeval and Modern History...	5
*Biology .....	5
*Manual Training .....	1
or	
Domestic Science .....	1
*Commercial Arithmetic ( $\frac{1}{2}$ year)...	5
*Rhetoricals .....	

## ELEVENTH GRADE

*English .....	5
Plane Geometry .....	5
German .....	5
English History .....	5
*Biology .....	5
or	
Physics .....	5
*Rhetoricals .....	

## TWELFTH GRADE

English .....	5
*American History ( $\frac{1}{2}$ year) .....	5
*Civics ( $\frac{1}{2}$ year) .....	5
Chemistry .....	5
Solid Geometry ( $\frac{1}{2}$ year) .....	5
Trigonometry ( $\frac{1}{2}$ year) .....	5
German .....	5

## Commercial Course

## NINTH GRADE

*English .....	5
*Algebra .....	5
*Physical Geography .....	5
*Ancient History .....	4
*Manual Training .....	1
or	
Domestic Science .....	1

## TENTH GRADE

*English .....	5
*Algebra ( $\frac{1}{2}$ year) .....	4
*Commercial Geography ( $\frac{1}{2}$ year) ..	5
Mediaeval and Modern History ..	5
Biology .....	5
*Manual Training .....	1
or	
Domestic Science .....	1
Commercial Arithmetic ( $\frac{1}{2}$ year) ..	5
*Penmanship ( $\frac{1}{2}$ year) .....	5
*Rhetoricals .....	

\* Indicates a required study.

## ELEVENTH GRADE

*English .....	5
Plane Geometry .....	5
German .....	5
English History .....	5
*Biology .....	5
or	
Physics .....	5
*Bookkeeping ( $\frac{1}{2}$ year) .....	5
*Typewriting ( $\frac{1}{2}$ year) .....	5
*Rhetoricals .....	

## TWELFTH GRADE

*English .....	5
*American History ( $\frac{1}{2}$ year) .....	5
Chemistry .....	5
*Civics ( $\frac{1}{2}$ year) .....	5
*Stenography .....	5
*Typewriting ( $\frac{1}{2}$ year) .....	5
*Commercial Law .....	5

Glee Club, Art, Mechanical Drawing, and Penmanship classes will be arranged, for which appropriate credit will be given.

Most colleges do not give credit for Commercial Arithmetic, Penmanship, Bookkeeping, Typewriting, and Stenography.

Credit will be given for Literary Society Work and Rhetoricals where the work is satisfactory.

Physics, Chemistry, and Solid Geometry are required for engineering schools.

College-preparatory students must elect two years of History and two years of Science.



## COURSE OF STUDY—LAMAR UNION HIGH SCHOOL

## First Semester

## FRESHMAN—

Algebra 1.  
Rhetoric.  
Ancient History.  
Beginning Latin B.  
Physical Geography.  
Soils and Crops.  
Beginning Latin A.

## SOPHOMORE—

Plane Geometry.  
Advance Rhetoric.  
Mediaeval and Modern History.  
Cæsar B and A.  
Penmanship.  
Breeds and Types of Farm Animals.

## JUNIOR—

Algebra 3.  
English Literature.  
Physics.  
Cicero and Cæsar A.  
Beginning German.  
Dairy Cattle and Care.  
Shorthand.  
Typewriting.

## SENIOR—

English-American Literature.  
Chemistry.  
Virgil.  
German.  
Civics.  
Bookkeeping.  
Commercial Law.

## Second Semester

## FRESHMAN—

Algebra 2.  
Rhetoric.  
Ancient History.  
Beginning Latin A and B.  
Commercial Arithmetic.  
Feeds and Feeding.  
Etymology.

## SOPHOMORE—

Plane Geometry.  
Advance Rhetoric.  
Mediaeval and Modern History.  
Cæsar A and B.  
Business English.  
Breeds and Types of Farm Animals.

## JUNIOR—

Solid Geometry.  
English Literature.  
Physics.  
Cicero.  
Beginning German.  
General Farm Management.  
Shorthand.  
Typewriting.

## SENIOR—

American Literature.  
Chemistry.  
Virgil.  
German.  
American History.  
Bookkeeping.  
Psychology.

## Schedule—Second Semester

	Lewis	Odell	Chappell	Oxley
1	Junior Physics.....	Senior German.....	Sophomore English	Study
2	Physics, Laboratory.	Sophomore History..	Freshman English.	Etymology
3	Senior Chemistry....	Junior English.....	Freshman English.	Freshman Latin
4	Chemistry, Lab.....	Junior German.....	Study.....	Plane Geometry
5	Junior Physics.....	Sophomore History..	Study.....	Virgil
6	Freshman History...	Study.....	Senior English....	Caesar
7	Physics, Laboratory.	Public Speaking.....	Domestic Science..	Freshman Latin B

	Davis	Corning	Brown	Mottinger
1	Com'l Arithmetic....	Shorthand.....	Fresh. Agriculture.	.....
2	Freshman Algebra...	Bookkeeping.....	Soph. Agriculture..	Study
3	Sophomore English..	Typewriting.....	Junior Agriculture.	Study
4	Com'l Arithmetic....	Penmanship.....	Fresh. Agriculture.	Psychology
5	Freshman Algebra...	Typewriting.....	.....	Freshman History
6	Solid Geometry.....	Business English...	.....	Botany
7	Study.....	Practice.....	Manual Training..	American History

### Beginners' Program

1. Commercial Arithmetic, Freshman Agriculture.
2. Etymology.
- 3.
4. Commercial Arithmetic, Freshman Agriculture, Penmanship.
- 5.
- 6.
7. Freshman Latin B, Botany.

## COURSE OF STUDY—LITTLETON HIGH SCHOOL

### College Preparatory

#### FIRST YEAR—

English.  
Algebra.  
Ancient History.  
Latin or German.

#### SECOND YEAR—

English.  
Plane Geometry.  
Science, one-half; Physical Geography, one-half.  
Latin or German.

#### THIRD YEAR—

English.  
Solid Geometry, one-half; Algebra, one-half.  
Physics.  
Latin or German.

#### FOURTH YEAR—

English.  
Mediaeval and Modern History, English History and Civics, alternate years.  
Chemistry.  
Latin or German.

### Special Course, One Year

English.  
Commercial Arithmetic and Bookkeeping.

Commercial Geography and Industrial History.  
General Science and Physical Geography.

Sixteen units required for graduation.

The following are electives: Chemistry, Solid Geometry, Advanced Algebra, two years of language other than English, one of the Advanced History courses.



## DAILY PROGRAM—LITTLETON HIGH SCHOOL

Hour	Miss Thompson	Miss Duer	Miss Walker	Miss Clark	Mr. Raybourn
9:00- 9:45	Rest.....	Algebra 9.....	History 11 and 12....	Study Room....	
9:45-10:30	Study 4.....	German 9.....	Virgil .....	Rest.....	Gen. Science Phys. Geog.
10:30-11:15	English 10...	Rest.....	History 9...	Physics.....	
11:15-12:00	Study Room.	German 10....	Caesar.....	Laboratory.....	
12:00- 1:00	Noon.....				
1:00- 1:45	English 9.....	Solid Geometry..	Study Room	Eighth Grade..	
1:45- 2:30	English 11...	Plane Geometry.	Latin 9.....	Com'l Arith., Bookkeeping...	
2:30- 3:10	English 12...	Study Room....	Rest.....	Ind. Geography, Ind. History...	

## DAILY PROGRAM—GOLDEN HIGH SCHOOL

Hour	Miss Blake	Miss Graham	Mr. Fitch	Mr. Morse	Mr. Bortz	Miss Tobey
8:45- 9:30	English 9...	English 10.	Science 9.....	Math. 11..	Algebra 10.	Virgil
9:30-10:15	Latin 9.....	English 10.	Science 9.....	Geometry .	History 12.	Cicero
10:15-10:30	Recess.....	Recess ....	Recess.....	Recess.....	Recess.....	Recess
10:30-11:15	English 11..	Study Hall.	Science 10....	Bookkp'ng.	History 9..	
11:15-12:00	English 12..	German 9..	Science 10....	Arith. 11..	Study Hall.	
12:00- 1:15	Noon.....					
1:15- 1:30	Chapel Exercises and Music.					
1:30- 2:00	Study Period	and Music.	Mech. Drawing.	German 12.		
2:00- 2:45	English 9...	German 9..	Physics.....	Study Hall.	History 10.	
2:45- 3:30	Study Hall..	German 10.	Laboratory ...	Arith. 9...	Algebra 9..	Latin 10

## COURSE OF STUDY—SALIDA HIGH SCHOOL

## FIRST YEAR

Algebra .....	5
English .....	5
Physical Geography .....	5
*Latin .....	5
*Manual Training (boys).....	4
*Domestic Science (girls).....	4
Music .....	1
Drawing .....	1

## SECOND YEAR

Plane Geometry .....	5
English .....	5
Ancient History .....	5
*Biology .....	5
*Latin .....	5

*Manual Training (boys).....	2
*Domestic Science (girls).....	4
Drawing .....	1
Music .....	1

## THIRD YEAR

*German .....	5
Algebra .....	2½
*Solid Geometry.....	2½
Mediaeval and Modern History.	5
Chemistry .....	5
*Latin .....	5
Music .....	1
*Drawing .....	1
*Manual Training (boys).....	2
*Domestic Science (girls).....	2

## FOURTH YEAR

*German .....	5	*Elements of Sanitation.....	2
Physics .....	5	*Manual Training (boys).....	2
*English History .....	2	*Domestic Science (girls).....	2
*American History .....	2	Music .....	1
*Latin .....	5	*Drawing .....	1
English .....	5		

\*Indicates electives.

Manual-training pupils take Mechanical Drawing as part of their course.

The girls take Household Chemistry during the second half of their year in Chemistry.

Two years of Science required.

Students should choose those studies required for entrance to schools they are planning to enter.

## PROGRAM—SALIDA HIGH SCHOOL

Period	Time	Gillpatrick	Pearsall	Montgomery	Ladwig
1	9:15- 9:55	English 10....	History 10.....	German 11.....	Dom. Science 9
2	9:55-10:35	English 10....	History 10.....	Assembly.....	Dom. Science 9
3	10:35-11:15	Assembly.....	Eng. History 11..	Latin 11-12....	.....
4	11:15-11:55	English 11....	History 9.....	Latin 9.....	.....
5	1:30- 2:10	Assembly.....	Algebra 11.....	German 12.....	Dom. Sci. 10
6	2:10- 2:50	Theme.....	.....	Latin 9.....	Dom. Sci. 10
7	2:50- 3:30	English 12....	English 9.....	Latin 10.....	.....

Per.	Time	McPherson	Wadell	McDonald	Bernard	Tanton
1	9:15- 9:55	Music, T. Th. 9:00-9:15 Draw. 9 Fri.	.....	Physics 12.....	Man. Tr. 9..	Assembly
2	9:55-10:35	.....	.....	Phys. Lab..... 12:00 M. T.	Man. Tr. 9..	Psychology
3	10:35-11:15	.....	Algebra 9.	Phys. Geography 9.	.....	Pl. Geom. 10
4	11:15-11:55	.....	Assembly.	Phys. Geography, Lab. Th. F.....	.....	Pl. Geom. 10
5	1:30- 2:10	Draw. 10 F....	Algebra 9.	Biology 10.....	Man. Tr. 10.	Algebra 9
6	2:10- 2:50	.....	English 9.	Biology, Lab. M. T. & Chem. Lab. Th. F.....	Man. Tr. 10.	Assembly
7	.....	.....	English 9.	Chemistry 11.....	.....	Assembly



## COURSE OF STUDY—FORT LUPTON CONSOLIDATED HIGH SCHOOL

## First Semester

## FIRST YEAR—

## Required:

English.

Algebra.

Latin.

Ancient History.

## SECOND YEAR—

## Required:

English.

Geometry.

Cæsar.

## Electives:

German.

\*Botany.

## THIRD YEAR—

## Required:

English.

Physics.

## Electives:

Zoology.

Agriculture.

\*Commercial Arithmetic.

## FOURTH YEAR—

## Required:

English.

Civics.

## Electives:

\*Chemistry.

\*Commercial Geography.

Political Economy.

## Second Semester

## FIRST YEAR—

## Required:

English.

Algebra.

Latin.

Ancient History.

## SECOND YEAR—

## Required:

English.

Geometry.

Cæsar.

## Electives:

German.

\*Botany.

## THIRD YEAR—

## Required:

English.

Physics.

## Electives:

Zoology.

Agriculture

\*Bookkeeping.

## FOURTH YEAR—

## Required:

English.

American History.

## Electives:

\*Chemistry.

\*Economics.

Psychology.

\* Indicates those chosen as electives.

## The English Course

Our English work was grouped somewhat as follows for 1913-14.

## FRESHMAN YEAR—

Composition and Rhetoric.

Classic studied in class: "Merchant of Venice."

Classics read outside of class and reported on: "Treasure Island,"  
"Oregon Trail."

\*Six weeks of review in grammar.

## SOPHOMORE YEAR—

Composition and Rhetoric.

Classic studied in class: "Silas Marner."

Classics read outside of class and reported on: "Treasure Island,"  
"Oregon Trail."

\*Six weeks of review in grammar.

## JUNIOR YEAR—

American Prose Writings.

Classic studied in class: Carlyle's "Essay on Burns."

Classics read outside of class and reported on: "Robinson Crusoe,"  
"Oregon Trail."

\*Six weeks of review in grammar.

## SENIOR YEAR—

English Literature.

Classic studied in class: Burke's "Speech on Conciliation."

Classics read outside of class and reported on: "Robinson Crusoe,"  
"Oregon Trail."

\*Six weeks of review in grammar.

\*The Grammar review was conducted in each class about as follows,  
with the work being made suitable for each year:

Two weeks on analysis and diagramming.

Two weeks on improprieties and synonyms.

Two weeks on practical letter-writing and composition forms.

NOTE.—With two teachers we managed the electives by giving what  
the majority wish to take. There are seniors, juniors, and sophomores  
in the Botany class.

We managed this program without any combination or alternation,  
except that the senior and junior English classes were combined in the  
Grammar review.

The following daily programs and courses of study are pub-  
lished to indicate the work that is being done in some of the repre-  
sentative high schools of Colorado:

## PROGRAM OF CLASS PERIODS

A	B	C
1. Woodwork 1, 2, 3	Agriculture 10, 11, 12	Household Arts 1, 20, 21
2. Drawing 7, 8, 9	Agriculture 4, 5, 6	Household Arts 2, 3, 4
3. ....	.....	Household Arts 22, 26, 27
4. ....	Agriculture 1, 2, 3	Household Arts 40, 30, 43
5. Carpentry 7, 8, 9	Gen. Science 1, 2, 3	Household Arts 6, 7, 8
6. Drawing 2, 11, 14	Agriculture 7, 8, 9	.....
7. ....	.....	.....



D	E	F
1. ....	Study Finance	Shorthand 1, 2, 3
2. ....	.....	.....
3. ....	Com. Law 1, 2, 3	Shorthand 4, 5, 6
4. Drawing 3, 11, 15	Penmanship I	.....
5. Drawing 1, 10, 13	Com. Arithmetic 1, 2, 3	.....
6. Design 16, 17, 18	Bookkeeping 1, 2, 3	.....
7. Hist. Music 13, 14, 15	.....	.....
G	H	I
1. Ind. History 10, 11, 12	German 10, 11, 12	Mod. History 4, 5, 6
2. ....	German 7, 8, 9	.....
3. Reading 1, 2, 3	German 4, 5, 6	Latin 4, 5, 6
4. ....	German 1, 2, 3	Ancient History 1, 2, 3
5. ....	.....	Latin 1, 2, 3
6. Economics 1, 2, 3	.....	.....
7. Civics 1, 2, 3	.....	American History 7, 8, 9
J	K	L
1. English 4, 5, 6	.....	.....
2. English 1, 2, 3	Mathematics 4, 5, 6	.....
3. English 7, 8, 9	.....	Mathematics 1, 2, 3
4. English 10, 11, 12	Chemistry 7, 8, 9	.....
5. ....	.....	.....
6. ....	.....	.....
7. ....	Mathematics 7, 8, 9	.....

## AGRICULTURAL COURSE

First Year	Second Year	Third Year	Fourth Year
English 1, 2, 3 Com. Arith., Math. Shop 1, 2, 3 Drawing 1, 10, 13 Agriculture 1, 2, 3	English 4, 5, 6 Science 1, 2, 3 Shop 10, 11, 12 Drawing 2, 11, 14 Agriculture 4, 5, 6	*English 7, 9, 12 History 10, 11, 12 Civics 1, 2, 3  Agriculture 7, 8, 9	Reading 1, 2, 3 Economics 1, 2, 3 Shop 7, 8, 9 Drawing 7, 8, 9 Agri. 10, 11, 12 History 7, 8, 9 Com. Law 1, 2, 3

\*In third year, Reading may be substituted for English.

## COLLEGE PREPARATORY—LANGUAGE COURSE

First Year	Second Year	Third Year	Fourth Year
German English Algebra  Household Arts	German English General Science Geometry Ancient History Drawing	German English Latin  History	German Reading, English Latin  Chemistry

## COLLEGE PREPARATORY—SCIENTIFIC COURSE

First Year	Second Year	Third Year	Fourth Year
English Mathematics Shop Drawing Civics	English Mathematics Shop Drawing Science	Mathematics Physics Ind. History German	English Chemistry History German

## COLLEGE PREPARATORY—TECHNICAL COURSE

First Year	Second Year	Third Year	Fourth Year
English 1, 2, 3 Algebra 1, 2, 3 Shop 1, 2, 3 Drawing 1, 10, 13 German 1, 2, 3	English 4, 5, 6 Geometry 5, 6, 7 Shop 4, 10, 11 Drawing 2, 11, 14 German 4, 5, 6	Mathematics 4, 8 Physics 4, 5, 6 Shop 5, 6, 13 Drawing 4, 5, 6 Ind. History 10, 11, 12	English 7, 8, 12 Chemistry 7, 8, 9 Shop 7, 8, 9 Drawing 7, 8, 9 History 7, 8, 9

## COMMERCIAL COURSE

First Year	Second Year	Third Year	Fourth Year
English Com. Arithmetic Household Arts or Shop Drawing Penmanship Com'l Geography	English Gen. Science Household Arts or Shop Drawing Finance	English Ind. History Shorthand or Bookkeeping Typewriting	History Com. Law Shorthand or Bookkeeping Typewriting Economics

## HOUSEHOLD ARTS COURSE

First Year	Second Year	Third Year	Fourth Year
English Mathematics Drawing 3, 10, 13 Civics Household Arts	English General Science Drawing 16, 17, 18 Household Arts Household Arts	*English Science History Household Arts	History Economics Household Arts Household Arts

\*Reading required in place of third credit in English.

## TECHNICAL COURSE—NOT FOR COLLEGE ENTRANCE

First Year	Second Year	Third Year	Fourth Year
English 1, 2, 3 Algebra 1, 2, 3 Shop 1, 2, 3 Drawing 1, 10, 13 Bookkeeping 1, 2, 3	English 4, 5, 6 Geometry 5, 6, 7 Shop 4, 10, 11 Drawing 2, 11, 14 Civics 1, 2, 3	Ind. History 10, 11, 12 Physics 4, 5, 6 Shop 5, 6, 13 Drawing 4, 5, 6 English 7, 8, 12	Vocational Chemistry 7, 8, 9 Shop 7, 8, 9 Drawing 7, 8, 9 Economics 1, 2, 3

## FRESHMAN YEAR

College Preparatory	Commercial Course	Agricultural Course	Normal Course
English 1 Algebra 1 Latin 1 or German 1 Physical Geography $\frac{1}{2}$ Botany $\frac{1}{2}$ Manual Training 1	Same, except Commercial Geography is given for Physical Geography	Same, except Botany, which is made to fit Agriculture	Same as College Preparatory



## SOPHOMORE YEAR

College Preparatory	Commercial Course	Agricultural Course	Normal Course
English 1 Plane Geometry 1 Caesar 1, German 1 General History 1 Manual Training 1	Same as College Preparatory, except that English is only required subject Shorthand Typewriting	See Bulletin	Same as College Preparatory

## JUNIOR YEAR

College Preparatory	Commercial Course	Agricultural Course	Normal Course
English 1 Adv. Algebra $\frac{1}{2}$ or 1 Solid Geometry $\frac{1}{2}$ Cicero 1 German 1 Physics 1	Bookkeeping 1 Business Arithmetic 1 Shorthand Typewriting Com. Law $\frac{1}{2}$ Civics $\frac{1}{2}$	See Bulletin	Same as College Preparatory

## SENIOR YEAR

College Preparatory	Commercial Course	Agricultural Course	Normal Course
English 1 Vergil 1, German 1 Chemistry 1 Electives 1 American History 1 Household Arts 1 Cooking 1	Business Penmanship 1 Typewriting 1 Shorthand 1 Economics $\frac{1}{2}$ English 1	See Bulletin	Reviews 1 Psychology $\frac{1}{2}$ Methods $\frac{1}{2}$ Agriculture 1 Electives 1 from other courses

1=2 Semesters.

 $\frac{1}{2}$ =1 Semester.

Students in college preparatory and normal course must fulfill college-entrance requirements. Students in commercial course work for proficiency only. They complete when proficient enough.

## TEACHERS' READING CIRCLE—1914-1915

### COLORADO READING CIRCLE

Organized under the Direction of the State Teachers' Association

#### MEMBERS OF BOARD

MARY C. C. BRADFORD, CHAIRMAN  
State Capitol Building, Denver

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CATHERINE D. A. MCCHESENEY  
Maria Mitchell School, Denver

The Teachers' Reading Circle is a permanent part of the state school system. It is performing a work of its own, and every progressive teacher should read the books adopted. In order to improve, we must read with a definite purpose in view, and by reading the books of the Reading Circle teachers will not only improve, but they will increase their professional interest and enthusiasm.

The Reading Circle Board appeals to the county and city superintendents and principals, and to the teachers generally, to unite in furthering this means of growth and improvement.

An outline will be furnished each member of the Reading Circle by the state superintendent. County superintendents shall award the certificates of reading to all members of the circle who return satisfactory answers to the questions issued on each book.

The board would suggest that the county superintendents make the reading of these books a part of the professional work required for the renewal of teachers' certificates.

#### COUNTY SUPERINTENDENTS' CO-OPERATION

We here express our sincere appreciation of the co-operation and support that has been shown the Reading Circle work by the county superintendents. We solicit a continuance of your kindness, because the books offered are just such books as you should be pleased to urge your teachers to read.



We hope you will take time at your institute to explain this work and to urge your teachers to buy the books.

### TEACHERS' READING CIRCLE BOOKS—1914-1915

The Training of Children, Dinsmore.

Teaching the Common Branches, Charters.

Play and Recreation, Curtis.

Method and Methods in the Teaching of English, Goldwasser.

These books are subject to yearly change.

#### FOR ADDITIONAL READING

Social Adjustment, Nearing.....	\$1.50
The Century of the Child, Key.....	1.50
The Theory of Social Revolutions, Adams.....	1.25
Immigration, Fairchild.....	1.75
Violence and the Labor Movement, Hunter.....	1.50

#### SUGGESTIVE LIST FOR DIRECTORS

Rural Life and Education, Cubberly.....	\$1.50
Joe, the Book Farmer, Harris.....	1.00
Better Rural Schools, Betts and Hall's.....	1.25

#### SUGGESTIVE LIST FOR ADULTS

Inside the Cup, Churchill.....	\$1.50
Crowds, Lee.....	1.35
The Harvester, Porter.....	.50
The Eyes of the World, Wright.....	1.35
Clark's Field, Herrick.....	1.40
Pollyanna, Porter.....	1.25
The Clarion, Adams.....	1.35
The Witch, Johnston.....	1.35

#### THE COLORADO SCHOOL JOURNAL

*The Colorado School Journal* for a number of years has given space to the Teachers' Reading Circle.

The board desires here to recognize the courtesy thus extended and to announce that, in view of the fact that the same kind offer has been made for the future, the articles on Reading Circle work will continue. These articles are helpful to the many patrons of the *Journal* and the Reading Circle.

#### PUPILS' READING CIRCLE BOOKS

Among the books selected for the Pupils' Reading Circle many old favorites will be found, with some valuable additions. These books have been carefully selected, with the hope that school directors may purchase them and add them to the libraries of

our schools. We also give a suggested library list, which we recommend.

#### INFORMATION ABOUT THE READING CIRCLE

For circulars, and for further information in regard to the Reading Circle and its work, address

STATE SUPERINTENDENT OF PUBLIC INSTRUCTION,  
DENVER, COLORADO.

#### TRAVELING LIBRARIES

The Colorado Traveling Library Commission will provide books for the free use of small libraries, shipped in strong, wooden case, the only expense to the school district being the payment of the necessary freight or express charges. Teachers or school officers, desiring to secure the use of one of these traveling libraries, should address the

SECRETARY OF THE COLORADO TRAVELING LIBRARY COMMISSION,  
STATE CAPITOL,

DENVER, COLORADO.



## SCHOOL LIBRARIES

This course of study should be supplemented by good dictionaries and other reference-books.

The extent of the equipment depends upon the size of the school and nationality of the pupils, as well as upon the funds available for the purpose.

A good reference library may be started at small expense, as publishers make a special rate for school libraries, and the books to be obtained are reliable and attractive.

Publications of the United States government can be obtained free of charge through our representatives at Washington. Pamphlets issued by the bureaus of the United States Department of Agriculture may be obtained free of charge by application to the bureau issuing them.

Many railroads and steamship companies, as well as the various chambers of commerce, distribute illustrated advertising literature, to be obtained for the asking, that is of great value in geography classes. Some of the information contained in this advertising matter is difficult to find elsewhere. To begin one of these valuable collections, consult the advertisements of the various railroads and steamship lines, and write to the chambers of commerce of different towns and cities.

State publications may be obtained on application.

A list of carefully selected books is given, so that teachers and directors may be aided in making a choice of books for their libraries. If no library exists in your school, establish one this year, and thus enroll among the progressive schools which seek to enlarge their opportunities.

## PUPILS' READING CIRCLE BOOKS—1912-1913

PRICES F. O. B. DENVER

### FIRST GROUP

#### First and Second Grades

Rhymes and Stories, M. F. Lansing (Ginn & Co.).....	\$0.32
The Bender Primer, Ida C. Bender (Charles E. Merrill & Co.).....	.27
Hero Folk of Ancient Britain, Sara E. Wiltse (Ginn & Co.).....	.41
Somebody's Little Girl, Martha Young (Hinds, Noble & Eldredge)...	.50

\$1.50

### SECOND GROUP

#### Third and Fourth Grades

Children of the Cliff, Wiley & Edick (D. Appleton & Co.).....	\$0.27
Robinson Crusoe, retold, James Baldwin (American Book Company)...	.32
The Jungle Book, Rudyard Kipling (The Century Co.).....	1.12
Old Stories of the East, James Baldwin (American Book Company)...	.41

\$2.12

### THIRD GROUP

#### Fifth and Sixth Grades

Heroes and Greathearts, John T. Dale (D. C. Heath & Co.).....	\$0.54
Tales of Shakespeare, Charles and Mary Lamb (Ginn & Co.).....	.36
Tan and Teckle, Charles Lee Bryson (Fleming H. Revell).....	.68
Stories of Brave Dogs, edited by M. H. Carter (The Century Com- pany) .....	.58
Cave, Mound and Lake Dwellers, Florence Holbrook (D. C. Heath & Co.).....	.36

\$2.52

### FOURTH GROUP

#### Seventh and Eighth Grades

The Perfect Tribute, Mary Shipman Andrews (Charles Scribner's Sons).....	\$0.45
Abraham Lincoln, James Baldwin (American Book Company).....	.54
A Dickens Reader, Ella M. Powers (Houghton, Mifflin & Co.).....	.36
Pathbreakers from River to Ocean, Grace Raymond Hebbard (River- side Press).....	.68
The Quest of the Four-Leaved Clover, Walter Taylor Field (Ginn & Co.).....	.36
Jacqueline of the Carrier Pigeons, Augusta H. Seaman (Sturgis & Walton).....	.77
Arabian Nights, M. Clark (American Book Company).....	.41
Source Reader No. 3, A. B. Hart (The Macmillan Company).....	.54

\$4.11



## PUPILS' READING CIRCLE BOOKS—1913-1914

## SECOND GROUP

## Third and Fourth Grades

Umé San in Japan, McDonald & Dalrymple (Little, Brown & Co.)	....\$0.60
Nature Stories, Gardner (Macmillan Company)	..... .40
Stories Grandmother Told, Oswell (Macmillan Company)	..... .40
Mighty Animals, Mix (American Book Company)	..... .40

## THIRD GROUP

## Fifth and Sixth Grades

Pilgrim Stories, Margaret B. Pumphrey (Rand, McNally & Co.)	.....\$0.45
Grayfriars' Bobby, Eleanor Atkinson (Harper & Brothers)	..... 1.20
King of the Golden River, Ruskin (Crowell)	..... .30
In Field and Pasture, Dutton (American Book Company)	..... .35
Lolami, the Little Cliff Dweller, Bayliss (School Publishing Company)	..... .45
Mighty Animals, Mix (American Book Company)	..... .40

## FOURTH GROUP

## Seventh and Eighth Grades

Little Jarvis, Seawell (D. Appleton & Co.)	.....\$1.00
Polly Oliver's Problem, Wiggin (Houghton, Mifflin & Co.)	..... .60
Lincoln, Mace (Rand, McNally & Co.)	..... .35
Seth of Colorado, Otis (American Book Company)	..... .35
Cadet Days, King (Harper & Brothers)	..... 1.25
European Beginnings of American History, Atkinson (Ginn & Co.)	... 1.00

## LIBRARY LIST

## FIRST GROUP

## First and Second Grades

Child's Garden of Verse, Robert Louis Stevenson (A. Flanagan & Co.)	..\$0.36
Sixteen Stories, Samuel Allison (A. Flanagan & Co.)	..... .22
Playtime, Clara Murray (Little, Brown & Co.)	..... .45
Fairy Stories, Hans Christian Andersen (The Macmillan Company)	.. .27
Reynard the Fox, E. Louis Smythe (American Book Company)	..... .27

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 \$1.57

## SECOND GROUP

## Third and Fourth Grades

Woodsey Neighbors of Tan and Teckle, Charles Lee Bryson (Fleming H. Revell)	.....\$0.68
Favorite Greek Myths, Lillian S. Hyde (D. C. Heath & Co.)	..... .45
Adventures of Pinocchio, C. Collodi (Ginn & Co.)	..... .36
Fifty Famous Stories Retold, James Baldwin (American Book Company)	..... .32
Æsop's Fables, J. H. Stickney (Ginn & Co.)	..... .32
Alice's Adventures in Wonderland, Lewis Carrol (The Macmillan Company)	..... .23

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 \$2.36

## THIRD GROUP

## Fifth and Sixth Grades

The Trail to the Woods, Clarence Hawkes (American Book Company).....	\$0.36
The Song of Roland, John H. Cox (Little, Brown & Co.).....	1.05
The Prince and the Pauper, Mark Twain (Harper & Brothers).....	1.30
Uncle Remus, His Songs and Sayings, Joel Chandler Harris (D. Appleton & Co.).....	1.40
The Flag Raising and Other Stories, Kate Douglas Wiggin (Houghton, Mifflin & Co.).....	.23
Robinson Crusoe, Daniel Defoe, edited by Mary Godolphin (Educational Publishing Company).....	.36
The Wonder Book or Tanglewood Tales, Nathaniel Hawthorne (The Macmillan Company).....	.23
Gulliver's Travels (two voyages only), Jonathan Swift (D. C. Heath & Co.).....	.27
Indian Folk Tales, M. F. Nixon-Roulett (American Book Company)...	.36

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 \$5.56

## FOURTH GROUP

## Seventh and Eighth Grades

The Making of Colorado, Eugene C. Parsons (A. Flanagan & Co.)....	\$0.59
Stories from English History, H. P. Warren (D. C. Heath & Co.).....	.59
Heroes of Everyday Life, Fannie Coe (Ginn & Co.).....	.36
Stories of the Thirteen Colonies, H. A. Guerber (American Book Company).....	.59
Literary Readings, Charles Madison Curry (Rand, McNally & Co.)..	.68
Autobiography, Benjamin Franklin (Houghton, Mifflin & Co.).....	.36
Treasure Island, Robert Louis Stevenson (The Macmillan Company)..	.23
An Old Fashioned Girl, Louisa M. Alcott (Little, Brown & Co.).....	1.05
Rocky Mountain Wild Flower Studies, B. O. Longyear (Herrick Book and Stationery Company).....	.68
On the Trail of Grant and Lee, Frederick Hill (D. Appleton & Co.)..	1.35
David Copperfield, Charles Dickens (A. L. Burt & Co.).....	.45

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 \$6.93

## PUPILS' READING CIRCLE BOOKS—1914-1915

## FIRST GROUP

## First and Second Grades

Tommy Tinker's Book, Blaisdell (Little, Brown & Co.).....	\$0.60
Mother Goose (A. L. Burt & Co.).....	.35
In Those Days, Hallock (Macmillan Company).....	.40
A Fairy Book, Oswald (Macmillan Company).....	.40
Umé San in Japan, McDonald & Dalrymple (Little, Brown & Co.)....	.60



## SECOND GROUP

## Third and Fourth Grades

Japanese Fairy Tales, Williston (Rand, McNally & Co.).....	\$ .50
Nature Stories, Gardner (Macmillan Company).....	.40
Pilgrim Stories, Pumphrey (Rand, McNally & Co.).....	.45
Beautiful Joe, Marshall Saunders (American Baptist Publishing Society) .....	.25
Lolami, the Little Cliff Dweller, Bayliss (Public School Publishing Company).....	.45

## THIRD GROUP

## Fifth and Sixth Grades

Grayfriars' Bobby, Eleanor Atkinson (Harper & Brothers).....	\$1.20
King of the Golden River, Ruskin (T. Y. Crowell & Co.).....	.30
Boy and Girl Heroes, Farmer (Macmillan Company).....	.40
King Arthur and His Knights, Pyle (Charles Scribner's Sons).....	2.00
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## BOYS' AND GIRLS' CLUBS

### ORGANIZATION

The organization of boys' and girls' clubs is simple. It is as follows:

#### SCHOOL DISTRICT CLUBS

The teacher is the manager of the club.

The officers are generally a president, vice-president and secretary.

The club should be a joint club of boys and girls together, generally known as The School Improvement Club.

The object of a club is to stimulate an interest in some particular line of work pertaining to the home and school life of the pupils.

A boys' club is generally an experiment club for work in some particular line in agriculture or manual training. A girls' club is usually a home culture club organized for some special line of work in domestic art, such as cooking, sewing or flower culture.

The names and addresses of the club members should be sent by the teacher to the county superintendent, and he should be informed of the nature of the work in which members are interested.

The work of the club is done largely at home, out of school hours, and during the summer vacation.

The time and character of the meetings, programs and exhibits of work done should be arranged by the teacher according to the nature of the work undertaken.

#### COUNTY ORGANIZATION

The county superintendent is the manager.

The clubs are generally known as Boys' Experiment Clubs, and Girls' Home Culture Clubs or Domestic Science Clubs.

A county meeting for organization is generally held to which teachers are asked to send elected delegates from their respective districts.

Officers are elected as in the district clubs.

The work taken up depends upon the agricultural and home interests of the county.

#### STATE ORGANIZATION

The state superintendent is manager of the state organization.

The officers are elected as in the county and district clubs.

The state manager works largely through the county managers. Full particulars are given on application to the state superintendent.

## FLAG RITUAL

PREPARED BY DR. JOHN GRASSE

The following patriotic service is to be committed to memory and used upon all patriotic anniversaries and occasions by the elementary and high schools. The extent and frequency of its use in the elementary grades will be determined by the principal.

First—Color-bearer enters room carrying the flag. The pupils all rise to their feet and remain standing until the flag leaves the room.

(It is suggested that as much form as possible be given to the matter of bringing the flag into the room and taking it out again. It is more impressive to have a color guard, properly drilled, accompany the color-bearer, and all enter the room to the tap of a drum or the music of a piano. If there is a drummer or a trumpeter among the pupils, the assembly may be sounded in the hall before the exercises begin. One color guard can be used to do the work for all the grammar- or high-school grades in the building.)

Second—Salute the flag: "We give our hands, our heads, and our hearts, to our country and to our flag."

(At the command "Salute the flag," the regular army flag salute is given by raising the right hand briskly to the forehead above the right eye, and then bringing the arm to the side.)

Third—Questions and Answers.

Q.: Why do we salute the flag?

A.: Because we desire to honor it.

Q.: Why do we honor it?

A.: Because it stands for liberty, justice and equal opportunities for all those who live under its folds.

Q.: How can we best show our devotion to the flag?

A.: By becoming law-abiding and honest citizens of our country.

Q.: Who are the enemies to our flag?

A.: Every person who strikes at our flag by force of arms or by breaking the laws that have been made to preserve our liberties. Those who violate a public trust are even more dangerous enemies than those who openly fire upon our flag.







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