DEPARTMENT OF EDUCATION

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Programme of Studies

for the

Elementary Schools

of

British Columbia

1926-1927

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TABLE OF CONTENTS.

1. Programme of Studies prescribed for Elementary Schools— PAGE.
   - Grade I 5
   - Grade II 17
   - Grade III 25
   - Grade IV 34
   - Grade V 42
   - Grade VI 55
   - Grade VII 67
   - Grade VIII 76
2. Needlework Course 89
3. List of Authorized Text-books for Elementary Schools 90
4. Manual Training 94
5. Domestic Science 96
6. Nature Study Course in Foods 99
7. Examination and Promotion of Pupils 103
8. Correspondence Course for Pupils in Isolated Districts 103

PROGRAMME OF STUDIES.

ELEMENTARY SCHOOLS.

NOTE.—The work prescribed for elementary schools is divided into eight grades, each of which will, as a rule, occupy one year of a pupil's time. The brighter pupils will be able and should be given an opportunity to complete the course in six or seven years. They should be transferred to a higher grade whenever their individual interests require it without regard to the reorganization of classes which is held regularly at the close of each term.

GRADE I.

1. Language.

Effective training in this subject should enable the children to gain suchs control of oral and written language that they may use both as a means of communicating and acquiring ideas.

Language and manual activities are closely related. The teacher should select material from this course to meet the needs of her class. She should provide the type of work most likely to develop initiative in the children and should create situations that will stimulate oral expression. The child's education should begin with a study of his interests and activities. Many problems arising from these activities may be solved through projects affording opportunity for representative play.

In language-training in the primary grades full and intelligent use should be made of the project method and the socialized recitation in order that the school-work may be motivated, that initiative in children may be developed, and that there may be training in free oral expression. Each child is expected to participate in representative and dramatic play. By the end of the term he should have made some gain in his power of oral expression and should have completed at least two project books.

PROJECT-WORK AND CONVERSATIONAL LESSONS.—The following topics are suggested as the type of material to be used for project-work and conversational lessons:—

(*a.*) *Home Life.*—The family; pets and toys; helping father and mother; taking care of baby; keeping clean; work in the garden.

(*b.*) *Farm Life.*—Animals and poultry; making butter; ploughing, planting, and harvesting; taking produce to market or store. The teacher should show pictures of various farm activities, such as ploughing, making hay, picking apples, feeding the chickens. Children will be interested in making a scrap-book of pictures relating to farm life. A farm project may be worked out on the sand-table or the children may play store. They may make butter and flour for their store and may collect peas, beans, candy-eggs, and fruits and vegetables. They may also make cardboard boxes for holding supplies, market-baskets, and delivery-wagons.

The home table as supplied from garden, farm, and store.

(*c.*) *Health Talks.*—Illustrative charts may be made of magazine pictures advertising dental cream, toilet-soap, bath-room furnishings, etc. Correlate with reading.

(*d.*) *Our School.*—Lessons and games; courtesy; co-operation.

(*e.*) *Our Flag.*

(*f.*) *Story-telling, Story-playing, Story Reproduction.*—Cultivate the æsthetic sense by means of nursery rhymes, folk-lore, fairy-tales, and poems. (Omit such stories as "Bluebeard" and "Babes in the Wood.") Intense interest in stories may be secured by dramatization. The children should be allowed to select the characters and to arrange the setting when possible. Dramatization should precede reproduction.

(*g.*) *Other Types of Stories.*—Tales of Primitive Life—Tree-Dwellers, Cave-Men, Early Sea People, Eskimos, Indians, Child Life in Many Lands, Bible Stories, Poems, Nature Stories, Stories and Poems Relating to Child Life, Nonsense Stories.

Study of good pictures, including those used in text-books and for school-room decoration.

Correction of errors of speech.

ORAL AND WRITTEN WORK (FIRST TERM).—Memorization of one poem in addition to nursery rhymes in the reader; name of school, city, and days of the week; complete answers to questions; children should write their Christian name, the pronoun "I"; copy descriptive phrases and write easy phonic words on the blackboard from dictation.

ORAL WORK (SECOND TERM).—Recitation of two poems; reproduction of two or three paragraphs in a simple story; description of a common object in two or three sentences.

WRITTEN WORK (SECOND TERM).—Pupil's full name and name of school; spelling and dictation as prescribed; words, phrases, and short sentences to accompany illustrations upon language or reading lessons on the blackboard or on paper.

READING.—Thought-getting should be emphasized from the beginning. The teacher should also aim to give the children a mastery of the mechanics of reading and to develop in them an appreciation of good literature. As many of the children have little opportunity for hearing correct speech outside the class-room, it is highly important that careful attention be given to clearness of articulation and enunciation.

The teacher should try to create in every child a genuine love of reading. Difficulties with word-recognition begin to disappear as children learn to read for the sake of the story. Appreciation of the reading lessons may be developed through free illustration, action, pantomime, dialogue, and dramatization. The rate of reading may be increased by giving children access to a large variety of easy reading material. For word and phrase drill the use of flash-cards, which can be easily made by the teacher from heavy paper or light cardboard, will be found particularly effective. Considerable rapid blackboard drill upon short sentences is also essential for the development of speed. Habits of pointing, word-calling, and lip-moving should not be formed as they tend to retard the rate.

For action-work the Short Exposure Phrase Cards (*see* Bibliography) are very useful.

BLACKBOARD-READING.—Exercises in group composition upon stories, health and nature topics, school experiences, and home and farm life should frequently be used as the basis of chart or blackboard lessons. Poems and short stories for reproduction may also be read from the blackboard. Children will enjoy searching the magazines for material to illustrate these lessons.

ORAL READING.—In oral work the child should read for the purpose of sharing with others his pleasure in the story. The best pupils in a group require much less practice in oral reading than the slow pupils. They should be kept well supplied with material for silent reading.

SILENT READING.—This will include action-work, incidental reading, and study of the reading lesson.

The children should be trained to read for thought and the teacher should seize every opportunity for providing this type of reading for her class. The following devices are suggested for the purpose:—

(1.) Children find questions upon the blackboard when they arrive in the morning. "Did you sleep with your window open?" "What did Jack Frost do last night?"

(2.) Items of special interest are found upon the bulletin board: Notice of holiday, meeting in the assembly-room, folk-dancing.

(3.) Certain duties are assigned: Study your spelling lesson. James may clean the blackboard.

(4.) Directions for dramatization, drawing, or construction-work may be written on the board (*see* First Journeys and Twentieth Yearbook on Silent Reading).

(5.) Desks, hooks, and boxes are labelled with the child's name. Various objects in the school-room are also labelled. Children are encouraged to read labels on articles at home, also signs and advertisements in store windows, on buildings, and in magazines and newspapers.

(6.) Children arrange descriptive phrases or sentences beneath their own illustrations or those cut from old readers or magazines.

(7.) The teacher asks questions that bring out the main thought of the reading lesson. Questions may be written on the board to assist the children in studying the lesson. They may be asked to write the names of the characters or the places mentioned in the story and to illustrate them.

(8.) Cards containing questions to be read silently and answered aloud may be prepared by the teacher.

Specific exercises to increase rate and comprehension in silent reading should be in accordance with the technique illustrated in any modern Silent Reader.

Children should attach meaning to printed words in the first lessons. Begin the study of reading with action-words—come, go, run, jump, sit down, etc. Use games freely and try to socialize your work. Frequently, allow a child to lead the group. CHILD: "What can you do, Mary?" "I can jump." Mary jumps and afterwards points to the word she has acted. Other reading lessons grow out of conversations upon home or school experiences (*see* Language Outline). These stories should be printed upon charts or upon the blackboard and drills given upon the various word groups. The children will read the stories with greater interest if they are illustrated. Each child should make his own reading-book containing printed copies of the lessons and illustrations of imaginative drawings and free cuttings or suitable pictures cut from magazines. This method helps to establish a desirable attitude towards books. Three or four weeks will probably be sufficient for this kind of work. It may then be used as incidental reading during the remainder of the term. Drill-work with phonics and perceptive cards should be kept apart from the reading lessons. Train the children to apply their knowledge of phonics to the recognition of new words in the reading lessons as soon as possible. After the text-books are placed in the children's hands, a marker may be given them to aid them in finding and following the line.

PHONICS.—The study of phonics should enable the child to acquire the power of independent word-recognition and to develop habits of word production.

The initial blend method is recommended, although the family method may be employed to a certain extent. Drills upon meaningless phonograms—as pa, fa, ca—are very mechanical and are of little value unless final consonants are added to make complete words. New sounds are first obtained from familiar words through ear-training and phonic analysis. The new sound is then blended with known sounds, to form words. Words beyond the children's comprehension should not be studied.

In all phonic lessons emphasis should be placed upon correctness and distinctness of utterance. The teacher should also try to eliminate habitual mispronunciations, as lil for little; or for our; jist for just, etc. Many helpful suggestions for teaching this subject will be found in the chapter on phonics in "Teaching Children to Read" (Klapper).

PHONICS (FIRST TERM).—Consonants, except q, v, x, and z. Short and long vowels, phonograms that are commonly used—ee, oo, sh, th, ch, ar, or, ing, ea, oa, ai, ay, ow, wh. Words of three sounds, blending the vowel with the initial and final consonants. Words of four sounds containing a blend of two consonants either preceding or following the vowel—clap, frog, stain, sand, left, toast. Copying and spelling at blackboard of easy phonetic words of three or four letters.

The suggested order of teaching the vowels is as follows: a, o, u, i, e. The consonants, m, n, r, s, f, l, h, should be taught first as initial sounds, as they are more easily blended with the vowel than p, t, d, b, c, g, j, k. Many of the latter sounds should be used for the first time as finals.

The Receiving Class teacher may prepare her own word-lists from any modern phonic manual. Words should be presented in both written and printed forms, but it is advisable to use only one form—preferably script to correlate with writing—until the children have gained some skill in blending. Transition to print is a very simple matter and the children will sound printed words as easily as written ones after a few days' practice.

PHONICS (SECOND TERM).—Review of previous work. Consonants q, v, x, and z. New sounds—wa, ir, er, ur, oy, oi, aw, au, ew, ie, qu, ng, nk, c (soft), g (soft), a in all, a in care. Name of letters in phonograms.

Children are expected to sound for themselves unknown phonetic words within their comprehension as they find them in their reading lessons.

TEXT-BOOKS FOR GRADE I.

Authorized text:

The Canadian Readers, Book I. (NOTE.—The Manual of Method for Book I., Burnett (Macmillan & Co., Ltd., Toronto), will be found helpful.)

Supplementary Readers:

Everyday Classics Primer—Baker and Thorndyke (Macmillan Co., Toronto). Price, 65c.

Young and Field Primer and Book One (Ginn & Co., Boston).

Sunbonnet Babies' Primer (Gage & Co., Ltd., Toronto). Price, 80c.

Winston Primer (Gage & Co., Ltd., Toronto). Price, 60c.

Free and Treadwell Primer (Row, Peterson & Co., Chicago).

Story Hour Primer (American Book Co., Chicago).

Story Steps—Progressive Road Series (Gage & Co., Ltd., Toronto). Price, 70c.

Progressive Road to Reading, Book One (Gage & Co., Ltd., Toronto). Price, 60c.

Hiawatha Primer (Houghton, Mifflin & Co., Boston). Price, 85c.

Winston First Reader (Gage & Co., Ltd., Toronto). Price, 60c.

Cherry Tree Children—Blaisdell (Little, Brown & Co., Boston).

Work-a-Day Doings on the Farm (Silver, Burdett & Co.).

The Silent Reading Book, Book I.—Gertrude Jackson Wright (Nelson & Sons).

The Silent Reading Hour, First Reader—Busewell (Wheeler Publishing Co., Chicago).

Learn to Study Readers, Book I.—Horn and McBroom (Ginn & Co., New York).

The Silent Readers, First Reader—Lewis & Rowland (John C. Winston Co., Toronto).

Primer and First Reader—Bolenius (Houghton, Mifflin & Co., Boston).

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Teaching Children to Read—Klapper (D. Appleton & Co., New York).

Studies in Reading for First Grade (University Publishing Co., Chicago).

Twentieth Yearbook on Silent Reading (Public School Publishing Co., Bloomington, Ill.).

Silent Reading—O'Brien (Macmillan Co., New York). Price, $1.55.

Psychology and Pedagogy of Reading—Huey (Macmillan Co., New York). Price, $2.

Oral and Silent Reading—Stone (Houghton, Mifflin & Co., Boston).

The Teaching of Reading—Wheat (Ginn & Co., Boston).

Types of Elementary Teaching and Learning—Parker (Ginn & Co., Boston).

How to Tell Stories to the Children; Stories to Tell to the Children—Sara Cone Bryant (Houghton, Mifflin & Co., Boston).

Stories and Story Telling—Angela Keyes (D. Appleton & Co., New York).

Teaching Poetry in the Grades—Haliburton & Smith (Houghton, Mifflin & Co., Boston).

The Normal Child and Primary Education—Gesell (Ginn & Co., Boston).

Twentieth Year Book on New Materials of Instruction (Public School Publishing Co., Bloomington, Ill.).

Methods in Elementary English—Young & Memmott (D. Appleton & Co., New York).

How to Teach Silent Reading to Beginners—Watkins (J. B. Lippincott & Co., Philadelphia).

Projects in the Primary Grades—Krackowizer (J. B. Lippincott & Co., Philadelphia).

The Project Method of Teaching—Stevenson (Macmillan Co., New York). Price, $2.

Teaching by Projects—McMurry (Macmillan Co., New York). Price, $1.75.

Reading in the Primary Grades—Jenkins (Houghton, Mifflin & Co., Boston).

Short Exposure Phrase Cards for Increasing Rate and Comprehension in Silent Reading, Series A, B, C, D, and E (W. H. Wheeler Co., Chicago).

2. Writing.

During the first year the pupils should be taught correct habits of posture, pencil-holding, and movement, and the forms of all the small letters and figures and a few simple capitals. Letter and word formation must be taught from the blackboard before any attempt is made by the pupil to write with pencil. The lower part of the blackboard should be ruled with permanent lines, 2½ or 3 inches apart. By this means form, proportion, and slant are easily and quickly taught. Complete instructions for ruling blackboards are given in Chapter XI. of the MacLean Method Teachers' Complete Manual.

The first lessons should consist of instruction in position at the blackboard, motioning in the air, and "pretend" writing. This should be followed by lessons on chalk-holding and tracing of movement exercises—the direct and indirect ovals and "push-and-pull" movement drills.

The aim of these lessons is to interest the pupils in blackboard-writing and to develop rhythmic movement and muscular control.

Lessons should then be given at the blackboard on individual letters and words as shown in Compendium No. 1, MacLean Method of Writing. These lessons are fully outlined in the Teachers' Manual. Form, speed, and rhythm should be emphasized.

Seat-work during the first term should consist of profitable busy work of various kinds, but little, if any, pencil-writing should be done. The aim should be to develop correct writing habits. Pupils should be taught to sit in a healthful posture, to hold the pencil correctly, and to use a free, rhythmic, sliding-arm movement, with a minimum amount of separate finger motion.

During the second term, after letter formation, rhythmic movement, posture, and pencil-holding have been thoroughly taught, the pupils should write on pencil paper with large pencils, having a soft black lead, all the letter forms and words which they have previously written at the blackboard. The sliding-arm movement should be used. Pupils should not be allowed to form the habit of cramped finger movement writing. *Emphasis should be placed upon process rather than upon product.* All writing done by the pupils should be under the supervision of the teacher.

Compendium No. 1 of the MacLean Method of Muscular Movement Writing is to be used by the pupils. Teachers will use the MacLean Method Teachers' Manual as their guide.

3. Arithmetic.

Number facts in this grade should be taught orally and through concrete presentation. Materials such as the following should be used as aids: Pegs, nuts, beads, beans, clothes-pins, cubes, study-cards, paper rules of different lengths, perceptive cards; 1-cent piece, 5-cent and 10-cent pieces in real or toy money. All the problems should be related to the experiences and activities of the children. For example, suppose the pupils have 3 rows of flowers and 6 of vegetables in their school-garden,

they could find out: (*a*) How many rows there are in all; (*b*) how many more rows of vegetables than of flowers there are; (*c*) that there are twice as many rows of vegetables as of flowers; (*d*) that 3 rows taken twice make 6 rows; (*e*) that two 3's or three 2's make 6; and (*f*) that there are two 3's or three 2's in 6. "First Journeys in Numberland," which is recommended for the use of teachers, contains games for the motivation of number drills.

COUNTING.—Counting various objects in the class-room, also groups of objects, taps of a stick, strokes of the bell, steps taken in walking across the room; number of books, pencils, or papers required for children in the various rows of desks, etc. At the end of the year the pupils should be able to count to 100, to name the number following or preceding any number up to 100, to add and subtract 1 from any number up to 100 (oral), and to read the numbers on the pages of their readers.

GROUPING.—Giving the number of dots in a group and also the total number of dots in two groups—thus, ::, ∴, 4, 3, 7. Dividing a number of objects, up to at least 50, into groups of 10's, 5's, 2's, 4's, and 3's, and counting the number of groups.

Study of the numbers 1 to at least 10 (25 or more combinations).

When teaching pupils to read and write numbers, associate the number picture, the symbol, and the written name—thus, :::, 6, six.

The first 25 sets, at least, of the combinations and their separations should be carefully taught to all pupils. The brighter pupils should be given an opportunity to complete the 45 sets. The following indicates the order in which the combinations should be presented:—

Number 2.	Number 9.	Number 13.
1+1=	8+1=	9+4=
Number 3.	7+2=	8+5=
2+1=	6+3=	7+6=
Number 4.	5+4=	Number 14.
3+1=	Number 10.	9+5=
2+2=	9+1=	8+6=
Number 5.	8+2=	7+7=
4+1=	7+3=	Number 15.
3+2=	6+4=	9+6=
Number 6.	5+5=	8+7=
5+1=	Number 11.	Number 16.
4+2=	9+2=	9+7=
3+3=	8+3=	8+8=
Number 7.	7+4=	Number 17.
6+1=	6+5=	9+8=
5+2=	Number 12.	Number 18.
4+3=	9+3=	9+9=
Number 8.	8+4=	
7+1=	7+5=	
6+2=	6+6=	
5+3=		
4+4=		

After number facts have been presented concretely, give rapid drills until the children can give the answers at sight. Motivate the drill with games; develop the four simple relations of each set. For example, after they find out that 8 and 2 are 10, they should be asked what must be added to 2 to make 10? to 8 to make 10? 10 is how many 2's? How many 2's are in 10?

Deal in the same way with the other sets of combinations (avoid fractional relations at this stage).

Give abundance of such drill as the following, using blackboard, chart, or flash-cards:—

$$4 + 2 = \qquad \begin{array}{r} 4 \\ +2 \\ \hline \end{array}$$

Measure with a foot rule. Children should make paper rules of different lengths which they can use in their constructive work and in measuring the dimensions of books, desks, chairs, floor, etc. Introduce other simple measures, as pint, quart, week, dozen.

4. Manual Arts.

(*A.*) STICK-LAYING, PAPER-FOLDING, PLASTICINE MODELLING, AND PAPER-CUTTING.—The hand-work outlined below will provide profitable seat-work for beginners, which can be accomplished without the direct supervision of the teacher. It is advisable, however, in order to obtain the best results, that the work be planned in advance for each day of the week and that some one of the occupations outlined below or drawing be given each day. The aim of the teacher should be first to teach the simple forms of each, and then to correlate, as much as possible, the hand-work lessons with the nature, language, and reading lessons.

Stick-laying.—This is the simplest form of hand-work and may be given to the child on the first day of school. The apparatus consists of sticks or pegs of bright colours, such as supplied by the Milton-Bradley Company, San Francisco.

(*a.*) Outlining simple straight-lined familiar objects, such as table, chair, bed, pennon, window, door, picture-frame, flower-pot, ladder, steps and stairs, saucepan, house, ship.

(*b.*) Outlining figures and letters in correlation with other lessons.

(*c.*) More difficult outlines (by means of short pegs), as of clock, Indian canoe and wigwam, pine-tree, "scooter," bird, steamer, automobile.

(*d.*) Geometric and regular forms, which may be worked into border designs after the pupils have grasped the idea of border design through blackboard instruction and the examination of such designs on books, baskets, towels, etc. Afterwards opportunity should be given the pupils to originate designs.

(*e.*) Illustrating rhyme or story. Perfect work is not to be expected, but by sympathetic criticism the pupil should, eventually, be able to produce good, well-balanced work. The best illustrations should be kept and made permanent by gluing on stiff paper and hanging up on the school wall.

Paper-folding.—This is an occupation that teaches neat finger-work; it also provides training for the hand and eye, but it does not provide much opportunity for self-expression. About a dozen simple designs should be sufficient.

While engaged in this occupation the pupils should gain a knowledge of the forms, triangle, square, oblong, and should learn to know right side, left side, front, back, edge, corner, angle, and such terms as turn, fold, etc.

"Educational Handwork" (T. B. Kidner), published by the Educational Book Co., Canada, will furnish suggestions for this occupation.

Paper-folding material: No. 204 Engine, assorted colours; size 5 by 5 inches, Milton-Bradley Company, San Francisco.

Plasticine Modelling.—Plasticine modelling is an occupation that is enjoyed by the child, for in it he finds much scope for self-expression. It strengthens and educates the hand, provides excellent finger-training, and compels observation of the smallest details.

Each member of the class should be given a small lump of plasticine for his own use—to be kept in a small box which he can provide for himself.

After the child has been taught to use his fingers rather than the palms of his hands, he may be set to work while the teacher is engaged with other classes. The work will be crude, but much good will have been accomplished if it has opened the eyes of the child to the details of the object before him, and if he has expressed his image of it by means of his hands.

(1.) Simple forms: (*a.*) Round, such as ball, orange, apple, onion, pumpkin, cherries.

(*b.*) Oval, such as egg, lemon, carrot.

(*c.*) Rolled forms, such as worm, log, snake, cigar, a rope of twisted strands, anchor and rope.

(*d.*) Hollow shapes, starting from ball shape, such as nest, cup and saucer, any hollow vessel, vase, etc.

(2.) Various forms, correlating nature-study lessons, such as snowdrop, crocus, pussy-willow, twig, tulip, Easter lily, frog, meadow-lark, pea-pods, fish, starfish, crab.

(3.) Bas-relief on stiff cardboard or on the ordinary modelling-board. The illustrating of rhymes and stories should be in "bas-relief," which is better suited for illustrative work and requires less plasticine.

Freehand Cutting.—For this occupation common white or manila paper and a pair of scissors are required. No outline should be made on the paper, but a solid white drawing is shown on the blackboard, or some simple object is placed before the class.

(*a.*) Simple forms, such as the circle to represent dollars, quarters, etc.; the oval—cutting out an apple, a pear, a Japanese lantern, etc.

(*b.*) Symmetrical objects which can be cut with the paper folded, such as a fan, a kite, a milk-bottle, an open umbrella, a butterfly, etc.

(*c.*) Illustrate songs, reading lessons, and stories, such as "Little Red Hen," "The Gingerbread Boy," "Chicken Little," etc.

There should be frequent reviews, but the work becomes monotonous when the class is held to one model until it is perfected. Coloured crayons may be used for decorative purposes, and the most praiseworthy attempts should be mounted and hung on the class-room walls.

Teachers' reference books: Educational Handwork—T. B. Kidner (Educational Book Co., Canada); price, $1. Story Telling with the Scissors—B. Helen Beckwith (Milton-Bradley Company, San Francisco). Toymaking in School and Home—Polkinghorne (George G. Harrop & Co., Ltd., London, England); price, 10s. 6d. Handwork for the Classes—J. S. Lay (Evans Bros., London, England); 2 vols.; price, 3s. 6d. each.

(*B.*) Drawing.—Drawings may be in soft pencil, pastel, crayon, or water-colour, from objects, from memory, or from imagination.

Pupils should be taught to handle materials in a correct way and to sit and draw in a healthful posture. Drawings in pastel should be made on neutral tinted paper. Names of the primary and secondary colours and the method of mixing them should be taught and demonstrated.

Correct representative drawing cannot be got at this stage and teachers should try to see the child's mind as expressed in the drawing instead of looking for an adult concept. Imaginative drawing is especially good at this stage and should be used in conjunction with the literature lessons. In representative drawing the hand and eye may be trained to an appreciation of good relationship in form. Memory drawing is a powerful aid in stimulating observation. Advantage should be taken of fête days, seasons, Hallowe'en, Christmas-time, etc., for the purpose of correlating drawing with other mental activities (*see* Teachers' Manual of Drawing and Design).

5. Nature Lessons (to be correlated with the Language and Drawing Lessons).

Autumn (September, October, November).

General, Industrial, and Social.—The children's food-supply, clothing, and shelter; comparison of primitive with modern conditions; effects of approaching winter on plant and animal life and in people's activities.

Animal Life.—(*a.*) Children's pets and domestic animals—cat, dog, horse. (*b.*) Birds—canary, pigeon, robin. (*c.*) Insects—butterfly, larva and cocoon, beetle.

Plant Life.—(*a.*) Food-plants—local fruits and nuts; garden vegetables and grain. (*b.*) Wild plants—the maple tree, fall dandelion, fireweed. (*c.*) Garden flowers—nasturtium, sweet pea, sunflower.

WINTER (DECEMBER, JANUARY, FEBRUARY).

General.—Effects of cold; wind, clouds, snow.

Animal Life.—(*a.*) Domestic animals—the cow, our meat and milk supply; the sheep (clothing; rabbit. (*b.*) Wild animals—animal stories and pictures. (*c.*) Birds—sparrow, chickadee, bluejay.

Plant Life.—(*a.*) Food-plants—pop-corn, imported nuts. (*b.*) Wild plants—contrast of leafless trees, form of branches, and evergreen (Christmas tree).

SPRING (MARCH, APRIL, MAY, JUNE).

General.—The spring awakening; sun, wind, rain, weather chart, swollen streams, and new activities of the people.

Animal Life.—(*a.*) Pet and domestic animals—baby animals (calf, lamb, pig, chickens, ducklings). (*b.*) Birds—meadow-lark, crow, song-sparrow. (*c.*) Insects—life-history of moth or butterfly, housefly, and ant-hill.

Plant Life.—(*a.*) Wild flowers—dandelion, buttercup, dog's-tooth violet, trillium or spring beauty. (*b.*) Garden flowers—pussy-willows, pansy, bulbs (crocus, narcissus, and tulip). Window plants, seed-planting.

6. Music.

The music period should be one of pleasure and enthusiasm for both teacher and pupil. A careful and wise training will inculcate a love for good music, produce competency in sight-reading, and result in better singing.

A few children—far fewer than is generally supposed—have what is called a "bad ear" for music. That is, they do not readily distinguish between one musical sound and another; but it can safely be said that quite 99 per cent. of children can with patience and perseverance cultivate a "good ear" and learn to sing with pleasing voice.

Too much stress cannot be laid on the importance of "soft" singing. When the singing is soft, there is no risk of straining or injuring the voice.

Children should be trained to sing alone. It is a great mistake always to practise children collectively. If they were so taught to read and recite it would be hopeless to expect correct articulation and intelligent phrasing.

To sing intelligently, it is necessary, first, to phrase correctly; secondly, to sing with expression. To phrase correctly, means, roughly speaking, to take breathing in the proper places. To sing with expression children must be encouraged to put themselves into their music; for if they sing what they feel, those who listen will feel what they sing.

Each of the sections into which this work is divided deals with one particular branch of the child's musical education, but all sections must be used concurrently.

SECTION I.—SONG-SINGING.—Object: To introduce music as "literature."

Method: Nursery rhymes and songs should be chosen containing short, clear phrases; words and music should be taught by rote and the task should be made easy and enjoyable.

(1.) *Songs with Accompaniment.*

(2.) *Songs without Accompaniment.*—(*a.*) Teacher to play or sing a song to the pupils.

(*b.*) This to be repeated, the children joining in quite freely.

(*c.*) It may now be necessary to take the song in phrases to get the children to sing the song more accurately—time, tune, words, character, etc.

(*d.*) The song to be continued for some time, but other songs to be studied concurrently.

Suggested Songs for First Term.—Baby Bunting; Jesu, Tender Shepherd; Pussy Willows; Polly, put the Kettle on; We are Babies, Good as Gold; Now the Sun is Sinking; Dolly's Lullaby; Humpty Dumpty; Hush-a-by; I've a Little Dolly; Jack and Jill; Little Bo-Peep; Little Boy Blue; Little Miss Muffet; Mary, Mary, Quite

Contrary; See-Saw, Margery Daw; Little Jack Horner; Baa, baa, Black Sheep; Goosey, Goosey, Gander; Twinkle, Twinkle, Little Star.

Suggested Songs for Second Term.—Sleeping Daisies; Mary and the Lamb; Hickory, Dickory Dock; I love Little Pussy; The Little Nut Tree; Girls and Boys Come Out to Play; London Town; Time to Rise; The Spider and the Fly; Up the Ladder; The Squirrel; Ride a Mile; Falling Snowflakes; The Birdie; The Owlet Song; Merry Bells; I saw Three Ships; Little Robin Redbreast; The Fairy Folk; A Sweet Little Birdie; Falling Rain; Sleep, Baby, Sleep; Choo-Choo-Choo; Dolly's Lullaby; June; Harebell Song.

SECTION II.—SONG GAMES.—Method: These singing games must afford the opportunity for spontaneous expression by the children and not degenerate into mechanical action songs. The teacher must not expect all gestures and actions to be exactly alike.

Song Games, First Term.—Six Little Mice; Poor Mary sits a-weeping; Ring-a-ring o' Roses; London Bridge; The Mulberry Bush; Three Blind Mice; The Farmer; Round and Round the Village.

Song Games, Second Term.—Creep, Mousie, Creep; Cock-a-doodle-do; The Marching Song; Mayday Song; Five Little Birdies; Sleeping Beauty; Oranges and Lemons; Nuts in May; The Muffin Man; Sing a Song of Sixpence.

SECTION III.—PULSATION AND RHYTHM.—Object: To develop the child's musical activity.

Method: Clapping, tapping, walking, skipping, running, and the use of percussion instruments if possible.

First Term.

Step 1.—To feel the Pulse or Beat.—(*a.*) Children to clap with teacher, marking moderate, fast, and slow time.

(*b.*) Children to use instruments while teacher claps.

(*c.*) Teacher to play a simple march, using quarter-notes only; e.g., "Mountain March."

(*d.*) This repeated, children to clap or use instruments.

(*e.*) Children walk and clap—moderate time, quickly, slowly.

(*f.*) Use other simple marches concurrently with other steps, breaking away from the quarter-note.

First and Second Terms.

Step 2.—The Skipping Step.—Use the following songs: O Dear! What can the matter be? ; Mary and the Lamb; Jack and Jill; Hickory, Dickory, Dock; Mary, Mary, Quite Contrary; Cock-a-doodle-doo; Humpty Dumpty; See-Saw; Boys and Girls Come Out to Play; The Squirrel; When Fairies Dance and Sing; Ride a Mile; Grasshopper Green; Keep the Ball A-rolling; Mulberry Bush; Little Bo-Peep; Maypole Dance.

First Term.

Step 3.—Loud and Soft Beats.—Use "Soldiers' March" by Schumann or any other suitable march.

(*a.*) Play the exercise loudly, letting the children clap loudly.

(*b.*) Repeat the exercise played *piano*, children to clap softly.

(*c.*) Repeat this with instruments and marching.

(*d.*) Repeat with alternate loud and soft beats. Use instruments, clapping and marching.

(*e.*) Repeat, but teacher to cease playing piano half-way through exercise, children to continue.

(*f.*) Repeat, letting children march to tune, beating time with both hands; use instruments. Use the following songs and other suitable music you may have: We are Babies, Good as Gold; We are Merry Little Soldiers; The Marching Song; We are Soldiers Brave and Gay; Pussy Willows; Buttercups and Daisies; The

Cow; Poppies; Baby Bunting; Bed in Summer; London Bridge; Ring-a-ring o' Roses.

Second Term.

Step 4.—Responding to ¾ Time.—(*a.*) Divide class into two groups. Let one group follow the teacher's right hand (showing strong accent) with loud clapping or drum, and the second group follow the left hand (showing two weak accents) with soft clapping or triangles. Teacher to hum a tune in ¾ time, marking well the first beat.

(*b.*) Teach songs in ¾ time; e.g., The Farmer; Poor Mary sits a-weeping; The Bee and The Dove.

(*c.*) Use piano. Children to clap or make any rhythmical movement that will mark the correct rhythm. Cuckoo; Mountain March; Waltz; Evening.

Step 5.—The Running Step.—(*a.*) Teacher to clap a rhythm containing quarters and eighths.

(*b.*) Children to reply either by clapping or using instruments.

(*c.*) Children to run a bar of eighth notes to the left and walk a bar of quarter-notes to the right.

(*d.*) Repeat this, running two bars to the left and walking two bars to the right.

Introduce games, e.g.: (1.) Running eighths in a circle; at hopp run a bar of eighths outside circle and pose for two bars; return to circle running eighths. One bar—continue running in a circle.

(2.) Run two bars to left; two bars to right; two bars to centre; two bars back.

Take the following songs and step them and where there is a half-note let children stand still: Baby Bunting; We are Babies, Good as Gold; We are Merry Little Soldiers; Pussy Willows; Poppies; Ring-a-ring o' Roses.

Children should now be ready to take part in simple rhythmic plays.

SECTION IV.—While work at this stage should be quite non-technical, the scale can easily be taught by means of song sentences. It should be the aim of the teacher to eradicate the monotones during the first year at school. Song sentences should be taken individually, with the hand signs.

Sentences for First Term.

The Roll-call—

"Children." d d′ (by teacher).
"We are here." d′ d′ d.
"Mary." d d′ (by teacher).
"I am here." d′ d′ d.
Down falls the rain.
d′ $\bar{s}$ m d.
Kites fly up high.
d m s d′.

Sentences for Second Term.

Humpty Dumpty got a fall.
d′ t d′ s m r d.
Will you come and play.
d′ s r m d.
Tulips bright all close at night.
d′ l d′ d f l d′.

Imitation phrases should be given to quicken the children's aural perception.

Short time-pattern phrases should be imitated by children either by clapping or by instruments. Children should be able to detect the difference between the sound of high and low notes on the piano and be able to imitate any sound given to them within their singing compass.

SECTION V.—(1.) Mood in music. (2.) Music interpretation.

Object: To cultivate the child's sensibility to music.

(1.) Suggested pieces: Melody; Soldiers' March; Evening; Jesu, Tender Shepherd.

(2.) Children to dramatize while pieces are played on piano or sung by other members of the class or by another class in the school. Nursery songs can be taken; e.g., Polly, put the Kettle on.

Reference book: Rote Songs and Singing Games—Wickett (Gage & Co., Ltd., Toronto). Price, $1.

7. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To establish health habits and a positive attitude towards hygienic rules, with emphasis on personal cleanliness.

Classification of Suitable Topics:—

(1.) *Nutrition.*—Value of individual drinking-cups; danger of borrowing or exchanging cups, food, etc., or in eating food handled by other children or picked up from the floor, ground, or sidewalk; regularity in eating; avoidance of tea or coffee, liberal use of milk.

(2.) *Cleanliness (of Person and Surroundings).*—Washing of hands before and after eating, after going to the toilet, after having been soiled with playing or working, and after playing games requiring holding hands of other children; general cleanliness before coming to school; use of handkerchief; * care of teeth; cleanliness and good order of books and desk; use of door-mat and waste-paper basket.

(3.) *Clothing.*—Removal and orderly disposal of wraps, overcoats, sweaters, rubbers, etc.; care to avoid soiling of clothing, especially while playing or eating; guarding against unnecessary exposure to cold and wet.

(4.) *Rest and Sleep.*—How to relax in school; regular and sufficient hours of sleep; relaxation without disturbance of others.

(5.) *Fresh Air and Ventilation.*—How obtained by day and by night.

(6.) *Elimination.*—Habits of regularity; close supervision of condition of toilets; responding immediately to requests to be excused.

* The proper and habitual use of the toothbrush is most important. The demonstration method without actual participation by the children is recommended. Frequent inspection by the teacher influences the children in the care of their teeth.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE II.

1. Language.

Language-training in the Second Grade differs from that of the First Grade in degree rather than in kind. As in Grade I., by far the greater portion of the time must be devoted to the development of power in oral language. In this grade, as in all grades and in all subjects, it is essential that there be a definite aim to each lesson, giving direction and meaning to the various steps in the development of the lesson. In order that the pupil may have the proper "set," "attitude," or "adjustment," he should be conscious of this aim (*see* Thorndike's "Laws of Learning"). This may be attained by the methods outlined for Grade I.

(1.) Conversational lessons on such topics as: A birthday party; an automobile ride; a school picnic; a visit to the fall fair; playing a favourite game, etc.

(2.) *Projects.*—(*a.*) Primitive Life—Tree-Dwellers and Cave-Men; Eskimos; Indians.

(*b.*) Neighbourhood studies—Going to town; streets and cars; principal buildings in neighbourhood or city—churches, library, banks, post-office, railway-station, factories, stores, the fire and police departments, the sea, boats in the harbour, a visit to the beach, park, the circus, the fall fair.

(*c.*) How we travel.

(*d.*) Preparation for winter—How mother prepares for winter; how the farmer prepares for winter; how animals prepare for winter.

(3.) Reproduction and dramatization of stories.

(4.) Memorization of short poems.

(5.) Relating an interesting experience in three or four sentences.

(6.) *Written Work.*—(*a.*) Capitals—Names of persons, places; days of the week; months; pronoun "I."

(*b.*) Punctuation—Period at the close of statement; question-mark at close of question; period after abbreviation.

(*c.*) Abbreviations—Simple abbreviations that occur in readers.

Children's names and addresses; name of city; spelling and dictation exercises as prescribed; list of materials required for a project; names of characters in a story; three or four easy sentences upon some topic of interest; special words to be used in sentences.

READING.—Oral and silent reading according to methods outlined for Grade I. Standardized tests to measure rate and comprehension in silent reading should be given periodically in the Second Grade (*see* list under Grade VIII.).

The Second Reader of The Silent Study Readers, Sherman, Reid, MacKenzie (Dent & Sons), will be found very suitable for giving definite and specific exercises in rapid silent reading.

PHONICS.—Grade I. work reviewed. Additional work—igh, ough, tion, k and g before n (knock) (gnaw), w before r (write), dg in bridge, ea in head, o in love. Phonics applied to the recognition of new words in the reading lessons.

SPELLING.—Pupils should at the end of Grade II. be able to spell all words of Grade II. minimum and supplementary lists with 100 per cent. accuracy, whether words are given in lists, sentences, or paragraphs. Follow carefully directions to teachers given in prescribed spelling-book.

TEXT-BOOKS FOR GRADE II.

Authorized texts:

The Canadian Readers, Book II. (Teachers will find "Handbook to the Canadian Readers," Gage & Nelson, very useful.)

Spelling for the Grades (Department of Education).

Supplementary Readers:

Folk Lore (W. J. Gage & Co., Ltd., Toronto). Price, 60c.

Hiawatha Primer, continued (Houghton, Mifflin & Co., Boston).

Progressive Road, Books Two and Three (W. J. Gage & Co., Ltd., Toronto). Price, 60c. and 70c.

Young and Field, Book Two (Ginn & Co., Boston).

Winston Second Reader (W. J. Gage & Co., Ltd., Toronto). Price, 70c.

Ned and Nan in Holland (Row, Peterson & Co., Chicago).

Bunny Rabbit's Diary (Little, Brown & Co., Boston).

Child Life, Book II. (Macmillan Co., New York). Price, 80c.

The Silent Study Readers, Book II.—Sherman, Reid, MacKenzie (Dent & Sons). Price, 55c.

The Silent Reading Hour, Second Reader—Busewell (Wheeler Publishing Co., Chicago).

The Silent Readers, Second Reader—Lewis & Rowland (John C. Winston Co., Toronto).

Second Reader—Bolenius (Houghton, Mifflin & Co., Boston).

BIBLIOGRAPHY.

Teaching Children to Read—Klapper (D. Appleton & Co., New York).

Twentieth Yearbook on Silent Reading (Public School Publishing Co., Bloomington, Ill.).

Silent Reading—O'Brien (Macmillan Co., New York). Price, $1.55.

Oral and Silent Reading—Stone (Houghton, Mifflin & Co., Boston).

The Teaching of Reading—Wheat (Ginn & Co., Boston).

Psychology and Pedagogy of Reading—Huey (Macmillan Co., New York). Price, $2.

How to Tell Stories to Children; Stories to Tell to the Children—Sara Cone Bryant (Houghton, Mifflin & Co., Boston).

Reading in the Primary Grades—Jenkins (Houghton, Mifflin & Co., Boston).

How to Teach Silent Reading to Beginners—Watkins (Lippincott & Co., Philadelphia).

Projects in the Primary Grades—Krackowizer (Lippincott & Co., Philadelphia).

The Project Method of Teaching—Stevenson (Macmillan & Co., New York). Price, $2.

Teaching by Projects—McMurry (Macmillan Co., New York). Price, $1.75.

Short Exposure Phrase Cards for Increasing Rate and Comprehension in Silent Reading, Series A, B, C, D, and E (W. H. Wheeler & Co., Chicago).

Industrial and Social History Series—Dopp (Rand, McNally & Co., Chicago).
Book I. The Tree-Dwellers.
Book II. The Early Cave-Men.
Book III. The Later Cave-Men.

2. Writing.

MacLean Method Compendium No. 2 is to be used by the pupils. Teachers will use the Teachers' Manual as their guide. All new capital letters should be taught at the blackboard. The pupils' writing, with pencil or pen, should be the same size as that shown in the Compendium.

The transition from sliding-arm to forearm movement should be treated as an individual problem, but an endeavour should be made to have all pupils writing with forearm muscular movement at the completion of the Second Grade. Pen and ink should be introduced when the child has developed a light touch and can write with a free forearm muscular movement.

3. Arithmetic.

STUDY OF THE NUMBERS TO 100.—Review thoroughly work of Grade I. Drill from blackboard and flash-cards until pupils can recall automatically the facts which they learned from the concrete work the previous year. Teach the combinations

not already mastered in Grade I. Give rapid drills until the children can give answers at sight. Stress should be laid on the addition and subtraction facts and various devices should be used to secure the mastery of the new combinations. Make frequent use of such games as "I am thinking of two numbers whose sum is 9 or 13, etc. Name them"; similarly with differences.

Drill from blackboard or chart with such problems as:—

8	6	8	7	5	8	7	8	8	9
+7	+5	+9	+8	+6	3	4	4		
					4	2	5	+	+
								—	—
								17	17

Seat-work should be closely supervised, otherwise pupils are likely to get results by counting rather than by combinations.

Notation and Numeration.—Teach the location of the units', tens', and hundreds' places. Reading and writing, in figures and words, numbers to 100:—

74=7 tens and 4 units. 63=6 tens and 3 units.
4 tens and 9 units=49. 3 tens and 1 unit=31, etc.

Teach the meaning of the following (no formal definitions): Plus +, minus —, add, subtract, sum, difference.

Extensions of the combinations up to 100 and reverse, thus: 27+4=31; 31—4=27. Emphasize the terminal figure.

Drill from blackboard or chart with such problems as:—

17	27	37	19	29	39
+ 5	+ 5	+ 5	— 4	— 4	— 4
—	—	—	—	—	—

7+5=12 22+7=29 43+5=48
12—5= 7 29—7=22 48—5=43

10	10	10	10	20	13	13	14
1	4	8	10	—10	— 3	—10	—10, etc.
—	—	—	—	—	—	—	—

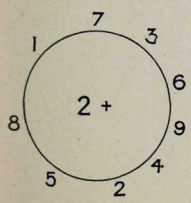
Add and subtract 2's, beginning at any number, thus: 2, 4, 6, 8, etc.; 27, 25, 23, 21, etc.

Add and subtract 4's, beginning at any number, thus: 13, 17, 21, 25, etc.; 38, 34, 30, 26, etc.

Add and subtract 3's, beginning at any number, thus: 16, 19, 22, 25, etc.; 32, 29, 26, 23, etc.

Count by 10's and 5's, up to and back from 100. Thus:—

10, 20, 30, 40, 50, etc.; 100, 90, 80, 70, etc.
5, 10, 15, 20, etc.; 100, 95, 90, 85, etc.



Drill, using some such device as is shown on the circle: Add 2 to each figure on the circle until pupils can recall results automatically; then substitute 12, 22, 32, for the 2. When 2 and its extensions are completed, use 3 and its extensions. In the same way continue with 4, 5, 6, 7, 8, 9, and their extensions. A few minutes should be spent each day on such drill until the pupils completely master the combinations and extensions (figures should not be arranged consecutively on the circle).

Add first orally, then silently, such columns of figures as the following. Time tests should be given frequently, about 10 columns at each test.

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

Pupils should not be allowed to count. They must be taught to add each column without hesitation and to proceed thus: 10, 19, 23, 28, 35, 41. Then, add beginning at the top, thus: 13, 18, 22, 31, 39, 41.

Continued subtraction—

20—6—5—4=
41—8—4—9—6=

Give such problems as the following in subtraction (no borrowing). Additive method is suggested, thus: 1 and 3 are 4; 3 and 6 are 9.

94	67	96	89	78
—31	—21	—52	—65	—40
—	—	—	—	—
63				

THE FRACTIONAL PARTS, ½, ¼.—The work should be presented objectively and should include such consideration as one-half or one-fourth of an apple or other object; ½ or ¼ of a group of objects, as ½ or ¼ of 12 apples, 16 oranges, etc.

CANADIAN MONEY.—The meaning of $, c. Coins: Cent, 5c., 10c., 25c. (quarter), 50c. (half-dollar).

MEASURES.—Teach the use and relation, by actual measurement, of inch and foot, pint and quart.

Children should make paper rules and use them in their constructive work. They should solve simple problems such as the following:—

How many inches in 1 ft. 5 in.? In 1 ft. 9 in.? 1 ft. less 2 inches= ; 1 ft. less 5 inches= .

How many pints in 1 qt. 1 pt.? In 3 qt.? In 4 qt. 1 pt.?

One dozen=how many? 1 doz. and 4=how many? 1 doz. less 5=how many?

Show the relation of day, week, and month.

Telling time, using both the Arabic and Roman notation.

Roman numerals to XII.

4. Manual Arts.

(*A.*) STICK-LAYING, PLASTICINE MODELLING, PAPER-CUTTING.—The directions given for hand-work in the course prescribed for Grade I. are equally applicable for Grade II.; the work, however, should be of a more advanced and better-balanced character, and much opportunity should be given the pupils to express themselves freely in design and illustration.

Where pupils have not received instruction in hand-work in Grade I., the teacher should follow the course as set forth under that grade; but in schools where instruction was given during the first year, the chief attention should be devoted to the following parts of the work as outlined under Grade I.:—

Stick-laying.—(*a.*) Geometric and regular forms to be worked into border designs.

(*b.*) Illustration of rhyme and story.

NOTE.—By speaking of the sticks as the "one-inch stick," the "two-inch stick," etc., the child will be helped to form a definite notion of the "inch" as a measuring unit.

Plasticine.—(*a.*) Various forms correlating nature study.

(*b.*) Illustration of rhyme and story in bas-relief.

Paper-cutting.—(*a.*) Symmetrical forms with paper folded.

(*b.*) Illustration of song, reading lesson, and story.
Teachers' reference books (*see* Grade I.).
(*B.*) DRAWING.

First Term.

As in Grade I., but with more attention to form, better handling of materials, and more power of illustration (*see* Teachers' Manual of Drawing and Design).

Second Term.

Object Drawing.—Drawing of simple rectangular flat forms in pencil, outline, or outline plus flat wash. Objects to be simple in shape and proportion. Method of drawing the vertical, horizontal, and oblique line to be taught in conjunction with object drawing.

Nature Drawing in pencil, crayon, or colour, etc., from flowers or leaves.

Design.—Borders and simple geometric areas, such as squares, rectangles, to be coloured in monochrome and complementary harmonies. Ruler to be used in design-work when necessary and correct measurement obtained (*see* Teachers' Manual of Drawing and Design).

5. Nature Lessons and Geography (to be correlated with the Language and Drawing Lessons).

(*A.*) NATURE LESSONS.

Autumn (September, October, November).

General.—Materials and sources of same which enter chiefly into our clothing, building and furnishing of our homes, etc. Again contrast modern conditions with primitive; preparation of plants and animals for winter, seeds ripening, leaves falling, hibernation of animals, migration of birds.

Animal Life.—(*a.*) Domestic animals and pets; a comparison of familiar animals based upon observation along the following lines: method of eating and drinking, sleeping, running, playing, calling, fighting, etc. (*b.*) Wild animals—deer, bear. (*c.*) Insects—cabbage butterfly, grasshopper, collecting and storing of cocoons.

Plant Life.—(*a.*) Food-plants, more careful study of the corn and pumpkin. Food-storage. (*b.*) Wild flowers—daisy, yarrow, aster. (*c.*) Garden flowers—aster, cosmos, planting of bulbs. (*d.*) Trees and shrubs—alder, birch, vine-maple.

Winter (December, January, February).

General.—Winter conditions, value of ice and snow, sports, home duties. Heating our homes—fire, fuel, etc. Primitive methods compared with modern.

Animal Life.—(*a.*) Wild animals—fox, squirrel, chipmunk. How wild animals spend the winter. Stories of animals in the wild. (*b.*) Birds—woodpecker, owl, towhee. (*c.*) Insects—spider (in contrast with insects already studied).

Plant Life.—(*a.*) Food-plants—potato, onion, carrot, celery. Note part of plant used for food. (*b.*) Trees—evergreens (Douglas fir, spruce, or balsam); contrast with pine.

Spring (March, April, May, June).

General.—Seasonal characteristics as spring advances. Weather chart. Spring work and spring games.

Animal Life.—(*a.*) Domestic animals; visit to a farmyard; kindness-to-animals week. Stories of animal fidelity and the proper treatment of dumb creatures. (*b.*) Wild animals; small animals in the pond—frogs and toads. (*c.*) Birds—bluebird, wren, humming-bird, record of first appearance of species. (*d.*) Insects—life-histories continued; the cricket; distinguish moth from butterflies.

Plant Life.—(*a.*) Garden plants—plant seeds in gardens or window boxes, and observe development of germination. (*b.*) Wild flowers—flower calendar; marsh marigold, bleeding-heart, tree blossoms, such as maple, cherry, and horse-chestnut. (*c.*) Trees and shrubs—spring condition of species already studied; dogwood, red-flowering currant, and spiræa.

(*B.*) GEOGRAPHY.

(*a.*) *Direction.*—The cardinal points of the compass; these to be related to the rising and setting of the sun, the school-room, rows of desks, fences, and streets.

(*b.*) *Time.*—(1.) Sunrise to sunset; daylight and darkness. Teach morning or sunrise, midday, evening or sunset, midnight. These terms related to the life of the child. (2.) The days of the week and the names of the months should be taught.

(*c.*) *Weather and Seasonal Changes.*—Pictorial records should be kept for the different months, showing such weather ideas as sunny days, cloudy days, rainy days. Note the direction of the wind.

6. Music.

SECTION I.—SONG-SINGING.—Songs should continue to be taught by ear (rote-singing).

Suggested Songs for First Term.—Good Morning, Merry Sunshine; Morning Bells; Ding, Dong, Bell; Lightly Row; Lady Goldenrod; Come Little Leaves; Jolly Old Saint Nicholas; Buttercups and Daisies; The Cow; Little Water Wagtail; The Bee and the Dove; I'm a Little Busy Bee; Trip and Go; Bed in Summer; Little Drops of Water; Now the Sun is Sinking; The Little Dustman; Gentle Jesus; Poppies; Baby-Bye.

Suggested Songs for Second Term.—Hop, my Pony, Hop; The Fox and the Grapes; The North Wind doth blow; A Valentine for Me; The Fairies; O Sing with Cheery Voices; Buttercups; Summer Joys; All the World is gaily Dancing; O dear, what can the matter be?; Dapple Grey; There was a Little Woman; Where are you going to?; Old King Cole; When Fairies dance and sing; The Woodpecker; Golden Slumber; White Caps; Wynken, Blynken and Nod; Jesu, Tender Shepherd; Angels Sweetly Singing.

SECTION II.—SONG GAMES.—The song games suggested for Grade I. will still appeal to children of Grade II. The following might be added: A frolic; Little Bo-Peep.

SECTION III.—RHYTHM AND TIME EXERCISES.

First Term.

Children should be able to respond to the value of the quarter-note (walking step), the eighth-note (running step), and the half-note. (The foot movements for the half-note will be taught later. At present the children can make the quarter-step and *hold* for the second beat.)

Method.—(*a.*) Play a piece of music containing quarter-notes only; e.g., Mountain March.

(*b.*) Let the children step the following songs: Lightly Row; Jolly Old Saint Nicholas; Little Robin Red-breast; Pussy Willows; Buttercups and Daisies; The Cow; Falling Rain; Poppies; Harebell song; Baby-Bye; I'm a Little Busy Bee.

Second Term.

In addition to the rhythms for First Term the following should be taken: The whole note, the dotted half-note, and the response to 6/8 time (skipping step).

Suggested Songs.—O dear! What can the matter be?; When Fairies dance and sing; Grasshopper Green; Ding, Dong, Bell; Old King Cole.

N.B.—The foot movements for the half-note should be taught, but the whole note and dotted half-note will be taught later. At present the children can step one beat and *hold* for the remaining required beats.

SECTION IV.—VOICE-TRAINING.—Children should be encouraged to sing sweetly and softly. Only the simplest breathing exercises are necessary. The smelling of a flower for deep inspiration, the blowing of a feather for slow expiration are happy suggestions.

The descending scale of Key D should be taken to loo, moo, noo, lo, mo, no.

SECTION V.—TUNE: LEADING TO SIGHT READING.

First Term.

Definite preparation should be made here in connection with the Tonic Sol-fa Modulator for Staff reading in Grade III. It requires all the ingenuity of the teacher to give the necessary drill on the intervals, and yet to avoid monotony by repetition. Children should be able to sing from the Modulator and from hand-signs to syllables and "laa" all notes of the scale in stepwise succession and the notes of the Doh Chord in any order; e.g.:—

Keys C, D, and E, d d′ ; d s ; d′ m ; d′ s .
Keys F, G, and A, d s, ; m s, ; s s, ; d s .

Second Term.

(*a.*) The notes of the Doh Chord taken to "laa" in any order and the other notes of the scale in stepwise succession.

(*b.*) The notes of the Doh and Soh Chords to syllables taken in any order, and "fah" and "lah" in stepwise succession.

(*c.*) Staff Notation to be introduced towards the end of the term. Children should be able to sing the notes *of the Doh Chord in all Keys.*

Suggested intervals in the Tonic Sol-fa Modulator, in addition to those of the first term:—

Keys C, D, E, s r ; s r′ ; s t ; s t, ; t r ; t r′ .
Keys F, G, A, s r ; s t, ; s s, ; s, r ; s, t, ; r t, .

Suggested exercise for pitch-lessons, various keys:—

d d d d : s s s — :
m m m m : d d d — :

d m s s : d′ d′ s — :
m s m d : s s d′ — :

N.B.—*Rules for Modulator Drill.*—(1.) Let the voluntary have an object; e.g., (*a*) to "fix" a new tone; (*b*) to test skill; (*c*) to teach a new song.

(2.) Let the voluntary have *shape*, making it correspond to some hymn tune or song form, with cadences or points of rest.

(3.) Mix leaps with stepwise movement.

SECTION VI.—EAR-TRAINING.

First Term.

To recognize the notes of the Doh Chord.

Second Term.

To recognize all notes of the scale. The hand-signs should be used in connection with the ear-training. This necessitates individual work. Imitation phrases either sung or played should be taken in both terms.

SECTION VII.—Concurrently with the above exercises, children should hear good music played if possible. The gramophone makes a good substitute for the piano. The music suggested for Grade I. can be used. Schumann's "Album for the Young" is an excellent book for children. Rhythmic Plays can be used in the second term. "Feeding the Birds," "The Hungry Mice," from Kathleen Mortimer's book, are suitable and enjoyable.

Reference books: Rote Songs and Singing Games—Wickett (Gage & Co., Ltd., Toronto); Rhythmic Work—Kathleen Mortimer & Gwynne Davies (J. Curwen & Sons, Ltd., London).

7. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To strengthen and develop correct habits and attitudes, placing emphasis on personal health.

(1.) *Nutrition.*—Continue and extend the work indicated under Grade I. and add the following: Value of drinking plenty of pure water between meals and before going to bed; eating slowly; importance of foods, using a simple classification into (*a*) foods that make us grow, (*b*) foods that keep us strong, (*c*) foods that keep our bodies well regulated (emphasis may here be placed on importance of elimination).

(2.) *Cleanliness (of Person and Surroundings).*—Review and insist on daily practice of everything mentioned under this heading in Grade I. A full bath at least twice a week, (*a*) personal reasons, (*b*) school reasons; emphasizing importance of keeping fingers, pencils, etc., out of mouth, with reasons; enlist constant aid of children in keeping school building and grounds clean.

(3.) *Clothing.*—Vigilance and daily practice of good management of clothing as indicated under Grade I. Continue with frequent changes of clothing, and why desirable, and clothing for different seasons.

(4.) *Rest and Sleep.*—Grade I. continued. Emphasize what sleep does for us and how much sleep we need; why we sleep better in the dark; value of short rest periods during the day.

(5.) *Fresh Air.*—What fresh air does for us; helps in ventilating class-rooms.

(6.) *Contagious-disease Control.*—Avoidance of play with other children who have whooping-cough or other disease; staying in own yard willingly.

(7.) *Attitude towards Health-control.*—Give children a positive interest in their own well-being by enlisting their co-operation in carrying out regular daily inspection, including condition of hands, face, nails, clothing, etc.

NOTE.—With children of the lower grades a great deal of attention should be given to frequent correlation of health instruction with such subjects as reading, writing, oral language, singing, nature-study, and manual arts. Drawing, paper-cutting, and poster-making help to give effect to and make more real many of the health lessons given. The use of stories, pictures, drills, games, etc., is also important as an aid to health-teaching in the lower grades.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE III.

1. Language.

OBJECTIVES.—(1.) To have children share their experiences through oral expression in a free and ready manner.

(2.) To eliminate wrong forms of speech actually used by the children and to habituate correct forms and the use of the usual courtesies of speech.

(3.) To develop in children the power to write correctly four or five short sentences on a given topic and the ability to criticize their own work.

(4.) To develop ear-training so that there shall be a sensitiveness to correctness of speech.

(5.) And, generally, to aid the children through conversation and literature in acquiring a reading and speaking vocabulary sufficient for their needs.

ORAL COMPOSITION.—The methods outlined for Grades I. and II. may be followed closely; the greater portion of the time devoted to language-training must still be given to oral work.

(1.) *Conversation.*—Opportunities for language-training arise in every one of the school subjects or activities. This is especially true of the work in history, geography, and nature study, where the need for conversation or language constantly arises. This conversation should be employed, however, to meet the needs of the occasion and should not be conversation merely for conversation's sake. Such topics as are listed below are also suggested as suitable, not as a list to be worked through, but as being of value when a proper motive for discussing them has been found. Other topics, if based upon native or acquired interests, may furnish motive equally well. These oral conversations will be the most effective when the pupils discuss them from their interest in the topics themselves without having it in the focus of consciousness that the lesson is a language lesson.

(*a.*) A motor ride.
(*b.*) Topics arising out of seasonal changes; e.g., the first robin; the first flower; the budding of the leaves; weather conditions, etc.
(*c.*) Some game of local interest recently played.
(*d.*) Events of local interest as they occur.
(*e.*) Local visitors.
(*f.*) Berry-picking.
(*g.*) The school picnic.
(*h.*) The last school holiday.
(*i.*) A picture I like.
(*j.*) A story read recently.

(2.) *Reproduction of Short Stories.*—In the reproduction of such stories the pupils should be trained to speak in a natural tone of voice.

(3.) Original story-telling to keep the imagination of childhood continuously active: (*a*) By making original fables on studied models; e.g., "The Fox and the Grapes" changed to "The Mouse and the Cheese," "The Cat and the Bird," etc. (these to be suggested by the children); (*b*) by telling the story from different points of view; e.g., "The Frog and the Ox" told, first, by a crow who saw it all; second, by the ox; etc.

(4.) *Dramatization.*—The children enjoy this part of the work to a greater degree if they select the players and do the directing themselves.

NOTE.—While it is not advisable in all oral work to hamper the flow of thought by excessive criticism, the children may be encouraged to correct each other's errors; e.g., "Excuse me, Jean, I think you said *done* for *did*," etc. This is a form of socialized lesson.

(For suggestions regarding dramatization *see* index in Parker's "Types of Elementary Teaching and Learning"; also Freeland's "Modern Elementary School Practice," Chapter 7; "The Dramatic Method of Teaching"—Finlay-Johnson (Jas. Nesbit & Co., Ltd., 22 Berners Street, London, W.).)

(5.) *Pronunciation and Enunciation.*—Careful drill should be given on correct production of words which children habitually pronounce or enunciate in a faulty manner, as catch, window, eleven, picture, have to, etc.

WRITTEN COMPOSITION.—(1.) Answering questions written on the blackboard; filling in blanks in sentences to illustrate correct use of was, were; have, has, etc.; and simple homonyms, such as hear, here; to, two, too, etc.

(2.) Following oral preparation, to write compositions of not more than four or five sentences on well-known topics, a simple personal experience, or a story read.

(3.) *Capitalization.*—At the beginning of sentences and lines of poetry; names of persons, places; days of the week; months of the year; pronoun "I"; name of school; class-teacher; principal.

(4.) *Punctuation.*—Period at the end of assertive sentence; question mark at end of question; correct punctuation of child's name and address; period after abbreviations used; apostrophe to indicate possession.

(5.) *Abbreviations.*—Mr., Mrs., St., days of week, months of year, pupil's initials, B.C., ft., yd., qt., pt.

(6.) *Grammatical Forms.*—Drill to correct errors occurring in pupil's composition, such as the following: "My book is tore" (torn); "It was me" (I); "that there," "them books," etc. Teachers should compile list of daily errors.

(7.) *Letter-writing.*—As children in this grade in actual life activities outside of school frequently write letters to absent relatives and friends, it is necessary to give due attention to instruction in the writing of the friendly letter as a part of the work at this stage.

It should be carefully noted, however, that this work must be motivated. The need for writing such a letter must arise. Mere formal teaching of letter-writing from a model is not sufficient. The children may wish to write: (1) To a classmate who is absent on account of illness; (2) to a former teacher; (3) to another class or school extending an invitation to attend a school concert. Occasions determined by local conditions will frequently arise to furnish a need for, or an interest in, letter-writing.

A Project.—Making a book and copying in it the best compositions written during the term is a very helpful way of getting children to take interest and pride in written work.

READING AND LITERATURE.

Oral Reading.—Canadian Reader, Book III., and recommended supplementary readers.

Silent Reading.—From this grade on an ever-increasing portion of the time devoted to reading must be given to silent reading. Provision should be made in the time-table for specific exercises to increase rate and comprehension in silent reading. (*See* Bibliography for this grade.) The regular readers prescribed and recommended should be used for this work. The Third Reader of The Silent Study Readers, Sherman, Reid, MacKenzie (Dent & Sons), will be found most suitable for giving definite and specific exercises in rapid silent reading.

Spelling.—Words of Grade III. minimum and supplementary lists with 100 per cent. accuracy.

TEXT-BOOKS FOR GRADE III.

Authorized texts:

The Canadian Readers, Book III. (Teachers will find "Handbook to the Canadian Readers" (Gage & Nelson) very useful.)

Spelling for the Grades (Department of Education).

Supplementary Readers:

Progressive Road to Reading, Books II. and III. (W. J. Gage & Co., Ltd., Toronto). Price, 60c. and 70c.

Heart of Oak Books, Book II. (W. J. Gage & Co., Ltd., Toronto). Price, 70c.

The Silent Study Readers, Book III.—Sherman, Reid, MacKenzie (Dent & Sons). Price, 65c.

Silent Reading Hour, Third Reader (for specific exercises in silent reading) —Busewell (Wheeler Publishing Co., Chicago).

The Silent Readers, Third Reader—Lewis & Rowland (John C. Winston Co., Toronto).

BIBLIOGRAPHY.

The Teaching of English—Chubb (Macmillan Co., New York). Price, $1.75.

The Teaching of English—Carpenter, Baker, and Scott (Longmans, Green & Co., London).

Language Games in all Grades—Deming (Beckley-Cardy Co., 312 W. Randolph Street, Chicago).

Language Games—King (Educational Book Co., Boston).

Bulletin, 1923, No. 43, Games and Other Devices for Improving Pupils' English (Bureau of Education, Department of Interior, Washington, D.C.).

Modern Elementary School Practice—Freeland (Macmillan Co., New York). Price, $1.75.

Motivation of School Work—Wilson & Wilson (Houghton, Mifflin & Co., Boston).

The Teaching of English—Klapper (Appleton, New York).

Types of Elementary Teaching and Learning—Parker (Ginn & Co., Boston).

How to Tell Stories to Children—Bryant (Houghton, Mifflin & Co., Boston).

Reading in the Primary Grades—Jenkins (Houghton, Mifflin & Co., Boston).

Teaching by Projects—McMurry (Macmillan Co., New York). Price, $1.75.

2. Writing.

MacLean Method Compendium No. 3 is to be used by the pupils. Teachers will use the Teachers' Manual as their guide. All pupils in the Third Grade should use forearm muscular movement in all their written work.

3. Arithmetic.

Smith and Roberts, Book I. to end of page 123, omitting difficult problems and all work not related to the following topics (text to be used by teacher only).

A thorough review of the number facts taken in the preceding grades. Continue daily drill in combinations and extensions.

NOTATION AND NUMERATION TO 10,000.—Review ones', tens', and hundreds' places and teach thousands' and ten-thousands' places.

Reading and writing of four figure numbers. Pay particular attention to numbers having zeros.

The following work should be carried through the year by means of brief daily drills:—

Counting forward and backward by 10's, 5's, 2's, 4's, 3's, beginning at any number

Counting by 6's, 7's, 8's, and 9's, thus:—

6, 12, 18, 24, etc., to 72.
7, 14, 21, 28, etc., to 84.
8, 16, 24, 32, etc., to 96.
9, 18, 27, 36, etc., to 108.

Addition and subtraction (within number limit of 10,000). Problem-work of one step with oral and written solution (oral problems first).

Give practice in adding horizontally as well as vertically and also in problems involving numbers reaching different spaces, as:—

```
1,9 2 7
  5 6 8
  7 5 4
3,2 0 8
    9 4
-------
```

In subtraction give practice in numbers having 0's and 1's; for example, in the following problem (using the additive method) teach the pupil to say as he performs it:—

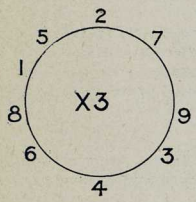
```
7 1 6 0
3 9 0 4
-------
3 2 5 6
```

4 and 6 are 10; 1 and 5 are 6; 9 and 2 are 11; 4 and 3 are 7.

Teach pupils to check subtraction by addition.

MULTIPLICATION TABLE TO 12 TIMES 12.—Group counting should be made a basis for multiplication. Memorize results. Use the idea and form shown at the right-hand side of page 91 in the prescribed text; that is, teach the tables as the families of 2's, 3's, 4's, etc.

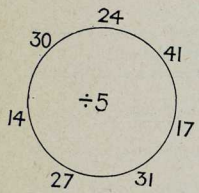
Give problems (oral and written), using the number facts of the multiplication tables as the tables are being taught. Multiply by any number not greater than 12. Eleven and 12 must be regarded as one-figure multipliers.



Give drill involving the use of the different multiplication tables, using circles, etc., on blackboard, as in annexed diagram; require pupils to start anywhere on the circle and name the products.

Thus: 8 three's are 24 or 8 times 3 are 24; 5 three's are 15 or 5 times 3 are 15; 2 three's are 6 or 2 times 3 are 6; 6 three's are 18 or 6 times 3 are 18, etc.

Use a similar device or plan for each of the other tables.



Use similar drill later for division and introduce numbers involving remainders.

Thus: 5 is contained in 30 six times; 5 is contained in 24 four times and 4 over; 5 is contained in 41 eight times and 1 over; 5 is contained in 17 three times and 2 over, etc.

Give such problems as the following:—

Oral work, $4\times7+3$; $4\times7-3$; $5\times9+7$; $5\times9-7$, etc.

Written work: $295\times8+290$; $295\times8-290$, etc.

Give abundance of oral drill, with one-step problems in the four simple rules. Require pupils to give statements. For example: Find the cost of 8 pencils at 9c. each.

Statement: 1 pencil costs 9c., therefore 8 pencils will cost 8 times 9c. = 72c.

DIVISION BY NUMBERS NOT GREATER THAN 12.—Teach pupils to check division by multiplication.

FRACTIONAL PARTS.—Develop from division of lines, rectangles, etc.

Associate with grouping and division. Thus: If 24 articles are placed into 2 groups of 12 each, a pupil can see that one of the groups of 12 is ½ of 24. If 24 articles are divided into 3 groups of eight each, he sees that one group of 8 is ⅓ of 24, etc.

Teach the idea, the reading and writing of ½, ⅓, ¼, ⅕, ⅙, etc., to $^1/_{12}$.

Teach the pupils to find one equal part of any quantity within these limits where the result is a whole number, as ½ of 12 inches, ⅓ of 18 miles, ¼ of 3572, ⅕ of

3145, etc. Pupils should be taught that ½ of a number is found by dividing the number by 2, that ⅓ of a number is found by dividing it by 3, ⅕ by dividing by 5, etc.

Give oral problems such as the following (confine to multiplication-table facts and to comparisons which produce whole numbers or fractions with a numerator of 1):—

(1.) 30 is how many times 3? How many times 5? How many times 10?; etc.

(2.) 24 apples are how many times 4 apples? How many times 6 apples? How many times 8 apples?; etc.

(3.) 7 is what part of 14? of 35? of 56?; etc.

(4.) 8 is what part of 24? of 40? of 56? of 72?; etc.

(5.) 9 oranges are what part of 27 oranges? of 45 oranges? of 72 oranges?; etc.

Give problems like the following (oral work first seven months of the school year; written statements and oral during the last 3 months):—

(*a*.) If 6 apples cost 30c., what will 18 cost?

(*b*.) If 6 apples cost 30c., what will 2 cost?

Solution of (*a*):—

6 apples cost 30c.

Therefore 18 apples cost 3×30c. = 90c. (× should be read "times.")

Solution of (*b*):—

6 apples cost 30c.

Therefore 2 apples cost ⅓ of 30c. = 10c.

Two Types of Division Problems.—The first of the followiing problems presents one type of division; the second, another type:—

(1.) If 4 yards of cotton cost 48c., find the cost per yard.

(2.) If 4 yards of cotton make a dress, how many dresses can be made out of 48 yards?

Solution of first problem:—

4 yards cost 48c.

Therefore 1 yard costs ¼ of 48c. = 12c.

Solution of second problem:—

4 yards make 1 dress

Therefore 48 yards will make 12×1 dress = 12 dresses.

Teach the meaning and use of the following terms (no formal definitions): Addition, subtraction, remainder, division, multiplier, multiplication, dividend, divisor, times, product, quotient.

Dollars, Cents.—Writing amounts of money expressed in dollars and cents; use of decimal point between dollars and cents; adding and subtracting amounts of money expressed in dollars and cents.

Measures.—Review previous work.

Second, minute, hour, day, month, year; inch, foot, yard; pint, quart, gallon; ounce, pound, hundredweight.

Establish the relation of the units in denominate numbers, where possible by actual use of the units. Thus, the pupils should measure their books in inches, their desks in feet and inches, and the blackboard, etc., in yards, feet, and inches. Teach them how to find perimeter. Give one-step problems in reduction. For example, 6 feet=how many yards?=how many inches?; 10 qts.=how many pints?=how many gallons?; etc.

Roman Notation extended to include the symbols I., V., X., L., C.

4. Manual Arts.

(*A*.) Cardboard Modelling.

Materials.—Thin card, paste, paper-fasteners, string, rivets, pins, thin sticks (matches or kindling), match-boxes, corks.

Tools.—Rule, set-square, scissors (cutting-board, knife, and awl, optional).

Method.—A series of simple objects should first be made by the pupils that they may acquire some skill in the use of drawing instruments and tools, and in the method of laying out the work on the card, and that they may gain a knowledge of the geometrical figures, and ascertain the limitations of the material. Afterwards, the pupils should be encouraged to suggest ideas for toys. Some of these might be worked as class projects while the brighter pupils are engaged in the execution of individual models. Finally, more ambitious work might be attempted, such as illustrations of historical scenes and incidents, models of noted buildings, bridges, etc. For these attempts the class should be broken up into several groups, each group having its own particular part in the general project.

"In all the occupations taken, one dominant factor should be the *thought* behind the 'making' and the 'doing,' the relation between what is made and the life around, the little chats about the things made, their use and purpose, the frequent play of fancy and imagery, and so on. Only in this way can exercises, so often degenerating into mere pastimes or mechanical processes, become enriched with thought and meaning, and so fulfil their purpose in all-round development."

Course.

Cardboard Construction.—(1.) Square tray; box with lid; triangular tray; money-box; waste-paper basket.

(2.) Toys suggested by pupils; e.g., boats, motor-cars, wheelbarrows, trains, carts, trucks, wagons, etc.

(3.) Doll's house and furniture.

(4.) Models of houses, churches, public buildings, with which the children are familiar.

(5.) Historical scenes; e.g., early settlement days, Indian camp-life, etc.

(6.) A sand-table project for such subject as "An Indian boy before the white man came," for which cardboard and plastic models should be used.

Plastic Models.—These should be correlated with the Nature and Geography lessons and should include various fruits, vegetables, leaves, etc.; boats, lighthouses, etc.

Reference books for teachers' use: Toymaking in School and Home—Polkinghorne (George G. Harrap & Co., Ltd., London, England); price, 10s. 6d. Handwork for the Classes—J. S. Lay (Evans Bros., London, England); 2 vols.; price, 3s. 6d. each.

(*B.*) Drawing.

Object Drawing.—Flat forms of varying shapes in upright and oblique positions; in outline and outline plus flat wash. Method of drawing oblique lines and art-curves.

Nature Drawing.—Simple leaves, flowers, fruits.

Design.—Borders, squares, triangles, rectangles, subdivided with straight lines and arcs. Designs to be coloured in monochrome, complementary colours, or harmony of two secondary colours.

Lettering.—Roman alphabet in skeleton capital letters. Lettering applied to simple verse, card, or poster (*see* Teachers' Manual of Drawing and Design).

5. Nature Lessons and Geography (to be correlated with the Language and Drawing Lessons).

(*A.*) Nature Lessons.

(*See* note on Nature Study, page 85.)

Autumn.

General.—Earth materials and their uses to mankind in furnishing food, clothing, and shelter—soil, rocks, gravel, sand, peat, etc. Food-plants; review of locally produced foodstuffs, with processes and by-products.

Animal Life.—(*a.*) Domestic animals; review of local animals already studied and extend the study to take in their intermediate usefulness to man—food, clothing, labour, transportation, sport, etc. (*b.*) Wild animals—racoon, porcupine, skunk. (*c.*) Birds—distinguish young from old birds; observe preparations for migration; examine abandoned nests of birds. (*d.*) Insects—the silkworm; collect cocoons of moths; examples of the work of insects.

Plant Life.—(*a.*) Food-plants; seed production of food-plants in field and garden—annuals, biennials, and perennials. (*b.*) Wild plants and weeds—thistle, burdock, observational study of how seeds travel. (*c.*) Trees and shrubs—local deciduous trees in woods, parks, or boulevards; shapes of trees, shapes and location of leaves, buds, and fruit.

Winter.

General.—The home grocery cupboard as representing foodstuffs of foreign production—samples, methods of production, countries and peoples involved, and transportation.

Animal Life.—(*a.*) Wild animals—wolf, coyote; animal-life stories continued. (*b.*) Birds—winter visitors, junco, grosbeak; plan and make bird-houses for spring use.

Plant Life.—(*a.*) Food-plants; study from samples all cereals grown in district and articles of food for man and beast made from each. (*b.*) Trees—evergreen trees not already studied, compare with those previously studied; study of winter buds on fruit-trees.

Spring.

General.—Water on the earth and its great value to mankind; source, forms, work, uses in daily life: (1) To all animal and plant life; (2) to people for daily use; for transportation, pleasure, sports, etc.

Animal Life.—(*a.*) Wild animals—beaver, musk-rat, mink; stories, pictures, value. (*b.*) Birds—bird calendar, feeding and nesting, habits of summer residents. (*c.*) Insects—the honey-bee, life-history; ants, work, social life, etc. (*d.*) Pond life; water-beetles, larvæ, etc.

Plant Life.—(*a.*) Garden and house plants; window boxes, house plants, seed germination, seed sowing and transplanting. (*b.*) Wild plants—flower calendar, the clovers, lupines, and broom; enemies (weeds) in the lawn. (*c.*) Trees and shrubs—study of fruit blossoms in tree and bush fruits.

(*B.*) GEOGRAPHY.

(*a.*) *Direction and Distance.*—Teach the semi-cardinal points of the compass. Give practice in locating objects, introducing the idea of distance.

(*b.*) *Time.*—Review and extend the work of Grade II.

(*c.*) *Weather and Related Phenomena.*—(1.) Pictorial records continued. (2.) How our home life is affected by seasonal changes. Note in this connection preparations for winter, spring activities, summer recreations, the beauties of autumn.

(*d.*) The study of some earth or water feature—a project.

(*e.*) *How We Live.*—(A study of our own home.) (1.) An Indian boy before the white man came. (2.) Our school district of to-day. The teacher should make a survey of the district surrounding the school. Observation of the main land and water forms should be undertaken: e.g., a hill, a mountain, a valley, a river, a lake, a bay or strait; these to be studied from the human standpoint. Reproduction—by the sandboard model, the pencil sketch, in some cases written composition; simple map-making and interpretation. The occupations of the people—this should comprise a simple study of the industries, the trades, the transportation facilities, and methods of communication of the home district. In many districts a study of soil conditions will be found necessary.

6. Music.

SECTION I.—VOICE-TRAINING.—The breathing exercises and voice exercises should still be of the simplest nature. The vowels oo, o, and aw should be used, prefixed by m, n, l.

SECTION II.—TUNE.—(1.) Children are expected to be able to sol-fa from the Modulator and sing to "laa" exercises containing any ordinary intervals of the Major Scale.

(2.) To learn to "fe" and "ta."

(3.) To have Staff Modulator drill in all keys.

SECTION III.—TIME.—The symbols for the quarter-note, half-note, eighth-note, and dotted quarter with the eighth-note to be taught. Time ear-tests should be taken. Teacher to tap a phrase, children to clap or step it and give time-names. Well-known tunes with rhythms suitable for tapping might be used; e.g., O, dear, what can the matter be?; Auld Lang Syne.

SECTION IV.—TIME AND TUNE.—The work of this section will be practically a test of what has been accomplished in Sections II. and III. Too many difficulties should not be presented at once, although there should be at least one little difficulty to test the initiative powers of the class. The aim is to get children to attack the exercise so that it will not have to be repeated for correction.

SECTION V.—EAR-TRAINING.—In addition to the work in Grade II., children should be required to write on the blackboard (the position of the key-note must be located by the teacher) the note sung or played by the teacher. Hand-signs will continue to be used for the testing. Imitation of phrases of three or four notes to be taken.

SECTION VI.—SONG-SINGING.—The songs should now be generally taught by sight, but where difficult intervals occur in a song it is better for the children to get them by imitation rather than by laboured work on the Modulator. The song is the thing, not the ability to master a difficult interval.

SECTION VII.—THEORY.—Children should be able to answer simple questions on the following terms of notation: Leger line; a bar or measure; bar lines; a beat; double bar; clefs; phrase mark; a tie; repeat sign; a dot; the slur; the pause; marks of expression.

SECTION VIII.—RHYTHMIC WORK.—(1.) Rhythmic plays; e.g., "Snowballing," "The Sleep Fairies," "Spinning Tops," etc., from Kathleen Mortimer's book.

(2.) Music interpretation from Schumann's "Album for the Young."

(3.) Rhythmic games; e.g., "Gathering Flowers."

Text-book: New Canadian Music Course, Book I.—Coney & Wickett (Gage & Co., Ltd., Toronto). Price, 20c.

Reference book: Rhythmic Work—Kathleen Mortimer & Gwynne Davies (J. Curwen & Sons, Ltd., London).

NOTE.—All necessary exercises and songs for the year's work will be found in the New Canadian Music Course, Book I.—Coney & Wickett.

7. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To stimulate further an interest in the forming of good health habits and attitudes. Empasis on personal responsibility for healthy bodies.

(1.) *Nutrition.*—Recall and emphasize the main points assigned under Grade II. The great importance of food in relation to bodily development and gain in weight. Foods as (*a*) body-builders, (*b*) energy-givers, (*c*) body-regulators. Relate instruction to the choice of foods most suitable for a school lunch. Good habits in eating; value of milk.

(2.) *Cleanliness (of Person and Surroundings).*—Review and extend the work indicated under Grade II. Care of finger-nails—should be kept clean and short, no biting or picking hang-nails. Personal responsibility for cleanliness of surroundings at home and at school. Daily inspection of children for cleanliness is invaluable and

should be taken early in the morning. Such inspection includes good order and cleanliness of shoes and clothing, neatness and brushing of hair, inspection of hands, face, neck, ears, and finger-nails.

(3.) *Clothing.*—Ensure daily practice of points mentioned in Grades I. and II. Personal neatness and responsibility for proper care of clothing.

(4.) *Rest and Sleep.*—Requirements for healthy sleep—open windows, change to night clothing, darkened room; outdoor sleeping.

(5.) *Fresh Air.*—Review work taken in former grades. Emphasize importance of breathing through the nose. Exercise to induce deep breathing; assistance by the children in ventilating of class-room, attending to lighting, heating, etc.

(6.) *Contagious-disease Control.*—Emphasize points taken in Grade II. Reasons for attending to colds; aim to avoid taking cold.

NOTE.—Morning inspection for cleanliness also affords an opportunity of detecting illness or any unusual physical condition. The following symptoms justify the attention of the school doctor or nurse, or having the child sent home: Nausea or vomiting; chill or convulsion; dizziness, faintness or unusual pallor; fever; discharging or inflamed eyes; sore throat or cough; rash or spots on the skin.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE IV.

1. Language.

Grade IV. is the psychological period for the acquirement of mechanical skill. The formation of habits of correct speech and the correct use of the mechanics of written composition should be the chief aim. The language-work of this grade should be put more fully on the project basis, thereby acknowledging the active practical turn of mind of the pupils and correlating the language-work with real needs and interests.

The objectives for Grade III. should be carefully studied and, in the main, followed.

In the conversational topics live discussion at greater length should be encouraged, but garrulousness should be guarded against. The use of short, crisp sentences should be stressed to supplant the rambling statement with many connectives. Variety of expression and a growing vocabulary should now be expected. There should be a close correlation of language with all school subjects.

Oral Composition.—In the treatment of the following suggested topics it is recommended that the procedure as outlined for Grade III. be followed:—

(1.) Duties of home life; indoor and outdoor sports and amusements.

(2.) Workers who minister to our needs—the baker, grocer, iceman, postman, cobbler, etc.

(3.) Reports of observations of familiar plant life and animal life in the immediate environment; of other forms and phases of nature.

(4.) Situations and experiences which illustrate familiar proverbs.

(5.) Team-work and service, as of the Boy Scouts.

(6.) Telling interesting experiences; describing animals, persons, places, and things; giving directions how to go to well-known places of interest; telling how to make or do things.

(7.) Dramatic rendering whenever the topic lends itself to personification or dialogue.

(8.) Simple debates on questions of common interest to the class.

(9.) Drills in finding words in small dictionaries.

(10.) *Story-telling.*—(*a.*) Reproduction of the story by the class or by individuals.

(*b.*) Original endings of stories begun.

(*c.*) Imaginary autobiographies; e.g., of a penny, a grain of wheat, a dog.

(*d.*) Stories in which animals are personified, suggested by the classic fables.

(*e.*) Original stories suggested by pictures.

(11.) Memorizing poems.

(12.) Good usage of words and phrases by means of language games, incidental instruction, and drills.

Written Composition.—A gradually increasing amount of time should be spent in written composition in this grade. Many of the topics used in oral composition work will serve as material for written reproduction.

While the major portion of the written composition work will involve the reproduction of matter which had previously formed the topic for full oral discussion, sufficient opportunity must be given for the writing of original paragraphs on subjects related in kind to those of the models studied and also on other subjects of vital interest to the children. Beginning with a simple paragraph, the work should gradually increase to the writing of a longer paragraph, with greater unity and greater variety in sentences.

The work should be made progressive and cumulative by constantly adding new words and language elements and by reviewing the old.

Letter-writing.—Continuation of simple letter-writing of the friendly, social kind as outlined for Grade III.

Capitalization.—Review work of previous grades. Geographical names, holidays, titles of relationship, various parts of a letter. Prepare for simple direct quotations by observation and discussion of them in print.

Punctuation.—Review work of previous grades. Special attention to question-marks, exclamation-marks; to hyphen in divided words; to comma in series; to the apostrophe in indicating possession.

Abbreviations and Contractions.—Review work of previous grades. In addition teach the following: B.C., U.S.A., A.M., P.M., Dr., Esq., and such contractions as isn't, don't, etc., which may occur in the children's reading material.

Grammatical Form.—A tendency may be displayed to use incorrectly the various forms of such verbs as be, do, come, saw, etc.; the forms of the personal pronouns; such words as good (well), very (awful), etc. There should be continuous drill in both oral and written exercises to inculcate the habit of correct usage of ordinary forms of speech.

Work on simple homonyms as indicated in the outline for Grade III. should be further developed.

(Such cards as those designed for Busy Work in Language and published by the Educational Publishing Company, Boston, will be found very helpful.)

READING AND LITERATURE.

Oral Reading.—Book IV. of the Canadian Readers. Correct pronunciation, clear enunciation, and articulation should be carefully stressed.

Silent Reading.—As indicated in the outline for Grade III., an ever-increasing portion of the time devoted to reading must be given to silent reading. Provision should be made in the time-table for specific exercises to increase rate and comprehension in silent reading. The Fourth Reader of the Silent Study Readers, Sherman, Reid, MacKenzie (Dent & Sons), or the Fourth Reader of The Silent Readers, Lewis and Rowland (The John C. Winston Co., Toronto), will be found particularly useful.

Teachers should understand clearly that *silent reading* does not mean merely reading silently. A complete exposition of the technique in teaching silent reading will be found in the works by O'Brien, Stone, and Wheat listed in the bibliography.

Spelling.—Words of Grade IV. minimum and supplementary lists with 100 per cent. accuracy. The use of the dictionary should be taught in this grade. First teach pupils how to find words in a dictionary. Have them arrange alphabetically the names of the pupils in the class. Arrange other words in alphabetical order. Continue this practice until pupils can with ease find words in the dictionary. Teach: How to find the pronunciation of a word; how to select the particular meaning required by the context; use of dictionary supplement. The pupil should be encouraged to refer to his dictionary if he has occasion to use a word of whose spelling he is in doubt. The "Highroads" or other suitable dictionary is recommended for pupil's use.

Authorized texts:

The Canadian Readers, Book IV. (Teachers will find "Handbook to the Canadian Readers" (Gage & Nelson) very useful.)

Spelling for the Grades (Department of Education).

Supplementary Readers:

Progressive Road to Reading, Book III. (W. J. Gage & Co., Ltd., Toronto).

The Silent Study Readers, Book IV.—Sherman, Reid, MacKenzie (Dent & Sons). Price, 70c.

The Silent Readers, Fourth Reader—Lewis and Rowland (John C. Winston Co., Toronto).

BIBLIOGRAPHY.

Oral and Silent Reading—Stone (Houghton, Mifflin & Co., Boston).

Silent Reading—O'Brien (Macmillan Co., New York). Price, $1.55.

The Teaching of Reading—Wheat (Ginn & Co., Boston).

The Teaching of English—Chubb (Macmillan Co., New York). Price, $1.75.

The Teaching of English—Carpenter, Baker, and Scott (Longmans, Green & Co., London).

Language Games in all Grades—Deming (Beckley-Cardy Co., 312 W. Randolph Street, Chicago).

Language Games—King (Educational Publishing Co., Boston).

Bulletin, 1923, No. 43, Games and Devices for Improving Pupils' English (Bureau of Education, Department of the Interior, Washington, D.C.).

Modern Elementary School Practice—Freeland (Macmillan Co., New York). Price, $1.75.

Motivation of School Work—Wilson & Wilson (Houghton, Mifflin & Co., Boston).

The Teaching of English—Klapper (Appleton, New York).

English Composition—Thorndike (Teachers' College, Columbia University, New York).

Types of Elementary Teaching and Learning—Parker (Ginn & Co., Boston).

Language Teaching in the Grades—Cooley (Houghton, Mifflin & Co., Boston).

Teaching by Projects—McMurry (Macmillan Co., New York). Price, $1.75.

2. Writing.

MacLean Method Compendium No. 4 is to be used by the pupils of this grade. Teachers will use the Teachers' Manual as their guide. Healthful posture, free rhythmic movement, and the production of better letter forms should be emphasized in all written work.

3. Arithmetic.

Smith and Roberts, Book I. to end of page 183, omitting difficult problems and all topics not indicated in the following outline.

Review previous work, striving for accuracy and reasonable rapidity. Continue daily drill on extensions and column addition.

NOTATION AND NUMERATION.—Reading and writing of numbers up to 1,000,000, locating the places and periods.

Teach, as the processes involving them are presented, the following arithmetical terminology. Even and odd numbers, factors, factoring, prime factors, prime numbers, composite numbers, composite factors, fraction, numerator, denominator, whole number or integer, proper fraction, improper fraction, mixed number, product, multiplicand, quotient (formal definitions should not be required).

Counting forward and backward by 6's, 8's, 9's, and 7's, beginning at any number; thus, by 6—14, 20, 26, 32, 38, 44, etc.; 87, 81, 75, 69, 63, 57, etc.

MULTIPLICATION.—Tables should be memorized thoroughly, beyond the possibility of forgetting.

Teach (orally) such problems as the following: 10×689; 100×176; 4×85; 5×69; 8×47.

Multiply quantities (including amounts of money in dollars and cents) by numbers of one, two, and three digits; give much practice in using numbers with zeros.

DIVISION.—Divisor not to have more than three digits. Begin with divisors having small numbers in the units; the difficulty in getting the trial quotient should be approached gradually. Take problems at first having for divisors such numbers as 21, 31, 41, 51, etc.; 22, 32, 42, 52, etc.

Teach pupils to give orally the quotient, but not the remainder, in such problems as $341\div62$; $156\div79$; $468\div54$.

Give practice in simple problems where dividend is expressed in dollars and cents.

FACTORS (ORAL WORK).—Factor, Common Factor, Highest Common Factor or Highest Common Divisor.

In finding the highest common factor of two or more numbers by inspection, proceed in the following way, using for example the numbers 18, 24, and 36:—

Take the smallest of the numbers—namely, 18; if it were to divide the other two numbers exactly, it would be the highest common factor. Eighteen does not divide

both 24 and 36 exactly. Then take its largest factor—namely, 9; if the largest factor does not divide each of the numbers exactly, take the next largest factor—namely, 6. Pupils should proceed in that way until they find the required factor. Confine work to small numbers.

MULTIPLES (ORAL WORK).—Multiple, Common Multiple, Least Common Multiple.

To find the L.C.M. of two or more numbers by inspection, proceed thus: L.C.M. of 15, 18, 30.

Take the largest number, in this case 30; if it were to contain the other two numbers, 15 and 18, an exact number of times, it would be the L.C.M. of the numbers. As it does not contain them exactly, try 2 times 30—namely, 60. As each of the three numbers does not divide 60 exactly, try 3 times 30, which is 90. Ninety contains each number exactly and is the L.C.M. of the three numbers. Confine work to simple numbers.

FRACTIONS.—(*a.*) Illustrate meaning of fractions by pictures and diagrams.

(*b.*) Reading and writing of any simple fractions, as $^1/_{15}$, $^8/_{21}$.

(*c.*) Develop, using diagrams, the relations between fractions up to twelfths, as:—

$$\frac{1}{2}=\frac{2}{4}=\frac{3}{6}=\frac{4}{8}, \text{ etc.}$$

$$\frac{1}{3}=\frac{2}{6}=\frac{3}{9}=\frac{4}{12}, \text{ etc.}$$

$$\frac{2}{3}=\frac{4}{6}=\frac{6}{9}=\frac{8}{12}, \text{ etc.}$$

$$\frac{3}{5}=\frac{6}{10}=\frac{9}{15}=\frac{12}{20}, \text{ etc.}$$

(*d.*) Reduction of fractions to higher or lower terms (orally).

(*e.*) Reduction of fractions to equivalent fractions with a common denominator (orally).

(*f.*) Teach the addition and subtraction of fractions and mixed numbers, confining work at first to fractions having a common denominator; later extend the work to fractions, having for the L.C.M. of the denominators numbers not exceeding 144.

TEACH HOW TO FIND ANY FRACTIONAL PART OF A QUANTITY, as $^2/_3$ of 69 tons; $^7/_{32}$ of \$864; $^9/_{25}$ of 775.

Then teach such problems as the following:—

If 21 chairs cost \$131.25, find what one chair will cost.

Solution:—

21 chairs cost \$131.25

Therefore 1 chair will cost $^1/_{21}$ of \$131.25 = \$6.25.

```
      |$6.25
21)$131.25
    126
     52
     42
     105
     105
```

If 6 boxes of apples sell for \$7.50, what will 5 boxes sell for at the same rate?

Solution:—

6 boxes sell for \$7.50

Therefore 5 boxes sell for $^5/_6$ of \$7.50 = \$6.25.

```
   $7.50
       5
6)$37.50
  $6.25
```

In problem-work pupils should be taught, before they begin the numerical calculation, to state first what is known or given, then what is required, and then what operation must be used.

It is suggested that a variety of problems be given daily.

TWO-STEP PROBLEMS IN THE FOUR SIMPLE RULES.—Teach problems involving two steps; that is, addition and subtraction, or addition and multiplication, or subtraction and division, etc.

The following problem involves subtraction and multiplication: A farmer had 480 acres of land. He gave his son 175 acres and sold the rest at $27 an acre. What did he get for what he sold?

Solution:—

(First step.) Farmer sold 480 acres—175 acres = 305 acres.

(Second step.) Amount of money he received for what he sold = 305 × $27.00 = $8,235.

MEASURES.—Review units of measure given in lower grades. Show relation between the following units and give one-step problems in reduction: Pint, quart, gallon, peck, bushel; ounce, pound, hundredweight; minute, hour, day, week.

ROMAN NOTATION TO MM.

4. Geography.

(*a.*) HOW OTHER PEOPLE LIVE.—(1.) The Eskimo Home. (2.) A Japanese Home. (3.) A Desert Home (the Arabs). (4.) An Equatorial Home. (5.) The Dutch Home. These to be studied by the project method. A picture, a story, some article of dress or utensil may form the approach. The lessons should be conversational. The pupils themselves should work out the project, either on sandboard or by a series of pictures collected and mounted.

(*b.*) THE EARTH AS A WHOLE, including a simple study of heat belts.

(*c.*) HOW PEOPLE ARE CLOTHED.—(1.) Wool. (2.) Cotton. (3.) Linen. (4.) Silk. (5.) Leather. (6.) Rubber. These are arranged topically, but this order need not be followed; for example, silk may be studied in connection with the Japanese Home.

(*d.*) HOW PEOPLE ARE FED.—(1.) Bread. (2.) Rice. (3.) Sugar. (4.) Tea and coffee.

Further study of the earth as a whole—the position of the Equator, latitude, longitude, the Tropics, the Arctic and Antarctic, the relative position of the continents and oceans.

5. Manual Arts.

(*A.*) CARDBOARD MODELLING.

Materials.—As for Grade III., in addition to which thicker cardboard or pasteboard, covering paper of various designs, binding strips, and brown paper should be provided.

Tools.—Rule, set-square, compasses, scissors (knife, cutting-board, awl, optional).

Methods.—Introductory models based on the circle should first be worked as class projects, to be followed by more difficult models. The thicker cardboard should be cut and scored for bending on the cutting-board with knife or scissors.

Course.

Cardboard Construction.—(1.) Lamp-shade; hexagonal tray; candlestick; pencil-box; blotter-holder or book-cover.

(2.) As for Grade III., but more difficult models should be attempted and more exact work expected.

Plastic Modelling.—This should be correlated with the Nature, Geography, and History lessons.

Free-cutting.—Booklets with free-cutting and pictures illustrative of some of the following lessons: Life in the cold lands; Life in the hot lands; Life in the temperate grass lands; Life in the temperate forests.

Teachers' reference books: As for Grade III.

(*B.*) DRAWING.

Object Drawing.—Flat forms and simple bi-symmetrical objects in outline and flat wash.

Nature Drawing.—Simple leaves, flowers, fruit, and vegetables.

Design.—Simple geometric areas subdivided and decorated with arc and simple freehand curves. Curves may be suggestive of simple leaf forms. Colour in monochrome and complementary harmonies with the addition of black and white.

Lettering.—Roman alphabet in skeleton capital letters. Attention to spacing of words and lines. Lettering of verse, inscriptions, prose, etc. (*See* Teachers' Manual of Drawing and Design.)

6. Nature Lessons. (*See* note on Nature Study, page 85.)

AUTUMN.

General.—The heavens month by month. The sun, changing length of day. Moon and its changing phases; north star and Big Dipper.

Animal Life.—(*a.*) Domestic animals—sheep and goat. Economic importance, similarities and differences, main uses, study of woollen manufacture (story of a sweater coat). (*b.*) Wild animals—mountain-sheep and mountain-goat. Compare with domestic species (pictures and museum specimens, heads, etc.). General topic —domestication of wild animals, stories. (*c.*) Birds—local water-birds, food and nesting habits. Bird-protection. Report on nesting-boxes. (*d.*) Insects—wild bees and wasps. Preparation of bees for winter.

Plant Life.—(*a.*) Food-plants—summary of food-plants grown in home or school gardens during the season and classification under following headings: (1.) Fruits—tree fruits, bush fruits, soft fruits. (2.) Garden vegetables—annuals, biennials, perennials. Food storage in leaf, stem, root, etc. Market value during season. How shipped and where. (*b.*) Wild plants and weeds—three or four of the common weeds of the garden and how propagated. (*c.*) Trees and shrubs—review in identification of the deciduous trees of the locality by leaves, buds, and bark. Make a school collection.

WINTER.

General.—The heavens month by month. Relation of sun, moon, and earth. More easily recognized constellations.

Animal Life.—(*a.*) Domestic animals—visits to a poultry-farm to study methods of handling poultry on a large scale. Make a census of breeds of poultry and number of birds in the district in each breed. Note market prices for eggs, method of export and destination, transportation, etc. (*b.*) Wild animals—recall characteristics of wild animals studied and observe locally and make an easy classification on the basis of resemblances to domestic animals, as, for example, the cat group, dog group, cattle group, and miscellaneous. Use pictures to help in identifying similar points; lantern-slides would be of great interest if available. Means by which these animals protect themselves.

Plant Life.—(*a.*) Food-plants—foodstuffs derived from plants not grown locally but used by poultry and live-stock men; e.g., meals and oil-cake, mashes, and provenders, alfalfa, hay, etc. Source from which obtained, prices, etc. (*b.*) Trees—collect and identify specimens of all evergreen trees in the district. Study products of British Columbia forests, pulp, making of paper, logging, rafting, and transportation to mills, kinds of lumber and dimension, timber produced locally, uses, prices, and particulars of export.

SPRING.

General.—Weather observations and easy records—prevailing winds, clouds and fog, rainfall, midday temperature, effects of weather conditions upon gardens and vegetation.

Animal Life.—(*a.*) Poultry study continued. Home projects in study and management of poultry or rabbits; poultry-raising competitions. (*b.*) Birds—identification of spring visitors; by size and plumage (male and female), songs, flights, etc. protection, resting habits, bird-boxes. (*c.*) Insects—insects of the garden and orchard, identification of a few common enemies such as cutworm, root-maggots, and aphis. (*d.*) Fish—observation of a local species.

Plant Life.—(*a.*) Garden and house plants—school and home projects in the raising of house and garden plants; early markets and the first appearance of local and imported vegetables and fruits, prices. (*b.*) Wild plants—identification of wild flowers continued; conservation of our native wild flowers; how to make a beautiful bouquet. Weeds—first ones to come into flower, collection with dates. (*c.*) Trees and shrubs—flowers of evergreens; calendar of ripening seeds and how scattered; growing of trees and shrubs from seed.

7. Music.

SECTION I.—VOICE-TRAINING.—Breathing exercises combined with voice exercises. Exercises should be taken that will emphasize the use of the "head voice." The exercises should be short and simple and taken daily. The vowels oo, o, and aw to be used.

SECTION II.—TUNE.—(*a.*) Sharp Modulator practice in all keys from the Staff Modulator, using syllables and laa.

(*b.*) A review of difficult intervals taken in the lower grades.

SECTION III.—TIME.—To sing to time-names and to doh exercises containing the whole note, half-note, quarter, eighth, and sixteenth, including the dotted quarter with the eighth. Simple and compound time.

SECTION IV.—TIME AND TUNE.—Short "study" songs sung to syllables, laa, and words.

SECTION V.—EAR-TRAINING.—(1.) To write or tell ear-tests containing three or four tones, including easy leaps on the tones of the Tonic Chord.

(2.) The study of thirds and sixths.

SECTION VI.—CHORDAL TRAINING.—(1.) Major and Minor Chords.

Major	s	d′	r′	s	Minor	l	t	m′
	m	l	t	m		f	s	d′
	d	f	s	d		r	m	l

(2.) The Inversion of Chords.

SECTION VII.—THEORY.—The children should be familiar with the terms of notation and terms of expression: Crescendo, diminuendo, and swell; legato; staccato marks; a brace; rests.

SECTION VIII.—SONGS.—Unison songs to be committed to memory.

SECTION IX.—RHYTHMIC WORK.—Exercises should be taken that will prepare pupils for definite work in music appreciation in Grade VIII.

Rhythmic games can be built on simple tunes of binary form. Musical phrasing and expression.

Text-book: New Canadian Music Course, Book II.—Coney & Wickett (Gage & Co., Ltd., Toronto). This book contains all necessary exercises and songs for the year's work. Price, 25c.

8. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To continue and encourage efficiency in the practice of good health habits; to instruct the pupils in the care of the special senses; to inculcate a sense of personal responsibility in helping to prevent the spread of disease.

(1.) *Nutrition.*—Review and extend the topics under Grade III.

(*a.*) Body-builders (material for growth and repair)—milk, eggs, meat, fish, etc.

(*b.*) Energy-givers—furnish heat, muscular, and nervous energy—fats (milk, butter, animal fats, and vegetable oils); sugar (in fruit, candy, honey, syrups, milk, etc.); starch (in cereals, bread, biscuits, potatoes, etc.).

(*c.*) Body-regulators—fruit, green vegetables, milk; water—emphasize the need of drinking plenty of water. Emphasize the importance of a mixed diet and of correct habits in eating; also bad effects of eating candy, cake, or pastry between meals.

(2.) *Cleanliness (of Person and Surroundings).*—Repeat and amplify the work indicated under Grades I., II., and III.; special study of care and cleanliness of the teeth—clean at least twice a day, using dentifrice at bed-time; consult dentist twice a year. Introduce general or community hygiene, showing importance of keeping streets or roadways, yards, etc., clean.

(3.) *Clothing.*—Clothing in its relation to health—amount, materials, kinds (non-constricting), care, and cleanliness.

(4.) *Rest and Sleep.*—Recall and continue topics indicated in previous grades; reasons why sleep is of such importance in maintaining healthy, well-nourished bodies; *sufficient* sleep one of the all-important health rules.

(5.) *Fresh Air.*—Relationship of fresh air to good health; emphasize importance of ventilation and outdoor exercise; danger from incorrect breathing; obstructions to breathing; elimination of poisonous matter from the lungs in breathing. Elimination of poisonous and waste matter from the skin, intestines, and kidneys should also be included here with a view to impressing the pupils with the vital relationship which exists between good health and the elimination of poisons from the body.

(6.) *Special Senses.*—Ears—to clean, use cloth over the finger; danger from putting foreign substances in the ear.

Nose—importance of keeping nasal passages clean; proper use of handkerchief; * handkerchief drill.

Throat—immediate attention to soreness, irritation, or coughing.

(7.) *Contagious-disease Control.*—How disease spreads and how to prevent it (avoid spitting, use individual cup and individual towel).

* Procedure: Each pupil displays a clean handkerchief, folds same loosely in hand, blows gently one nostril and then the other—never both at once—fold soiled part inside, return to pocket. This exercise may be given twice daily—opening of school in morning and afternoon. At this age learning of health rules, making of health posters and health charts add interest and serve to impress the lessons taught.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE V.

1. Language.

In this grade the broadening Course of Study gives excellent opportunity for the development of greater vocabulary and the stimulation of the imagination through study of the biographies of great men. These new interests furnish abundant material for both oral and written work.

The writing of long, rambling compositions should be discouraged, but original work should be given greater prominence.

One of the most effective means of developing the power of oral expression will be the adoption of the socialized recitation method, particularly in such subjects as history, geography, literature, and nature study.

In following this method the pupils are trained to express clearly and logically the ideas which they have acquired from their individual research-work. Pupils of this grade should aim to develop the ability to stand before the class and speak with some degree of fluency for a period of two or three minutes on a topic which had been assigned for special individual or group work.

ORAL COMPOSITION.—(1.) Socialized recitation of the work prescribed in history, geography, nature study, and literature.

(2.) Current events, school and local interests to furnish topics for live discussions, arguments, and short informal debates.

NOTE.—Make the topic specific and narrow rather than broad. Have pupils make simple outlines for practice in order of arrangement of content, stressing good beginnings and good endings. Make every oral lesson a language lesson, thus correlating language with all other subjects on the school programme.

(3.) Story-telling and dramatization in correlation with literature and history.

(4.) Memorizing poems.

(5.) Good usage of words and phrases by language games, incidental instruction, and drills.

Continue training in correct use of verbs and pronouns and against colloquialisms and mispronunciations, based upon the specific common errors of pupils in class.

The teacher should make compilations of the errors common to the class and to the local community, and give specific drill to eradicate these.

Use the positive method rather than the negative.

WRITTEN COMPOSITION.—A plan carefully worked out by the class should precede written reproduction. This written reproduction in Grade V. should be extended to include compositions of at least two short paragraphs, the principle of paragraph unity being given special stress.

(1.) *Reproduction.*—(*a.*) Topics which form the basis for oral discussion in literature, history, and geography periods.

(*b.*) Stories and information gleaned from books.

(2.) *Original Composition.*—The supreme test of the power of expression. Little stories of real or imaginary happenings and simple explanations and descriptions.

(3.) *Letter-writing.*—(*a.*) Continuation of writing of friendly and social letters, informal invitations, etc.; real letters to real people.

(*b.*) Simple business letters, as orders for magazines or papers, requests for catalogues, etc.

(4.) *Project.*—The class or school paper or magazine in manuscript.

The work in composition prescribed for this grade will be found in Alexander and Mowat's Elementary Composition, Part I. (W. J. Gage & Co., Ltd.). Price, 50c.

READING.

Oral Reading.—Book V. (Part I.) of the Canadian Readers. Correct pronunciation, clear enunciation and articulation should be carefully stressed.

Silent Reading.—In this grade the major portion of the time devoted to reading must be given to silent reading.

The various supplementary readers recommended for history and geography may be used. For specific training to develop rate and comprehension in silent reading The Silent Study Readers, Book V., Sherman, Reid, MacKenzie (Dent & Sons); price, 70c., or the Fifth Reader of The Silent Readers, Lewis and Rowland (The John C. Winston Co., Toronto), will be found particularly useful.

Spelling.—Words of Grade V. minimum and supplementary lists with 100 per cent. accuracy. Further lessons in the use of the dictionary.

Authorized texts:

The Canadian Readers, Book V., Part I. (Teachers will find the "Handbook" (Gage & Nelson) very useful.)

Alexander & Mowat, Elementary Composition (Gage). Price, 50c.

Spelling for the Grades (Department of Education).

BIBLIOGRAPHY.

Reference books recommended for Grade IV. and The Socialized Recitation—Whitney (Barnes, 381 Fourth Avenue, New York).

2. Writing.

Continuation of the work of Grade IV. Compendium No. 4 is to be used by the pupils. Teachers will use the Teachers' Manual as their guide. A few optional letter forms may be introduced.

3. Arithmetic.

Smith and Roberts, Book I. to end of page 205 and pages 237 to 251, omitting difficult problems and all topics not referred to in the following outline.

Give a systematic review of the work of the preceding grades, paying considerable attention to checking the work.

NOTATION AND NUMERATION.—Read and write any whole number or fraction. Give numerous examples of numbers involving ones and zeros in combinations, as 30,704,601; 40,805,910, etc.

COUNTING.—Continue counting as in the Fourth Grade, with special drill in counting by 6's, 7's, 8's, and 9's, beginning at any number.

FACTORS AND MULTIPLES.—Review work of Grade IV. Teach pupils to find prime factors, common factors, the highest common factor (H.C.F.) and the least common multiple (L.C.M.) of two or more numbers, thus:—

Find the H.C.F. and L.C.M. of 18, 30, and 42.

First find the prime factors:—

$$18 = 2\times3\times3$$
$$30 = 2\times3\times5$$
$$42 = 2\times3\times7$$

2 and 3 are common factors; therefore the highest common factor is $2\times3=6$.

The L.C.M. is the smallest number which is exactly divisible by 18 ($2\times3\times3$), by 30 ($2\times3\times5$), and by 42 ($2\times3\times7$). Taking the prime factors ($2\times3\times7$) of the largest number—namely, 42—we must add 3 to the group to get a number exactly divisible by 18 ($2\times3\times3$). We now have $2\times3\times3\times7$. In order to get a number exactly divisible by 30 ($2\times3\times5$) we must add 5 to the group of factors. We now have $2\times3\times3\times7\times5$. Therefore the L.C.M. of 18, 30, and $42 = 2\times3\times3\times7\times5 = 630$.

The following process has the advantage of being shorter:—

$$\begin{array}{r} 2)18,\ 30,\ 42 \\ \hline 3)9,\ 15,\ 21 \\ \hline 3,\ \ 5,\ \ 7 \end{array}$$

Divide by prime factors, taking first the smallest factor common to any two or more of the numbers.

The common factors are 2 and 3.

The H.C.F. is therefore $2\times3=6$.

L.C.M. $=2\times3\times3\times5\times7=630$.

FRACTIONS.

(*a.*) Review work of Grade IV.

(*b.*) Reduce fractions to equivalent fractions having a common denominator.

(*c.*) Arrange fractions in order of magnitude (oral work).

(*d.*) Reduce fractions to their lowest terms (oral work).

(*e.*) Reduce improper fractions to mixed numbers and mixed numbers to improper fractions.

(*f.*) Multiplication and cancellation. Pupils should do such problems as the following without reducing the mixed numbers to improper fractions:—

875
$3\frac{1}{4}$
———
$218\frac{3}{4}$ (one-fourth of 875).
2625 (three times 875).
———
$2843\frac{3}{4}$ (three and one-fourth times 875).

$679\frac{7}{11} \times 8$
———
$5\frac{1}{11}$ (eight times $\frac{7}{11}$).
5432 (eight times 679).
———
$5437\frac{1}{11}$ (eight times $679\frac{7}{11}$).

(*g.*) Division.

(*h.*) Complex fractions (simple problems only). Such problems as the following should be solved mentally:—

$\frac{3\frac{2}{3}}{4} = \frac{11}{12}$ Multiplying the numerator and denominator by 3, we get 3 times $3\frac{2}{3}$ or 11 for the new numerator, and 3 times 4 or 12 for the new denominator.

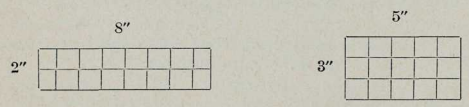
$\frac{5}{7\frac{3}{8}} = \frac{40}{59}$ Multiplying the numerator and the denominator by 8, we get 8 times 5 or 40 for the new numerator, and 8 times $7\frac{3}{8}$ or 59 for the new denominator.

DENOMINATE NUMBERS.—Review previous work. Teach the following tables: Linear, Time, Avoirdupois.

Give simple problems such as the following: 58 yards = how many feet? how many inches?; 58 feet = how many yards and feet? how many inches?; 750 rods = how many miles and rods; 750 miles = how many rods?; 29 miles 150 rods = how many rods?; 249 lbs. = how many ounces? = how many hundredweight?; 7560 lbs. = how many tons? = how many cwt.?; 3 tons 7 cwt. = how many cwt.? = how many lbs.? etc.

AREA AND SURFACE.—Give each pupil two pieces of paper or cardboard (rectangular shape), one, say, 8 inches long and 2 inches wide, the other 5 inches long and 3 inches wide. Then ask the pupils which piece is the larger, or which one, if placed on the desk, would cover the greater surface. Their reply will probably be that they are unable to decide. Then tell them that you are going to teach them how to measure surfaces or areas.

Ask them to mark off the inches on each side of the two pieces of paper, and join the points, thus:—

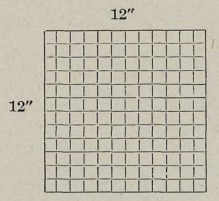


The pieces of paper are now divided into squares, each 1 inch long and 1 inch wide. Each square covers a square inch of surface and is called a square inch.

Counting, the pupils find there are 16 squares in the longer piece (two rows having 8 squares each) and 15 in the shorter piece (3 rows having 5 squares each). The pupils will now see that the piece which is 8 inches long and 2 inches wide has the greater surface and that its surface is 1 square inch greater than that of the other piece. They will also see that, since the number of square inches in the surface of each could have been found by multiplying the number representing the length of the paper by the number representing its width, it was not necessary to mark off the papers into squares in order to determine their surface. For example, the number of square inches in the surface of one piece is 2 times 8 square inches, and the number in the other piece is 3 times 5 square inches. Tell them that the number of squares in the surface of any oblong or rectangle can be obtained by multiplying the numbers representing the two dimensions expressed in like units.

Then ask such questions as the following: How many square inches are in a piece of paper 9 inches long and 7 inches wide; in a piece 12 inches long and 11 inches wide?

Get them to draw a square a foot long and a foot wide (a square foot) and to mark off the inches on each side, and also to join the points, thus:—



They will see that the square has been divided into 12 rows, each containing 12 squares, and that therefore the square foot has been divided into 12 times 12 squares = 144 squares. As each square is 1 inch long and 1 inch wide, it is called a square inch. The pupils will now see that there are 144 square inches in a square foot and that the result could have been found (without marking the square foot off into square inches) by multiplying the number representing the length of the square in inches—namely, 12—by the number representing its width in inches—namely, 12.

In the same way get them to mark off on the blackboard a square yard into square feet. Ask them to tell how they could have determined the number of square feet in a square yard without dividing it up into squares.

Ask such questions as the following: If there were only 10 inches in a foot, how many square inches would there be in a square foot? If there were 4 feet in a yard, how many square feet would there be in a square yard?

Emphasize the fact that surfaces are measured by squares, that small surfaces whose length and width are expressed in inches are measured by the square inch, and that surfaces such as the walls or floors of rooms whose length and width are expressed in feet or yards are measured by the square foot or the square yard. For larger surfaces or areas, such as farms, disticts, counties, there are other units of measure which will be taken up later.

Do not allow pupils to say that the number of square feet in a rectangle 30 feet long and 20 feet wide is 30 feet multiplied by 20 feet. Teach them that the number of squares (square feet) in the rectangle is 30×20 sq. feet = 600 square feet. As the rectangle may also be said to be divided into 20 rows, each row containing 30 square feet, it would also be correct to say that the number of square feet in the rectangle $= 20 \times 30$ sq. ft. = 600 sq. ft.

Give such problems as the following: 63 square feet = how many square yards? = how many square inches?; 17 square yards = how many square feet? = how many

square inches?; 5904 square inches=how many square feet?=how many square yards?

If a room is 18 feet long and 16 feet wide, find (1) the area of the floor in square feet, (2) the perimeter of the room.

If a lot is 54 yards deep and 23 yards wide, find (1) its area in square yards, (2) its area in square feet, (3) the perimeter of the lot.

TEACH PROBLEMS INVOLVING three steps when whole numbers are employed and two steps when fractions are employed.

Pupils should be required to indicate the steps required for the solution before beginning the written process.

Teach such problems as the following: If 8 tables cost $176, what will 5 cost at the same price?

Solution:—

8 tables cost $176

Therefore 5 tables will cost 5/8 of $176 = $110

$$\begin{array}{r} \$176 \\ 5 \\ \hline 8)\$880 \\ \hline \$110 \end{array}$$

4. Geography.

(*a.*) Explanation of aim of the instruction.

(*b.*) Physical Geography.

(*c.*) Regional Geography, which includes: (1) North America; (2) Canada in general; (3) British Columbia in detail.

(*d.*) Bibliography of supplementary reading material for pupils' and teachers' use.

(*a.*) THE AIM OF THE INSTRUCTION.—Hitherto the study of nature and the beginnings of geography have been based upon the child's actual experience and upon practical observational work in the neighbourhood of the school, these being supplemented by the teacher's oral descriptions and by the reading of suitable supplementary material.

The work of Grade V. includes the facts of the earth's shape and rotation, of the existence and location of heat-belts, of the longer and shorter days and slanting rays as determining seasons. The latter may be discovered by the children from observations recorded month by month, and by reference to the globe. A scientific explanation of these facts will be deferred to a later time.

An atlas (Canadian School Atlas—Cornish (Dent & Sons)) is now used by the children, and, the maps being introduced merely as substitutes for a globe, the child must be trained to recognize the meaning of the various marks and symbols, so that they call to his mind an actual fact or condition—land and water, river, lake, and highland, city and country. Thus map study becomes an extension of personal observation and we avoid such mechanical exercise as "finding" and "listing" names mentioned, or of "reproducing" the details of the printed map. The use of pictures and of word-pictures by the teacher will be continued, but intelligent and directed map study, together with the reading of *supplementary* and *descriptive* material, will partially replace the oral teaching upon which reliance has till now been placed.

At the end of the portion devoted to the summary of Grade V. work a list of texts has been appended. These will be of assistance to the teacher in making a selection for the library and for the necessary supplementary reading material which should follow up the oral lessons of the teacher, and from which the solution of problems and projects may be gained. Pupils of this grade should not be required to use a text-book in geography.

Interest will be increased and the children's self-activity promoted by their working in groups upon any problem or project that they themselves have met in their study of the following subject-matter.

(*b.*) PHYSICAL GEOGRAPHY.—(1.) The atmosphere—i.e., evaporation and condensation, winds, clouds, effect of mountains in forming clouds; the story of a river reviewed; sea-coast, effects of waves, high and low water, islands and bays.

(2.) A series of observations through the year of position of sun at noon, showing so far as *local* conditions are concerned the nature of the seasons.

(3.) Globe study leading to shape of the earth, rotation giving day and night, heat-belts, latitude.

(*Some* of the following subject-matter may be utilized: Cornish's Canadian School Geography, Sections 21 to 23, 25, 26, 28 to 32; 97 to 105; 58 to 60; 3 to 13, 15, 18, 20.)

(*c.*) REGIONAL GEOGRAPHY.

1. *The Continent of North America.*

A. Map study of the continent as a whole, to familiarize the pupils with the features of outstanding importance—*coast-line*, *surface*, and *drainage*. Relief maps or models made and outline maps filled in by pupils. In this work the following points should be developed:—

(1.) The position and the comparative size of the continent (by globe study). Mercator's projection is out of proportion and some explanation should be made if this map is used.

(2.) *Coast.*—The pupils should study the Map of North America (Map 8, Cornish's The Canadian School Atlas) and select the islands, peninsulas, and bays; the teacher aiding them to gain a clearer concept of these features by discussing their comparative size and by relating items of interest. Review by means of blank blackboard outline map. Some of Section 177 may be adapted to this grade.

(3.) *Surface Features.*—Use a relief map and models in plasticine, clay, or sand. Map No. 8 should then be interpreted. Special attention should be given to the explanation of the key. Further reference to the most prominent peninsulas and bays, seeking an explanation of their position and shape, cause, etc.

B. Topic Lessons.—A series of oral lessons taking the pupils in imagination through the different districts of the continent. In these they see the people at work and learn about the climate, the products, the trade, and the names and location of the great commercial centres. A large product map should be in process of development as the topic lessons proceed.

Where supplementary reading material is available (*see* Bibliography) the oral lessons should be followed by well-selected descriptive reading-matter. Pictures should be used. Some of the topic lessons listed below will be found suitable for group study by the problem project method:—

(1.) *The Frozen Northland.*—That part of the continent north of the parallel of 60°. The fur trade and the life of the Eskimo will be emphasized. A project may be undertaken by working out in cardboard a representation of an Eskimo village.

At this stage the Mackenzie River Basin should be taught. Correlate with the history topic—Alexander Mackenzie.

(2.) *Life in the Forest Belt.*—From Pacific to Atlantic. As the initial study of a great industry the pupils should learn something about: (*a*) The modern logging operations; (*b*) the sawing of the logs into lumber; (*c*) the distribution of the finished product. A visit to a logging camp, sawmill, and water-front if possible.

(3.) *The Wheat Lands.*—Describe and show pictures of the methods used in planting, harvesting, and marketing the wheat (*see* Sections 131, 305, and Figs. 134, 135, 136, 137).

The Saskatchewan Nelson.—If the pupils have access to supplementary reading material they should be encouraged to prepare an account of a canoe trip from Calgary or Edmonton to York Factory.

This should follow the working-out of a plan of the drainage-basin on the blackboard.

(4.) In a similar manner the following may be studied: (*a*) The Corn Belt; (*b*) The Cotton Section; (*c*) The Great Ranch Lands.

The Mississippi.—It is suggested that it would lend interest to the work if the teacher took the pupils on an imaginary trip down the Mississippi. In this manner the following might be noted: Changing climatic conditions, fields of wheat, mills at Minneapolis, fields of corn, Chicago and St. Louis; cotton-fields, New Orleans, Galveston. The levees and delta lands. A map of the Mississippi drainage-basin should be drawn by the pupils.

(5.) (*a.*) A visit to an orange grove (California and Florida). (*b.*) The manufacture of iron and steel, using Pittsburgh or some similar place as a centre.

C. Climate.—This should be inferred from the information gained in the study of the foregoing topics. The teacher should aim to reach the following conceptions: Temperature and rainfall, the great factors determining climate; Oceanic and Continental climates. (Use Maps 10 and 11, Atlas. Sections 184, 185, Sections 21–32, omitting 24 and 27, text.) Westerley winds and their influence.

D. Political Divisions.—(*See* Map 13, Atlas, also Section 180, Canadian School Geography; include capital cities.)

2. *Canada in General.*

(1.) Map study (Map 17) to determine the provinces of Canada. Teach grouping of the Provinces into: (*a*) Maritime Provinces; (*b*) Provinces of the St. Lawrence; (*c*) The Prairie Provinces; (*d*) The Pacific Province; (*e*) Territories.

(2.) Relative sizes should be noted.

(3.) Examine each group to determine natural and artificial boundaries.

3. *British Columbia in Detail.*

(1.) *Position.*—Section 317. Emphasize its situation in relation to the Orient and Australia, South America and Europe. British Columbia is Canada's Western Gateway.

(2.) *Shape and Size.*—Sections 318, 319.

(3.) *Surface Features.*—Section 320. Map study, Map 23. On an outline map pupils may mark in the main mountain masses. A blackboard cross-section should be drawn.

(4.) *Coast-line*—Section 321.

(5.) *Drainage.*—Section 322. Special emphasis should be given the Fraser at this stage. The outline map should again be used and the main drainage features added.

(6.) *Climate.*—Section 323.

(7.) Particular study of the Province by districts as in supplement. Pages 451 to 498.

4. *Map Drawing.*

(1.) Prepared outline maps of North America should be obtained and the pupils taught to fill in important features from memory.

(2.) The map of British Columbia should be taught from the blackboard; the pupils should then be required to make a copy of the outline and to fill in from memory important features.

Booklets.—It is further suggested that the teachers bear in mind the value of composition-work which emanates from the pupils' activities. In this regard a note-book may be kept by each pupil as the topic lessons develop. This may provide a permanent record for reference and, if properly conducted, is of value at the end of the term for review-work, as well as a means of training the child in expression. Mere copying of blackboard notes or outlines is insufficient.

Such topics as the following point the way: (*a*) The advantages of our district (town or city); (*b*) Fur-bearing animals near home; (*c*) Indian life in North America; (*d*) Lumbering in British Columbia; (*e*) A trip down the Fraser; (*f*) Wheat-fields of the Saskatchewan.

Such a booklet should include outline maps filled in, views and sketches and illustrations cut from magazines and newspapers, with descriptive summaries.

Some very interesting booklets have been worked out from time to time by individual teachers. The following account may be of help and is inserted with that end in view:—

The booklet was entitled "Victoria—Our Home." The children made the cover design, each design being original. The contents include a map of the district showing important bays, pleasure resorts, public buildings, and the school-house, written description and illustration material. Pictures were freely used, as well as post-cards, folders from steamship and railway companies, advertising bureau material, and the daily press. Some pupils provided photographs. Illustration played an important part, and while the work was individual, pupils exchanged extra copies with each other. The principal industries were described; the necessary material in many cases having been secured by "class" visits and actual observation. The textual material was largely prepared at home and pupils were encouraged to gather information from any one and every one, much of the actual preparation thus being done out of school-hours. The preparation of the booklet took about six weeks. During that time the progress each pupil had made was checked two or three times, advice and help were given, and the child was given a fresh impetus. The results were most satisfactory in nearly every case. Outside help was secured in the judging and the booklets were divided into A, B, and C ranking. The better ones were put on view and excerpts from the best descriptions were read to the whole class.

The pupil activity engendered by this work was most gratifying to the teacher and to the parents. The children gained an appreciation of their district which could be secured in no better way. The same class, later in the term, prepared a booklet on "Vancouver Island" with equally happy results.

It is not necessary that the booklets be restricted to topics of local or provincial setting. At times a topic of world-wide current interests may be utilized. The recent Japanese earthquake is a case in point.

REFERENCE BOOKS FOR PUPILS.

The World and Its People—North America (T. Nelson & Sons, Ltd., Toronto).

Human Geographies, Primary Series, Book IV.—In the New World (Geo. Philip & Son, Ltd., London, England).

Carpenter's Geographical Reader—North America (American Book Co., New York).

How the World is Fed; How the World is Clothed; How the World is Housed—F. G. Carpenter (American Book Co., New York).

Table Talks and Table Travels—Mabel Bloomer (Blackie & Son, Ltd., Edinburgh).

Big People and Little People of Other Lands—E. R. Shaw (American Book Co., Chicago).

How Other People Live—H. Clive Barnard (Adam and Charles Black, London).

Great Cities of the World—New York (McDougall's Educational Co., London).

Eskimo Land—E. W. Hawkes (Ginn & Co., Boston).

Romance of Travel Series—Redmen and Buffalo—W. A. Bell (Oxford University Press, Toronto).

North America—Nellie B. Allen, 390 pages (Ginn & Co., Boston). One of a new set of Geographical Readers (1922) in which the "geographical and industrial studies" are delightfully told. The illustrations are new and well selected.

REFERENCE BOOKS FOR TEACHERS.

The books enumerated above, and in addition:—

(1.) Descriptive Geography from Original Sources—North America—F. D. and H. J. Herbertson (A. & C. Black, London). Price, $1.10.

(2.) The World's Commercial Products—Freeman & Chandler (Ginn & Co., Boston).

(3.) Great American Industries: Book 1, Minerals; Book 2, Products of the Soil; Book 3, Manufactures—W. F. Rocheleau (A. Flanagan & Co., Chicago).

(4.) The Frye and Atwood Geographies, Books I. and II. (Ginn & Co., Boston).

(5.) Teaching Geography by Problems—E. E. Smith (Doubleday, Page & Co., New York).

(6.) Teaching of Geography in Elementary Schools—Dodge and Kirchwey (Rand, McNally Co., Chicago).

(7.) Project Method in Education—M. E. Branom (Badger, Boston).

(8.) Teaching by Projects—C. A. McMurry (Macmillan Co., New York). Price, $1.75.

(9.) Commercial Geography—E. VanD. Robinson (Rand, McNally Co., Chicago).

5. History.

I. AIM.—History is no longer considered a mere chronicle of kings and of diplomacy, a list of battles, of dates and of statutes, but it is becoming more and more a sociological study. The advance of civilization, the progress of the community to culture, economic freedom, and the growth of democracy are the bed-rock of the subject.

The aim, therefore, in the teaching of history is to present to the pupil the story of the past that he may understand more clearly the social system in which he lives. Through history he will learn the significance of citizenship, its privileges and its responsibilities, and he will become acquainted with the social forces around him.

The scope of the subject is wide. It is possible in the elementary school for the pupil to cover but a very limited portion. It is the work of the teacher to create in him a real interest in history, and to give him an insight into the subject that he may have the ability to read intelligently for himself, rather than to cram him with predigested information.

In Grade V. the work involved in carrying out the first part of the course assigned is in no sense a formal teaching of the subject. It should be interwoven with the language-work, supplementary reading, and the study of geography. *The primary aim is to awaken a keen interest in the subject and a desire for reading.*

When the pupil has gained considerable knowledge and understanding of the social conditions around him he may be led farther afield. In the second part of the course assigned for this grade he is able to begin, therefore, a study of the discoveries, the explorations, the fur-tradings, the wars, the settlements, the social conditions, etc., on the American continent, as an outcome of the social, economic, and political conditions that prevailed in Europe.

II. METHOD.—The following method is suggested: In the introductory stage (first term) the method should consist rather in the use of graphic word-pictures of stirring events and of interesting tales of adventure. The stories should sometimes be told, sometimes read, to the class; as much as possible, too, the children should be allowed to gain that enjoyment that comes from each reading for himself independently.

After the initial stage the pupil should gradually become less and less dependent on the teacher. The teacher should always encourage initiative on the part of the pupil that he may develop the ability to do much independent work for himself. For this purpose the *laboratory method* is strongly recommended. The laboratory will

consist of a small class-room library; the apparatus, of books, pictures, magazines, etc. A well-selected collection of general histories, monographs, biographies, magazines, etc.; portraits of historical personages, pictures of groups and scenes, modern imaginative pictures portraying historical scenes are indispensable.

If suitable material is available in the library the teacher should outline the lesson plan. With this plan or framework as his guide, the pupil should be in a position to do much intelligent purposeful reading. In this way the details may be assembled. The class discussion, which would naturally follow, may take the form of a general discussion, a socialized recitation, a dramatization, or a debate. The project method may be used where the topic under discussion lends itself to this method of treatment.

III. SUBJECT-MATTER.

A. Talks on the Early History of British Columbia.

(*a.*) Stories relating to Indian life in the Province before the white man came. From these stories the pupil should get a clear conception of the Indian's method of living, his mode of warfare, his superstitions, his legends, his means of travel, etc.

(*b.*) Stories of adventure of early explorers; e.g., Cook, Meares, Vancouver, Mackenzie, Thompson, Fraser. These stories will include accounts of the initial stages of the fur trade in our Province.

(*c.*) Stories of the re-establishment of the fur trade by the Hudson's Bay Company.

(*d.*) The story of the Cariboo Trail.

(*e.*) Stories relating to early missionaries and the establishment of missions.

(*f.*) Stories of early pioneers (only those of local interest are to be attempted).

(*g.*) Stories of the surveying for the C.P.R. and the building of it.

(*h.*) Stories of the beginnings of such centres as Victoria, New Westminster, Kamloops, Vancouver, etc. Special attention should be paid to the founding and growth of the pupils' home town, and the surrounding towns, cities, and districts that are of local interest.

B. Discoverers and Explorers of America.

1. A general description of Europe in the 15th century, showing the social, political, and economical conditions of the times (two or three lessons).
2. Marco Polo (and the Trade with the East—the Turkish Invasion—breaking of the trade route—desire for a new route).
3. Bartholomew Diaz.

(The above three topics should be treated in such manner as to form a suitable background for the story of the life and discoveries of Columbus.)

4. Columbus.
5. Description of the Indians.
6. Balboa.
7. De Soto.
8. Cortes.
9. Magellan.
10. Pizarro.
11. John Cabot.
12. Jacques Cartier.
13. Capt. John Smith.
14. Champlain.
15. The Jesuit Missionaries.
16. Pilgrim Fathers.
17. Radisson.
18. Frontenac.
19. La Salle.
20. Verendrye.
21. Montcalm and Wolfe.
22. The United Empire Loyalists.
23. Joseph Brant.
24. Tecumseh.
25. Laura Secord.
26. General Brock.

At least fifteen of these biographies should be studied. The teacher should select from this list such characters as are necessary to present to her pupils a clear account of the condition of the times and to show the advancement of the settlement of this continent.

IV. BIBLIOGRAPHY.

(*a.*) Reference books for pupils:

The Far West Coast—V. L. Denton (J. M. Dent & Sons, Ltd., Toronto). Price, $1.50.

Britannia History Reader—Introductory Book (The Copp, Clark Company, Toronto). Price, 60c.

Britannia History Reader, Book I. (The Copp, Clark Company, Toronto). Price, 60c.

Story of Canada; The Story of La Salle; The Story of the Pilgrims; The Story of Mexico. (These stories and many others are contained in "Instructor Literature Series," published jointly by F. A. Owen Publishing Co., Dansville, N.Y., and Hall & McCreary, Chicago.)

(*b.*) For the teachers:

The Far West Coast—V. L. Denton (J. M. Dent & Sons, Ltd., Toronto).

Early History of British Columbia—B. A. McKelvie (Dent & Sons, Toronto).

Explorers and Founders of America—Foote and Skinner.

By Star and Compass—W. S. Wallace (Oxford University Press, Toronto).

Where the Buffalo Roamed—Marsh (Macmillan Co., Toronto). Price, $1.60.

Pathfinders of the West—A. C. Laut (Macmillan Co., Toronto). Price, $1.

Canada, the Empire of the North—A. C. Laut (Ginn & Co., Boston).

Pictures from Canadian History—K. L. Macpherson (Renouf Publishing Co., Montreal).

Canada—Beckles Wilson (T. C. & E. C. Jack, Ltd., Edinburgh).

Famous Canadian Stories—Leslie Horner (McClelland & Stewart, Toronto).

French Pathfinders in North America—Johnson (Little, Brown & Co., Boston).

Brief Biographies—J. O. Miller (Copp, Clark Co., Toronto). Price, 40c.

Canadian Men of Action—Brock and Champlain (The Macmillan Co. of Canada, Ltd., Toronto). Price, each volume 85c.

The Ryerson Canadian History Readers—Sir Isaac Brock and Sir Alexander Mackenzie (Ryerson Press, Toronto). Price, 10c. each.

Chronicles of Canada (32 vols.), edited by Geo. M. Wrong & H. H. Langton (Glasgow, Brooks & Co., Toronto).

6. Drawing.

OBJECT DRAWING.—Cylindrical forms of common objects in vertical and oblique positions, finished in outline or flat tones.

NATURE DRAWING.—Leaves, flowers, twigs, in outline and outline plus colour.

DESIGN.—Borders and panels decorated with simple motifs based upon nature forms as suggested in Group III., Design Section of Teachers' Manual.

COLOUR.—As noted in previous grades, with better technique.

LETTERING.—Review of Roman capital letters. Introduction of small Roman letters (skeleton form). Lettering of verse, prose, etc., using capitals and small letters in conjunction. (*See* Teachers' Manual of Drawing and Design.)

7. Nature Study and Elementary Agriculture. (*See* note on Nature Study, page 85.)

AUTUMN.

Animal Life.—(*a.*) Wild animals—seal, walrus, sea-lion. (*b.*) Birds—owls, hawks, eagles. (*c.*) Insects—grasshoppers, crickets, bugs.

Plant Life.—(*a.*) Weeds—shepherd's-purse, wild mustard, lamb's-quarter, pigweed, narrow-leaved plants in (ribgrass), wild sunflowers. (*b.*) Trees and shrubs—cypress ("cedar"), poplar, arbutus, oak.

Gardening and Elementary Agriculture.—Careful study of one or two types of annuals, biennials, and perennials, with special attention to food-storage (preparation for winter).

WINTER.

Animal Life.—(*a.*) Wild animals—cougar, wolverine, lynx, and wild-cat (using pictures or stuffed specimens where available). (*b.*) Birds—woodpeckers, including flicker and nuthatch. (*c.*) Insects—dormant forms of insect-life.

Plant Life.—Trees—larch ("tamarack"), spruce; comparison of all evergreens studied.

Gardening and Elementary Agriculture.—Planning of school and home gardens; drawing of plans; description and stories relating to gardens and gardening.

SPRING.

Animal Life.—(*a.*) Birds—jays and magpies; nesting habits of birds studied in autumn and winter. (*b.*) Insects—flies, beetles, and wasps.

Plant Life.—(*a.*) Wild flowers—twin-flower, violet, false Solomon's-seal, wild bleeding-heart. (*b.*) Trees and shrubs—spiræa, red flowering currant, the poplars.

Gardening and Elementary Agriculture.—School and home gardening projects taken up as already planned.

8. Music.

SECTION I.—VOICE-TRAINING.—Breathing exercises combined with voice exercises. The exercises in this and the following grades should now be a little more definite.

SECTION II.—TUNE.—(*a.*) Sharp Staff Modulator drill in all keys, using syllables and laa.

(*b.*) To sol fa from the Modulator, exercises containing minor mode phrases introducing l se l.

SECTION III.—TIME.—As for Grade IV., but including the dotted eighth and sixteenth.

SECTION IV.—TIME AND TUNE.—"Study" songs to syllables and laa.

SECTION V.—EAR-TRAINING.—(*a.*) To write or tell ear-tests containing four or five tones, including easy leaps.

(*b.*) Chordal exercises for blending of voices.

(*c.*) Two-part exercises.

SECTION VI.—THEORY.—Formation of scale; a sharp, flat, and natural; an accidental; key signatures; a triplet; the sharpened fourth; the flattened seventh; terms of expression (animato, allegro, adagio, largo, legato, maestoso); dance forms (minuet, gavotte, sarabanda); transition or modulation to nearly related keys.

SECTION VII.—SONGS.—Songs in unison.

SECTION VIII.—RHYTHMIC WORK.—Use the minuet, gavotte, and skipping steps to introduce the works of Bach, Handel, and Schumann.

Text-book: New Canadian Music Course, Book III.—Coney & Wickett (Gage & Co., Ltd., Toronto). Price, 25c. This book contains all necessary exercises and songs for the year's work.

9. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To give a better understanding of health rules and to extend the instruction along each line as already started. To emphasize the importance of physical fitness.

(1.) *Nutrition.*—Review carefully the work of Grade IV.; quantity of food neded; simple facts of digestion and absorption; uses and structure of the teeth; how to guard against decay.

(2.) *Posture.*—Framework of the body—important bones and joints; muscles and their use; importance of good posture and of physical exercise.

(3.) *Rest and Recreation.*—Different kinds of rest—(*a*) active rest (for mental workers), (*b*) mental rest, (*c*) sleep for mental and physical workers, (*d*) outdoor recreation for all.

(4.) *Fresh Air.*—The breathing system—simple description of the organs and process of breathing; emphasis on efficient respiration—good posture, loose clothing, nose breathing—exercises.

(5.) *Circulation.*—What the blood does for the body; the heart and its work—what the pulse is; the body temperature—how maintained and regulated.

(6.) *Elimination.*—Function and proper care of the skin—bathing; cleanliness as an aid to health.

(7.) *Special Senses.*—Review Grade IV. and continue with care of the eyes and value of good sight; good habits for conserving sight.

(8.) *Disease-control.*—Danger from flies and mosquitoes as disease-carriers and how to fight them; danger from impure drinking-water; reasons for quarantine.

NOTE.—Story-telling and health plays may be used to advantage, also making of health posters and booklets. Weekly recall and inventory of correct health habits is of value.

Following is a summary of correct health habits as adopted by the Child Health Association of America (*see* list) :—

1. A full bath more than once a week.
2. Brushing the teeth at least twice every day.
3. Sleeping many hours every night with the window open.
4. Drinking as much milk as possible, but no tea or coffee.
5. Eating some vegetables or fruit every day.
6. Drinking at least four glasses of water a day.
7. Playing a part of every day out-of-doors.
8. A bowel movement every day.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE VI.

1. Language.

Note carefully and follow generally the outline for Grade V. The work in English for Grade VI. is largely an extension and a development of the work done in the Fifth Grade. The chief aim in this grade in the development of oral expression is to train every pupil to speak for a few minutes in an interesting and logical way, using good enunciation and clean-cut sentences, devoid of the common errors of speech; to read silently once and then reproduce a short, simple story, an item of news, or a paragraph of information; to associate with all oral expression habits of good position and delivery; in the development of written expression to work for ease and fluency in simple English; to establish a clear notion of a sentence and to train pupils to write briefly in an interesting and logical way, using clean-cut sentences, unmarred by misspelled words and by common grammatical errors; to establish in the mind of the pupil the paragraph-sense.

NOTE.—If the desired aims in the attainment of oral and written expression are to be attained, intelligent use must be made in a majority of the school subjects, of the socialized recitation and the project method.

ORAL AND WRITTEN COMPOSITION.—Continue outline for Grade V. The work for Grade VI. differs from that of Grade V. in degree rather than in kind.

The work prescribed in composition for this grade will be found in Alexander and Mowat's Elementary Composition, Part II., Chapters I. to IV., inclusive.

READING.

Oral Reading.—Book V. (Part 2) of the Canadian Readers. Correct pronunciation, clear enunciation, and articulation should be carefully stressed.

Silent Reading.—As in Grade V., a major portion of the time devoted to reading should be given to silent reading. The various supplementary readers recommended for history and geography may be used.

For specific training to develop rate and comprehension in silent reading The Sixth Reader of The Silent Study Readers, Sherman, Reid, MacKenzie (Dent & Sons); price, 70c., will be found particularly useful.

In order to attain the desired objectives it is imperative that teachers familiarize themselves with the technique specifically set forh in the books on silent reading listed in the bibliography.

Spelling.—Words of Grade VI. minimum and supplementary lists with 100 per cent. accuracy. Encourage the pupil to consult his dictionary to ensure absolutely correct spelling in all his written work.

Authorized texts:

The Canadian Readers, Book V., Part 2. (Teachers will find the Handbook (Gage & Nelson) very useful.)

Alexander & Mowat, Elementary Composition (Gage). Price, 50c.

Spelling for the Grades (Department of Education).

BIBLIOGRAPHY.

Books recommended for Grades IV. and V. and The Psychology and Pedagogy of Reading—Huey (Macmillan Co., New York). Price, $2.

2. Writing.

Pupils of this grade use MacLean Method Senior Manual. Teachers use the Teachers' Manual as their guide. Special attention should be devoted to freedom of movement, better letter formation, and greater rapidity in writing. Optional letter forms are introduced as shown in the Senior Manual. The essentials of business penmanship should be emphasized and forearm muscular movement should be used in all written work.

3. Arithmetic.

Smith and Roberts, Book I., omitting all work not indicated in the following outline.

Review previous work and aim to increase speed and accuracy in the mechanical operations. Give tests each week. Oral and mental work should receive special attention in Grades VI., VII., and VIII.

In teaching practical problems, get the pupils to indicate before beginning the mechanical work the steps required for the solution. Teach pupils to give approximations of answers.

FACTORS AND MULTIPLES (completed).

DECIMALS.—Decimals should not be approached as a new subject. Show that the work is nothing more than the application to fractions of the system of notation (the decimal system) used for whole numbers.

(*a.*) The significance of the term "decimal."

(*b.*) Reading and writing of decimals. In teaching place values, impress on pupils the fact that every decimal gets its name from the *place* of the last figure. For example, the last figure in .357—namely, 7—is in thousandths' place; the decimal therefore reads three hundred fifty-seven thousandths. Use "and" only to separate the integral and decimal parts. 875.64 should be read "eight hundred seventy-five and sixty-four hundredths."

(*c.*) Arrange decimal fractions in order of magnitude (oral work).

(*d.*) Reduce decimal fractions to common fractions and common fractions to decimal fractions (simple problems chiefly oral work).

(*e.*) Addition and subtraction. Do not treat these as separate processes. They should be taught at the same time.

For example, add and subtract 3.75 and 6.2.

$$\begin{array}{r} 3.75 \\ +6.2 \\ \hline 9.95 \end{array} \qquad \begin{array}{r} 6.2 \\ -3.75 \\ \hline 2.45 \end{array}$$

(*f.*) Multiplication.

(*g.*) Division, including cancellation. Teach, first, problems in which the divisor is a whole number. When the divisor is made up of a whole number and a decimal, multiply, before proceeding to divide, the divisor and the dividend by the least power of ten that will make the divisor a whole number. For example, in dividing 86.328 by 4.36, proceed thus: The least power of 10 that will make the divisor a whole number is 100. Multiplying (mentally) 4.36 and 86.328 by 100, one gets 436 for divisor and 8632.8 for dividend.

$$\begin{array}{r} 4.36)86.328 \\ |19.8 \\ \hline 436)8632.8 \\ 436 \\ \hline 4272 \\ 3924 \\ \hline 3488 \\ 3488 \\ \hline \end{array}$$

(*h.*) Multiply and divide decimals (orally) by 10, 100, 1000, etc., by moving the point, or rather by moving the figures.

(*i.*) Easy concrete problems, applying the four simple rules.

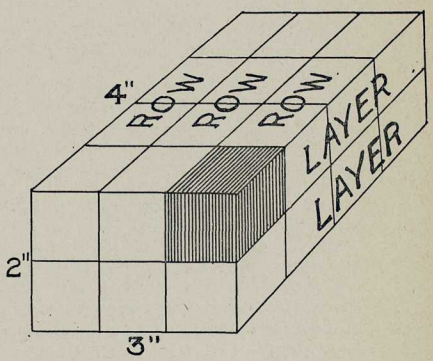
AREA.—Review previous units of measures—square inch, square foot, square yard. Teach how to find the number of square yards in a square rod and the number of square rods in a square mile.

Give problems dealing with areas of rectangles, fields, farms, etc. Tell the pupils that the usual way of expressing the areas of fields and farms is to count 160 square rods as an acre and a square mile of land (640 acres) as a section.

CUBIC OR SOLID MEASURE.—In other grades pupils were taught that dimensions and distances are measured by certain units, as the inch, foot, yard; that areas or surfaces are measured by other units (squares), as the square inch, square foot, square yard. They must now learn that the space occupied by a body or the amount of material in it is measured by other units (cubes).

Ask them to draw on paper a cube whose edges are each 1 inch (1-inch cube), and on the blackboard a cube whose edges are each 1 foot (1-foot cube), and another whose edges are each 1 yard (1-yard cube). Tell them that the space occupied by an object or the amount of material in it, as in a block of wood, is measured by one or other of these cubes.

Draw a sketch representing a small block of wood 4 inches long, 3 inches wide, and 2 inches thick, and divide it into cubes each edge of which represents 1 inch. The sketch should show the block divided into 2 layers of cubes, each layer containing 3 rows of 4 cubes each. The pupils will see that the top layer contains 12 cubes and that the 2 layers contain 24 cubes. They will also observe that they could have found the number of cubes (cubic inches) in the block by multiplying together the numbers representing the dimensions of the block—$4 \times 3 \times 2 = 24$.



They should now be able to give the rule for finding the amount of material in any rectangular body. Tell them that, before they proceed to multiply, they must reduce the dimensions to like units; that is, to inches, to feet, or to yards. Drill orally on such problems as the following:—

Find the number of cubes (cubic inches) into which rectangular solids, with the following dimensions, may be divided:—

(*a.*) Length 5 inches, width 3 inches, and thickness 2 inches.

(*b.*) Length 7 inches, width 5 inches, and thickness 3 inches.

(*c.*) Length 1 foot, width 10 inches, and thickness 5 inches.

(*d.*) Length 10 inches, width 7 inches, and thickness 6 inches.

Also such problems as the following: How many cubes (each a cubic foot) are contained in a block of marble 8 feet long, 6 feet wide, and 5 feet thick?

Now develop the table. Get the pupils to make a sketch or drawing representing a cubic foot and to divide it into cubes each edge of which is 1 inch. Ask them to tell the number of layers of cubes into which the drawing has been divided, the number of rows in each layer, the number of cubes in each layer, the number of cubes in all the layers. They will find in that way that there are 1,728 cubic inches in a cubic foot.

In the same way get them to find out how many cubic feet there are in a cubic yard. They should now be able to tell you how they could have found out, without making a sketch or drawing, the number of cubic inches in a cubic foot and the number of cubic feet in a cubic yard.

Give abundance of oral drill on such problems as the following:—

(1.) What are the dimensions (length, width, and thickness) of a 2-inch cube, a 5-inch cube? How many cubic inches are in each cube? How many square inches are in a face or side of each cube?

(2.) How many faces has a brick or box? How many edges? How many corners? What is the shape of each face? What is a solid called whose faces are rectangles?

(3.) How many cubic feet of air are in a school-room 30 feet long, 25 feet wide, and 10 feet high? How many square feet of floor has the room? How many square feet are in an end wall? How many square feet in a side wall? What is the perimeter of the room? How many square feet are in the walls of the room?

Tell them that the amount of material in a solid (the number of cubic inches, cubic feet, or cubic yards in it) is usually referred to as its "volume" or "cubic contents" and that the number of cubic inches, cubic feet, or cubic yards a box or room will hold is called the capacity of the box or room. Tell them that the name "cubic contents" arises from the fact that cubes are used to measure the contents of an object or the amount of material in it. The table used in the measurement of volume is for the same reason called the Table of Cubic Measure.

Drill on such problems as the following:—

(1.) Find the volume or cubic contents of a block of wood 7 feet long, 5 feet wide, and 4 feet deep.

Solution: Volume of block $= 7 \times 5 \times 4$ cubic feet $= 140$ cubic feet. Do not permit pupils to give the solution thus: Volume of block $= 7$ feet $\times 5$ feet $\times 4$ feet $= 140$ cubic feet.

(2.) Find the capacity of a granary 20 feet long, 10 feet wide, and 9 feet high.

Pupils frequently confuse the terms inch, square inch, and cubic inch; foot, square foot, and cubic foot; yard, square yard, and cubic yard. When you find mistakes of that kind being made, impress again on the class that dimensions and distances are measured by the inch, foot, yard, etc.; that areas are measured by squares, and that the amount of material in an object (its volume) is measured by cubes. Then ask such questions as the following:—

Which is correct? The length of the box is *20 feet*, or *20 square feet* or *20 cubic feet;* the area of the end of the box is *24 feet*, or *24 square feet* or *24 cubic feet;* the capacity of the box is *42 feet*, or *42 square feet* or *42 cubic feet;* the volume of the block of granite is *54 feet*, or *54 square feet* or *54 cubic feet?*

Pupils should be required to give a reason for each answer.

Denominate Numbers.—(1.) Review denominate-number work taken in previous grades.

(2.) Teach the proper abbreviations of the names of the different units.

(3.) Reduction ascending and descending (simple problems). Pupils should be taught to have a definite knowledge of the size of all common denominate units.

(4.) Simple problems in addition, subtraction, multiplication, and division in all measures. Very little time should be spent on this work. Two or three easy problems with each measure in each of the four rules should be sufficient.

Bills, Accounts, Receipts.—Stress *neatness, form,* and *mental calculation.*

Aggregates and Averages.

Teach such problems as the following:—

(1.) If $5\frac{3}{4}$ yards of cloth cost \$38, what will $14\frac{3}{8}$ yards cost at the same rate? Solution:—

$$\text{If } 5\tfrac{3}{4} \text{ yards cost } \$38$$

$$\text{Therefore } 14\tfrac{3}{8} \text{ yards will cost } \frac{14\frac{3}{8}}{5\frac{3}{4}} \times \$38 = \frac{115}{8} \times \frac{4}{23} \times \$38 = \$95.$$

(2.) $6\frac{1}{4}$ gallons of water weigh 62.5 pounds; what will $2\frac{1}{2}$ gallons weigh? Solution:—

$$6\tfrac{1}{4} \text{ gallons weigh } 62.5 \text{ pounds}$$

$$\text{Therefore } 2\tfrac{1}{2} \text{ gallons weigh } \frac{2\frac{1}{2}}{6\frac{1}{4}} \times 62.5 \text{ pounds} = \frac{5}{2} \times \frac{4}{25} \times 62.5 \text{ pounds} = 25 \text{ pounds}.$$

(3.) If 20.5 acres of land yield 366.95 bushels of wheat, how many bushels can be raised from 49 acres at the same rate of production?

Solution:—

$$20.5 \text{ acres yield } 366.95 \text{ bushels}$$

$$\text{Therefore 49 acres yield } \frac{49}{20.5} \times 366.95 \text{ bushels} =$$

$$\frac{490}{205} \times 366.95 \text{ bushels} = 877.1 \text{ bushels.}$$

4. Geography.

(*a.*) General statement of view-point.

(*b.*) Physical Geography.

(*c.*) Regional Geography: (1) South America; (2) Review of North America in brief, Canada in detail; (3) Europe.

(*a.*) STATEMENT OF VIEW-POINT.—In the work of this grade the teachers will begin to connect cause and effect; for natural products and local industries may sometimes be inferred from climatic conditions, or conversely, and the conclusions arrived at may be tested by the facts of the descriptive geography studied by the children. Climate itself is seen to be the result of certain definite causes. "Problem" or "project" lessons should be provided; this treatment gives purpose and definiteness to the work and accentuates pupil activity. It should be noted that the reading of suitable supplementary books is as much a part of the course as is the careful study of the sections in the prescribed text. All subject-matter studied should, in general, be analysed and outlined by oral class methods before being assigned for study. The oral teaching should lead to reading by the pupils and the "projects" or "problems" should, as far as possible, be suggested by them and should be regarded as the necessary sequel to the class teaching.

(*b.*) PHYSICAL GEOGRAPHY.—(1.) A study of the simpler principles of climate for the world; review of Grade V. work; the wind systems; variations of heat and length of day; rainfall; all made real by teaching the *life* of the various regions in the continents studied. *Descriptive geography*, that is to say, is the basis of the teaching; the life and occupations of the people of Argentina, or of various parts of Canada and Europe, suggest climatic conditions which can be *accounted for;* and the explanation of these leads to conclusions regarding climate in general as outlined in Canadian School Geography, Sections 45–50 and 68. By this means a concrete character is given to matters which would otherwise be of an abstract nature and quite without interest to the children. Revision lessons on the general topic of climate thus acquire meaning because illustrated by instances from matter already studied in connection with the various regions.

(2.) Longitude. Subject-matter to be *selected* from Cornish's Canadian School Geography, Sections 24 to 27, 33, 34, 36 to 42, 45 to 50, 53 to 57, 66 to 68, 14, 17 to 19.

(*c.*) REGIONAL GEOGRAPHY.

1. *South America.*—Chapter 26, text.

A. Map study of the continent as a whole. In finding the position of the continent emphasis is laid on the Equator, the Tropic of Capricorn, and the Belts of Heat, comparison being made with conditions in North America. In connection with the coast-line read Chapter 10.

Link the Strait of Magellan and Island of Tierra del Fuego with the History Story of Magellan's voyage at this stage, the story of Drake should follow. The Falkland Islands should be taught from the standpoint of the part they played in the Battle of Falkland Islands, 1915. *Juan Fernandez.*—Correlate at this time the poem, The Solitude of Alexander Selkirk.

Surface.—Section 394. For methods *see* Section 178. Map study of Map 26 in Atlas. Compare with North America throughout.

B. Climate.—The conclusions arrived at in the teaching of North America are recalled and used to introduce the subject-matter of Section 395. *See* Section 390 for method and Maps 28–31 in the Atlas.

C. Great Regions and Political Divisions.

(*a.*) The Andean States—(1) Columbia, Ecuador, Peru, Bolivia; (2) Chili.

(*b.*) The Slope to the North—Venezuela, Orinoco Valley, The Guianas.

(*c.*) The Slope to the East—Brazil: (1) Amazon Valley; (2) The Brazilian Highland.

(*d.*) The Slope to the South—Argentine, Paraguay, Uruguay.

See treatment as outlined for Northern Plain of Europe. Correlate with the History Stories of Inca Civilization and Spanish Conquest.

Map Drawing.—Prepared outline maps of South America should be obtained and pupils taught to fill in important features from memory.

2. *Canada.*—Pages 145 to 264, Canadian School Geography, Cornish.

Review briefly general physical features of North America, including as much of the subject-matter of Chapter 17 as the teacher may think advisable.

A study of the provinces grouped as in the text, Chapters 18 to 21, will follow. Although British Columbia was taught in Grade V., it is desirable that our province receive a satisfactory revision in Grade VI., partly for purposes of comparison. Projects such as the following will suggest themselves: Comparisons between west and east coast fisheries; lumbering in British Columbia and in the Ottawa Valley or New Brunswick; fruit-growing in the Okanagan, Niagara peninsula, and Nova Scotia.

Map Drawing.—(1.) Prepared outline maps of Canada and of the British Isles should be obtained and important features filled in from memory by the pupils.

(2.) Review British Columbia. Pupils should learn to draw a map of British Columbia from memory.

3. *Europe.*—Pages 308 to 380, Canadian School Geography, Cornish.

A Suggested Treatment.

A. Map study of Map 33. Note position of Arctic Circle and Tropic of Cancer; compare with the part of North America which lies in the same latitude. Emphasize length of coast-line in relation to area; the depth of the indentations; the continental shelf.

In teaching the surface of Europe construct a relief model and fill in a prepared outline map. Chief mountain masses and principal rivers may be drilled by the use of blank blackboard outline maps which are filled in from memory. These details will be selected as suggested in treatment of North America.

B. Climate.—Section 410. Review ideas relating to: (1.) Oceanic climate. (2.) Continental climate. Apply these to northern and eastern Europe. (3.) Teach the Mediterranean climate, making suitable comparisons with the climate of similar sections in North America. Study Maps 35 to 38 and compare with North America.

C. Political Divisions and Regions.—By grouping states which lie in a well-defined climatic region much time and labour may be saved and a mass of detail which leads to confusion of ideas rather than the acquirement of clear concepts may be avoided. The following grouping is suggested:—

(1.) *North-western Europe.*—The British Isles. Chapter 28, Sections 412 to 435. The Northern Plain—France, Belgium, Holland, Denmark, Germany, Poland. The North Baltic Region—Scandinavia, Finland, Petrograd district.

(2.) *Central Europe.*—The Eastern Plain—Central and Southern Russia. The Valley of the Danube—Austria, Czecho-Slovakia, Hungary, Jugo-Slavia, Rumania, Bulgaria.

(3.) *The Alpine District.*—Switzerland and adjacent lands.

(4.) *Mediterranean Europe.*—The Mediterranean countries—Iberian Peninsula, Rhone Valley, Italy, Balkan States bordering the Mediterranean, Turkey. The Balkan Peninsula—a regrouping to emphasize the political status.

Type Treatment.

The following is given as a type treatment for any one of these regions:—

The Northern Plain.

(1.) The *position, size, surface,* and *climate* are reviewed from work previously done on the continent as a whole. In this connection note slope of the land and principal rivers; proportion of the area of the Northern Plain to that of Europe; shallow waters and sunken coast-line. Construct an enlarged sketch of the region showing build and drainage; stress oceanic climate and rainfall. Where are similar conditions found in North America?

(2.) *Industries.*—Use Maps 34 and 38.

(*a.*) Those depending upon climate.

(1.) *Forest Lands.*—Although these lands have been inhabited for many centuries, large forest areas remain. Stress the idea of conservation.

(2.) *Agriculture.*—(*a.*) *Dairying* on the lowlands. Mark off Denmark, Belgium, Holland at this stage. Dairying the chief industry; where is the produce sold? (Export.) Teach cities connected with this trade.

(*b.*) *Grain.*—Through plain of France, central Germany, Poland. Wheat in the west; rye in the east. Stress dense population and need of more breadstuffs than is produced. (Import.) Where may such grain be secured? Mark off boundaries of France, Germany, and Poland.

Find a seaport in each suitable for such importation.

(*c.*) *Sugar.*—Map 34. North-east France, Belgium, and Germany.

(*d.*) *Flax.*—Map 34. Note large areas devoted to the growth of the plant. Review its use. Pick out centres of manufacture. Link up with Belfast.

(*e.*) *Wine.*—Map 34. Plains of France—Rhine Valley. Centres of this industry introducing two or more large cities.

(*b.*) Other industries.

(1.) *Fishing.*—Shallow seas border the entire coast. Discuss this with the class and compare with similar conditions in North America.

(2.) *Mining.*—(*a.*) *Coal Deposits.*—France (Lens), Saar Valley; Germany (The Ruhr); Poland (Silesia). Value of these mines as an aid in manufacturing.

(*b.*) *Iron.*—France (Lorraine); Southern Germany.

(3.) *Manufacturing.*—France.—Section 440. Nancy, iron; Lille, textiles; Government, Paris.

Belgium.—Sections 444, 445. The interdependence of population and manufacturing. Iron and steel. Textiles—linen, cotton, and wool. Government, Brussels.

Holland.—Sections 449, 450. Amsterdam, diamonds; Rotterdam, bulbs; Antwerp, ivory carving; Government, The Hague.

Germany.—Essen, iron. The Krupps. Munich, breweries; Breslau, wool; Leipzig, books, leather, furs; Cologne, cotton; Hamburg, seaport; Government, Berlin. Population as an aid in manufacturing.

Poland.—Sections 474, 475. Lodz, cotton; Warsaw, strategic situation; Danzig, the corridor city.

Note suggestion at end of Grade V. work in regard to preparation of notes, booklets, etc.

The following provide opportunities for project treatment and group study:—

Three countries, France, Belgium, and Germany, manufacture machinery. Specify: Engines, rails, boilers; railroad equipment. Note continents where these are needed and where whole railroad systems have been built by these European people. Note competition with England and U.S.A.

Ship-building.—The iron vessel. These carry the manufactured articles to far lands. Centres of this trade—Hamburg, Kiel Canal, Bremen, Wilhelmshaven, Essen, Antwerp, Nancy, Havre.

Textiles may be treated in a similar manner.

AUTHORIZED BOOKS.

Canadian School Geography—Cornish (Dent & Sons, Ltd., Toronto).
Canadian School Atlas—Cornish (Dent & Sons, Ltd., Toronto).

REFERENCE BOOKS FOR PUPILS.

(1.) The World and Its People—South America (T. Nelson & Sons, Ltd., Toronto).
(2.) Carpenter's Geographical Reader—South America (American Book Co., New York).
(3.) Peeps at Many Lands Series (Macmillan Co., New York).
Panama—Edith C. Browne. Price, 85c.
South America—Edith C. Browne. Price, 85c.
(4.) Peeps at Many Industries (Macmillan Co., New York).
Rubber—Edith C. Browne. Price, 85c.
Sugar—Edith C. Browne. Price, 85c.
(5.) Human Geographies, Primary Series, Book IV.—In the New World—Fairgrieve & Young (George Philip & Son, Ltd., London, England).
(6.) Human Geographies (George Philip & Son, Ltd., London, England).
Primary Series, The British Isles—Fairgrieve & Young.
Book VI., Europe and Britain—Fairgrieve & Young.
(7.) Earth Knowledge Series (McDougall's Educational Co., London).
Book II. (which contains good material on the British Isles).
Book III. (which contains short regional treatments of Europe, North America, South America, Africa, and Australasia).
Book V., Europe Regionally Treated (a very good text for children).
(8.) The World and Its People Series (T. Nelson & Sons, Ltd., Toronto).
(*a.*) The British Isles.
(*b.*) Europe.
(9.) Carpenter's Geographical Reader—Europe (American Book Co., New York).
(10.) Little People in Far-off Lands—Among the Balkans (Serbia, Bulgaria, Rumania)—Florence E. Tapsell (a well-written booklet) (Macmillan Co., Toronto). Price, 12c.
(11.) Big People and Little People of Other Lands—E. R. Shaw (American Book Co., Chicago).
(12.) Under Sunny Skies—M. A. L. Lane (Ginn & Co., Boston).
(Describing life in Mediterranean Lands.) In the same series, Northern Europe.
(13.) The Romance of Travel (Oxford University Press, Toronto).
(*a.*) Days in the Golden East—Eliot Warburton.
(*b.*) A Cruise in Northern Seas—Lord Dufferin.
(14.) Great Cities of the World: (*a*) Constantinople; (*b*) Venice; (*c*) Rome; (*d*) Paris; (*e*) London; (*f*) Petrograd (McDougall's Educational Co., Ltd., London).
(15.) Overseas Children Series—Manuel's Adventure—M. E. Gullick (Oxford University Press, Toronto).

(16.) Romance of Travel Series—In the Forest of Brazil—A. H. Bates (Oxford University Press, Toronto).

(17.) (*a.*) South America—N. B. Allen (Ginn & Co., Boston). A new geographical reader in which industrial studies are well arranged.
(*b.*) The New Europe.

REFERENCE BOOKS FOR TEACHERS.

(1.) Canada, Natural Resources and Commerce. Issued by Department of Interior, Ottawa. (Apply to Natural Resources Intelligence Service; F. C. C. Lynch, Superintendent.)

(2.) Descriptive Geography from Original Sources—South America—F. D. and H. J. Herbertson (A. & C. Black, London). Price, $1.10.

(3.) McDougall's Regional Geography—The World, A Scientific Treatment (McDougall's Educational Co., Ltd., London).

(4.) Regional Geography — The Americas — J. B. Reynolds (A. & C. Black, London). Price, $1.10.

Or

Regional Geography—The World—J. B. Reynolds (A. & C. Black, London). A book of 350 pages containing much useful information for the teacher. The contents include a regional survey of each continent, together with many maps and diagrams. Price, $2.25.

(5.) A Regional Survey of Europe (1923 edition)—T. S. Muir (W. and R. Chambers, Ltd., London).
One of the new texts on the new Europe.

5. History and Civics.

I.—AIM.—The aim as outlined in the course for Grade V. should be read carefully.

II.—METHOD.—(*a.*) The history tales outlined for this grade are suggestive only and the list as given may be altered or increased by individual teachers, the important consideration being the creation in the pupils' minds of a clear and vivid picture of each of the four periods. The methods suggested for Grade V. will be adopted in this grade, but will be extended and developed in accordance with the increased abilities of the pupils.

(*b.*) The Course in Citizenship is intended to familiarize pupils with our simplest forms of organization. Lessons should be confined to the type of condition existing in the immediate locality; in municipalities such matters as roads, streets, police, fire-protection, schools, etc., would be included, while in unorganized territory only those which are actually in local operation would be considered.

Socialized methods may be used to advantage in this subject, the conducting of meetings, holding of elections, appointing of committees and receiving of their reports are illustrative of suitable topics. Such projects as "Our Water System," "Building a New Road," "The Community Hall," and others dealing with the raising of money by taxation, assessment, etc., are of benefit. Throughout the pupils should do the major portion of the work; the keynote of this course is "Learn by doing."

III. SUBJECT-MATTER.

A. History Studies.

1. *Early Britain Period.*—Stories selected from the legends of King Arthur and his Knights may be used to illustrate the life and conditions in Britain at this time. Stories of Boadicea, King Alfred, The Vikings, St. Augustine, An English Village in the Eighth Century.

2. *Saxon-Norman Period.*—"Robin Hood" stories or stories from "Ivanhoe" may be used to illustrate this period. Studies of Trial by Ordeal, Feudal System, Curfew, An English Village in the Twelfth Century.

3. *The Age of Chivalry.*—The Crusades, illustrated by stories from Scott's "The Talisman." The "Children's Crusade," Knighthood, A Tournament, Richard the Lion-Hearted.

4. *Later Medieval Period.*—Stories of Robert Bruce, William Wallace, Joan of Arc, the Black Prince.

B. Citizenship.

Studies of organization for such purposes as churches, schools, water-supply (in irrigation districts), and for general municipal government (in municipalities).

IV. Bibliography.

(*a.*) Reference books for pupils:

Highroads of History, Book IV. (Thos. Nelson & Sons, Ltd., Toronto).

King Arthur and His Knights (Macmillan or J. M. Dent & Sons, Toronto). Price, 20c.

Robin Hood and His Merrie Men (Macmillan or J. M. Dent & Sons, Toronto). Price, 20c.

Then and Now, Junior Series (Macmillan). Price, each, 19c.

Joan of Arc, Story of the First Crusade, Old English Heroes, Robin Hood (Instructor Literature Series, Hall and McCreary, Chicago).

(*b.*) For the teachers:

First History of England—Keatinge (A. & C. Black, London). Price, $1.35.

Teaching by Project—McMurry (Macmillan, New York). Price, $1.75.

The Project Method in Education—Branom (The Gorham Press, Boston).

The Canadian Citizen—Goggin (The Macmillan Company of Canada, Ltd., Toronto). Price, $1.

Studies in Citizenship—McCaig—B.C. Edition (Gage & Co., Toronto).

6. Drawing.

Object Drawing.—Cylindrical forms of common objects in vertical, oblique, and horizontal positions. Drawings to be finished in light and shade.

Nature Drawing.—Leaves, flowers, twigs, in outline, in colour, and in light and shade.

Design.—Observation of nature forms illustrating the principles of repetition, contrast, and variety. Application of these principles to the planning of original motifs for the decoration of borders and panels. Simple conventional renderings of leaves and flowers for borders and panel decoration. Groups III. and IV., Design Section, Teachers' Manual.

Colour.—Any colour exercises given in previous grades, with the addition of greyed colours and simple analogous harmonies.

Lettering.—Roman letters—skeleton form, capital and small letters. Lettering of school announcements, advertisements, etc. (*See* Teachers' Manual of Drawing and Design.)

7. Nature Study and Elementary Agriculture. (*See* note on Nature Study, page 85.)

Autumn.

Animal Life.—(*a.*) Wild animals—beaver, otter, musk-rat. (*b.*) Birds—divers (loon), swimmers (duck); adaptation of birds to environment. (*c.*) Insects—cabbage-butterfly, cabbage-aphis, tent-caterpillar.

Plant Life.—(*a.*) Wild flowers—cat-tail, arrowhead, water-parsnip, water-milfoil. (*b.*) Weeds—chicory, curled dock, sheep-sorrel, wild carrot. (*c.*) Trees and shrubs—mountain-ash; review of deciduous trees.

Gardening and Elementary Agriculture.—(*a.*) Harvesting crops of school and home gardens and estimation of yields; fall cultivation and preparation of gardens for winter. (*b.*) Soil studies—origin and classification of soils continued. (*c.*) Soil

experiments dealing with (1) determination of humus at different depths; (2) deposition of soil in water; (3) capillarity in soils; (4) water-holding power of soils; (5) use of the earth mulch; (6) testing soils for acid.

WINTER.

Animal Life.—(*a.*) Wild animals—skunk, marten; review and compare other fur-bearing animals previously studied, noting winter adaptations, hibernations, etc. (*b.*) Birds—scratching birds (grouse, quail, etc.), poultry types, and a few popular breeds of each; feeding and care of poultry. (*c.*) Insects—winter conditions of insects already studied.

Plant Life.—(*a.*) Weeds—collecting and identifying of seeds of varieties already studied. (*b.*) Trees and shrubs—yew, red cedar, and juniper.

Experimental Work relating to Natural Phenomena.—(1) Forms of matter—solids, liquids, gases; (2) change of state as related to temperature; (3) expansion in solids due to heat; (4) expansion in liquids; (5) expansion in gases; (6) thermometer; (7) physical properties of air, application of air pressure—barometer, common lift-pump.

SPRING.

Animal Life.—(*a.*) *Miscellaneous*—Snake, lizard, earthworm. (*b.*) Birds—sparrows, swallows, and fly-catchers. (*c.*) Insects—review life-cycle of insects studied in the autumn; the honey-bee and honey production, an economic study.

Plant Life.—(*a.*) Wild flowers—skunk-cabbage, water-lily, or other available marsh plants. (*b.*) Trees and shrubs—cottonwood, June-berry or wild cherry.

Gardening and Elementary Agriculture.—Soil studies (continued): (1) Need of air-spaces and therefore of drainage; (2) temperature of drained soil as compared with undrained soil; (3) review of results of soil studies already made and related to subject of soil requirements for growing plants.

8. Music.

SECTION I.—VOICE-TRAINING.—Combination of breathing and voice exercises on all the singing vowels. Vocal studies.

SECTION II.—TUNE.—Sharp practice on the Staff Modulator daily to "laa" in all keys.

SECTION III.—TIME.—Review of the rhythmic figures taken in the lower grades. Original phrases to be used.

SECTION IV.—TIME AND TUNE.—Short "study" songs for sight-reading.

SECTION V.—EAR-TRAINING.—Phrases played or sung by teacher to be written in music dictation books.

SECTION VI.—THEORY.—Special study of vowels, consonants, and diphthongs; verbal and musical phrasing; transition or modulation applied to Staff Notation; chromatic degrees; syncopation; double sharps and double flats; transposition; the bass clef; additional terms of expression.

SECTION VII.—SONGS.—Songs in unison; simple two-part songs; three-part singing introduced.

SECTION VIII.—RHYTHMIC WORK.—A beautiful melody or theme taken from the classics to be sung, stepped, or dramatized. Two-part exercises to be stepped.

Text-book: New Canadian Music Course, Book IV.—Coney & Wickett (Gage & Co., Ltd., Toronto). Price, 30c. This book contains all necessary exercises and songs for the year's work.

9. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To have the pupils realize why a healthy body is necessary for successful work—to understand the main functions of the organs of the body and how to ensure good health.

(1.) *The Framework of the Body.*—What the bones are made of; the skeleton and how the bones are held together.

(2.) *The Muscular System.*—How the muscles do their work and how to keep them strong; best kinds of exercise; dangers from overexercise.

(3.) *The Nervous System.*—Character and work of nerves—nerve stimulus and control; effect of good and bad habits on nervous system.

(4.) *Respiration—Air and Health.*—Organs used in breathing and how they work; effect of good and bad air on health; importance of ventilation in schools, churches, theatres, homes, etc.; effects of overheated or underheated rooms; obstructed or improper breathing—causes and effects; breathing exercises.

(5.) *The Blood and its Uses.*—Review Grade V.; organs of circulation and their function; how to maintain good circulation—relation to diet, bathing, exercise, and sleep.

(6.) *Selection of Proper Food.*—Meaning and value of a balanced diet; the fuel value of food; character and use of vitamines; effect of proper cooking and serving of food on appetite and digestion; simple menus for different purposes.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE VII.

1. Language.

General Aims.—To establish a standard for self-criticism by teaching simply and concretely certain facts of English grammar which function in every-day speech and applying these facts in eliminating errors that experience has shown to be prevalent in this grade.

To work for the following as fundamental conditions of good speaking and writing: A definite subject and aim; interest on the part of the speaker or writer; originality; the forming of clear mental images; accurate thinking; clear, direct expression; an orderly arrangement of thoughts.

To eliminate incomplete sentences, the "and" habit, and the "comma" fault.

To enrich the children's speaking and reading vocabularies. For this work, literature and the other subjects of study furnish wide opportunities in the Seventh Grade.

To give increased attention to the sequence of sentences within a short paragraph.

To make habitual by continued practice the correct forms of personal letters and simple business letters, and accuracy in the mechanics of composition in general, including all the ordinary uses of capital letters, and of punctuation.

In speech, to work for clear articulation, correct pronunciation, a pleasant, natural tone of voice, self-poise, and a correct and easy standing position.

Oral Composition.—(*a.*) Informal class discussion and debate arising from such topics as current events, home life, school life, social life of the children, travel, excursions, outings, things observed, objects in nature, familiar occupations, any child activities, etc.

(*b.*) Reproduction of stories or articles read.

(*c.*) Other subjects of the curriculum, such as history, geography, literature, and nature study, will furnish abundance of material for class discussion. The socalized recitation method should be adopted if full opportunity is to be given for development of language-power.

(*d.*) Dramatization of short stories in prose or verse.

Note.—In all oral discussion in class the criticism must be kindly, helpful, constructive. The chief critic should be the class, but no petty fault-finding should be allowed.

Written Composition.—Written composition should usually grow out of discussion, which should have one or more of these definite aims: To stimulate interest; to suggest lines of thought; to aid in organizing material; to guard against prevalent errors. Written composition should include: (*a*) Friendly letters and notes and simple business letters; (*b*) short compositions on topics of vital interest to the writer and the class. These compositions should usually be not more than 200 words in length; hence the topic should not be too broad for these limits. Occasional longer exercises, as writing or dramatizing stories, may take the place of several of these short compositions.

All forms of composition may be used both for oral and written work as occasion arises, but simple narratives and explanations of the narrative type (telling how things are done) should be stressed. The children should frequently speak and write from brief, simple outlines, sometimes developed in class, sometimes thought out individually. Letter-writing should form an important part of the year's work.

The work prescribed for composition in this grade will be found in Alexander & Mowat's Elementary Composition, Part II., Chapter V., to Part III., Chapter III., inclusive, with Appendix A.

Project.—School or class paper or magazine in manuscript. Reports on other projects might be inserted in the paper or magazine.

Grammar.—The work prescribed in English grammar comprises the first nine chapters of The British Columbia School Grammar (Lang). No formal parsing is required nor should the analysis of greatly involved sentences be undertaken.

As an aid to teachers, particularly in ungraded schools, the following outline is suggested:—

A. Study of Simple Sentence.

1. Definition.

2. Kinds: Assertive, interrogative, imperative, exclamatory.

3. Detailed analysis. Subject; enlargement of subject (word or phrase). Predicate; enlargement of predicate (word or phrase); completion of predicate (object or complement).

4. The phrase. Definition: A group of words doing the work of one part of speech. Teach here only adjective and adverb phrases.

B. The Parts of Speech.

1. The noun.

2. The pronoun. Uses: Subject of a verb; object of a verb or preposition; completion of the predicate; the possessive use.

3. The verb. Use: Predicate of the sentence. Teach "doing" verbs first, as they are simplest; then "having" verbs; and lastly the "being" verbs, or verbs which express existence. The idea in the latter is abstract, but ought not to present any great difficulty to Grade VII.

4. The adjective. Uses: Describes noun or pronoun; completes the predicate.

5. The adverb.

6. The preposition.

7. The conjunction.

8. The interjection.

C. Teach Correct Use of—

1. Prepositions: The meanings of prepositions are often ignored and misuse results, as: I shall divide between the three boys. Father is not to home to-day.

2. Conjunction: Even "and" and "but" are occasionally interchanged, and confusion among the subordinate conjunctions is a common vulgarism, as: I don't know as I can. It could not have happened without some one opened the door.

3. The possessive forms: (1) With compound nouns; (2) with a plural proper noun; (3) with a compound subject or object; (4) with double possessive.

4. The articles: A, an, the.

5. The adverb: To use the adjective instead of the corresponding adverb is a very common error, as: He behaved bad. He did that good. Come quick. Drive slow.

6. Adjectives and adverbs should be placed as near as possible to the word which they modify.

7. The pronouns "I" and "we" always stand last in a series of nouns and pronouns.

In addition to the above outline the work in this grade should include the compound sentence (without subordinate clauses), and the complex sentence with not more than one subordinate clause.

READING AND LITERATURE.

Oral Reading.—In oral reading correct pronunciation, clear enunciation, and articulation should be carefully stressed. A deeper emotional response to good literature is expected from this grade.

The practice of having pupils miss the whole spirit and content of literature through spending their time in looking up the meanings of long lists of rare and obsolete words is greatly to be deprecated.

Silent Reading.—Specific exercises to increase rate and comprehension should be continued in this grade and the rate of silent reading should be brought to its maximum.

Material for specific training to develop rate and comprehension may be selected from prescribed or suitable supplementary reading-matter.

In order to attain the desired objectives it is imperative that teachers familiarize themselves with the technique specifically set forth in the books on silent reading listed in the bibliography.

Every effort should be made to establish a library in each school as a source, not only of reference books, but also of recreational reading for the children.

Literature.

(*a.*) Canadian Prose and Poetry—A. M. Stephen (Dent & Sons). Price, 40c. (Only selections recommended for Grade VII. pupils are to be studied.)

(*b.*) *Either* Golden Steps (Nelson & Sons); price, 25c, *or* Selections from the Nature Poets, Stevenson (The Macmillan Co. of Canada); price, 20c.

(*c.*) A Christmas Carol, Dickens, and King of the Golden River, Ruskin (Copp, Clark Co., Ltd.). Price, 30c.

(*d.*) *Either* Familiar Fields, Peter McArthur (Dent & Sons); price 40c, *or* Selections from the Makers of Canada, Saul (The Macmillan Co. of Canada); price, 20c.

(NOTE.—The latter book will not be used after June, 1927.)

Memorization: Teachers are expected to assign for memorization the more beautiful passages of the selections of poetry prescribed for this grade.

Spelling.—Words of Grade VII. minimum and supplementary lists with 100 per cent. accuracy. (*See* directions for other grades.) Prescribed text-book: Spelling for the Grades (Department of Education).

BIBLIOGRAPHY.

Books as recommended for Grade VI.

The Teaching of Composition in the Elementary Schools—Coleman (Gage & Co., Ltd., Toronto). Price, $1.25.

Talks on Teaching Literature—Bates (Houghton, Mifflin & Co., Boston).

2. Writing.

Pupils will continue the course as outlined for Grade VI. The Senior Manual is to be used by pupils. Teachers will use the Teachers' Manual as a guide.

3. Arithmetic.

Smith and Roberts, Book II. (only work relating to the following outline to be taken; difficult problems to be omitted).

Give systematic review of the work of the preceding grades. The attainment of accuracy in all computations must continue to be a leading purpose in the minds of teacher and pupils.

Through the problem-work of the Seventh and Eighth Grades pupils should be given a better understanding of the more common applications of arithmetic to social uses. The aim in these grades is not so much to furnish exercises in numerical calculations as to make clear to the pupils the full meaning of certain activities that are associated with the practical interests of life. Time must therefore be taken to make the situation presented by the different exercises intelligible to the pupils. It is very desirable that the practical application of arithmetic to such business matters as *insurance, taxes, interest*, etc., be adequately presented. Pupils should be taught to give approximations of answers.

DENOMINATE NUMBERS.—(*a.*) An accurate knowledge of all the units of measure in common use.

(*b.*) Reduction ascending and descending.

(*c.*) Application of the four simple rules to denominate numbers (simple problems).

MENSURATION.

(1.) *Area.*—(*a.*) Review work taken in Grade VI.

(*b.*) Area of lots, fields, farms, walks, floors, walls of rooms, fences, etc.

(*c.*) Plastering, painting, papering, simple problems in carpeting.

(2.) *Cubic Measure.*—(*a.*) Review work taken in Grade VI.

(*b.*) Excavation of cellars, measuring of stone-work, etc.

(*c.*) Cords of wood.

(3.) *Lumber Measure.*

ALIQUOT PARTS to shorten processes in multiplication and division.

(*a.*) Find the aliquot parts of 100.

(*b.*) Teach pupils to multiply and divide numbers by aliquot parts.

PERCENTAGE.

(1.) (*a.*) Significance of the terms "per cent." and "percentage."

(*b.*) Teach and drill thoroughly the changing of any fraction of the three types (common, decimal, and per cent.) into an equivalent fraction of the two remaining types.

(*c.*) The relation of per cent. to whole numbers (orally). For example, 2 = 200%.

(*d.*) Finding what per cent. one number is of another (chiefly oral work).

(*e.*) Finding per cent. of numbers and quantities.

In solving problems pupils should be taught to use in each case the type of fraction (common or decimal) that is most direct and simple. For example, in finding 18% of $67, the solution should be given thus:—

18% of $67 = .18 of $67 = $12.06

```
  $67
  .18
  ---
  536
  67
  ------
 $12.06
```

In finding 62½% of $78.48, proceed thus:—

62½% of $78.48 = ⅝ of $78.48 = $49.05

```
   $78.48
        5
  --------
8)$392.40
  --------
   $49.05
```

(2.) (*a.*) Gain and loss.
(*b.*) Trade discount.
(*c.*) Commission.
(*d.*) Insurance.
(*e.*) Simple interest.
} Omit the more difficult problems in the text-book.

In finding simple interest on any sum, say on $375 for 2 years 9 months at 8%, proceed thus:—

Interest for 1 year = 8% of $375.00 = $30.00
Interest for 2¾ years = 2¾ × $30.00 = $82.50

```
  $375      $30
   .08      2¾
  -----    -----
 $30.00    22½
           60
          -----
           $82½
```

No formula which pupils do not understand should be used. For that reason *do not* allow pupils to give the solution in the following way:—

Interest is .08 × 2¾ × $375 = $82.50.

Teach that the words *per annum* or *a year* are understood after the words per cent. in interest problems.

4. Geography.

(*a.*) General statement of view-point.

(*b.*) Physical Geography.

(*c.*) Regional Geography: (1) Asia; (2) Africa; (3) Australasia; (4) Review of British Columbia.

(*a.*) GENERAL STATEMENT OF VIEW-POINT.—The work of this grade falls into three main divisions, viz.: (1) A review of the physical geography previously studied, the

ideas gained being consolidated and organized into a clear and definite knowledge of *climate*—perhaps the greatest single factor determining conditions of human life. To prevent this study becoming too abstract it will be taught by means of the continents now studied. These are: (2) Asia, which, stretching from the Equator to the Arctic, includes all the natural climatic regions; and (3) Africa and Australasia, which furnish invaluable material for comparison with one another and with the third southern continent—South America.

(*b.*) PHYSICAL GEOGRAPHY.—Review of rotation. Teach revolution, latitude, longitude. Seasons and their cause. Teach Chapter 3, omitting Sections 52 and 60 to 65, inclusive. While these sections are marked *omitted*, still the teacher should give the pupils a very simple explanation of the tides, with special reference to diagrams on pages 48 and 55 and Fig. 37.

It should be remembered that *descriptive* geography is an important factor in climatic or economic teaching; i.e., in order to preserve the sense of reality the principles of climate may be arrived at from a descriptive study of life and conditions in certain districts, and a concrete character is given to what would otherwise be an abstract study—often without interest or appeal. Thus the reading of the article entitled "The Change of the Monsoon" (Descriptive Geography of Asia, Herbertson, page 186) will provide a vivid introduction to the study and understanding of the Monsoon Winds.

(*c.*) REGIONAL GEOGRAPHY.

1. *Asia.*

A. Map study of position and coast as previously outlined. Trace the primary highland from Persian Gulf north-east to Bering Strait, then the line of the Himalayas from Pamir Plateau south-east to Tongking Gulf. This divides Asia into three main slopes and an area of interior drainage.

B. Climate.—Sections 534 and 42. The study of climate emphasizes the great natural regions of the continent.

C. Regions and Political Divisions.

(1.) The Northern Plain—Siberia and the Tundra. Compare with Canada.

(2.) Western Asia. The hot and dry plateaux (Iran, Asia Minor, and Arabia); the inland drainage area and Mesopotamia.

(3.) The Monsoon countries: (*a*) India to the south; (*b*) China to the east; (*c*) Japan.

(4.) The Pamir and Tibetan Plateaux.

(5.) The Malay Archipelago.

2. *Africa.*—Chapter 47.

A. Treatment as suggested for the continent of South America. NOTE.—Africa is a continent of Plateau Lands. Rim mountains predominate. These affect the drainage. Comparisons may be made as to the utility of African rivers, with such rivers as the Mississippi, St. Lawrence, or Amazon.

B. Climate.—Section 566. Contrast with South America.

C. Regional Geography and Political Divisions.

(1.) *The Valley of the Nile.*—(*a.*) Uganda Protectorate and Kenya Colony, outlet to Mombassa. Altitude a factor in differentiation of products. (*b.*) Anglo-Egyptian Sudan. A trip down the Nile from Lake Victoria to Khartum. (*c.*) Egypt the Gift of the Nile. Section 570.

(2.) *French West Africa.*—(*a.*) The Mediterranean States. (*b.*) The Sahara and Senegal districts—Timbuktu.

(3.) *Central Africa.*—(*a.*) The Guinea Coast; Nigeria; French Equatorial Africa. (*b.*) The Belgian-Congo; Tanganyika Territory.

(4.) *South Africa.*—Section 572.

3. *Australasia.*—As in text, Chapter 48. Treatment as already suggested for other continents. Read Chapter 5.

4. *Review of British Columbia.*—By this time the physical features of our province should be quite familiar to the pupils. The chief districts and the

main products of the province should be thoroughly reviewed. The Grade VII. pupil should follow these products to their several markets (export); special attention being paid to the Pacific trade with South America, Australasia, and Asia. Since Canada exports more each year through Vancouver, this wider application should not be ignored.

Imports should be treated in a similar manner. What does each Pacific country send us? Opportunity is provided for project-work. The daily files of newspapers are a constant mine for such information.

Neighbouring states to the south of us should be examined. Similarity and diversity of products noted and transportation routes discovered. Cities have competitors; there is much trade rivalry; do we find this on the Pacific Coast?

Map Drawing.

(1.) Prepared outline maps of *Asia, Africa, South Africa, India,* and *Australasia* should be obtained and important features filled in from memory by the pupils.

(2.) Review memory map of British Columbia and teach the drawing of Canada from memory.

AUTHORIZED BOOKS.

Canadian School Geography—Cornish (Dent & Sons).

Canadian School Atlas—Cornish (Dent & Sons).

REFERENCE BOOKS.

(1.) Descriptive Geography from Original Sources—F. D. and H. J. Herbertson (A. & C. Black, London).

Asia, Africa, Australasia. These books are valuable for both pupils and teachers. Price, each, $1.10.

(2.) Products of the Empire—J. C. Cunningham (Oxford University Press, Toronto).

(3.) The World and Its People Series—Asia, Africa, Australasia (T. Nelson and Co., Toronto).

(4.) Carpenter's Geographical Readers—Asia, Africa, Australasia (American Book Co., Chicago).

(5.) Human Geographies—Fairgrieve & Young (Geo. Philip & Son, London). In the Old World—Book V.

(6.) Earth Knowledge Series (McDougall's Educational Co., London).

(*a.*) Book VI., The Empire Overseas.

Or

(*b.*) The World (240 pages—a scientific treatment of Regional Geography, in which *all* the continents are discussed).

(7.) A New Comparative Geography—Meiklejohn (Meiklejohn & Son, Ltd., London).

(8.) Regional Geography—The World—J. B. Reynolds (A. & C. Black, London). Price, $2.25.

Individual books on each continent by the same author may be had from the publishers; i.e., Asia, Africa and Australasia, The Three Southern Continents.

5. History and Civics.

I. AIM.—The aim as outlined in the course for Grade V. should be read carefully.

II. METHOD.—In this grade for the first time the text-book is placed in the hands of the pupils and it is imperative that they be taught how to use it. Lesson assignments should consist of topics to be studied or of problems to be solved or of projects to be constructed and not merely of pages or paragraphs to be read or to be "learned." In every case as a preliminary to the assignment a framework should be developed by the teacher so that the pupils will know what they must

do to complete the structure. Pupils must be required to secure much of this information for themselves, and for this purpose suitable supplementary reading is essential; such exercises, however, are of value only when pupils know what they are looking for and how they are to find it.

A. It is intended that this portion of the history should be studied with reference chiefly to (1) the advancement in social conditions and (2) the growing power of the people and the lessening power of the sovereigns. Such episodes as "The Crusades," "Hundred Years' War," "Peasants' Revolt," "Black Death," etc., are important on account of and should be studied in respect of these movements. The causes of such events and their influence on existing conditions must be clearly understood, but the details are relatively unimportant.

B. In the study of the French Period in Canadian History special attention should be devoted to: (1) The early discoveries and explorations; (2) the methods of government; (3) the work of the missionaries and their influence on the social and religious life of the people; (4) the later explorations of the missionaries and fur-traders; (5) the growth of the settlements in Canada and in New England; (6) the struggle between the French and the British for supremacy. In the treatment of this course the laboratory method is strongly recommended. When the plan or framework of the lesson has been outlined by the teacher the pupils should do much reading to gather the necessary information. Different phases of important questions will be developed in the class discussion or in the socialized recitation. Pupils should be trained to express their independent views on such questions.

A suitable collection of well-selected histories, supplementary readers, magazines, etc., is absolutely necessary if this method is to prove successful.

C. Pupils are expected to become reasonably familiar with our Provincial organization in respect of such matters as election of members of the Legislature, selection of Cabinet, public health, forestry protection, agriculture, education, roads, and taxation. The methods adopted should be an extension of those suggested for Grade VI.; in the main, lessons should be socialized and advantage should be taken of projects wherever possible. An important phase of this course lies in the development of a sane and reasonable attitude towards public property, taxation, and government.

III. Subject-matter.

A. William the Conqueror to Elizabeth (1066–1603).

B. The French Period in Canada (1492–1763).

C. Citizenship: Organization for provincial purposes.

IV. Bibliography.

Authorized texts:

History of England for Public Schools (The Macmillan Co. of Canada, Ltd.). Price, 63c.

History of Canada, with B.C. Supplement—Gammell (W. J. Gage & Co., Ltd., Toronto).

Reference books for pupils:

Studies in Citizenship—McCaig—B.C. Edition (Gage & Co.).

Highroad Series, Books IV.a and VII. (Nelson & Sons, Ltd., Toronto).

Story of the British People, Revised Edition (Nelson & Sons, Ltd., Toronto).

New History Readers (Macmillan). Price, Primary 55c., Junior 75c., Intermediate 75c., Senior 90c.

Then and Now, Intermediate Series (Macmillan). Price, each 22c.

Child's History of England—Dickens.

Britannia Readers (The Copp, Clark Co., Ltd., Toronto). Price, 60c.

Discoverers of the World—Eric Wood (Cassell & Co., Ltd., Toronto).

By Star and Compass—W. S. Wallace (Oxford University Press, Toronto).

When Canada was New France—George H. Locke (J. M. Dent & Sons).

Canada's Story—H. E. Marshall (Nelson & Sons, Ltd., Toronto).

Reference books for teachers:

Citizenship in British Columbia—Angus (Department of Education).

Texts suggested for Grades V. and VI.

Highroad Series, Social History (Thos. Nelson & Sons, Ltd., Toronto).

The New Examiner—Ballard (Hodder & Stoughton, London).

Industrial and Social History of England—Cheyney (Macmillan). Price, $2.85.

The Story of the Canadian People—Duncan (Macmillan, Toronto). Price, 65c.

A History of Canada—Roberts (Musson Book Co., Toronto). Price, $1.50.

6. Drawing.

OBJECT DRAWING.—Cylindrical and rectangular forms of common objects, singly and in groups. Finish in light and shade.

NATURE DRAWING.—Leaves, spray of leaves, flowers, twigs, fruits, in pencil and colour.

DESIGN.—Planning of decorative motifs as in Group VI., but of more advanced nature. Decoration of bands and panels with the above motifs, also with conventional nature forms. Study of a few simple examples of historic ornament. Groups III. and IV., Design Section, Teachers' Manual. Simple geometrical constructions as required for framework of designs. (*See* pages 83, 115, and 116 of Teachers' Manual.)

COLOUR.—Use of all previous colour schemes, with better feeling for colour and technique.

LETTERING.—Capital and small skeleton Roman letters. Lettering of verse, prose, and advertisements, in pencil and pen over pencil. (*See* Teachers' Manual of Drawing and Design.)

7. Nature Study and Elementary Agriculture. (*See* note on Nature Study, page 85.)

AUTUMN.

Animal Life.—(*a.*) Wild animals—gopher, badger; invertebrates—clam and crab. (*b.*) Domestic animals—the horse. (*c.*) Birds—waders (heron or bittern).

Plant Life.—(*a.*) Wild plants—vines (Virginia creeper, clematis, honeysuckle, and vetch). (*b.*) Weeds—chickweed, Russian thistle, sow-thistle, collection of seeds for winter study. (*c.*) Trees and shrubs—wild fruits and nuts (wild blackberry, cranberry, blueberry, walnut, hazelnut, chestnut); budding.

Gardening and Elementary Agriculture.—(*a.*) Study of tree fruits of the district; comparison of varieties and habits of growth of cereals found in the district, such as wheat, oats, rye, and barley. (*b.*) School and home gardening projects.

WINTER.

Animal Life.—(*a.*) Wild animals—weasel, porcupine. (*b.*) Birds—the pigeon. (*c.*) Insects—review winter habits of insects for this grade.

Plant Life.—(*a.*) Weeds—review; class-room study of seeds collected in the autumn. (*b.*) Trees and shrubs—review evergreens native to British Columbia; pruning and grafting. (*c.*) Improvement of plants by seed selection; plan a few definite plant-growing experiments and select seed for same.

Elementary Science—Physics.—Following topics treated experimentally: (1) Sources of heat; (2) transmission of heat—conduction, convection, radiation; (3) water—physical properties such as weight and pressure; (4) sources of water (relate to hygiene); (5) impurities in water and method of purification; (6) solvents and solutions.

SPRING.

Animal Life.—(*a.*) Wild animals—bat, field-mouse; invertebrates—snail, slug. (*b.*) Birds—night-hawk, humming-bird, kingfisher. (*c.*) Insects—cutworms, cabbage-root maggots, wireworms, spittle-bugs, woolly aphis.

Plant Life.—(*a.*) Wild plants—wild strawberry, bearberry; observe spring condition of vines studied in the fall. (*b.*) Weeds—Canada thistle and bull-thistle, wild buckwheat, wild morning-glory. (*c.*) Trees and shrubs—spring condition (blossoms, etc.) of species studied in the autumn; gooseberry, wild cherry, or wild crab-apple.

Gardening and Elementary Agriculture.—(*a.*) Carry out a few of the experiments in sections 1 and 3, page 3, of the Circular No. 4 ("Instructions to Teachers and School Boards with reference to School and Home Gardening"). (*b.*) For home project suggestions *see* page 6 of the same circular. (*c.*) Planting of gardens and window-boxes.

8. Music.

VOICE-CULTURE.—Continued practice on the singing vowels.

SONGS.—Unison and two-part songs. Solo-singing to be encouraged. Simple vocal studies.

Text-book: New Canadian Music Series, Book V.—Coney & Wickett (Gage & Co., Ltd., Toronto). Price, 35c.

Reference book: School and Community Song Book—Vogt and Willan (Gage & Co., Ltd., Toronto). Price, 50c.

9. Health Education.

(*a.*) HYGIENE. (*See* page 87 for a general note on method and for a list of suitable reference books.)

Aim.—To correlate and make practical application of knowledge gained in preceding grades.

(1.) *Nutrition.*—(Correlate with Household Science Course.) Relative value of different methods of cooking—boiling, frying, roasting, etc.; selection and planning of meals for (*a*) school-child, (*b*) a family; effects of stimulants.

(2.) *The Digestive System.*—Organs and process of digestion; absorption and storage of food in the body; mastication and good habits in eating and drinking.

(3.) *The Nervous System.*—Continue from Grade VI. The wonderful work of the brain and its branches (the nerves); the meaning of motor and sensory nerves; voluntary and involuntary action, automatic action in relation to habit; serious effects from use of drugs, alcohol, and tobacco. Review care of special senses and emphasize care of eyes in reading; function of eye-glasses, etc.

(4.) *Control of Infectious Diseases.*—Helpful and harmful bacteria; causes of infectious diseases; sources of disease-germs and how the body fights against them; spread of disease-germs—contact, in food, insects, animals, in dust, in water.

(5.) *Health Departments.*—(1.) Local or Municipal Department and its work—(*a*) control of communicable diseases, (*b*) sanitary supervision of food, milk, water, buildings, etc. (2.) Provincial Board of Health—(*a*) control of infectious diseases by laboratory methods, legislation, by educational work, literature, health campaigns, and through a system of Public Health Nurses.

(6.) *First Aid.*—What to do in case of accident. Foreign bodies in eye, ear, nose, or throat; nose-bleed, cuts and wounds, bruises and sprains, broken bones, dislocations, fainting, burns, frost-bites, poisons, insect-stings; meaning of artificial respiration and what to do in case of drowning.

(7.) *Suggestions.*—Encourage cleaning-up campaigns, fight-the-fly campaigns, etc.; get new circulars and reports on health topics; organize a School Health League or a Little Mothers' League, either or both of which should be under the direction of the teacher or school nurse. Special committees of pupils can be charged with care of heating and ventilation of class-room; water-supply, toilet facilities, school-ground neatness, etc.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

GRADE VIII.

1. Language.

AIMS.—Study carefully the aims outlined for Grade VII., as these are still to be kept in view. The work in English in this grade is simply an extension and further development of that outlined for the Seventh Grade. Written and oral composition should be closely correlated. Narrative and simple explanation are still the main forms of written composition to be employed. Practical exposition will also be especially valuable; telling how to reach a certain place, how to play a game, how to do a certain piece of work, and so on. Letter-writing is important. Business letters should include letters of inquiry, letters answering inquiries, and applications for positions. Tact and courtesy in business letters should be stressed. Advertisements and telegrams give excellent practice in clearness and brevity. The more formal compositions should still be short, as a rule, but the class should sometimes work out together an outline for a broader subject, each pupil afterwards writing on a simple phase of that subject. A growing power should be developed to fit the sentences to the thought by teaching in a simple and practical way the differences between simple, compound, and complex sentences; their respective values in expressing thought; the correct uses of the various clausal connectives; and the necessity of subordinating the minor thought in a sentence.

All the content subjects will play their part in furnishing material for the development of oral and written expression. To attain this end in the fullest measure judicious and skilful use of the socialized recitation should be employed.

COMPOSITION.—The work prescribed in composition for this grade will be found in Alexander & Mowat's Elementary Composition, Part III., Chapters IV. to IX., inclusive, with Appendices B and C.

PROJECT.—School or class paper or magazine in manuscript. Reports on other projects might be inserted in the paper or magazine.

GRAMMAR.—British Columbia Public School Grammar (Lang). No formal parsing is required nor should the analysis of greatly involved sentences be undertaken.

As an aid to teachers, particularly in ungraded schools, the following outline is suggested:—

A. Review and Extension of Compound and Complex Sentences.

1. Kinds of sentence (according to form): Simple, compound, complex.
2. The clause. Kinds: (*a*) Principal; (*b*) subordinate.
3. Clausal analysis: Identify clause; indicate its relation and thereby classify it.
4. Detailed analysis (for review).

B. Parts of Speech—Classification and Inflection.

1. The noun:	Proper.	Gender.
	Common.	Number.
		Case.
2. The pronoun:	Personal.	Gender.
		Number.
		Case.
	Compound personal.	Gender.
		Number.
	Demonstrative.	
	Interrogative.	Number.
	Conjunctive.	Case.
	Indefinite.	

3. The verb: Transitive. Intransitive.
Agreement.
Tense — nine primary and three secondary tenses.
Voice.
Mood.
Principal parts.
Participles, gerunds, infinitives.

Auxiliaries—be, have, do.
"May" indicates permission, possibility, wish.
"Can" indicates ability.
"Shall" indicates futurity in first person.
"Will" indicates futurity in second and third person.
"Will" indicates promise, threat, resolve, in first person.
"Shall" indicates promise, threat, resolve, in second and third person.
"Should" and "would" follow same rules as "shall" and "will."
"Ought" is a finite verb and must never be used with "have" or "had" to form a compound tense.

4. The adjective: Qualitative, quantitative, demonstrative. Teach use of *er* and *est* with monosyllables, *more* and *most* with polysyllables, and uses of irregular words, as: good, much, etc. Teach the attributive and the predicative use of the adjective.

5. The adverb: Teach use of adverb modifying adjective and adverb, formation of adverbs from adjectives, comparison of adverbs.

6. The preposition: Teach correct use of such prepositions and prepositional phrases as: at, in; between, among; with, by; in, into; compare to, compare with; differ from, differ with, etc.

7. The conjunction: Co-ordinative, subordinative. Illustrate correct use of "both——and," "not only——but also," "as well as"; and teach uses of "than" and "as."

READING AND LITERATURE.

Aims in Reading.—At the end of the Elementary School Course the pupils should possess the ability to read practical material such as periodicals, grasping the central thought, finding the conditions necessary to the answering of questions or the solving of problems, and determining the truth of statements.

Oral Reading.—In oral reading correct pronunciation, clear enunciation, and articulation should be carefully stressed.

Every effort should be made by the teacher to create an "audience situation" to develop expression. The monotonous "reading around" of a whole class with books open "watching the place" should be discouraged. Pupils may occasionally bring selections suitable for oral reading period.

There are two special occasions which call for oral reading: (1) When an "audience situation" has been created, as when some information, emotion, or ideal is to be communicated to a group; (2) when a poetical selection or a piece of highly literary prose has a vocalic quality which requires oral expression in order that the full value of it may be secured.

The practice of having pupils miss the whole spirit and content of literature through spending their time in looking up the meanings of long lists of rare and obsolete words is greatly to be deprecated.

Silent Reading.—Training in silent reading to be continued. *See* outline for previous grades.

Material for specific training to increase rate and comprehension in silent reading may be selected from prescribed or from suitable supplementary reading-matter.

In order to attain the desired objectives it is imperative that teachers familiarize themselves with the technique specifically set forth in the books on silent reading listed in the bibliography.

Every effort should be made to establish a library in each school as a source not only of reference books but also of recreational reading for the children.

Literature.

(*a.*) Canadian Prose and Poetry—A. M. Stephen (Dent & Sons). Price, 40c.

(*b.*) *One* of the following:—

(1.) Scott's Lady of the Lake—Stevenson (Copp, Clark Co., Ltd.). Price, 30c.

(2.) Narrative and Lyric Poems, Third Series, British Columbia Edition (Copp, Clark Co., Ltd.), price 25c, with Public School Poetry Book, Part II., White and Sykes (Morang Educational Co.), price 20c.

(3.) Scott's Lay of the Last Minstrel—Alexander (Copp, Clark Co., Ltd.). Price, 30c.

(NOTE.—This book will not be used after June, 1927.)

(*c.*) *Two* of the following:—

(1.) Selections from Irving and Hawthorne, British Columbia Edition—Stevenson (Copp, Clark Co., Ltd.). Price, 30c.

(2.) Treasure Island—R. L. Stevenson (Cassell & Co., Ltd.), price 67c, *or* (Macmillan Co., Ltd.), price 50c.

(3.) Sharp Eyes and Winter Neighbours, from the text entitled "Sharp Eyes and Other Essays"—Burroughs (Gage & Co.). Price, 25c.

(4.) Scott's Ivanhoe, abridged and edited with introduction, notes, glossary, etc.—Fanny Johnson (Macmillan Co., Ltd., London), price 65c, *or* as prepared and annotated by Williams (Collins, London and Glasgow), price 50c.

(5.) Lamb's Tales from Shakespeare, with notes—Flather (Copp, Clark Co., Ltd.). Price, 30c.

(NOTE.—This book will not be used after June, 1927.)

(6.) Waverley—Scott (T. Nelson & Sons). Price, 50c.

(NOTE.—This book will not be used after June, 1927.)

Memorization: Teachers are expected to assign for memorization the more beautiful passages of the selections of poetry prescribed for this grade.

NOTE.—In dealing with the prose selections it is recommended that, after a proper assignment has been made, the selections be read silently. The problems or topics assigned to individuals or groups should then be discussed in class according to the socialized recitation method.

Spelling.—Words of Grade VIII. minimum and supplementary lists with 100 per cent. accuracy. The examination for promotion to Grade IX. will be based on the lists for all grades. Words that appear in dictation on the examination paper but which are not in the spelling lists will not be considered as a part of the test in spelling. Prescribed text-book: Spelling for the Grades (Department of Education).

BIBLIOGRAPHY.

Books as recommended for Grade VII.

Teaching Literature in the Grammar Grades and High School—Bolenius (Houghton, Mifflin & Co., Boston).

English Composition as a Social Problem—Leonard (Houghton, Mifflin & Co., Boston).

STANDARD TESTS.

1. To measure word-recognition:

(*a.*) Haggerty's "Visual Vocabulary Test" (Northwestern School Supply Co., Minneapolis, Minn.).

(*b.*) Thorndike's "Improved Scales for Visual Vocabulary" (Bureau of Publications, Teachers College, Columbia University, New York).

2. To measure oral reading ability:
   Gray's "Oral-Reading Test" (Public School Publishing Co., Bloomington, Ill.).
3. To measure the understanding of sentences:
   Thorndike's "Improved Scale for Measuring the Understanding of Sentences" (Bureau of Publications, Teachers College, Columbia University, New York).
4. To measure rate and quality of silent reading:
   (*a.*) Gray's "Silent Reading Tests" (Public School Publishing Co., Bloomington, Ill.).
   (*b.*) Courtis' "Silent Reading Test No. 2" (Public School Publishing Co., Bloomington, Ill.).
5. To measure silent-reading ability:
   (*a.*) Monroe's "Standardized Silent Reading Tests" (Public School Publishing Co., Bloomington, Ill.).
   (*b.*) Burgess' "Scales for Measuring Ability in Silent Reading" (Publication Department, Russell Sage Foundation, New York).
6. To measure intelligence:
   (*a.*) Haggerty Intelligence Examination. Delta 1, for Grades I. to III.; Delta 2, for Grades III. to IX. (World Book Company, Yonkers, N.Y.).
   (*b.*) Illinois General Intelligence Scale (Monroe-Buckingham). For elementary schools (Public School Publishing Co., Bloomington, Ill.).
   (*c.*) National Intelligence Tests. Scale A, Forms 1, 2, and 3; Scale B, Forms 1, 2, and 3 (Haggerty, Terman, Thorndike, Whipple, and Yerkes). For Grades III. to VIII. (World Book Company).
   (*d.*) Otis Group Intelligence Scale. Primary Examination for Grades I. to IV.; Advanced Examination for Grades V. to college (World Book Company).
   (*e.*) Pintner-Cunningham Primary Mental Test. For kindergarten and Grades I. and II. (World Book Company).

NOTE.—Teachers will find the following group of tests very satisfactory for measuring ability in Silent Reading for the various grades:—

(1.) For Grades I., II., and III.: Haggerty Reading Examination, Sigma 1 (World Book Company, Yonkers, N.Y.).
(2.) For Grades III., IV., and V.: Burgess' Scale for Measuring Ability in Silent Reading. Picture Supplement Scale 1 (Russell Sage Foundation, New York).
(3.) For Grades VI., VII., and VIII.: Thorndike-McCall Reading Scale for the Understanding of Sentences (Teachers College, Columbia University, New York).

2. Writing.

Pupils will continue the course as outlined for Grades VI. and VII. The Senior Manual is to be used by pupils. Teachers will use the Teachers' Manual as a guide.

3. Arithmetic.

Smith and Roberts, Book II. (Only topics given hereunder and those given in the outlines for the other grades should be studied. All very difficult problems should be omitted.)

At the beginning of the year a review of all the fundamental work of the previous grades should be taken. Much practice should be given in expressing orally statements of the operations required for the solution of problems. Develop power to give rapid approximations of answers.

OUTLINE OF WORK.

(1.) Compound interest.
(2.) Taxes.
(3.) Promissory notes.
(4.) Bank discount.
(5.) Powers.
(6.) Find, by factoring, roots of numbers that are exact powers; and the square root of any number by the square-root process.
(7.) Circle (radius, diameter, circumference, area).
(8.) Cylinder (area and volume).
(9.) Metric system (measures of length).
(10.) Rectangular figures and solids.
(11.) Sharing (pages 97 and 98 of the text).
(12.) Aggregates and averages.

4. Geography.

(*a.*) General statement of view-point.
(*b.*) Physical Geography.
(*c.*) Regional Geography: (1.) A Study of the British Empire. (2.) During this study the several continents will be reviewed.

(*a.*) GENERAL STATEMENT OF VIEW-POINT.—In the preceding grades all the continents have been studied; the amount of detail and the complexity of the subject-matter increasing proportionately with the pupils' interest, geographical sense, and intellectual capacity.

The work of Grade VIII. includes: (*a*) A brief review of the continents, each being treated as a whole and from a broader standpoint than was possible with the more immature pupils of lower grades; and (*b*) a special study of the British Empire. It will be seen that the work of this grade consists almost wholly of review, though of a review conducted with a very definite aim and from a slightly different standpoint. Thus in continent review comparative methods should be freely used, involving general ideas of configuration, climatic conditions, productivity, world supplies of foodstuffs and of raw materials, distribution of population, and trade routes. Study of the Empire will include a review of work already done in connection with its constituent members as parts of the various continents, and also a study of some of the economic, social, and historical features that have determined its growth and extent.

(*b.*) PHYSICAL GEOGRAPHY.—Review Motions of the Earth, Chapter 1, also Chapters 2 and 3; Chapter 6 (Running Water); Chapter 7 (Work of Ice).

(*c.*) REGIONAL GEOGRAPHY.

1. *The British Empire.*—Find and locate the component parts of the British Empire.
   (*a.*) The Mother Country—The British Isles.
   (*b.*) Self-governing Dominions—Canada, Newfoundland, Australia, New Zealand, Union of South Africa, Irish Free State. Emphasize their position in the Empire from the standpoint of Responsible Government.
   (*c.*) Portions with Representative Government—India, Guiana, Jamaica, Malta.
   (*d.*) Crown Colonies—Gibraltar, Trinidad, Ceylon, Sierra Leone, etc.
   (*e.*) Protectorates—Uganda, etc. (*See* Statesman's Year Book.)

   Bring out clearly that the type of government enjoyed depends upon the state of civilization attained.
2. *Review British Isles.*
   (*a.*) The Heart of the Empire. Sections 412 to 435, Canadian School Geography—Cornish. (*See* Meiklejohn. The World and Its People, The British Isles, The British Empire, How the Empire Grew, pages 7 to 49.)

(*b.*) Review of Europe as a whole, using problems of a kind similar to the following:—

(1.) What competition on the continent must the British iron masters meet?

(2.) There are 44 million persons in the British Isles. Where do they get their butter, eggs, cheese, bacon, etc.?

(3.) Of what value to Britain are Gibraltar, Malta, and Suez: (*a*) From a naval standpoint; (*b*) from the standpoint of trade?

(4.) Why go to the Riviera?

3. *Review Canada.*—Pages 128 to 259, Canadian School Geography—Cornish.. Stress the trade within the Empire. Exports to British Isles, imports from British Isles, North Atlantic Trade Route. Ports of entry connected with this trade. Cable communications. Main lines of rail communication across Canada. Canals.

See "Canada and its Provinces" (Department of Interior, Ottawa).

Canada buys largely from the U.S.A., which is also a good customer. Note a few of the leading articles.

4. *Newfoundland.*—Pages 260 to 263, Canadian School Geography.

5. *The West Indies.*—Pages 292 to 294, Canadian School Geography.

Complete the study of North America by a study of the United States, Alaska, Mexico, and Central America. Stress the development of trade between British Isles, Canada, and U.S.A. Follow a few main commodities from one country to the other. For example:—

Cotton from New Orleans to Liverpool.

Grain from Central Plain to Liverpool via Portland and New York.

Textiles from Manchester and Leeds to New York and Boston.

Teach Panama Canal Trade Route as an aid in the B.C. export of grain and lumber to Eastern U.S.A. and United Kingdom.

6. *Review South America.*—Group the states under the regional treatment. Extend the Empire trade to Rio de Janeiro and Buenos Aires. Stress lack of coal and iron leading to an exchange of raw products on the one hand for manufactured articles on the other. Note British Guiana and Falkland Islands.

7. *The Empire in the South Pacific.*

Australia (pages 418 to end). New Zealand (pages 433 to 434).

Teach the trade route Sydney to Melbourne, Suez to Southampton and Tilbury. Also Vancouver, Victoria, Auckland, Sydney route.

Cable communications between these southern Dominions and Canada and United Kingdom.

8. *Review Asia.*—Pages 381 to 400, Canadian School Geography.

The following order is suggested so that more stress may be laid upon the Empire possessions: (*a*) Siberia; (*b*) China; (*c*) Japan; (*d*) British India; (*e*) Western Asia.

Note particularly development of Persian oil-fields and the recent protectorate over the Mesopotamia Valley.

Develop trade route: (1) Calcutta, Singapore, Hongkong, Yokohama, Victoria, Vancouver; (2) Bombay, Suez, Southampton.

9. (*a.*) *Review Africa in General.*—Pages 401 to 411.

(*b.*) Teach: The Valley of the Nile (note British development in this region); Uganda Railroad; The Sudan; The Assuan Dam; Egypt; Suez Canal. (*See* "The World and Its People"—Africa (T. Nelson & Sons.)

(*c.*) In a similar manner teach the spread of French domain over the western Sahara and Algeria.

(*d.*) Tropical Africa: (1) Nigeria; (2) Belgian Congo.

(*e.*) South Africa: Compare with Australia and with Canada. Teach trade route: (1) Cape Town, Southampton; (2) Cape Town, Adelaide, Melbourne, Sydney, Vancouver.

10. *Review Europe.* Teach Chapters XI. to XV. as a résumé. Pages 90 to 127, Canadian School Geography—Cornish.
11. *Review British Columbia.*
12. *Map Drawing.*
    (1.) Review memory maps of British Columbia and Canada. Teach pupils to draw memory maps of the Prairie Provinces and the St. Lawrence River Basin.
    (2.) Prepared outline maps of North America, South America, Europe, Asia, Africa, Australasia, British Isles, South Africa, and India should be obtained and important features filled in from memory by the pupils.

AUTHORIZED TEXTS.

Canadian School Geography—Cornish (Dent & Sons, Ltd., Toronto).

Canadian School Atlas—Cornish (Dent & Sons, Ltd., Toronto).

REFERENCE BOOKS:

It would be well to examine the lists of texts under Grades V., VI., and VII. Many of the texts there noted are well suited for the work in Grade VIII. In addition the following list is recommended:—

(1.) The principles of Geography, Physical and Human—E. G. Skeat (1923) (Oxford University Press, Toronto).
(One of the best of the new books on general geography.)

(2.) Greater Britain, Its Rise and Growth (W. & R. Chambers, Ltd., London). (A school history of the Colonies. It is a good reference reader for pupils.)

(3.) The British Empire, A Short History—J. P. Bulkeley (1921) (Oxford University Press, Toronto).

(4.) The Expansion of Britain, from the age of the discoveries—W. R. Kermack (1922) (Oxford University Press, Toronto).
(This is a geographical history of the growth of the Empire.)

(5.) Historical Geography of the British Colonies—C. P. Lucas (Oxford University Press, Toronto).
The following books comprise the series:—
(*a.*) The West Indies.
(*b.*) The Mediterranean and Eastern Colonies.
(*c.*) South Africa. (1913 Edition.) (Vol. IV., Parts I. and II., Historical; Part III., Geographical.)
(*d.*) West Africa.
(*e.*) Australasia. (Vol. 6, Part I., Historical; Part II., Geographical.)

(6.) Products of the Empire—J. C. Cunningham (Oxford University Press, Toronto).

(7.) Descriptive Geography from Original Sources—A. J. Herbertson and L. Jowitt (A. & C. Black, London).
The British Isles. Price, $1.10.

(8.) The World and Its People Series (T. Nelson & Sons, Toronto).
(*a.*) The British Isles.
(*b.*) The British Empire.

(9.) The Statesman's Year-Book (Macmillan & Co., Toronto). Price, $6.

5. History and Civics.

I. AIM.—The aim as outlined in the course for Grade V. should be read carefully.

II. METHOD.—In general the course for this grade will be conducted along the lines suggested for Grade VII. Approximately the first month of the term should be devoted to a review of the preceding history.

A. It is suggested that before beginning a study of the course presented in Canadian History for this grade a number of lessons should be devoted to a review of the general topics outlined for Grade VII. to form a suitable background. The course for this grade should be taken up in fairly minute detail. The events should be studied in chronological order. The work in this grade is the study of the pupil's national history and he should become familiar with all the important facts in connection with the growth of Canada's political institutions, the social advancement of the people, its relations with foreign nations, its economic problems, etc.

In review it is suggested that the course be divided into topics and that each may be treated by the project method. The following topics are suggested:—

(1.) Growth in self-government—a study of the various acts under which Canada was governed.
(2.) Growth in settlement—special attention to the great immigration periods and the North-West settlements.
(3.) The wars in which Canada has participated.
(4.) The development in transportation facilities.
(5.) The growth of our educational system.
(6.) Foreign relations—special attention to the treaties between Canada and United States.
(7.) The tariff question.
(8.) Canadian literature.
(9.) Biographies of leading characters, such as Sir John A. Macdonald, Sir Wilfrid Laurier, etc.

B. It is recommended that the course in British Columbia History be treated along similar lines to that outlined for Canadian History. In review it is suggested that the whole history of British Columbia be treated fully under the following topics:—

(1.) Early explorations by sea.
(2.) Early explorations by land.
(3.) Story of the fur trade and the rival companies.
(4.) Growth in government.
(5.) Story of the mining industry.
(6.) Boundary disputes.
(7.) The development in transportation facilities.
(8.) "Better Terms" question.
(9.) Immigration.
(10.) Educational progress.

C. Social changes, industrial changes, the growth of democracy, and the development of the Empire constitute the background of the Stuart and Hanoverian periods, and practically all episodes of these times can be definitely related to one or other of these movements. It is suggested that the course consist of a series of topics or projects or problems, to be followed by a review in which each of the movements mentioned would be traced throughout its whole course. Topics would be of such a nature as: The Stuarts and Parliament, Discovery and Colonization in the Stuart Period, Competition between France and England in the 18th century, Extension of the Franchise and Parliamentary reform, etc. Each of these topics would include several phases; for example, "Extension of the Franchise" includes such items as the Catholic Relief Bill; the various Reform Bills; the Chartists; Woman Suffrage.

As a review, towards the end of the grade, projects of the great movements mentioned should be constructed by linking together these topics. To be of real value these projects must be the independent but wisely-directed effort of the pupils undertaken on "laboratory" lines.

D. Citizenship in Grade VIII. deals with Federal organization and emphasis should be laid upon such topics as election of members, enlarged constituency, the Senate, selection of the Cabinet, duties and customs, military protection, administration of justice, federal public works, etc. Here again the socialized recitation and the project method should be used freely and pupils should be encouraged to

make extensive use of the public press in securing information. A "scrap-book" collection of press clippings is an important addition to the class-room "laboratory."

III. Subject-matter.

A. The British Period in Canada (1763 to present).

B. History of British Columbia.

C. Stuart and Hanoverian Periods (1603 to present).

D. Citizenship: Organization for Federal purposes.

IV. Bibliography.

Authorized texts:

History of England for Public Schools (The Macmillan Co. of Canada, Ltd., Toronto).

History of Canada, with B.C. Supplement—Gammell (W. J. Gage & Co., Ltd., Toronto).

Studies in Citizenship—McCaig—B.C. Edition (Gage & Co.).

Reference books for pupils:

Then and Now, Senior Series (Macmillan).

Highroads Series, Allies, Foes, and Neutrals, and Books V., V.A, VI., VII., and VIII. (Thos. Nelson & Sons, Toronto).

Progress to History Series, Books IV., V., and VI. (Macmillan).

Flag and Fleet—Wood (Macmillan).

Gateways of History (Edward Arnold, London).

Finger-Posts to British History (Thos. Nelson & Sons, Toronto).

New Age History Readers (Thos. Nelson & Sons, Toronto).

The Far West Coast—V. L. Denton (J. M. Dent & Sons, Ltd., Toronto).

Reference books for teachers (texts suggested for Grade VII.):

Source Book of English History—Kendall (Macmillan).

Early History of British Columbia—McKelvie (Dent & Sons).

The Far West Coast—V. L. Denton (J. M. Dent & Sons, Ltd., Toronto).

Citizenship in British Columbia—Angus (Department of Education).

6. Drawing.

Object Drawing.—Type forms and common objects based on these type forms, singly and in groups. Finish in lead-pencil outline and in light and shade.

Nature Drawing.—Spray of leaves, flowers, fruit, vegetables, in light and shade or colour.

Design.—As in Grade VII. This grade should show a better feeling for good line and spacing. Colour schemes will be repetition of old work, but should show more refinement of tone and colour. Simple geometrical constructions as required for framework of designs. (*See* pages 83, 115, and 116 of the Teachers' Manual.)

Lettering.—Lettering of verse, prose, school announcements, etc., in pencil and pen. Decoration of initial letters. (*See* Teachers' Manual of Drawing and Design.)

7. Nature Study and Elementary Agriculture.

(Note—Teachers are asked to keep a note-book in which they may enter weekly a list of topics taken up with the class in this subject.)

Autumn.

Animal Life.—(*a.*) Wild animals—deer, elk, moose, and caribou (treated comparatively). (*b.*) Farm animals—types and common breeds of cattle. (*c.*) Birds in relation to agriculture; perchers—common forms, such as meadow-lark, the sparrow, vireos, and warblers. Keep records of identification. Special attention to food of species studied. (*d.*) Insects—common insect pests (continued); parasitic insects (those that destroy other insects), predaceous beetles.

Plant Life.—(*a.*) Wild plants—collect and study the ferns found locally. (*b.*) Weeds—couch-grass, squirrel-tail grass, wild lettuce, sheep-sorrel, dodder; collect and identify weed-seeds and preserve for winter study. (*c.*) Trees and shrubs—review deciduous trees of the district.

Gardening and Elementary Agriculture.—Legumes and common fodder grasses; cover-crops and crop rotation.

WINTER.

Animal Life.—(*a.*) Wild animals—mountain sheep and goat. (*b.*) Farm animals—sheep and swine; types and main breeds of each found in British Columbia. (*c.*) Birds—study of the birds found locally during the winter, with records. (*d.*) Insects; insects injurious to forests—bark-beetles, wood-borers, scale-insects; methods of control.

Plant Life.—(*a.*) Wild plants—kelp and one or two common seaweeds (in coast districts), moulds and yeast. (*b.*) Weeds—review methods of seed-dispersal; identification of weed-seeds in grain or garden seeds. (*c.*) Trees and shrubs—varieties suitable for planting in school and home grounds (Circular No. 6, "Trees and Shrubs: Their Planting and Care").

Gardening and Elementary Agriculture.—Comparison of dry and germinating seeds and the food substances found in each.

Elementary Science—Physics and Chemistry.—Chemical composition of air, carbon dioxide; fuels and combustion; limestone.

SPRING.

Animal Life.—(*a.*) Wild animals—seasonal changes in hoofed animals already studied. (*b.*) Farm animals—special attention to dairy cattle, milk records, and the dairy industry. (*c.*) Birds in relation to agriculture and forestry—study feeding and nesting habits of birds already identified; special attention to those of greatest economic importance. (*d.*) Insects—water-insects; the mosquito and its control; continue life-history studies of species already observed; important insecticides.

Plant Life.—(*a.*) Wild plants—flowerless plants (continued); horsetail and mushrooms. (*b.*) Weeds—review of weeds of the district observed as seedlings. (*c.*) Trees and shrubs; elementary forestry—methods of conservation and protection; planting of seeds and seedlings.

Gardening and Elementary Agriculture.—Continue experiments in germination and growth of plants; gardening and agricultural projects for the season started (sections 2 and 4, page 3, Circular No. 4, also projects on page 6).

NOTE.—Teachers will have to exercise their own judgment as to the most opportune time for dealing with certain topics in the Nature Study Course. If any of the species of wild flowers, trees, or birds assigned are not to be found in certain districts, suitable substitutes should be made. Whilst many teachers will readily cover all of the topics assigned in this course, some may have difficulty in doing so, due chiefly to differences of method. It should be understood that real educational merit in teaching of nature study is not measured by the number and variety of topics treated, but rather by the amount of genuine interest aroused out of school as well as in the class-room in the natural objects and natural forces in the midst of which children live and must continue to live and with which they must adjust their lives. The recommendations with reference to nature study in ungraded schools should be adhered to. No definite time is assigned for the teaching of nature study in the different grades, but it should be understood that a period per day of from ten to fifteen minutes should be given to the subject in the first four grades and not less than three periods per week of from twenty to thirty minutes each in higher grades. The relationship of experience, which nature study so beautifully provides, is so fundamental to the proper teaching of every subject that that above all others should not be neglected.

General Assignments.—Obviously the major portion of the subject-matter which may properly be included in a Nature Study Course belongs in the biological field and can be designated under the headings "Animal Life" and "Plant Life." There are, however, many valuable topics which, if not in the strictest sense of the term true nature topics, are nevertheless closely associated with the daily life and experience of children. Weather phenomena, changes and effects of changes, for example, belong in this class. The response of children and of adults to changing climatic and weather conditions, food-supply, clothing, home-making materials, out-of-school activities, work, games, etc., and the varying forms and character of the earth itself as seen in the home region are all topics of immediate interest and of educational as well as practical value to children. They are topics which may be treated continuously throughout a whole season, or during one or more years. In this outline they are assigned as general topics. They serve to link up nature study as usually treated with local geography, and might even be regarded as forming an introduction to the study of geography.

8. Music.

MUSIC APPRECIATION.—While this should form the major part of the musical study in Grade VIII., song-singing should be continued.

Suggested Work.—To be viewed from a historical standpoint in the development of music, and with a free use of illustrations. The English Madrigalists of the 16th century; Purcell; Bach, Handel, Haydn; Mozart; Beethoven; Schubert; Schumann; Mendelssohn; Chopin; Greig; Elgar; MacDowell.

MUSICAL FORM.—Binary; Ternary; History and growth of Carols; Folk Music. Gramophone records of selected works of standard instrumentalists and singers.

NOTE.—Where there is no Music Supervisor selections should be made by the teacher and the gramophone used to illustrate the works of the great composers.

Text-book: New Canadian Music Series, Book V.—Coney & Wickett (Gage & Co., Ltd., Toronto). Price, 35c.

Reference book: School and Community Song Book—Vogt and Willan (Gage & Co., Ltd., Toronto). Price, 50c.

9. Health Education.

(*a.*) HYGIENE.

Aim.—To develop a sense of responsibility towards the health and welfare of the community.

(1.) *Nutrition.*—Market value of foods considered in the light of physiological or fuel values; economy with efficiency in the selecting and purchasing of foodstuffs; the care of food in the home and in shops; the milk-supply—sources, safeguards, methods of treatment, pasteurization, etc.; laws relating to purity and handling of milk and foods generally; inspection of factories producing foodstuffs—canneries, bakeries, etc.

(2.) *Prevention and Control of Disease.*—(*a.*) Preventing disease—importance of prevention through proper living and working conditions, in schools, factories, and all places of industry and through training into correct health habits.

(*b.*) Resistance to disease—natural resistance in the body and acquired resistance through use of vaccines and serums in the prevention or control of such diseases as smallpox, typhoid fever, scarlet fever, lock-jaw, diphtheria, etc.

(*c.*) Controlling disease—importance and method of quarantine, cleaning and disinfection.

(*d.*) Medical inspection—need of co-operation of pupils and parents.

(3.) *Protection of Life from Accident.*—Results of carelessness and negligence; importance of knowing and observing traffic regulations; safety devices in transportation by land and water; safety measures in factories and mines.

(4.) *Recreation.*—Meaning and value of recreation for young and old; public playgrounds, parks, and sports-fields; gymnasium—use and not abuse of same; private recreation—movies, theatres, concerts, etc.; clubs—Boy Scouts, Girl Guides, and other organizations.

(5.) *Municipal Sanitation.*—Water-supply—source, purification, distribution, prevention of contamination; disposal of waste—sewage, garbage; cleanliness of streets and back yards.

(6.) *Hygiene and Sanitation in Rural Communities.*—There is need of an awakened interest and of a strong campaign in all matters pertaining to sanitation and healthful living. Try to gain the support of the parents through your influence on the children in establishing rural health services, health regulations, a safeguarding of the water-supply for both home and school, the proper disposal of sewage, proper cleaning, lighting, heating, and ventilation of all school-rooms, churches, and public halls.

NOTE.—Projects may be assigned to groups of pupils leading towards investigation and report on such problems as naturally grow out of the above outlines. The following are merely offered as suggestions: How the milk is collected, stored, and delivered; source, storage, and handling of meat, fish, vegetables, fruit, bread, etc.; safeguards against the fly nuisance; cleanliness and proper sewage or garbage disposal; current market prices for foods and cost of family budget.

(*b.*) PHYSICAL EXERCISES.—Syllabus of Physical Training for Schools, 1919.

NOTE.—The chief aim of health-training and instruction is to conserve and promote the health of the child. This may be accomplished by the formation and practice of habits essential to health; by instruction in practical knowledge necessary for healthy living; by the development of right ideals and attitudes with regard to the value of health; by creating a sense of responsibility for personal health as well as responsibility for the health of the community.

One of the first considerations in the successful teaching of health courses in schools is for the teacher to look well to her own health in order that she may exemplify what she may hope to teach day by day. The strictest attention to personal habits, neatness of appearance, correct posture in walking, standing, or sitting, cultivation of a good speaking voice, and correctness of speech at all times must be given if teachers are to achieve the best results with their pupils. Health education is more than the mere giving-out of useful information. It has to do with all those experiences in the school and elsewhere which influence habits and attitudes relating to individual and community health. The teacher's great task is in so organizing the life of the school that the child comes to feel the need of the knowledge that the teacher wants him to have. The next step, which is a continuous process, is that of applying the information gained to the end that good and abiding habits may be formed. As one knowing teacher has stated it: "All the enthusiasm, understanding, and technique of motivation are needed for this intriguing task of making the habits sought function in the core of the child's being, so that there need be no umpire to assure the rules of the game."

In the gradation of subject-matter the chief emphasis has been placed on the formation of good health habits up to Grade VI. In Grades VII. and VIII. the applications of knowledge gained and more widely applied to community interests and to socially healthful behaviour are set forth. In Grades VI. and VII. the physiological basis of hygiene is introduced, but the intention is that human physiology should be included only in so far as it immediately relates to healthful living, and is used for the sole purpose of giving boys and girls at this age a more intelligent interest in the welfare of their own bodies.

A great deal might be said regarding correlation with other school subjects—such as nature-study, language, and manual arts—but most teachers are fully aware of the educational significance of all such correlations and will make them a part of their regular class-room procedure.

Physical training should form an integral part of any comprehensive scheme of health education. It can no longer be considered from the standpoint of muscular ability and prowess, but as having to do with the maintenance of all organs of the body in a state of healthful efficiency. Moreover, true physical education develops the individual mentally and socially as well as physically. For the time being the 1919 Syllabus of Physical Training for Schools will form the basis of the work to be undertaken in the grades, but teachers are warned against the practice of monopolizing the time for physical training in the execution of formal exercises only. Greater attention should be given to what might be termed natural or self-directed exercise as in games, free play and school sports, suitable to the interests, ages, and physical ability of the pupils.

Reference Literature and Teaching Material on Health Education.

Teachers should write to the following organizations for their lists of publications from which to choose suitable references as aids in the teaching of hygiene and allied subjects:—

(1.) Provincial Board of Health, Parliament Buildings, Victoria.

(2.) Dominion Department of Health, Ottawa, Canada.

(3.) American Child Health Association, 370 Seventh Avenue, New York. (Supplies wide range of materials for health education—plays, readings, weight charts and records, games, etc.)

(4.) Bureau of Education, Department of Interior, Washington, D.C. (Ask for list of pamphlets under the Health Education Series, also under School Health Studies.)

(5.) Joint Committee on Health Problems in Education of the National Education Association and The American Medical Association. (Ask for a list of pamphlets on Health Education and order a copy of "Health Education—A Program for Public Schools and Teacher Training Institutions"—price, $1—may be ordered from the Chairman, Dr. Thomas D. Wood, 525 West 120th Street, New York City.)

(6.) National Tuberculosis Association, 370 Seventh Avenue, New York. (Write for list of publications and order a copy of "Health Teaching in Schools—A Manual for Teachers," by Theresa Dansdill, 400 pages; price, $1.)

(7.) National Health Council, 370 Seventh Avenue, New York. (This organization publishes a long list of valuable reference booklets of about 70 pages each and costing 30c. each. Write for their list.)

(8.) Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago.

(9.) The Rockefeller Foundation, 61 Broadway, New York.

(10.) The Russell Sage Foundation, 130 East Twenty-second Street, New York.

BOOKS:

The Hygiene of the School Child (Advanced)—Lewis W. Terman (Houghton, Mifflin & Co., New York). Price, $1.65.

Health Work in the Schools—Hoag and Terman (Houghton, Mifflin & Co., New York). Price, $1.60.

Health Education in Rural Schools—J. M. Andress (Houghton, Mifflin & Co., New York). Price, $1.85.

The New Hygiene (Advanced)—Dr. H. W. Hill, Dean Faculty of Public Health, University of Western Ontario, London, and recently appointed Professor and Head of the Department of Public Health, University of British Columbia, Vancouver (The Macmillan Co., Toronto). Price, $1.50.

Human Physiology, 1924—John W. Ritchie (World Book Co., Yonkers-on-Hudson, N.Y.). Price, $1.60.

Gulick Hygiene Series—L. H. Gulick (Ginn & Co., San Francisco).

Physiology and Hygiene—Ritchie & Caldwell (Gage & Co., Toronto, Ont.).

How to be Healthy—Halpenny & Ireland. (Obtained free on application to the Department of Education, Victoria.)

Ontario Public School Health Book—Fraser and Porter (Copp, Clark Co.). Price, 40c.

SUPPLEMENTARY READING FOR CHILDREN. (Price, 25c. to 50c.)

Child Health Alphabet (Primary Grade) (Macmillan Co., New York or Toronto, Yonkers-on-Hudson, N.Y.).

Cho-Cho and the Health Fairy (Primary Grade) (Macmillan & Co.).

Mary Gay Stories (Primary Grade)—Stella Booth and Olive I. Carter (World Book Co.).

A Journey to Health Land (3rd or 4th Grade)—J. Mace Andress (Ginn & Co., San Francisco).

Boys & Girls of Wake up Town (4th or 5th Grade)—J. Mace Andress (Ginn & Co., San Francisco).

A Child's Book of the Teeth (5th or 6th Grade)—H. W. Ferguson (World Book Co., San Francisco).

Rosy Cheeks & Strong Heart (Macmillan Co.).

The Most Wonderful House in the World—N. S. Haviland (Lippincotts).

NEEDLEWORK COURSE

Accuracy in each step must be the ruling thought in every grade. Insist on clean hands, keeping material clean and workboxes in g od order. Avoid tedious descriptions of, and reasons for, mechanical processes.

A Needlework Course should be built up from the following and be preparatory to the Course in Cookery :—

Grade III.

Even basting, uneven basting, running stitch, chain stitch, cross stitch, blanket stitch. Free cutting from paper-folding method of simple garments of various sizes—e.g., caps, bonnets, bibs, etc.

Grade IV.

Stitching, back stitch, combination stitch, hemming stitch, overhanding stitch, French seam, flat fell seam, herringbone stitch, feather stitch. Free cutting from paper-folding method of simple garments for children of different ages.

Grade V.

Overhanding, buttonhole stitch, hemstitch, damask seam, flannel seam, making cookery outfit (pot-holder, towel, sleeves, apron, cap). Free cutting and making of garments.

Grade VI.

(Twenty-five hours during the school-year.) (In conjunction with work in Cookery.)

A selection of exercises from the following: Hemstitching, buttonholes, household sewing, pillow-slips, towels, etc. Making and repairing kitchen linen. Patching, darning. Free cutting continued. Knitting.

Grade VII.

(Twenty-five hours during the school-year.)

Draughting, free cutting, and making undergarments. Repairing, patching, and darning flannels, prints, and coloured goods. Knitting.

Grade VIII.

(Twenty-five hours during the school-year.)

Cutting and making undergarments or High School outfit. Repairing table linen, mending and darning of outer garments, gloves, etc.

LIST OF AUTHORIZED TEXT-BOOKS FOR PUBLIC SCHOOLS.

Readers, etc.

The Canadian Readers, Book I. (The Macmillan Co. of Canada, Ltd.), for Grade I.
The Canadian Readers, Book II. (Nelson & Gage), for Grade II.
The Canadian Readers, Book III. (Nelson & Gage), for Grade III.
The Canadian Readers, Book IV. (Nelson & Gage), for Grade IV.
The Canadian Readers, Book V. (Nelson & Gage), for Grades V. and VI.
Teachers' Manuals—
The Canadian Readers, Book I., Teachers' Manual—Burnett (Macmillan Co., Ltd., Toronto). Price, 35c.
Handbook to the Canadian Readers, Books II.–V. (Gage & Nelson, Toronto). Price, 95c.

English Literature.

See prescribed texts listed under Grades VII. and VIII.

Supplementary Readers.

See names of books listed under Grades I. to VIII.; also—
"The Great War in Poetry and Prose," edited by Wetherell, Department of Education, Toronto.
"Heroes of Land and Sea"—Newbolt (Longmans, Green & Co., Toronto).
"School Days Magazine"—E. W. Reid, Franklin School, Vancouver. Published monthly; yearly subscription, $1; in lots of ten or more, 5c. per copy.

Speller.

Spelling for the Grades (Department of Education).

Grammar and Composition.

British Columbia Public School Grammar—Lang (The Copp, Clark Co., Ltd.).
Elementary Composition—Alexander & Mowat (Gage & Co., Ltd.). Price, 50c.
The Highroads Dictionary (Thomas Nelson & Sons, London).
Chambers' Etymological Dictionary (W. & R. Chambers, Ltd., London and Edinburgh), 694 pages. Price, 60c.

Writing.

Grade I.: Compendium No. 1 of the MacLean Method of Muscular Movement Writing.
Grade II.: Compendium No. 2 of the MacLean Method of Muscular Movement Writing.
Grade III.: Compendium No. 3 of the MacLean Method of Muscular Movement Writing.
Grades IV. and V.: Compendium No. 4 of the MacLean Method of Muscular Movement Writing.
Grades VI., VII., and VIII.: Senior Manual of the MacLean Method of Muscular Movement Writing.
Teachers' Manual.

Arithmetic.

Arithmetics, Books I., II.—Smith & Roberts (W. J. Gage & Co., Ltd.).
Teachers' reference book: Arithmetic, Teachers' Manual for the Modern Method—Reid & Martin (Dent & Sons). Price, $1.

Geography and Atlas.

Canadian School Geography—Cornish (Dent & Sons, Ltd., Toronto). Price, 90c.
Canadian School Atlas—Cornish (Dent & Sons, Ltd., Toronto). Price, 90c.
Junior Atlas for Canadian Schools (Nelson & Sons, Ltd., Toronto). For Elementary Schools only.
Royal Atlas (Nelson & Sons, Ltd., Toronto).
Wall Maps (W. & A. K. Johnson, London).
Reference books for pupils and teachers:
See books listed under Grades V., VI., VII., and VIII.

History and Civics.

History of Canada, with B.C. Supplement—Gammell (W. J. Gage & Co., Toronto).
Studies in Citizenship—McCaig—B.C. Edition (Gage & Co.).
History of England for Public Schools (The Macmillan Co. of Canada, Ltd.). Price, 63c.
Recommended for teachers' use and for supplementary reading for pupils' use:
See lists under Grades V., VI., VII., and VIII.

Drawing.

Teachers' Manual of Drawing and Design (Department of Education, Victoria).

Manual Arts.

Recommended for teachers' use:
See names of books listed under Grades I. to IV.

Music.

Rote Songs and Singing Games—Wickett (W. J. Gage & Co., Ltd.). For use of teachers only. Price, $1.
New Canadian Music Course, Book I.—Coney & Wickett (Gage & Co.), for Grade III. Price, 20c.
New Canadian Music Course, Book II.—Coney & Wickett (Gage & Co.), for Grade IV. Price, 25c.
New Canadian Music Course, Book III.—Coney & Wickett (Gage & Co.), for Grade V. Price, 25c.
New Canadian Music Course, Book IV.—Coney & Wickett (Gage & Co.), for Grade VI. Price, 30c.
New Canadian Music Course, Book V.—Coney & Wickett (Gage & Co.), for Grades VII. and VIII. Price, 35c.
School and Community Song Book—Vogt and Willan (W. J. Gage & Co., Ltd., Toronto). Price, 50c.
Recommended for teachers' use:
Rhythmic Work—K. Mortimer and G. Davies (J. Curwen & Sons, London).
National Song Book (Boosey, Toronto).
Song Reader, The, Canadian Edition (Ginn & Co., Boston).

Health Education.

See list under Grade VIII.

Nature Study and Elementary Agriculture.

Reference books:
Nature Stories—R. S. Sherman, 1924 (Dent & Sons, Ltd., Toronto). Price, $1.25.
Handbook of Nature Study—Anna B. Comstock (Comstock Publishing Co., Ithaca, N.Y.). Price, $4.
Practical Nature Study—Coulter & Patterson (D. Appleton & Co., New York).

Nature Magazine, Illustrated—American Nature Association, 1214 Sixteenth Street N.W., Washington, D.C. Price, $3.

The School Book of Forestry—Charles L. Pack. Price, $1.

Native Trees of Canada—Morton & Lewis (Department of Interior, Ottawa). Price, 50c.

The Book of Birds—National Geographic Society, Washington, D.C. Price, $3.

Birds in their Relation to Man—Weed & Dearborn (Lippincott & Co., Philadelphia). Price, $2.50.

Western Bird Guide—Reed (Musson Book Co., Toronto). Price, $1.25.

Children's Book of Birds—Olive Thorne Miller (Houghton, Mifflin & Co., Boston). Price, $3.

Elementary Entomology—Sanderson & Jackson (Ginn & Co., San Francisco). Price, $2.50.

Butterflies Worth Knowing—Clarence M. Weed (Doubleday, Page & Co., Garden City, N.Y.). Price, $2.

Canadian Forest and Outdoors—Illustrated Magazine, Canadian Forestry Association, 51 Sparks Street, Ottawa. Price, $2.

American Forests and Forest Life—Illustrated Magazine, American Forestry Association, Washington, D.C. Price, $4.

Wild Animals of North America—National Geographic Society, Washington, D.C. Price, $3.

Animal Guide: North American Wild Animals—Reed (Chas. K. Reed, Worcester, Mass.). Price, $1.25.

Squirrels and Other Fur Bearers—John Burroughs (Houghton, Mifflin & Co., Boston). Price, $1.

Eyes and No Eyes—Buckley (Cassell & Co., N.Y.). Price, $1.25.

The Outlook to Nature—L. H. Bailey. Price, $1.25.

Manual of Gardening—L. H. Bailey (Macmillan Co. of Canada, Toronto). Price, $2.50.

Among School Gardens—Louise Green (Charities Publishing Co., New York). Price, $1.50.

The Garden Magazine (Illustrated) (Doubleday, Page & Co., Garden City, N.Y.). Price, $3.

A Study of Farm Animals—Plumb (Webb Publishing Co., St. Paul). Price, $2.

Field Crops—Wilson & Warburton (Webb Publishing Co., St. Paul). Price, $2.

The Soil and its Management—Miller (Ginn & Co., San Francisco). Price, $1.50.

The New Agriculture—Walters (Ginn & Co., San Francisco). Price, $2.

NOTE.—The last four books in the above list are also valuable for use in High Schools. The last book of all covers briefly many subjects more thoroughly treated in the three books preceding it.

COURSE OF STUDY AND REGULATIONS FOR MANUAL TRAINING SCHOOLS.

1. Where Manual Training Schools are established, attendance is compulsory and must be continuous throughout the school-year, with one-half day's attendance per week for each child. The hours of instruction shall be as defined in Article 1 of the Rules and Regulations for the government of Public Schools. Boys from distant schools in attendance at the morning session may be dismissed at 11.45 a.m.

2. Manual Training Instructors shall be subject to the same general regulations as Public School Teachers.

3. The Principal of the Public School at which a Manual Training Centre is situated shall have supervision over the general discipline of all classes in attendance at that centre.

4. Where Manual Training Schools are established, instruction shall be given to pupils of Grades VI., VII., and VIII.

5. Attendance registers, visitors' book, and stock book must be kept and be open for inspection at all times.

6. A three-years' course of woodwork shall be taken in the Elementary Schools.

7. Where the pupil enters the High School before completing the Elementary School Course, he must, if required by the teacher, complete that course before commencing the High School Course.

8. In all school districts where there is more than one Manual Training Teacher employed, one of these shall be in charge.

9. Each teacher shall design and submit for the approval of the Department of Education a course of models based on the group scheme given below. The models should be arranged to suit the locality—urban or rural—as well as the equipment at the disposal of the boys.

10. An exhibit showing the finished course with working drawings should be on view at each centre, together with the following:—

(*a.*) A liberal number of alternative problems.

(*b.*) Projects showing stages of construction.

(*c.*) Teaching apparatus.

(*d.*) Illustrations of wood shrinkage, seasoning, etc.

(*e.*) Diagrams for teaching purposes, etc.

Elementary School Manual Training Syllabus.

1. Drawing.

Plans and elevations; section drawings; scale drawings; isometric drawing; copying of drawings; producing complete working drawings from dimensioned sketches; making drawings from models.

Measuring blank drawings when the scale is given.

Ruled and freehand sketching.

Supplying additional views.

Lettering. Graded thus: (1) Lower-case letters in script, slanting; (2) capitals, slanting; (3) vertical lettering.

Lessons in design, proceeding in easy stages, as applied to the outline and the construction of models.

The designing of complete models should rarely be attempted before the end of the fourth group.

2. Woodwork.

(1.) The exercises or tool operations in each group shall be covered by the models in that group and all the tools indicated shall be used.

(2.) The operations should be carefully graded and the progression should be very easy, especially in Groups 1, 2, and 3.

(3.) In designing the models, provision should be made for ample repetition, the aim being to repeat each new exercise in the two following models at least.

(4.) Easy progressive steps must also be observed in the Drawing lessons, and the models should be designed with that aim also in view.

(5.) The first group may be preceded by a simple preliminary course, such as strip-work, where in the opinion of the teacher such is necessary.

(6.) During the course, lessons should be given on grinding and sharpening chisels, plane irons, and saws.

GROUP SCHEME OF WORK.

Group 1, Models 1 to 6.

Rule: Measuring.

Knife: Marking out, chamfering.

Try-square: Squaring and testing.

Saws: Hand-saws for cutting out stock; tenon for fine sawing (squaring).

Plane (jack): Medium planing, surface 2 to ¾ inches; narrow planing, surface ¾ inch down; shooting ends.

Gauge (marking): Marking width and thickness.

Chisel: Vertical chiselling; horizontal chiselling.

File: Filing curved outline (end).

Brad-awl: Boring holes.

Brace and bits: Boring holes; bits not to include those mentioned in Group 3.

Glass-paper.

Nails: Nailing and setting (simple).

Group 2, Models 7 to 12. (Simple tool operation.)

Knife: Long cut, cross cut, concave and convex cut.

Saws: Bow-saws (curves).

Plane (jack): Broad planing 2 to 4 inches; planing cylinder.

Smoothing-plane.

Chisel: Cross paring (notching).

Gouge (inside): Scribing (vertical).

File: With grain, shaped outline, profile.

Spoke-shave: Profile.

Glue: Gluing, not necessarily a joint.

Joints: Half-lap; open housing.

Group 3, Models 13 to 18.

Planes: Wider planing, 4 inches and upwards; end planing; oblique planing; chamfering.

Gouge (outside): Horizontal (open ends).

Spoke-shave: Modelling.

Brace and bits: Countersink; expansion; Forstner.

Knife: Modelling.

Screws: Fixing with screws.

Other operations: Trenching.

Group 4, Models 19 to 25.

Gauge (mortise): In joint.

Gouge: Modelling (scooping).

Other operations: Glued and rubbed joint; mortise and tenon joint; stopped housing joint.

Group 5, Models 26 to 30.

Gauge (cutting): Easy dovetailing; mitreing; rabbeting; keying; more advanced mortise and tenon construction; more advanced dovetailing; more advanced exercises already mentioned.

3. Theory.

Lessons of general information on materials used with the object of encouraging observation.

Recognition of common trees by their leaves, flowers, and fruits.

Recognition of common woods by their markings, weight, smell, etc.

Growth of trees.

Seasoning and marketing of timber.

Products of trees; enemies of trees.

Material used in the construction of tools.

4. Practice.

(1.) Boys should provide themselves with aprons or overalls and should be encouraged in good habits of workmanship.

(2.) The working drawings should be kept by each pupil in a folder until the three years' course is completed.

(3.) Mistake-sheets or record-cards should be carefully filled in and kept until entering High School. Due regard should be paid to penmanship and spelling.

(4.) Models and drawings should have a maximum of 10 marks each.

(5.) Tests in theoretical work should also be given and marks awarded.

(6.) Both the English and the Metric system of measuring are to be used.

(7.) The boy may be allowed to submit an alternative model, provided it embodies the required exercises.

Diplomas for Manual Training.

Diplomas will be awarded by the Department of Education to pupils who obtain 400 of the 600 marks possible in the woodwork and drawing of the Elementary School Course and have completed the first four groups of same. The percentage of marks gained in Woodwork, Drawing, and Theory will be entered on the diploma.

Text-books and Books of Reference for Manual Training Teachers.

Teaching Manual and Industrial Arts—Ira S. Griffith. Price, $2.

Essentials of Manual Training—Ira S. Griffith. Price, $1.25.

Furniture Making—Ira S. Griffith. Price, $1.25.

Problems in Furniture Making—Fred. D. Crawshaw.

Problems in Wood Turning—Fred. D. Crawshaw. Price, 64c.

Problems in Farm Wood Working—S. A. Blackburn. Price, $2.
Publisher, Manual Arts Press, Peoria.

Native Trees of Canada—Bulletin No. 61, Forestry Bureau Branch, Ottawa.

Elementary Forge Practice—Harcourt. Price, $1.50.

Elementary Machine Shop Practice—Palmateer. Price, $1.50.

Farm Blacksmithing—Friese. Price, $1.35.

DOMESTIC SCIENCE.

Rules relating to Domestic Science Centres.

1. Where Domestic Science Centres are established, attendance is compulsory and must be continuous throughout the school-year. The hours of instruction in Domestic Science shall be as defined in Article 1 of the Rules and Regulations for the government of Public Schools. Girls from distant schools in attendance at the morning session may be dismissed at 11.45 a.m.

2. A three-years' course of Domestic Science should be taken in the Elementary Schools.

3. Where Domestic Science Centres are established, all pupils in Grades VI., VII., and VIII. shall take Domestic Science.

4. When the forenoon and afternoon periods vary in length, the senior classes *must* take the longer period.

5. Attendance registers, records of lessons, an inventory of equipment, and a visitors' book must kept open for inspection at all times.

6. Expense sheets for food and other materials, exclusive of heating, lighting, and permanent equipment, should be sent to the Secretary of the Board at the end of each month, also an attendance sheet.

7. Only one course of work will be recognized for all the schools in any one city.

8. Domestic Science Instructors shall be subject to the same general regulations as Public School Teachers.

9. The Principal of the Public School at which a Domestic Science Centre is situated shall have supervision over the general discipline of all classes in attendance at that centre.

10. Plans for Domestic Science buildings must be submitted to the Department of Education for approval.

11. All courses of work in Domestic Science must be submitted to the Education Department for approval. Needlework for Grades VI., VII., and VIII. must be included in the course.

The following is a suggested outline of work:—

First-year Course for Elementary Schools.

Needlework.

If previous sewing lessons have not been taken, *see* Needlework Course.

If the pupils have been taking needlework in the previous grades as suggested in the Needlework Course, see that the cap, apron, sleeves, towel, and pot-holder are completed, then follow on with:—

HOUSEHOLD SEWING.—Pillow-slips, towels, etc. Making and repairing kitchen linen. Hemstitching, button-holes, patching, darning, knitting. Free cutting continued from previous grades.

Preparatory Lessons in Home Management and Personal Hygiene.

Washing dishes and saucepans. Care of white wood. Care and cleaning of metals in daily use. Care, cleaning, and disinfecting of sink. Waste and its removal. Construction, management, and cleaning of kitchen range, with simple study of combustion and use of wood and coal respectively. Sweeping and cleaning. Laying the table. Personal cleanliness, care of teeth, nails, hair.

Practical Cookery.

Definitions, tables, and rules of cookery to be taught by simple lessons selected from the following methods: Boiling, steaming, baking, roasting, shallow frying, sautéing, stewing, etc.

Theoretical Cookery.

As "practical application is the only mordant which will set things in the memory," principles should be taught in conjunction with the practice of cookery. Reasons for cooking food; effect of applying heat to food. Food principles; use of food to the body. Fuel foods and tissue-building foods. Carbohydrates, proteins, fats, mineral matter.

Reviews to take the form of simple meals; for example, breakfasts for a tray. Develop quick, free, independent action in all lessons. Cooking must be active work, give the child an ability to do. Explanations should articulate the lessons as closely as possible to those done in other departments of the school. All written lessons should be short, carefully executed, and mistakes corrected by the teacher.

Second-year Course for Elementary Schools.

Needlework.

Draughting: i.e., free cutting and making undergarments. Repairing, patching, darning flannels, prints, and coloured goods, knitting.

House Management.

Household brooms and brushes—choice, cost, and care. Cleaning painted, varnished, and polished wood. Various cleansing agents—use, economy, cost. Ventilation—value of fresh air, chimneys, doors, windows. Choice, cost, and care of linoleum and oilcloth. Water—source of supply, pipes, cisterns, storage, etc. Drainage—where pipes go, simple tests for faulty drains. Table setting and service.

Practical Cookery.

Recapitulation of the methods taught during the first year, with additions. Boiling, steaming, simmering, roasting, baking, broiling, stewing, sautéing, deep and shallow frying, braising, pot-roasting. Reviews to take the form of simple meals.

Theoretical Cookery.

More theory than in the first year. Foods and their use to the body. The perfect food. Proteins, carbohydrates, fats, mineral matter, vitamines. Importance of mixed diets, well balanced and varied. Need for forethought in planning meals. Planning, purchasing, cooking, and serving a luncheon for a family of four. Economy of the larder. Care of the meat-safe, cost, fixture, inexpensive substitutes.

Laundry-work.

Arrangement of household washing—washing, boiling, and plain ironing of household linens and underwear. Removal of stains and bleaching. Consideration of water, soap, soap powder, soda, borax, starch, and laundry blue.

Third-year Course for Elementary Schools.

Needlework.

Draughting: i.e., free cutting and making undergarments, or preparing High School outfit. Repairing table linen, mending and darning of outer garments, gloves, etc.

House Management.

Practical revision of two former years.

Practical Cookery.

Recapitulation of methods taught in the second year, with the addition of the following: Preservation of food. Reasons. Different methods. Dried fruits and their value. Pickling, canning, preserving. Salads with simple dressing. Fruit salads. Marmalade. Poultry—choice, trussing, cooking. Beef cuts. Bread-making.

Table service and table setting. Reviews to take the form of meals; for example, dinners.

Theoretical Cookery.

Emphasis to be placed on food values and the necessity for a well-balanced and varied diet. Digestion—its meaning, foods easy and difficult to digest. Digestion in the mouth, hard and soft foods, condition of teeth. Digestion from the alimentary canal to intestines. Suitable food for child from birth to dentition. Good and bad types of feeding-bottles. Cleansing of bottle. Sterilizing and pasteurizing milk, whey. The child under two years. Vegetarian diet, advantages and disadvantages.

Laundry-work.

Washing and finishing flannels, coloured garments, wool, cotton, linen, muslin, silk, and lace. The management of a small family wash. Soap-making from kitchen grease, soaps, acids, alkalies. Simple methods of softening water. Making and use of starch.

Diplomas for Domestic Science.

Diplomas will be awarded by the Department of Education to pupils who complete the Course prescribed for Domestic Science.

Text-books and Books of Reference for Teachers.

The Canadian Cook Book—Pattinson (The Ryerson Press, Toronto).

Elements of Cookery—Williams & Fisher (The Macmillan Co., Ltd., New York). Price, $1.55.

The Boston Cooking School Cook Book—F. M. Farmer (Little, Brown & Co., Boston).

Food—What it is and Does—Edith Greer (Ginn & Co., Boston).

Household Engineering—Frederick (American School of Home Economics, Chicago).

Bacteria, Yeasts, and Molds in the Home—Conn (Ginn & Co., Boston).

First Aid to the Injured—Dr. J. Cantlie (St. John Ambulance Association, Queen St., Ottawa).

Hints and Helps on Home Nursing—Cosgrave (St. John Ambulance Association, Queen St., Ottawa).

Ontario Sewing Manual (Department of Education, Toronto).

Bulletin No. 23, Clothing for the Family (Federal Board of Vocational Education, Washington, D.C.).

NATURE STUDY COURSE IN FOODS.

For Rural Schools where the Cooking of Hot Lunches is undertaken.

Forty half-hour lessons during the school-year—A to be followed by B the same week. To be given in a class-room as an ordinary lesson.

Equipment.

Set of 15 food charts (Superintendent of Documents, Washington, D.C., U.S.A.)	$1 00
Registry of Foods, by R. W. Goldsbury (Whitcomb & Barrows, Huntington Chambers, Boston, U.S.A.)	1 10
1 enamel plate	10
1 small spirit-stove or oil-stove	35
1 enamel cup and saucer	25
1 small enamel saucepan and lid	25
1 vegetable-knife	10
1 tablespoon, 1 teaspoon, 1 fork	15
	$3 30

Many of these the students might donate to save expense, also flour-bags to act as dish-towels. A bowl for washing up would be a convenience.

Samples of the following would greatly assist: Tea, fermented and unfermented, of different grades; coffee, similarly, and cocoa; cereals of all kinds, whole and ground, etc.; dried fruits, sugars of all kinds; milk in its component parts.

The price of all food materials used should always be discussed, including the relative cost of 1 cup of flour, sugar, oatmeal and other cereals, butter, etc.

A.—Water.

Sources; appearance; taste; hard and soft; detergent power; impurities; different forms (ice, etc.). (Sugar, salt, cold water.)

B.—Water.

Amount needed per day; uses in body; how taken; foods rich in water; effect of heat on water; simmering and boiling; boiling as a means of purifying and softening; water rate in local city; country and city water supplies. (Saucepan, cold water, heat to turn all water to steam, examine residue.)

A.—Tea.

Source where grown; how prepared for sale; various kinds and varieties; cost. (Tea of various kinds and preparation.)

B.—Tea Infusion.

Method of preparing; properties of infusion; when well and ill prepared; use of tea in dietary, people for whom suitable; tea infusion on leaves 3, 6, and 12 minutes, respectively, to be tasted and results noted. (Tea; boiling water.)

A.—Milk.

Milk as a food for babies and calves; food principles illustrated by milk and chief use of each; separated or skim milk, its food value; cost of milk, separated milk; cream; absorbability of milk; diseases from milk; care of milk in dairy, transit, and home. (Milk, onions, milk exposed to dust, milk in its component parts.)

B.—Milk and Junket.

Review—composition and food value; digestibility of milk; illustrate by babies; explain rennet and its action on milk, compare with processes in human stomach; make junket; deduce why milk should be sipped slowly, not taken quickly. (Milk, sugar, junket tablet, nutmeg.)

A.—Cocoa.

Source; nature; how prepared for sale; composition; food value; chocolate and cocoa prepared; pictures of cocoa trees, pods, and cocoa powder in process of manufacture. (Cocoa samples.) Price.

B.—Cocoa (Beverage).

Review composition; method of preparing cup of cocoa; need for boiling; comparision of tea and cocoa for food value and preparation. (Cocoa, sugar, milk, boiling water.)

A.—Fruits (Acid and Salt-supplying).

Classification; test for sugar, water, cellulose, and acids; dietary value; three methods of preserving fruits. (Fresh fruits, dried fruits, canned fruits, jam, jelly.)

B.—Fruits.

Review composition; digestibility of raw and cooked; cellulose; effects of cooking; methods of preparing and cooking fresh and dried; prepare an orange; stew prunes previously soaked. (Orange, six prunes, water, sugar, lemon, or fruit salad.)

A.—Cereals (Quick Fuel-supply).

Name explained; kinds; sources; products; test for starch (sugar when chewed); cellulose; use of cereals to the plant. (Samples of whole grain, ground—coarse and fine—grains, other preparations of grains; a whole ear of corn or barley; plate with small samples of flour, salt, cornmeal, baking-soda, corn-starch, etc., and iodine.)

B.—Cereals.

Review composition; explain digestion of starch; need for long cooking; make lumpy and smooth porridge, turn on to a plate and compare; make smooth last and continue to cook same for ½ hour, compare for taste with that cooked 5 minutes; methods of preparing and cooking. (Fine oatmeal, boiling water, salt.)

A.—Starch.

Sources; nature, use in body; effect in cold and boiling water; use in laundry-work. (Starch, cold water, boiling water.)

B.—Starch Sauces (Fuel Foods).

Review porridge; three methods of separating starch grains; thickening properties; make three sauces of varying thickness; effect of boiling; time to boil, need of boiling, sweet and savory sauces. (Starch, sugar, butter, cold and hot water.)

A.—Wheat (Fuel, Muscle and Bone Builder).

Part of plant; storehouse; structure of grain; various grades and kinds of flour; food value of these (whole wheat and various kinds of flour from it).

B.—White Flour.

Test for starch and gluten; nature, use in diet, use in bread-making of gluten. (Flour, cold water, starch from flour, a good gluten-ball, well cooked.)

A.—Sugar (Fuel Food).

Sources; manufacture; kinds; use in body; effect of too much sugar on appetite. (Pictures of sugar cane and beets; or various grades of sugar.)

B.—Sugar.

Review composition and uses; effect of heating to charring point; make small quantity of fudge; discuss when candy to be eaten; home-made *vs.* bought candy. (Brown sugar, milk, butter, flavouring.)

A.—Cheese (Fuel Food and Tissue-builder).

How prepared; various kinds; value in diet. (Rennet, sour milk, different kinds of cheese.)

B.—Cheese.

Composition; food value; digestibility; effect of dry and moist heat on cheese; methods of cooking; make cottage cheese. (Sour milk, salt, pepper, cheese-cloth.)

A.—Eggs (Tissue-builder).

Seven parts of an egg; food value of an egg; illustrate by little chick (2 eggs); cause of eggs decaying; preservation of eggs.

B.—Eggs.

Review composition; effects of heating out of shell by dry heat and moist; eggs cooked in shell three ways; deduce directions for cooking eggs (4 eggs).

A.—Vegetables (Salt-supplying).

Classification as to parts of plant; food value; test for starch; test for sugar; test for cellulose and water. (Vegetables of all kinds.)

B.—Fresh Vegetables (Salt-supplying).

Review composition and uses; preparation of various kinds of cooking; methods of cooking discussed. (Carrots, turnip, beet, onion, cabbage, green beans.)

A.—Dried Vegetables (Tissue-builders).

Legumes; storehouse of food; composition; food value; contrast with greens and roots; cost of legumes; foods to combine with legumes. (Legumes of various kinds.)

B.—Potatoes (Salt and Fuel-supplying).

Composition; food value; methods of preparing and cooking; cooked in skin and without; test water for starch. (Two potatoes, boiling water.)

A.—Green Vegetables (Salt-supplying).

Composition and value in diet; discuss vegetable gardens; kinds which may be grown. (All kinds of greens, wild and cultivated.)

B.—Salads.

Kinds of vegetable cold salads, cooked and uncooked, their preparation; prepare a simple salad and dressing. (Salad material, cream, sugar, vinegar, salt, pepper.)

A.—Meat (Tissue-builder).

External structure; rules for selecting; care of meat; tender and tough meat, where found. (Diagram of ox and sheep; borrow a good joint, if possible.)

B.—Meat.

Internal structure of lean meat; contents of meat-tubes; connective tissue; apply dry heat to meat. (Scraped meat in cold water, piece of boiled meat, heat meat-juice.)

A.—Fish (Tissue-builder).

Classification; local kinds available; structure; compare with meat; cost compared with meat; rules for selecting; care of fish. (A whole fresh fish.)

B.—Fish.

Composition; compare with meat for food value and digestibility; soak fish in water; apply dry heat to fish and boil a piece of fish; compare with meat; discuss methods of cooking; steam small piece of fish. (Small piece of cooked meat, raw fish.)

A.—Yeast (Raising Agent).

Nature; growth; activity; four essentials for growth; result of growth; use of yeast in bread-making; test for good compressed yeast. (Dry and compressed yeast, fruit-juice fermenting.)

B.—Yeast.

Review former lesson; three forms of yeast; perform eight experiments to show the best conditions for fermentation by yeast-plant in bread-making. (Yeast, flour, sugar, cold and hot water, boiling water, salt.)

A.—Soda and Cream of Tartar (Raising Agent).

Sources; nature; manufacture; texture; cost; effect of uniting and adding moisture; baking-powder. (Soda, cream of tartar, cold and hot water.)

B.—Soda and Acids.

Review their effect on each other; use of carbonic-acid gas in cookery; six experiments to illustrate how to use to produce most CO_2. (Soda, cream of tartar, sour milk, molasses, vinegar, cold and hot water.)

A.—Table-setting.

Things required for general and personal use for dinner; how to set table; illustrate on blackboard. (Ask students to bring these for next lesson.)

B.

How to set and wait at table; table etiquette; how to clear away after a meal. (Table linen, silver, cutlery, china, flowers.)

A.—Menus.

Directions as to the choice of dishes for one day's meals.

B.—Flowers arranged for Table Decoration.

(High and low vases for long and short-stalked flowers, wild and cultivated.)

NOTE.—A preliminary course might be given on the above plan dealing with choice, manufacture, cost, at one lesson, and cleaning and care at the next lesson of the following: Sink, floor, windows, silver, cutlery, white wooden utensils, finished woodwork, tin, enamel, and aluminium ware, furniture, hair and household brushes, kitchen range, soap, scouring agents.

EXAMINATION AND PROMOTION OF PUPILS.

Elementary Schools.

In all Elementary Schools there must be a general classification of pupils at the end of each term. Pupils should be transferred to a higher or lower grade whenever it appears that their individual interests require it, without regard to the periodical reorganization of classes.

Examinations held for the purpose of classifying the pupils of a graded school shall be oral for classes below the Fourth Grade, but in all classes the judgment of the teachers who have respectively taught the pupils during the preceding term should chiefly determine the promotion list.

Examinations for admission to High Schools will be held on the last three teaching-days in June at all places where High Schools are in operation, and at such other centres as may be determined and announced by the Department from year to year.

The Department will promote, on the recommendation of the principal, the most proficient of the pupils of Grade VIII. attending an Elementary School of seven or more divisions. The other pupils of the school who desire to obtain Entrance Certificates must take a written examination on Penmanship, Dictation and Spelling (one paper); Grammar and Composition (one paper); Arithmetic; Geography; Drawing. To be successful a candidate must obtain an average of 60 per cent. in these five papers. Those taking the examination (the lowest in rank) must comprise at least 40 per cent. of the pupils of Grade VIII. who have covered the prescribed course satisfactorily in all subjects and are reported by the principal as fit to undertake High School work. All candidates for Entrance from schools of less than seven divisions and from private schools as well as candidates who have prepared for Entrance by private study must take the written examinations in the above-mentioned subjects and satisfy the Department by written or oral tests that they have a good knowledge of the prescribed work in English Literature, British and Canadian History, and Nature Study and Hygiene.

Pupils of Elementary Schools in a school district having a High School, after passing a satisfactory examination and being declared eligible for promotion from an Elementary School to a High School, shall not be received as pupils in the graded schools of such district.

All pupils of British Columbia schools (both public and private) must hold High School Entrance Certificates before they are eligible for admission to a High School. Any pupil holding a High School Entrance Certificate obtained in another Province or country may be admitted to a High School in this Province on probation, subject to the approval of the Department.

CORRESPONDENCE COURSES IN ELEMENTARY SCHOOL SUBJECTS.

The Department of Education has organized a Correspondence Course for children living in isolated districts beyond the reach of an Elementary School.

The purpose of this course is to give such children assistance in all the subjects taught in Grades I.–VIII. of Elementary Schools.

Lessons are sent to each pupil to be worked, and on completion are then returned to the Instructor for correction.

Tuition is free; also school-books issued by the Free Text-book Branch are provided free of charge.

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