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## JOURNAL OF

Province of



## EDUCATION,

Ontario.

VOL. XXV.

TORONTO, JULY, 1872.

No. 7.

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## PUBLIC SCHOOL-HOUSE ACCOMMODATION.

One of the most valuable features of the School legislation of last year was that which provided for increased School-house accommodation. By a singular oversight, no provision was made in the comprehensive School Law of 1850 for this essential part of our School Economy, nor was it, even, embodied in the School Law Amendment Act of 1860, which was designed to remedy certain proved defects in the law. Indeed, not until after twenty years' experience had demonstrated the want of some general regulation relating to School-house Accommodation being made, did the necessity for a clearly defined regulation on the subject force itself on the attention of our Educationists.

Although some opposition was made, at first, to this most desirable reform, yet on the whole, it has been hailed as a real boon by the vast majority of the trustees. Never was there such singular unanimity on any one subject among the intelligent friends of our improved School System as on this. It has (when proper explanations have been given to the parties concerned) been regarded as a most enlightened step in advance. The provision of the law has been framed, as we think all will admit, in the interests of humanity, cleanliness, order and decency. It is true that in many cases a thoughtless apathy or inattention alone had prevented anything from being done to improve the condition of the school premises; but, in other cases, timidity on the part of the trustees, or the fear of taxation on the part of the ratepayers had paralyzed local effort; and from year to year nothing was done to put the school-house in even a reasonable state of repair. Hence the necessity for the interposition of some higher authority, in the shape of

Statute Law, to rouse public attention to the subject, and virtually to decide the question in favour of the health of the teacher and pupils and the advancement of the school. These were, really, the parties who had suffered so long from local apathy or selfishness, while they were powerless to effect any change for the better.

Were it not vouched for by the written testimony of the Public School Inspectors, who have examined and reported to the Department upon the state of the school houses and premises under their jurisdiction, it could scarcely be believed that trustees and parents would, in so many cases, have allowed their children to congregate, day after day, and year after year, in the miserable hovels which, up to this year had existed as so-called school-houses in many parts of the province. And yet, so it was. Neither the ill health of the teacher, nor the listless faces of the children, added to the warning of medical men, or the counsel of local superintendents, could, in many localities, rouse trustees or ratepayers from their apathy. "Their fathers, or other relations, or friends, had gone to the school, and it was good enough for them." This, or some other valueless excuse, was too often their reply, and hence nothing was done, or would be attempted. Not even, in many cases, would the spirited example of their neighbours in other localities influence them; and often, in inverse ratio to the wealth of the neighbourhood, would the spirit of selfish economy prevail, and even be defended on the plea of poverty!

It is true that many people had no definite idea as to what was actually required to be done, in order to provide what was really necessary to put their school-house and premises in a proper and efficient state. Such people would say: "Tell us what we should do and we will cheerfully do it." "We know that our children and the teachers are sufferers, and that they are not in such a school-house as we should like them to be in. But we do not know the proper size to build the school-house, the space for air which we should leave, or the best way to ventilate the building or premises. If the law or regulations would lay down some definite general rules on the subject, we should be glad to follow them, but we do not like to spend money on a new school-house, and then find that we were all wrong in our calculations on the subject." Such excuses as these were often urged, and they were reasonable in some cases. Trustees, too, would say, when pressed to do something to better

the condition of the school-house: "We would gladly do so, but the ratepayers object to the expense, and we do not like to fall out with our neighbours. If you say that we *must* do it, we will undertake it, for then the responsibility will be on you, and we shall do no more than our duty in complying with the law." Some trustees have felt so strongly the necessity of improving the condition of their school premises, and yet have lacked the moral, and even the legal, courage to do their duty, independently of this pressure, that they have privately intimated their desire to the Inspector that he would enforce the law in this matter in their school section.

It affords us real pleasure to say that, in carrying out the law and regulations on this subject, the Inspectors generally have displayed great judgment and tact. They have even, taken unusual pains to enlist the sympathies and best feelings of trustees and ratepayers in favour of this most needed reform. They have answered objections, smoothed difficulties, removed prejudices, met misrepresentations by full information and explanation, and have done everything in their power to introduce, as suggested by the Department, a gradual change for the better in the condition of the school-house, the outbuildings, fences and premises generally.

As an evidence of the desire of the Chief Superintendent to still further enlist the energies and ability of the local school authorities themselves in this good work, we append herewith a circular issued by him in the last number of this Journal, offering prizes for plans of school-sites and school-houses. It has always been laid down by him, as an essential principle of our School System, that it is after all a more effective means of aiding the people to educate themselves through themselves, than for the Department to attempt it by law or regulation;—and that all that our School System can do is to aid them to do so by providing facilities, and suggesting plans, for doing work in the most efficient manner. In this respect his most sanguine expectations have been fully realized.

At the "Ontario Teachers' Association" held in this city, this year, the following Resolution was unanimously passed. "In the opinion of this Convention, the School accommodation required for the New School Law and Regulations, is under, rather than over, that demanded by health and comfort; as well as the proper organization and discipline of Schools."

### 1. PUBLIC SCHOOLS OF ONTARIO.—PRIZES FOR RURAL SCHOOL-HOUSE PLANS.

With a view to improve the school accommodation in the various rural school sections, and to act as an incentive, as well as to aid trustees in the matter, the Department of Public Instruction will pay to any Inspector, Trustee or Teacher, the following prizes for ground plans for school-houses, and for block plans of school sites which may be found best adapted to rural school sections, viz:

I. *For the best ground plan of a rural School-house* (on the scale of eight feet to an inch).—1. For the best first floor (ground) plan of a rural School-house, with porch, cap and cloak-room, map and book-presses, teacher's accommodation, etc., capable of accommodating 60 to 75 children, \$15; 2. Ditto, with at least two rooms, 100 to 125 ditto, \$20; 3. Ditto with at least three rooms, 150 to 175 ditto, \$25.

II. *For the best block plan of a School site* (on the scale of forty feet to an inch).—For the best block plan of a School site, of an acre in extent. Position of School-house, wood shed, privies, well, fence, play ground for boys and for girls, shade trees, etc., to be marked on the plan, \$20; 2. Ditto, of half an acre, \$15.

The plans to be neatly prepared in ink and to be accompanied by full written explanations. They are to be marked by some word or motto, the key to which is to be enclosed in an envelope, which will be opened after the prizes shall have been awarded.

Plans, etc., to be addressed to the Rev. Dr. Ryerson, Chief Superintendent of Education, not later than the 15th of November next.

The prize plans will be the property of the Department, and will be required for publication in the JOURNAL OF EDUCATION.

No plans will be received or adjudicated upon, which are not drawn on the scales mentioned.

### 2. "ADEQUATE SCHOOL ACCOMMODATIONS."

In answer to numerous inquiries as to the law relating to school accommodation, we desire to state that the second section of the School Act of 1871 declares that:—

"Each school corporation (in a city, town, village or rural school section) shall provide adequate accommodations for all the children of school age (from five to twenty-one years, resident) in their school division or municipality."

The regulations, which define what "adequate school accommodations" are; suggest a medium or minimum amount of school accommodation to be provided, as compared with the law and regulations on the subject in other countries. Although the law, as quoted above, is *imperative*, yet inspectors will exercise a judicious discrimination in enforcing it.

### 3. CONDITION OF THE SCHOOL-ROOM.

It is very pleasant to go through many of our modern school-rooms and notice the care which has been taken to make everything comfortable and cheerful. The light has been so arranged that the eye is neither dazzled by glare or wearied by gloom; ventilation has been secured in proper kind and degree, so that headache cannot often be complained of there; the desks are adapted in height to the size of the sitter, and the chairs have comfortable backs; pictures are on the walls, an attractive library is accessible, and the polished brass and glass, in the case of apparatus, add to the general effect. Would that *all* school-rooms were comfortable and cheerful! Yet where they are not, much can be done to improve them, and this with but little expense. Even if hard benches and inconvenient desks are the furniture of four bare walls, there may be *something* done to make the place *seem* comfortable and cheerful, if actual improvement is impossible.

Let us suppose the worst case possible—possible, I mean, now-a-days, and try to improve it.

1st. Arrange the desks and seats in some way, so that each pupil can find support for his back and rest for his feet. It need hardly be supposed that this is impossible.

2nd. "Tinker" the window frames, so as to be able to lower the upper sash a few inches. Get calico curtains, if there are no blinds; they will cost about ten cents each.

3rd. Cover all holes and ink-spots in the wall with white paper, neatly pasted on; but cover up no dirt which can be washed off. Let the floor be clean and the windows clear.

4th. Tack engravings on the walls, the best you can find; woodcuts, from newspapers, are better than nothing. Inland boys like ships and steamers, and sea-scenes generally, while boys who live near the coast prefer hunting scenes and rocks and woods. Maps of the country, the State, the county, town, ward and block are desirable.

5th. On the ceiling, draw neatly—in charcoal if you can do no better—the solar system. Make the sun in red chalk; give the planets their relative size and orbits; let a bushy, red-tailed comet enliven the sketch. On the side wall draw a long black line, five and a half yards long, to represent a rod; divide the line into yards, one of the yards into feet, and one of the feet into inches. In various spaces, otherwise unoccupied, draw, distinctly, a square yard, a square foot, a cubic foot, an equilateral triangle, and other similar outlines. Let the walls be covered with instruction and amusement for the eye. At first, these figures will attract attention from studies; but in a few days the novelty will have worn off, and although they may attract, they will not distract.

What a change comes over the dreary old room! What a change over the scholars!

There are many *little* matters which affect the success of a teacher's daily duties. Is the black-board warped, and cracked, and scratched? Take it down, screw a "cleet" on the back, putty up the crack, and paint it black again. There is no expenditure here of anything but a little labour, except for the paint, and that may be made trifling if a few cents' worth of lampblack, a little camphene, a flannel rag, and ingenuity are used. Perhaps the chalk is "scratchy." Buy some crayons, if you can; if not, make them. Your boys will help you; and, in a few hours, at an expense of half a dollar, you can make enough to last for a whole term, and the improvement will pay you for your trouble. Have a ledge on the bottom of the black-board, to catch the falling chalk-dust, and to hold "the cleaner." The cleaner may be a stick two inches square and six long, wrapped around with canton flannel.—*Root's "School Amusements."*

## VENTILATION OF SCHOOL HOUSES.

It is really astonishing how much ignorance or thoughtlessness there is among teachers even at this late day, about properly ventilating their school-rooms. It would seem that enough had been written and said about this subject, yet if the readers of this magazine will officiate as visiting committee and visit our schools in the winter season, they will learn the rule, and not the exception, is, bad air in the school-room. The construction of the room is faulty, in a majority of instances, but the fact is apparent that teachers do not *practically believe* in ventilation, and do not do the best they can to have good air in the room. To show the bad effects of want of ventilation, I quote from *Mayhew's Universal Education* a short article :

"Both irritability of the nervous system and dulness of the intellect are unquestionably *the direct and necessary result of a want of pure air*. The vital energies of the pupils are thus prostrated, and they become not only restless and *indisposed to study*, but absolutely *incapable of studying*. Their minds hence wander, and they unavoidably seek relief in mischievous and disorderly conduct. This doubly provokes the already exasperated teacher, who, from a like cause, is in the same irritable condition of both body and mind. And what is more natural under such circumstances, than to resort to the use of the rod."

Now, brother teacher, when your school gets very noisy some afternoon, when you have had a good fire and warm room all day, try this experiment : Set every scholar marching round the room, or turn them out of doors for five minutes, then open every window, and when you call them back and you close the windows again, they will be quiet and go to work. Why? Because they have taken a new lease of life. City teachers are familiar with this, but many of our common country schools suffer more than can be calculated from the want of pure air, of which such an abundance is all about them out of doors.—E. S. M., in *Maine Journal of Education*.

## I. Papers of the recent Examinations.

To the Editor of the Journal of Education.

SIR,—In the June number of the *Journal*, I gave solutions of the questions proposed, in Algebra and Natural Philosophy, to candidates for First Class certificates at the recent Examination of Public School Teachers. Owing to my absence from town, I had no opportunity of correcting the press; and I find that the discussion of one of the questions in the Natural Philosophy paper appears in a somewhat unintelligible form, in consequence of a confusion in the letters employed. I refer to the 3d question, of which I gave two solutions. In the *first solution*, in the expressions, "the forces represented by P A and P B," and "of which A P and B P are adjacent sides," P should be changed into D. The confusion in the *second solution* is such, that perhaps the simplest course is to give the whole de novo.—Draw C F perpendicular to A D, and C E to B D. Then, since the lever is at rest, the force at A, multiplied by C F, is equal to the force at B, multiplied by C E. That is

$$D A \times C F = D B \times C E.$$

Therefore, triangle A C D = triangle B C D. ∴ A C = B C.

In the solution of question 4, a misprint occurs, which I should also like to correct. Instead of "uniting in the direction B A, and uniting in the direction A B," read "one acting in the direction B A, and one acting in the direction A B."

In question 7, it is put for 1; but this can create no difficulty.

I am Sir,

Yours truly,

GEORGE PAXTON YOUNG.

TORONTO, 12th September, 1872.

## SELECTIONS FROM RECENT MISCELLANEOUS EXAMINATION PAPERS.

## ETYMOLOGY AND SPELLING.

FOR 2ND AND 3RD CLASS TEACHERS.

1. Correct, where necessary, the spelling of the following words :—paroxysm, miniature, mischievous, delapidate, alkemy, abscess, harpsicord, acheive, yoeman, beverage, obliquy, catiff.
2. Attach roots to the following prefixes, exhibiting, when possible, change made in prefix for the sake of euphony :—ad, re, inter, trans, con, in, syn, amphi, hyper, sub.
3. Mention prefixes, each in combination with some word, which denote *negation* and *destitution* in place or time.

4. Give words in which the following affixes appear, and state the force of each affix :—"ster," "mony," "ric," "ion," "ency," "tude."

ADDITIONAL FOR SECOND CLASS CANDIDATES.

5. Give the adjectives of Latin derivation corresponding to the following nouns :—Dog, head, house, friend, step, light, law, rest.
6. Trace the following to their Greek roots :—Rhetoric, crypt, nautical, cosmogony, ephemeral, asteroid, polity, telegraph.
7. Give words—two in each case—derived from these Latin roots :—Faber, fruur, integer, licet, plico, salio, voveo.

## ENGLISH GRAMMAR.

2ND AND 3RD CLASSES.

[Second Class will omit 1, 4, 6, 7, and 11]

1. Name the four great divisions of Grammar, and state the province of each.
2. Define CASE, PERSON, VOICE, MOOD, and TENSE.
3. Form abstract nouns from the following adjectives : pure, brief, slow, dear, intricate.
4. Name and distinguish the plurals of nouns which have two forms of the plural with different signification.
5. Write the plurals of the following : staff, potato, canto, grotto, attorney, seraph, cousin-german, medium, stamen, appendix, thesis, chrysalis.
6. Of the following adjectives compare such as are capable of comparison : cool, late, happy, perpendicular, many, triangular.
7. Name the distributive and the indefinite pronouns.
8. How is the verb inflected? Name the moods, and state the force of each.
9. Quote the rules of syntax which the following sentences are severally intended to exemplify :  
(a) Give us this *day* our daily bread.  
(b) The youth of this country *are* well educated.  
(c) The horse and the man *that* we met.
10. Parse the following sentence, and change the active into the passive construction.  
"His love of change drove him a pilgrim to the Holy Land."
11. Analyze the following : "Stimulated in turn by their approbation, and by that of better judges, he turned to their literature with redoubled energy."

ADDITIONAL FOR 2ND CLASS.

12. Give rules for the proper use of "shall" and "will."
13. Form or quote sentences to illustrate :  
(1) The restrictive and the connective force of the relative pronoun.  
(2) The twofold form of the cognate object.
14. Examine the correctness of the following, giving, in each case, your reason for retaining or altering the construction :  
"The nations not so blessed as thee  
Must in their turn to tyrants fall."—*Thomson*.  
"In reality more than one principle has been contended for at one time."—*Arnold*.  
"Every street and square in Dresden was by this time crowded with troops."—*Alison*.  
"At an hour  
When all slept sound, save she who bore them both."—*Rogers*.
15. Analyze the following :  
"Fancy had cast a spell upon the place  
And made it holy; and the vilagers  
Would say that never evil thing approached  
Unpunish'd there. The strange and fearful pleasure  
That filled me by that solitary spring  
Ceased not in riper years; and now it woke  
Deeper delight and more mysterious awe."—*Southey*.

## ENGLISH GRAMMAR AND ETYMOLOGY.

FIRST CLASS.

1. Give reasons for regarding the Article as an Adjective.
2. Give, as fully as you can, the Syntax of the possessive Case.
3. Parse the italicised words in the following sentences.  
(a) No amount of experience will teach *them wisdom*.  
(b) *Lepidus flatters both*,  
Of both is flattered; but he never loves,  
Nor either cares for him.  
(c) Villain, knock *me* at his gate,  
And rap *me* well.  
(d) *Whom* he would he slew.

(e) Forthwith, on all sides, to his aid *was run*  
By angels many and strong.

4. Correct or justify the following, giving, in each case, your reason. —

(a) The great triumphs of modern ingenuity and art are those astronomical clocks and watches, in which the counted vibrations of a pendulum or balance-wheel have detected periodical inequalities even in the motion of the earth itself.—*Arnot*.

(b) Language consists not of single words, no more than a ship consists of trees.—*Penny Cyclopaedia*.

(c) To see distinctly the right way, and to pursue it, are not precisely the same thing.—*Hall*.

(d) He that outlives this day and comes safe home.—*Shakespeare*.

5. Explain the figures Syncope, Paralepsis, Pleonasm, indicating the class to which each belongs; and distinguish Barbarism and Solecism, Simile and Metaphor.

6. What figures occur in the following:—

(a) Death is Sin's eldest daughter.—*Jeremy Taylor*.

(b) I die, I faint, I fail.—*Shelley*.

(c) Holy and humble men of heart.—*Isaiah*.

(d) An upright minister asks, what recommends a man; a corrupt minister, who.—*Colton*.

7. Give specimens of the Iambus, Trochee, and Amphibrach, and scan the following:—

(a) Through the depths of Loch Katrine  
The steed shall career.

(b) Leave the deer, leave the steer,  
Leave nets and barges.

(c) Why Jove's satellites are less than Jove.

8. Analyze the following:—

Branches they bore from that enchanted stem,  
Laden with flowers and fruit whereof they gave  
To each; but whoso did receive of them  
And taste, to him the gushing of the wave,  
Far, far away, did seem to mourn and rave  
On alien shores; and, if his fellow spake,  
His voice was thin, as voices from the grave;  
And deep asleep he seemed, yet all awake,  
And music in his ears his beating heart did make.

*Tennyson—Lotus eaters*

9. What is meant by Historical Etymology?

10. Derive the following—Mechanics; politics; Cambrie; meander; tantalize; April; Thursday; furlong; fathom; pilgrim; vintage; sarcasm.

11. Give the Etymological Analysis of the following words, mentioning, in each case, prefix or affix, root, literal meaning, and ordinary signification:—Discussion; expressed; adventure; condolence; hypocrite; expedite; atonement; accuracy; cemetery; extravagant; trespass; dilapidation.

12. Give the historical analysis of the following passage:—

We feel the strength of mind through the beauty of the style;  
we discern the man in the author, the nation in the man, and  
the universe at the feet of the nation.

### ECONOMY OF THE HOUSEHOLD.

#### 2ND CLASS.

(This Paper may be taken, instead of Euclid, by Female Candidates.)

1. Illustrate the importance of "intelligence, economy and industry" in the management of a household.

2. Describe the best arrangement for the dairy, as to the building or room used for the purpose; temperature; and pans to receive the milk. Why should not the milk-pans be set on the bottom of the cellar.

3. (a) In churning, what temperature may be expected to give "the greatest quantity of butter of the best quality"? (b) What effect is produced by the application of warm water and by violent churning? (c) Describe the process of working the butter, and show that "a large sponge, covered with a clean cloth, may be used to great advantage."

4. (a) Explain the action of the yeast in making bread. (b) What is said of the bran with reference to nutritious property?

5. "If meats are to be boiled, they should be put at once into boiling water; if they are to be roasted, they should be exposed at once to a quick fire." Why should this be done?

6. Describe the best method of boiling potatoes.

### BOTANY AND PHYSIOLOGY.

#### 2ND CLASS.

1. What are the different parts of a plant? Describe the functions of each part.

2. State all the ways by which an Exogenous stem may be distinguished from an Endogenous.

3. Describe the functions of leaves. What is the cause of their fall in Autumn? Draw and describe a maple leaf.

4. Name the different parts of a flower, and describe the use of each part. Draw a diagram showing a stamen and a pistil and the parts of each.

5. What is the fruit? Why do some fruits fall from the stem more easily than others?

6. Of what does the food of plants consist? In what forms and by what organs is it taken up, and how assimilated? Name the substances inhaled and those exhaled by plants and the uses of each in the economy of nature.

7. Describe fully the process of grafting. What conditions should be observed as to species, constitution, adhesion of parts &c.

8. Describe the organs of respiration.

9. Show clearly the effects of impure air upon the brain and nervous system.

10. State, with reasons, the kind of food suitable for the inhabitants of high Southern latitudes.

### NATURAL HISTORY, BOTANY, AND AGRICULTURAL CHEMISTRY.

#### 2ND CLASS.

(Special Paper—optional.)

1. Give some account of the whalebone whale. Name the trade products we obtain from it, stating the purposes which each of these serves to the animal.

2. What is meant by Passerine birds? Draw the beak and foot of one of them, and give an account, from your own knowledge, of some of the birds belonging to this group.

3. What is meant by the term insects? Describe the transformation of a silkworm.

4. Describe the structure and mode of growth of the exogenous and the endogenous stems.

5. Describe a maple leaf, with special reference to its form, parts, and venation.

6. Pulse family, order Leguminosae,—how distinguished? Give examples of its usefulness to man.

7. Name the different kinds of manures, and state under what circumstances each should be used.

8. On what fact is the theory of the rotation of crops founded? Give a rotation suitable for light lands.

9. "The proper care of stock is vital to the success and interests of the farmer"—state the principal things necessary to the proper care of the stock.

10. What plants are used in arts and manufactures, and which of them are cultivated in Canada?

### BOTANY AND AGRICULTURE.

#### 1ST CLASS.

1. Give an outline of the classification of the vegetable kingdom according to the natural method, proceeding only to the classes and great sections.

2. Give illustrations of each of the following terms: Runner, sucker, stolon, corymb, irregular flower, compound pistil, compound leaf.

3. How would you distinguish between a root and a stem?

4. Explain clearly the technical terms in the following description of the maple sub-family: flowers generally polygamous or dioecious, regular. Petals, often none, but calyx sometimes petal-like. Stamens, 4 to 12. Styles, 2, united below. Fruit, a pair of keys, united at the bottom. Leaves opposite.

5. Name the families to which the following belong, giving the distinguishing characteristic of each: turnip, radish, pea, apple.

6. State the advantages of draining. In heavy soils what is the proper depth for drains, and how far should they be apart?

7. What is gypsum? On what kind of crops does it produce the greatest effect. Give reasons.

8. What are the defects of (1) heavy soils, (2) sandy soils? State how these defects may be remedied.

9. Name the best soils for the following crops: wheat, barley, oats.

10. Give a rotation of crops suitable for heavy soils.

## NATURAL HISTORY AND PHYSIOLOGY.

## 1ST CLASS.

1. How would you distinguish between the flying opossum and the flying squirrel? The dolphin and the porpoise? The dromedary and the camel?
2. What families are comprised under the term Pachydermata? State how you would distinguish between the Indian and the African elephant.
3. What are the leading characters of Ruminants? Describe and illustrate by a diagram the stomach of a Ruminant.
4. Sketch the skull of a Rodent.
5. State briefly the characteristics of the Carnivora. Into what groups are they divided? Give a characteristic example of each group.
6. Give a full account of the structure of the bird. Name the orders into which birds are divided, and the leading characteristics of each order.
7. How are fishes classified? What is peculiar to their structure?
8. Give a diagram of the human heart, and describe fully the circulation of the blood, stating when and by whom discovered.
6. Describe the parts of the human ear, and the use of each part.
10. A person has received a cut from which the blood is rapidly flowing: how would you determine whether the blood is flowing from an artery or a vein, and how would you proceed to stop it in each case?

## PRINCIPLES OF VOCAL MUSIC AND LINEAR DRAWING.

## 2ND CLASS.

1. Explain the terms "acute" and "grave" applied to the scale in music.
2. How would you explain to a class the duration of notes or rests.
3. State the most important points to be observed in singing.
4. Explain the terms "Adagio," "Andante," "Allegro," "Presto," "Pause."
5. (a) What is a fifth? (b) Do two notes a fifth apart occupy a similar or dissimilar positions on the staff? (c) What is an imperfect fifth?
6. Explain OBLONG, RHOMBOID, DIAGONAL.
7. Delineate a kite with mathematical accuracy.
8. Show by a drawing that triangles on the same base, and between the same parallels, are equal.
9. Why does not a bridge, when properly built, fall in? Make a drawing of such a bridge.
10. Distinguish between an oval and an ellipse.

## EDUCATION AND SCHOOL LAW.

## 3RD CLASS.

1. What is education? How does it differ from instruction.
2. What is meant by the organization of a school?
3. How would you proceed to organize a school assembled for the first time.
4. Give notes of an *introductory* lesson in fractions.
5. How would you describe the nature of a map to a class beginning Geography.
6. Illustrate the maxim "The teacher makes the school."
7. Rapidity and indistinctness are common faults in reading; how are they to be corrected?
8. State the principal duties of Public School Teachers, as laid down by Statute Law.
9. What is the general principle on which discipline is to be administered and maintained in a school by a teacher, as laid down in the Official Regulations.

## EDUCATION.

## 2ND CLASS.

1. Give a general description of the interior of a rural school house for fifty pupils, as regards dimensions, number of rooms, furniture and apparatus.
2. Sixty children who have never before assembled together are placed under your care for the first time; how would you proceed to organize the school?
3. Should you use text-books in beginning a subject with young children? Give reasons.
4. Show how you would begin the following subjects: Grammar, Composition, History.

5. Draw up notes of a lesson on the following subjects: (1) *The Sheep*; (2) *Salt*; (3) *Self-help*.
6. Show to what extent you consider the "lecture system" may be employed in a school.
7. Give an outline of the method in which you would combine *lecturing* and *questioning* in education.
8. Point out any common defects in teaching arithmetic.

## EDUCATION.

## 1ST CLASS.

1. How would you organize a school of 60 children of ages varying from 7 yrs. to 13 yrs., supposing you had one capable assistant? Draw a plan of the school-room you would prefer, showing the arrangement of the classes and the seats and desks.
2. State the principal characteristics of good reading. What are the difficulties encountered in teaching a young child to read? How may these be overcome?
3. Describe fully (illustrating by an example) how you would teach a class *Long Division* so that they might see the reason of every step.
4. In what manner should you propose to teach the elements of grammar? Give reasons.
5. Draw up notes of a lesson on the following subjects for your most advanced pupils:
 

Botany	Subject	<i>The Flower.</i>
Natural History	"	<i>Birds,</i>
Geography	"	<i>Climate.</i>
6. State what you consider to be the best means of attaining the following objects in school.
  1. Securing attention.
  - " Order.
  - Exciting interest in study.
7. "The study of mathematical science can be of little or no use as an exercise of mind because its *principles* and *process* of reasoning are self-evident." Examine this statement.
8. What are the most important statistics to be recorded in a school.
  1. To aid the teacher in his work.
  2. For the information of the school authorities.
 Exhibit tables such as would be suitable for both purposes.

## SCHOOL LAW OF ONTARIO.

## 2ND CLASS.

1. Give examples of the four classes of persons disqualified from holding the office of Public School Trustee.
2. Illustrate five out of the seven ways in which the office of Public School Trustee may be vacated.
3. Mention some of the provisions of the law in regard to the (1) erection, (2) repairs, and (3) use of the school-house of a section.
4. Distinguish (if any difference exist—and if so, what?) between the powers and duties of a Public School Meeting, and those of Trustees in regard to (1) the employment of a teacher, (2) the purchase of maps, apparatus, (3) library and prize books, and (4) the use of authorized, or unauthorized text-books.
5. What are the duties of a Secretary-treasurer, and what penalties (if any) attach to the non-performance of duties, or faithlessness in the discharge of them?
6. State where only can "inequality of assessment" arise; and what are the provisions of the law in regard to an "undivided lot."
7. Summarize the difference between the powers and duties of Masters and Assistant Masters (if any exist) in regard to (1) the "General Principles of School Government," (2) "Exercise of Discipline," (3) "Suspension," and (4) "Expulsion" of Pupils, and (4) "Modes of Teaching."
8. State what is the essential difference in the principle on which prizes are given on the authorized "Merit Card" system, and that of awarding them on the result of a Competitive examination. Give illustrations of the effects of each principle.
9. Explain fully the provisions of the law and regulations in regard to Superannuated Teachers.

## SCHOOL LAW OF ONTARIO

## 1ST CLASS.

1. Give a summary of the provisions of the law and decisions of the Superior Courts in regard to the "Personal Liabilities of Public School Trustees," and mention how that responsibility can be enforced.
2. Mention some of the general powers, liabilities, and disabilities of School Trustee Corporations.

3. In how many ways can trustees obtain moneys for the support of their school?—distinguishing the sources from which these moneys are obtained.
  4. Mention four out of the five purposes or objects for which Trustees cannot lawfully impose an assessment.
  5. In making out the Collector's Roll, how must the Trustees be guided in regard to (1) mistakes or omissions in the Township Assessment Roll, (2) inequality in the assessment of the Union Sections, (3) an "undivided lot," (4) two or more "owners," and (5) "unpatented land"?
  6. In what respect do the provisions of the new law differ from the old, in regard to the formation and alterations of School Section, and Union School Section boundaries?
  7. How can trustees collect School-rates from (1) "non-residents" of their Section, and (2) "unknown owners"?
  8. Distinguish between the "lawfulness" and "expediency" of trustees' School expenditure?
  9. What are the powers and duties respectively of School Auditors, Public School Meetings, and County Inspectors, in deciding between the "lawfulness" and "expediency" of a School expenditure.
  10. Mention the cases in which "arbitration" has been abolished and retained in the School Law; and give a summary of the law in regard to arbitrations and awards.
  11. What are the provisions of the law and regulations affecting teachers in regard to (1) Holidays and Vacations, (2) Visiting Schools, (3) Teachers' meetings, and (4) Discipline in the Schools.
  12. Point out fully what are the powers and duties of "Inspectors" under the new law, as distinguished from those of "Local Superintendents" under the old law.
  13. Classify the powers and duties of County, Township, and City Councils, in regard to the Public Schools, and shew in what respect they differ, especially in financial matters.
  14. Mention the cases in which the law is "permissive" and "obligatory" on Township Councils in providing moneys for school trustees upon their application.
  15. On what grounds can you defend the "compulsory" feature of our system, as a complement to Free Schools; and state how the "compulsory" provisions of the law can be best carried out.
21. What are your views about favourites in school?
  22. Give your views of corporal punishment. Can it be dispensed with?
  23. How do you prevent tardiness and absence?
  24. Should the teacher have a uniform method in opening and closing school? What is your method?
  25. How would you teach your pupils in composition?
  26. What should be the teacher's leading motive in his work?
  27. What are the objects of study?
  28. What are the objects of recitation?
  29. What is true education?
  30. What do you think of teacher's institutes?
  31. Of what items should a teacher keep a record in the school registrar?
  32. Give the characteristics of a satisfactory answer?
  33. Why should the teacher aim to make his school govern itself?
  34. Give such a programme as you would use for daily exercises and recitations?
  35. Would you have certain recitations assigned for the early part of the day, and others for the afternoon, and if so, why?
  36. Give your reasons for and against the self-reporting system.
  37. How do you reform a pupil who is inattentive in recitation?
  38. How do you deal with a pupil who uses profane language?
  39. In reciting, when should pupils use their own language, and when the word of the text-book?
  40. What means do you adopt to make your pupils think?
  41. To what extent and how should normal instruction be given?
  42. What is meant by the topical method of recitation?
  43. What are the advantages of oral instruction?
  44. What is the greatest obstacle to good government in school?

## II. Mathematical Department.\*

### MATHEMATICAL NOTES.

J. C. GLASHAN.

**MATHEMATICAL:** R. S. Finlay, Feby., 1872.—Mr. Finlay is right, as the veriest tyro in mathematics would at once acknowledge. There was no need of authorities, and, besides, *authorities are of no authority* in mathematics. The rule given by the Mathematical Editor of the *Canadian Almanac* is the correct and only one, but he does not know how to apply it, thus showing that he did not appreciate the only point in the question. "Of all four-sided figures of equal perimeter, the square has the greatest area." In arithmetical geometry the figure will be a *square in perimeter-units*, or a square relative to unit rectangles of a length-unit by a width-unit. The problem considered geometrically is really one in projections, being, "Find the quadrilateral of maximum area in the plane A, whose projection on the plane B shall have a given perimeter." The following is a problem similar in principle, but relieved of the ambiguity lurking in that proposed in the *Canadian Almanac*:—Two persons, A and B, are to mark off a rectangular piece of land to be 500 of their steps in semi-perimeter, A to mark off the front and B the side. Now, A takes but 2 ft. at a step, while B takes 3 ft.; how many steps must each take that the rectangle may be of maximum area? Mr. Findlay would be right answering 250 each (giving a *square-in-two-by-three-units*), thus actually marking off a rectangle 500 ft. by 750 ft. = 375,000 s. ft. The Editor gives, A 300 steps, B 200 steps, thus marking off an absolute square of 600 ft. by 600 ft. = 360,000 s. ft.

**INTEREST THAT IS INTERESTING:** J. Cameron, April, 1872.—The problems are simply questions (and extremely easy ones) in annuities, and the formulæ for their solution are given in *Sangster's National Arithmetic*, No. II., page 358, and No. VI., page 361. In the former read  $v(1+rt)$  for A, to adapt it to the questions proposed. For this change see No. V., page 248.

**THE CARPENTER'S SQUARE:** J. Ireland, April, 1872.—The method of solution exhibited must appear rather awkward to those accustomed to "rationalize" right-angled triangles. General solution for sides  $a$  and  $b$ — $\frac{a+x}{b-x} = \frac{m^2-1}{2m}$ ,  $m$  being any rational number,

$$\therefore x = \frac{b(m^2-1)-2am}{m^2+2m-1}. \text{ In Mr. Ireland's problem } a=1 \text{ and } b=2,$$

$$\therefore x = \frac{2(m^2-m-1)}{m^2+2m-1}. \text{ And } x < \frac{1}{2} \text{ but } > 0. \therefore m < \frac{13+\sqrt{698}}{23} \text{ but}$$

$$> \frac{1+\sqrt{5}}{2}. \text{ Let } m = \frac{5}{3}. \therefore x = \frac{1}{23}.$$

The readers of the *Journal* may perhaps here remember that ap-

\* All communications for this Department of the *Journal* are to be sent to Mr. A. Doyle, Hamilton, Ont.

### QUESTIONS FOR TEACHERS TO ANSWER.

The character of the questions used in any locality for the examination of teachers is a very good key to the standard of education in that locality. The last report of the school commissioner of Ohio gives about fifty pages of questions used in the different counties of the State for examining teachers. They are upon all the common-school branches, and also upon the theory and practice of teaching and school management. From the last-named class we have selected a few from each county. If teachers will give them careful thought and answer them, they will find it an exercise that will do much for their own improvement.

1. State briefly how you would organize your school.
2. How will you secure obedience and respect from your pupils?
3. What special preparation have you made for teaching?
4. What qualifications should a teacher possess to manage a school well?
5. Why do you teach? Do you love the work?
6. What plans would you recommend to create an interest in study?
7. What advantage is there in pupils giving an analysis of their respective lessons.
8. What is your method of assigning lessons?
9. Do you permit your pupils to pass from one lesson to another before they comprehend and master it? Give the reasons for your answer.
10. What means do you make use of, and how do you use them to govern your school?
11. Name five characteristics of a good teacher,—giving reasons for the same.
12. Name three characteristics of a good school,—giving reasons.
13. What ends can be secured by object lessons?
14. In teaching, should rules or processes first receive attention? Why?
15. Give a short account of your method of conducting a recitation.
16. Do you take an educational journal?
17. What works on education have you read?
18. What incentives to study should be used in school?
19. The difference between education and knowledge?
20. Give some of your mode of punishment.

parently there was given no solution of Mr. Ireland's "New Diophantine Problem," proposed in the September Number for 1870. I have said *apparently*, for in reality this *new* problem is but another form of the other *new* problem proposed by Mr. Ireland, in the July Number for the same year, and solved in the August Number by Mr. H. G. Kidd, who at the same time, pointed out that the problem is an old "college" one. Mr. Kidd's solution, adapted by multiplying the lengths of the sides into  $\frac{780}{1309}$  and subtracting 1 from the first perpendicular, is  $\frac{3120}{1309}$  and  $\frac{1031}{1309}$ , (+ 1, + 2, + 3), giving for the new triangles the hypotenuses  $\frac{3900}{1309}$ ,  $\frac{4801}{1309}$ ,  $\frac{5858}{1309}$ . The value of the problem, even as a mathematical curiosity, is too small to induce me to ask for the insertion of the general solution. The base,

$$\text{common to the four triangles,} = \frac{8m(m^2-1)\{(m+1)^4-4m^2\}}{\{(m+1)^4-4\}\{(m+1)^4-4m^4\}}$$

$$m \text{ being any rational number} > \frac{454 - \sqrt{949}}{230} \text{ but } < 1 + \sqrt{2}.$$

Regarding the "Indian Reserve" problem, I would respectfully suggest to Mr. Ireland that possibly no solution was offered because mathematicians saw merely a particular case of a problem of which the general solution is given as an example of "Maxima and Minima" in some of our college text books. See Todhunter's Diff. Calc. Chap. XVI., Ex. 2. The answer in the proposed case is  $2\sqrt{6}$ .

Strathroy, August, 1872.

### III. Papers on Practical Education.

#### 1. WHAT TO TEACH.

The Rev. Charles Brooks, father of the State Normal Schools in America, was asked by a teacher this question:

"What shall I teach my pupils?"

He answered—"Teach them very thoroughly these five things:

- "1. To live religiously.
- "2. To think comprehensively.
- "3. To reckon mathematically.
- "4. To converse fluently; and
- "5. To write grammatically.

"If you successfully teach them these five things, you will have nobly done your duty to your pupils, to their parents, to your country, and to yourself."

#### 2. INTEREST RULES.

For finding the interest on any principal for any number of days. The answer in each case being in cents, separate the two right-hand figures of answer to express it in dollars and cents.

Four per cent.—Multiply the principal by number of days to run; separate right-hand figure from product, and divide by nine.

Five per cent.—Multiply by number of days, and divide by seventy-two.

Six per cent.—Multiply by number of days; separate right-hand figure, and divide by six.

Eight per cent.—Multiply by number of days, and divide by forty-five.

Nine per cent.—Multiply by number of days; separate right-hand figure, and divide by four.

Ten per cent.—Multiply by number of days, and divide by thirty-six.

Twelve per cent.—Multiply by number of days; separate right-hand figure, and divide by three.

Fifteen per cent.—Multiply by number of days, and divide by twenty-four.

Eighteen per cent.—Multiply by number of days; separate right-hand figure, and divide by two.

Twenty per cent.—Multiply by number of days, and divide by fifteen.

#### 3. HOW AND WHY, IN ARITHMETIC.

There is a general satisfaction with the *how* of a thing, while the *why* is not inquired about. Yet the "whys" are the mainsprings of thought and action; they are in the van of all progress in science and art; to them we owe our better farming and better teaching; they comprize the intelligence, and are the leaders of society, while the "hows" are satisfied to follow in the ruts of old fogies, or new fogies who can do their thinking. All know how the apple falls, but Newton said, "why?" and Science will honour him through

all time. The why of certain things inspired Columbus till the New World gave him and us the answer.

A teacher was hearing a class in Arithmetic for the first time. An intelligent boy divided  $\frac{2}{3}$  by  $\frac{4}{5}$  and obtained the quotient  $\frac{10}{6}$ . "How did you work it?" he asked. "By inverting the divisor," etc., said the boy. "Why?" asked the teacher. "The rule says so." "Why?" "I don't know; I didn't know we were to learn that." It had never occurred to him that he could give the reason for a rule. This was in Illinois, not long since, and too many teachers allow such work to pass. Hence I say these words, hoping that they may help some of them to say "why."

Pupils should be taught, from the first, to look for the cause of things everywhere. Do not bind them down to certain processes, or to accept certain results, because the rule or the book says so. I should lead them to know why the subtrahend must be written under the minuend; why, in Alligation, the cost of the several ingredients must be joined by lines; and why, in Proportion, "we make the larger of the remaining numbers the first term or the second," if there be a reason. Pupils should know why the divisor multiplied by the quotient will give the dividend; why we multiply numerators, etc., in fractions; why we point off a certain number of places in decimals; why the Amazon is so large a river; why Chicago is not at the head of Lake Michigan; why British America is so marshy and wet; and why, in the earlier wars, the armies had a certain line of march between the United States and Canada.

I have given these as representative points. And let the reasoning be clear. It will make no difference with the result whether four be multiplied by five (concrete) or the reverse, but it may make difference with the "why" of it.

Hang this motto over your school-room door: "be able to give a reason for the faith that is in you."—H. in *Illinois Teacher*.

#### 4. TEACHING SPELLING.

Some of the Western Educational Journals have recently been discussing the merits of the different methods of teaching spelling, now most commonly in use. There has been manifested, by several writers, a want of confidence in some of these methods, and especially in those where spelling-books, so called, and oral spelling, are discarded. We sympathize, most fully, with those writers, for we are satisfied that most of the teaching at the present day, in this branch, is the departure from the best course. And we are by no means alone in this opinion; for there has been a growing dissatisfaction with the results of spelling, as taught quite generally in our schools. Formerly, spelling was entirely oral, and from spelling-books. Many now discard spelling-books and have all spelling exercises written. We have no hesitation in saying that the change from one extreme to the other, was unfortunate. The results achieved do not recommend the method when used exclusively. We believe the two methods, oral and written, must be combined, and that more prominence must be given to the former, with young pupils, while the latter should receive more attention from pupils further advanced. The orthography of a word must be associated with its pronounced sound, and the earlier this habit is acquired by the young learner, the easier it will be for that pupil to have correct associations formed in regard to the spelling. We believe in spelling-books, for the reason that by the arrangement and classification of words as there found, we can facilitate the formation of the habits above spoken of; and also show the few rules by which the orthography of our language is governed. The practice of assigning a portion of the reading lesson for a spelling exercise is not a good one for children. The argument, usually adduced in its favour, that in such connection pupils see and understand the meaning of the words, at the same time they learn to spell them, is not a correct one; for children do not, until a latter stage in their education, form such habits to any considerable extent. Lessons thus assigned are not usually studied as carefully as those in a spelling-book. All teachers will acknowledge that this is almost universally the case. The most probable explanation of this is to be found in the well-known fact that every word in a spelling-book lesson is usually spelled. The pupil expects that such will be the case, and makes no calculation on the probability that he may be called upon to spell one word rather than another. While in a reading-lesson, assigned as a spelling lesson, many of the words are not spelled, and the pupil knows and calculates upon such a fact. The certainty, in the expectation of the pupil, that every word will be spelled, is the only thing that will secure on his part a thorough preparation of the lesson.

#### 5. SPELLING AS AN EDUCATOR.

With pupils who can write with facility, the spelling-lesson may be made a means of culture. Some one has justly remarked of labour, that he who gets only his pay is cheated. So we regard the



pupil, who has nothing to show for the years of labour bestowed upon spelling, but the mastery of the written forms of words, as certainly cheated. True school-work has in it something for both mind and heart, something which makes wiser and better. The pupil goes from the recitation knowing or feeling something new.

A slavish adherence to the mere letter of the lesson destroys the spirit of culture. It is possible that the child, who learns nothing but spelling from the spelling-lesson, may become a good speller, but it is also possible that he may grow up ignorant, narrow-minded, and even vicious—that is, that, as far as good is concerned, he shall be an uneducated person. Such characters we sometimes meet—dare we say that they are not produced in school?—but we have no desire to increase their number.

We like the skill, but do not wish to purchase it at the expense of character. It is not enough that school-exercises be not bad for the mind and heart; they must be positively good. The primary idea of the school is that of true culture, and not that of technical learning. It is to assist weak and ignorant children to grow up into wise and strong men and women. Every lesson must tend to this end. All school-work should be educative. A word in due season, a remark, a question in the middle of a lesson, brought in as collateral to the subject, may prove of great benefit. All educators insist upon the value of indirect instruction. Experienced teachers have observed the wilfulness of children's minds, and that their attention cannot be forced. We may take advantage of these known characteristics. "Being crafty," let us "catch them with guile."

Our school opportunities of indirect instruction have been, like mountain-streams, running to waste; let us now collect them into one channel, and systematically apply them to the education of our pupils. This exercise shall be known as spelling. As it bears this name, and has no other apparent object than to teach the written forms of words, we have the pupil's mind ready to receive any impressions which we may choose to give. He is free, free to accept or reject anything we give him, and this is the best reason in the world why he should accept it, if it is good. We place food before him, but do not press him to eat. We do not ask whether he has eaten, much less whether he has digested it. We know that if the food is of the right kind, he will eat it, digest it, and it will make him grow. We know, too, that all this goes on best in silence and in secret. The grandest forces of nature are quiet and secret in their operation. With the mysteries of growth she permits no tampering. Such thoughts and perceptions as come unsought, and pass unconsciously into our being, make us what we are. The true educator must be content to labour in secret. He who is willing to walk by faith and not by sight, who is satisfied with the approval of his conscience, and his God, he whose heart's desire is in age to look back upon a life spent in toils for man, he, and he only, is ready to adopt a system of indirect instruction. He who must have immediate applause at any cost, he who has no faith in anything which he cannot see, need consider this subject no further; for "per cents" are no more tests of the work we propose than the ruler and calipers are tests of the effects of beefsteaks. We may make our spelling-lesson tell upon almost any part of the pupil's education. One of the first things of which the teacher would think would be to make the spelling of a language lesson. In this way we may increase the scanty store of words possessed by our pupils, may compare the uses of words, and may practise writing those which are already more or less familiar. Whatever we do, we will proceed from things to words, and from spoken to written words. That is, we will teach spelling objectively. Let us take for example a "Lesson on a Rope." By questions we obtain from the class, say, the following words:

1 rope	5 cable	9 string	13 pack-thread	17 sea-grass
2 strands	6 cord	10 thread	14 cordage	18 linen
3 rope-yarn	7 line	11 wrapping-yarn	15 hemp	19 rope-maker
4 twisted	8 twine	12 wrapping-twine	16 cotton	20 rope-walk

These words are written on slates as fast as they are found. If the class are unable to give a word when asked for, we call especial attention to the idea, and then give the word. If the lesson contains more than two or three new words, it is too hard for the class. The second and third words of our lesson are the parts of which the rope is composed; from the fifth to the thirteenth are the names of things of the rope-kind, ending in cordage, which covers them all. The other words describe materials, and hint at manufacture.

The words written, we correct errors in spelling. Let the first pupil write the first word on the board, and all compare their slates with what he has written. Proceed in like manner with all the words. Practise upon the words as a review lesson till they are fully learned. The skilful teacher will bring this lesson within reasonable limits. The number of words should not exceed

twenty. The words are written in columns and number, but do not begin with capitals unless for reason.—*W. W. in National Teacher.*

## 6. A MODEL PRIMARY SCHOOL.

FROM A REPORT OF HON. J. D. PHILBRICK, BOSTON.

Go with me into a school kept by one of these meritorious teachers. Observe the condition of the room,—its neatness, order, cleanliness; look into the happy faces of the pupils, reflecting the intelligence and love beaming from the countenance of their teacher. They have evidently come from homes of extreme poverty; but notice their tidiness, and especially the good condition of their heads and hands; and see their position in their seats,—neither stiff and restrained, nor careless and lounging, but easy and natural. The temperature, you will perceive, is what it should be; and the atmosphere uncommonly wholesome for a school-room,—no roasting by stoves, or shivering in chilling drafts of air. What skill and care and patience, on the part of the teacher, have been employed to produce this state of things! Now witness the operations going on. The windows are opened more or less, according to the weather. The bell is struck, and the pupils are brought to their feet; they perform some brisk physical exercises with the hands and arms, or march to music, or take a lively vocal drill according to Professor Munroe's instructions. In five minutes the scene changes: the windows are closed, half the pupils take their slates with simultaneous movement, place them in position, and proceed to print, draw, or write exactly what has been indicated and illustrated for them as a copy. The rest stand, ranged soldier-like, in a compact line, with book in hand, and take their reading-lesson. No one is listless or inattentive. Sometimes they read in turn, and sometimes they are called promiscuously, or they are permitted to volunteer; or the teacher reads a sentence or two, and the whole class read in concert after her; or they are allowed to read a paragraph silently. Now a hard word is spelled by sounds; then there is thrown in a little drill on inflection or emphasis. Many judicious questions are asked about the meaning of what is read, and all useful illustrations and explanations are given with such vivacity and clearness that they are sure to be comprehended by every pupil and remembered. The time for the lesson quickly glides away, every pupil wishing it would last longer. A stroke upon the bell brings the whole school to position in their seats; the slates are examined and returned to their places; a general exercise on the tablets, or an object-lesson, follows. If the latter, perhaps it is on colours, the teacher having prepared for this purpose little square cards worked with bright-hued worsteds, or the children having brought bits of ribbon or coloured paper or water-colour paints—very likely some one has brought a glass prism to show the colours of the rainbow. A verse or two of poetry on the rainbow is repeated. Now comes the music. A little girl takes the platform, and, with pointer in hand, conducts the exercise on Mason's charts. She asks about the staff and notes and bars and clefs. They sing the scale by letters, numbers, and syllables; and close with a sweet song. They are next exercised in numbers, not in mere rotation of table, but by combination with visible objects,—the ball-frame and marks on the black-board,—writing figures on the slates being interspersed with oral instruction. And thus goes on the whole session. You would gladly remain the whole day, such is the order, harmony, and cheerfulness of the school. You see that the children are both pleased and instructed, that they are wisely cared for in all respects. Neither body, mind, nor heart is neglected. The teacher is happy. She is happy because she is successful, because *her heart is in her work*. She has the *right disposition*, and this qualification multiplies tenfold all others.

This is no fancy sketch, nor is it a flattering picture of some single school; it is only an imperfect outline of what may be seen daily in not a few schools. I say to myself, all honour to the admirable teachers who have made them such!

## 7. THE ORAL AND THE TEXT-BOOK METHOD.

What is the difference between the oral and so-called text-book method, and what are the merits and defects of each?

In the former, the oral method, the teacher is the general source of information; in the latter, or text-book method, the pupil is sent to the book for information. In neither of these methods is a cramming of the memory with mere words considered to be good teaching, and yet it may happen under a poor teacher, whether the oral or text-book method is used.

The excellence of the oral method should be its freedom from stiffness and pedantry, and its drawing out the pupil to self-activity in a natural man. Its abuse happens when, in the hands of a poor teacher, the subject is presented in a confused manner, or scientific

precision is lost by using too familiar language, or by too much pouring into the pupil without enough exercising the pupil by making him do the reciting and explaining.

The excellence of the text-book method consists in getting the pupil to work instead of working for him; in teaching him how to study for himself, and to overcome difficulties by himself, instead of solving them for him. Unless the teacher knows this, and directs all his efforts to achieve this end, very great abuses creep in. Thus it may happen that the teacher requires the pupil merely to memorize the words of the book, and does not insist upon any clear understanding of it. Indolent teachers lean upon the text book, and neglect to perform their own part in the recitation.

But in the hands of the good teacher the text-book is a powerful instrument to secure industry, precision, accuracy, and self-help on the part of the pupil. In conducting a recitation, the teacher should—

1st. See that its main point is brought out, explained, and illustrated again and again by the different pupils, each using his own language, and the using of the language of the book discouraged, in so far as it tends to verbiage or parrot-like recitations.

2nd. The teacher should himself criticise and call upon his pupils to criticise the defects in the statements made by each pupil, so that they shall acquire a habit of alertness in noticing inaccuracy as well as lack of exhaustiveness in definition, whether in oral statements or in the text-book itself.

3rd. The lesson should, in all cases, be brought home to the pupil's own experience, and his own observation and reflection made to verify the statements of the books.

4th. Every recitation should connect the lesson of to-day to the lessons already recited, and the questions awakened in to-day's lesson should be skilfully managed to arouse interest in the subject of to-morrow's lesson.

5th. The good teacher always notes by the recitation of a pupil what are his habits of study, and the recitation is the place where bad habits are pointed out, and the true method of study shown and illustrated.

I think all will agree with me in pronouncing the recitation conducted in the manner here described effective in securing the ends for which you have established the rules and regulations governing the teachers in the public schools. I have now to point out an additional regulation, which, if adopted by your honourable body, will, I think, lead to the correction of some of the abuses more or less prevalent among the teachers of the schools. I refer to the practice of some of our teachers of using the text-book during the recitation as a source of information from which to draw a supply for their own use on the occasion, thus making up for their own lack of preparation. From this practice results the greater bulk of the evils complained of by intelligent parents, who find their children becoming mere cramming machines, instead of intelligent investigators. That the teacher should know at least as much of the lesson as the pupil, does not need statement. Why, then, should the teacher have recourse to the text while the pupil is debarred from it? In consideration of the evils arising from this source, I respectfully suggest the adoption of a regulation prohibiting to the teacher the use of the text-book in the recitation whenever the pupil is expected to recite without the book; and that the teacher be recommended to use a syllabus of topics or questions, either written or printed, in the conduct of such recitations.—*W. T. Harris in recent Special Report to the School Board of St. Louis.*

**MARKING RECITATIONS.**—Most of the teachers of our acquaintance adopt some system of recording their estimate of the recitations of their pupils. Many, while they use such a system, are yet fully persuaded that it is open to serious objections. It is so liable to abuse that the question is often raised whether it would not be better to abandon it altogether. As it is sometimes used, it certainly is full of evil. The following, we believe, are valid objections to the system.

1. It tends to divert the attention of the teacher from the true objects of the recitation.

2. It leads to the adoption of that method of conducting the recitation which will enable the teacher to make his estimate the most easily and accurately, rather than that which will be best for the pupil.

3. It takes time which might be more profitably employed in other school work.

4. It is unfavourable to original investigation on the part of the pupil, leading him to prepare his lesson with a view to the recitation, rather than with a view to the extending of his own knowledge.

## IV. Education in Various Countries.

### 1. EXAMINERS IN THE UNIVERSITY OF TORONTO, 1872-3.

The following gentlemen have been appointed Examiners in the different Faculties and Schools for the academic year 1872-73:—**LAW.**—J. M. Gibson, M. A., LL.B., W. P. R. Street, LL.B. **MEDICINE.**—Physiology and Comparative Anatomy, W. Oldright, B. D., M. D.; Surgery and Anatomy, J. E. Grahame, M. D.; Medicine and Therapeutics, J. W. McLaughlin, M. B.; Midwifery and Medical Jurisprudence, T. J. White, M. D.

**MEDICINE AND ARTS.**—Chemistry, W. H. Ellis, M. A., M. B.; Natural History, H. A. Nicholson, M. B., etc.

**ARTS.**—Greek and Latin—Rev. John McCaul, LL.D., Rev. N. McNish, M. A.; Mathematics, J. A. McLellan, M. A., LL.B.; W. Fitzgerald, M. A.; English and History, D. Wilson, LL.D., F. E. Seymour, M. A.; French, E. Fernet, Esq.; German, W. H. Vandersmissen, M. A.; Italian and Spanish, W. G. Falconbridge, M. A.; Mineralogy and Geology, E. J. Chapman, M. A., Ph. D., Metaphysics and Ethics, Rev. G. P. Young, M. A., W. H. Renselton, M. A.; Oriental Languages, J. M. Hirschfelder, Esq.; Meteorology, G. T. Kingston, M. A.; Civil Engineering, A. McDougall, C. E.; Agriculture, G. Buckland, Esq.

### 2. WORK OF THE LONDON SCHOOL BOARD.

The London School Board with a population of three and a quarter millions of people within its district, has a most arduous task to perform in endeavouring to educate the enormous juvenile population under its control. After discussing all sorts of projects for a whole year, in the course of which some very hard knocks have been given and taken by the respective partizans of religious and non-religious education, and Professor Huxley and other prominent men have retired disheartened at the slow progress of the work, the Board now issues its first annual report. There are still, it appears, 176,000 children between the ages of three and thirteen who attend no school and receive no education, save that which can be picked up in the gutters. Of those who are still without schooling various excuses considered reasonable are made. But there are about 80,000 for whom there is not the shadow of an excuse to be made for their non-attendance, except—and it is an important exception—that sufficient school-room has not been provided by the Board. The report very properly suggests that the Education Department be asked to authorize the immediate provision of schools for 100,000 children.

### 3. LETTER WRITING IN GERMAN SCHOOLS.

The class being ranged, with slates and pencils in their hands, the master propounds a subject. "Let me see," he will say, "to-day is a market day. You live, we will say, not here, but in the little dorf of Hen's Nest, one hour away. Mother sends you to market with something to sell, and something to buy; you are not to go home to her to-night, and so you want to write a letter, telling her what you have done. Now, then, begin. What shall we write down first? 'I have sold the three hens for:' shouts out a little fat, white-haired boy, who plainly is used to sell his mother's farm produce. 'Stop!' says the master; 'you are too fast. That's not the way to begin, we will come to that after.' Here several rise and ask to be heard. A little girl shouts out, 'My dear mother!' 'No,' says the Herr; 'that is good; it will come later.' Another? 'To-day is Friday.' 'That is right! but there is more to add.' At last it is settled that the name of the place and the day of the month, and perhaps the hour of the day, if need be, shall all be set down first, and at the right hand of the letter, before anything else be done. Having settled now what is first to be done, next comes the question how to do it, and the competition who shall do it best. The end of the room has huge blackboards, sponges and chalk and towels, with little long rows of steps for the little ones to climb up. The letter has first to be written out (in draft) on the chalk-board, corrected and settled finally before it is allowed to be written with ink on paper. Now, then, a little child is called out to write on each board, at the right-hand corner, the name Swallow's Brook, the day, Friday, the date, September 20, 1867. The arrangement of this gives rise to variety of opinion and discussion. Shall 'Swallow's Brook' go down as two words or one? Shall the second part have a capital letter? Shall a stroke part the words? Shall 'Friday' go below or on the line? Shall we write 20 Sept., or 20 September, or September 20? Shall we put 1867 below or on a line? Shall we begin near the top of the board, or lower or more right or left, and on three lines, two lines, or one? At last the best is settled, and the master asks the cleverest girl to write down the pattern agreed, dating at the right-hand corner, with the proper margin all round, and this is now copied over by each on the slate

as the right heading. "My dear mother" is rightly placed at last, the same way, and, preliminaries adjusted, the real business of the day begins in earnest. "My dear mother—I did not get into Swallow's Brook before the hand of the clock, on the lower church, told three-quarters of eight," and so forth. The letter being finished, revision and criticism begin. Each pupil changes slates with her or his neighbour, who has to pick holes and find fault. The corrected slates are all shown to the master, who gives the finishing touch. At last, they all sit down to the desk, take pen and ink, mend their pens, rule their paper, and write out the letter fairly on the pages of their letter-book, which is to form a standard of reference for any letters of the sort they may want to write in their future life.

#### 4. AN EXPERIMENT IN SAXONY.

A novel and most interesting experiment in the field of elementary instruction has just been resolved upon in Saxony. Hitherto, as everywhere else, so in that small but highly-developed kingdom, the youth of the lower orders, upon being apprenticed to a trade, have been left at liberty to forget the little they have learned at school. Attendance at Sunday school and evening instruction provided by the State and charitable societies was perfectly optional. By a law just passed this liberty is abridged, and compulsory attendance at evening schools exacted for a period of three years. This is the first time, if we are not mistaken, in the annals of the world, that an attempt has been made by a State to extend the education of the humblest classes beyond the merest rudiments, and after they have entered upon the business of life. Saxony, already the best taught portion of Germany, will by the new law be more than ever in advance of her sister States.

#### 5. SCHOOLDAYS AND FESTIVALS IN SWITZERLAND.

The festivals and holidays of a Switzer are connected with his life at school. Each change is made the pretext for a feast. On going to school there is a feast; on leaving school there is a feast; at every stage of his advance there is a feast. There is a vacation feast, assembling feast; when a new teacher comes there is a feast, and when a teacher leaves there is a feast. The school is made to him by public and private acts a centre of all happy thoughts and times. It shares the joys of home and the rewards of church. At school a Swiss boy finds his mates, with whom he learns to sing and play, to drill and shoot. The teacher is to him a father. With this teacher he will grow into a man, assisted on his way with care and love, unmixed with either foolish fondness or paternal pride. With him and with his mates, the lad will take his country strolls, collecting rocks and plants, will push his boat across the lake, dive into the secrets of the ancient waterfolk, will pass by train into some neighbouring commune where the arts are other than he sees at home. All bright and pleasant things are grouped about him; and in after time, when farm and counter occupy his cares, these classroom days will seem to him the merriest of his life.—"The Switzers," by W. Hepworth Dixon.

#### 6. LIBERAL PROGRESS IN CHINA.

The Chinese Government has appropriated \$1,000,000 for sending, annually, thirty of the leading alumni of the Government Colleges to the United States to complete their education in American colleges. The first deputation of thirty young men will arrive in San Francisco in July or August in charge of Shan Lai Sun, who has been in this country and is familiar with its manners, language and customs. The young gentlemen will be distributed for the usual four years' course in the leading colleges, and will be followed next year by thirty more, in charge of Yung Wing. This gentleman with Chan Lai Sun, Wang Sing, and Lee Can, now a resident of San Francisco, were classmates in a Government school, and graduated with high honours. Yung Wing then came to America and attended Yale College, where he graduated with great credit. He then returned home, and was sent by his Government to England to purchase machinery for the Government arms foundries; and is now deputed to superintend the education of thirty students in the sciences of the Western world. These important movements of the Chinese Administration are a practical reply to those who sneer at Burlingame's mission, and who affect to belittle the civilizing tendencies of the Chinese rulers. This measure may be taken as the first Government sanction of foreign travel on a large scale. It is, to be sure, under Government sanction, but will have the effect of popularizing travel, and, by so doing, break down that reluctance to go abroad manifest among the better class of Chinese, and which has resulted from an indisposition to contravene Government wishes.—*Alta California*.

#### 7. WOMEN STUDENTS IN ZURICH.

A letter in the *National Gazette*, of Zurich, says that, at present,

out of some 400 students at the University at Zurich, there are eighty ladies, in attendance, most of them students of medicine. A large proportion of these ladies belong to Russia, where the movement in favour of female education has taken very distinct shape, though they have not been able yet to establish a medical college of their own. It would seem, from the remarks of the writer of the letter, that the lady students are hardly much more in favour with their masculine companions at Zurich than they have been at the University of Edinburgh, although there have been none of the discreditable scenes at the former by which the latter has made itself notorious. The professors are also a good deal puzzled, sometimes, how to proceed, and some of them do not hesitate to speak openly in condemnation and discouragement of the lady medical students—remarks which are sure to be applauded by the chivalrous males.

### V. Educational and Literary Summary.

The constituted authorities of several schools of repute having expressed their desire that the Universities would undertake the systematic examination of their pupils, both Oxford and Cambridge have appointed Syndicates "to confer with the Committee of Masters of Schools," and their Reports are expected to appear at the end of the present term. It will be remembered that, rather more than a year ago, Dr. Ridding, of Winchester, on behalf of the Committee of Head Masters, addressed a letter to the Vice-Chancellors of the Universities upon certain "points in which the education of the University and Schools come into contact." A Syndicate of the University of Cambridge was in consequence appointed, which, after a conference with the Committee of Masters, recommended, in November last, that the University should undertake, in conjunction with the other English Universities, (1) to examine the highest grade schools in school work, in such a manner as to enable the examiners to report on the general character and efficiency of the teaching in each school; (2) to examine individually boys who are leaving school, and to certify that the successful candidates have reached a standard suitable for boys (a) under 19, or (b) under 16, years of age. This Report having been accepted by the Senate, the Syndicate proceeded, in conjunction with a similar body representing the University of Oxford, to frame precise regulations, which, it is understood, have been submitted to the Committee of Head Masters, and may shortly be expected to be made public. It is perhaps premature to foretell the fate of the Scheme; but it foreshadows undoubtedly a most important reform which is in progress among our leading public schools, and which no one interested in the improvement of the higher education of the country will regard with indifference.

On the occasion of the annual conferring of degrees by the University of London, on the 15th ult., Mr. Lowe, who is a member of the Senate of the University and its representative in Parliament, expressed an opinion in favour of making Greek an optional subject at the Matriculation Examination, to be substituted either by an additional modern language or by some branch of Natural or Physical Science. The proposed change has now been before the body of graduates for the last two years, but has not yet received the sanction of the Convocation. At the last meeting, on the 14th ult., the subject was referred back to the Annual Committee of Convocation for further consideration. In the course of the same speech, Mr. Lowe urged benefactors of education to leave money for the endowment of scholarships at the Universities rather than of professorial chairs, on the ground that the pay of lecturers ought to be in proportion to the amount of instruction they give—i. e., to the number of their pupils. Mr. Lowe appears, however, that quality as well as quantity is required in teaching, and that this quality can only be secured by original work, to devote himself to which the professor must be to a certain extent independent of the emoluments derived from actual teaching.

The *Westminster Review*, in its last number, discusses at considerable length the proposed University of Wales. The suggestions thrown out were all practical—that such a University should be unoriginal sectarian; that its instruction should be high in quality, comprehensive in range, and moderate in price; and that its buildings should be situated in a central and healthy locality. The College is now built at Aberystwith, the central town in Wales, from which railways radiate to every quarter. It is to accommodate about one thousand students and a staff of resident professors. Its status is to be that of University College and King's College, London; and it is modelled on the combined constitutions of the Queen's Colleges and University, Ireland. The curriculum is to be adapted for the different professions, and to embrace special preparation for academic degrees. All other colleges and schools in Wales whose course of study comes up to the recognised standard are to be entitled to affiliate to the University, in the same way as the Queen's

Colleges are affiliated to the University in Ireland; and the institution is to open on equal terms to members of all denominations, there being no special chair of theology, the teaching of which is to be left to the various affiliated colleges. Government, it is expected, will subsidize the University, and place it on a permanent basis.

The Scottish National Association for Combined Secular and Religious Instruction has issued a statement of its views. The basis adopted by the Association is as follows:—1. That no system of national education will be satisfactory which authorises the application of public money, either by Government grants or by local rates, toward the teaching the theological tenets of any religious sect. 2. That, therefore, the State and the School Boards should make provision only for the secular instruction which all children may receive in common; and that, in the interest of religious teaching itself, the care and responsibility of theological instruction should be left to parents and Church organisations, to be provided by separate arrangements.

The Finance Committee of the School Board for London has reported, through its Chairman, M. Freeman, that the amount of money which it would probably be necessary to borrow in order to provide new Board Schools for the children of London would be about one million sterling. Mr. Freeman reminds those who are especially watchful over the interests of the rate-payers, that they need not be alarmed at the amount, for the Committee had made calculations, and the result was that the burden of the establishment and support of these schools would not, after all, be very severe. The debt is to be paid off in instalments in fifty years, and the interest is only 3½ per cent. The *School Board Chronicle*, commenting on the Report remarks:—"Mr. Freeman might have adduced yet further reasons why this large outlay should not be regarded with unqualified seriousness. Undoubtedly an annual sum will have to be drawn from the pockets of the rate-payers sufficient to pay the interest and the instalments; but there are many items to place on the other side of the account. We are not now referring to the oft-repeated argument that money spent in educating the children of the poor will, in the long run, prove to be a good investment, by reason of the diminution of crime and pauperism, and the conversion of comparatively useless into useful members of society. We wish to look at the subject for a moment in relation to the manner in which it will affect the general prosperity of the community, not fifteen or twenty years hence, but now. In the first place, we may assume that, to employ capital to the amount of a million sterling will, in a more or less indirect way, benefit the community. The interest, drawn, no doubt, from the pockets of the ratepayers, will flow back by various channels, giving a certain impulse to trade and manufacture. Again, the million sterling will be spent in building materials, in labour, and in professional services. So much money put to work in this city will induce a great deal of activity, and enliven many industrial agencies which might otherwise move sluggishly. A guinea goes a long way before it dies, and it is not easy to estimate the movement among the busy portions of the community which may be caused by setting a million severigns usefully to work."—*English Educational Times*.

## VI. Biographical Sketches.

### 1. THE VERY REVEREND DEAN BETHUNE.

Few men in our community have obtained more universal respect and regard than the late Dean. He was a firm and upright man, kind of heart and sound of head. As the rector of the parish of Montreal, he for many years conducted its affairs with great ability. In Christ's Church Cathedral, of which he was the head, his face had of late years been seldom seen; but it was sadly missed by many members of the congregation who, from their childhood up had been accustomed to see it at each recurring service; and to feel that the Dean was indeed, "that good old man, the clergyman." They felt the absence the more keenly, too, as they knew that it must soon become perpetual, for his long years and failing health gave no room for hope that he could ever become strong again. The last official act which he performed was to preside over the meeting of the Diocesan Synod, held in this city in June, 1869, for the election of a Bishop to the See left vacant by the death of the late Bishop Fulford, and which resulted in the election of Bishop Oxenden. The session was a very stormy one, as many will remember, yet we do not recollect that one of the chairman's rulings was even called into question, and his attitude was at all times dignified and impartial. From that time, the Dean had not appeared much in public. It was his

practice, so long as his health allowed, to officiate on communion Sundays. Latterly, however, his turns of duty had been very infrequent, and on one Sunday last month he paid his last visit to the Cathedral, where he partook of the holy communion. Afterwards he gradually declined, and passed quietly away yesterday morning at the ripe old age of eighty-two years. He was the son of a United Empire Loyalist, who settled in South Carolina in 1791, having emigrated to that place from the Isle of Skye in the year 1751. He espoused the loyal cause in the revolutionary war, and at its conclusion, came to Montreal, and became a minister of the Presbyterian Church. He was appointed to the mission of Glengarry, where his son, who afterwards became the Dean, was born in 1791. Mrs. Bethune being a member of the Anglican Church, brought her son up in its tenets. He was educated in the famous Cornwall Grammar School, of which he subsequently became principal, succeeding the late Bishop Strahan. In the war 1812, he did duty on the frontier as a volunteer. Later he was ordained to deacon's orders by Bishop Mountain, of Quebec, and served for some time as a missionary in the west. In 1818 he was appointed to the rectory of Christ Church, in this city, which he held up to the hour of his death. In 1835 a degree of D.D. was conferred upon him by Columbia College, New York. His last and highest office was that of Dean, which was bestowed upon him soon after the creation of the diocese.—*Montreal Gazette*.

### 2. MR. CHARLES MACLEAN.

Mr. Maclean was born at Edinburgh, in the year 1806, and was one of a very large family. His father, Donald Maclean, writer to the Signet of Edinburgh, was at one time Solicitor of the Exchequer for Scotland, and occupied a high position in the Scottish Capital. At the age of fifteen Mr. Maclean lost his sight completely. In consequence of this calamity the profession for which he was intended, viz., the army, had to be abandoned, and the whole course of his life was changed. Under his father's influence he was induced to study for the ministry of the Church of Scotland, and with this in view he spent eight sessions at the University of Edinburgh, taking a distinguished part in his classes notwithstanding his blindness. At the end of his college course, having passed the prescribed examination, an objection was raised to his admission to the church by reason of his want of sight, and the matter was debated very warmly in the General Assembly in the year 1829. Many distinguished men took part in the discussion, and it was finally determined to authorize the license on condition that Mr. Maclean would bind himself never to accept a charge. In the year 1834 he emigrated to Canada with no other companion than a hired man-servant. By the recommendation of Governor Sir John Colborne he went to Seymour where he bought land to make himself a home. Having made a "clearance"—some of the largest trees being felled by his own hand—and built a homestead, he returned in 1836 to Edinburgh, where he married Miss Campbell who accompanied him in the following year to his primitive home in the backwoods. His life was marked by many remarkable adventures which if collected would make a most interesting volume. In 1842, and again in 1845, his house with all its contents, was destroyed by fire, and on the latter occasion, all the outbuildings, fences, crops and even live stock were destroyed as well as the homestead. He crossed the Atlantic some fifteen times, and on almost all these occasions he was entirely alone and unattended. Twice he was ship-wrecked—once on the Banks of Newfoundland. In spite of the treatment which he received from the Church of Scotland, he remained throughout life her devoted adherent and took the deepest interest in all her schemes. In politics Mr. Maclean, true to the school in which he had been bred retained to the end of his days the sentiments and feelings of a British Tory. Like all true Scotchmen he cherished an undying love for his native land, her traditions and glories.—*Kingston Chronicle and News*.

### 3. COL. ALEXANDER FRASER.

Decased was born in the Scottish Highlands in the year 1794, and at fifteen enlisted in the British army as a private soldier. Among other battles he fought at Queenston Heights, Stoney Creek, and for distinguished conduct, especially at the latter, was raised to the rank of adjutant, though yet only nineteen. He settled in this neighbourhood fifty-six years ago, and for a long period was a prominent public man and active magistrate in this county; for some time past, however, old age and infirmness of body and mind caused his retirement into strict private life. He was in all respects a true gentleman of the old school.

### 4. MR. JOHN FRASER.

Mr. John Fraser, known all over the Dominion as "Cousin Sandy," whose melancholy and sudden death at Ottawa has been

learned with profound regret, was born at Pontsoy, near Banff, Scotland, in 1811. When quite a young man, he left his native town to make his way in London, where his active mind found congenial exercise in the political strife and turmoil of the day. He became a prominent leader in the moderate wing of the Chartist body, but withdrew from active co-operation with the movement when it assumed the revolutionary character which the thoughtful men of the party never contemplated. He emigrated to Canada about fourteen years since, and with his family went to Montreal about nine years ago. He made his first appearance in the press of that city in the *Herald* with a political squib on the late Mr. T. D. McGee. This was followed by others possessing the same fresh original ring, and the author made many warm friends amongst our public men of all shades of political opinion. He was personally a man of genial and kindly disposition, and cultivated intellect.

#### 5. MRS. PETER WEAVER.

The widow of the late Peter Weaver died near Port Burwell, in the 93rd year of her age. She was born in the city of New York, in 1784, and with her parents and other U. E. Loyalists, went to Digby, Nova Scotia, where she grew up, and where she was married to her late husband, in 1808. Not long after they emigrated to Upper Canada, and located on the first concession of Bayham, better known as Nova Scotia street, near Port Burwell, where she lived until the day of her death.

#### 6. MONUMENT TO REV. DR. FORRESTER.

I have been to Truro to-day and was present at the unvailing of a monument erected to the memory of the Rev. Alexander Forrester, D.D. Dr. Forrester was a native of Scotland, having been born in 1805. After passing through the usual course of training, he was licensed to preach and for some years was minister of a parish in connection with the Church of Scotland. In 1843 he came out of the establishment, being the only one in his Presbytery that did so, and helped to form and build up the Free Church. In 1848, he was sent out as a deputation to Nova Scotia, when, liking the country, and being liked in turn, he was induced to accept a call to a congregation in Halifax. Here he laboured until 1855, when he was appointed Superintendent of Education in the Province and Principal of the Normal School at Truro. He threw himself into the Education question with great force and enthusiasm, and accomplished wonders in the cause. In fact he shortened his days by the herculean labours which he undertook and carried out. In 1863 the two offices which he had held for eight years were separated and he remained at the head of the Normal School. In 1869 he died while still in the vigour of his strength to all appearance. He had gone to New York for a few weeks of leisure, and while there he left this scene, the end having come in the house of his beloved friend, Dr. John Thomson, the same who was a delegate to the churches of this Province, a few weeks ago. There were no remarks made by the latter in his address to the Synod in Halifax, that made such an impression, in fact drew tears to many eyes, as the reference to the last scenes of Dr. Forrester's life. Shortly after his death the teachers of the Province conceived the idea of raising a monument to his memory. Many of them had been his own pupils and all of them had been associated with him in the good cause, and had caught some of his enthusiasm. To-day witnessed the inauguration of the work completed. A vast concourse had assembled to see the dedication, teachers being there from all parts of the Province. The oration was pronounced by the Rev. Dr. Robertson, an old and tried friend of the deceased, and speeches were delivered by some others. The whole passed over in a pleasing and satisfactory manner.—*Correspondent British American Presbyterian.*

#### 7. SAMUEL F. B. MORSE, ESQ.

Samuel Finley Breese Morse was born in Charlestown, Mass., April 27, 1791. He was educated at Yale College, where he graduated in 1810. Having from an early age determined to be a painter, he sailed for England, shortly after leaving college, for the purpose of prosecuting his art studies. In London he met C. R. Leslie; the young artists became fast friends, and the first portraits they painted after the intimacy was formed were likenesses of each other. Mr. Morse made rapid progress in his profession, and in 1813 exhibited at the Royal Academy his picture of "The Dying Hercules," remarkable for its colossal size if for nothing else. The plaster model which he made of the same subject, to assist him in his picture, received the prize in sculpture the same year. On his return to America in 1815, he first took up his residence in Boston, but met with so little encouragement and support that he removed to New Hampshire, where he found employment in painting por-

traits at fifteen dollars per head. After spending a year or two in Charleston, South Carolina, where he found more profitable employment, he returned to the north, and took up his residence in New York in 1822. Under commission from the city corporation, he painted a full-length portrait of Gen. Lafayette, then on a visit to the United States. In 1829 he visited Europe for the second time, and remained there for three years. While returning home in the packet-ship *Sully*, in 1832, a fellow-countryman—Professor Jackson—was describing the experiments that had just been made in Paris with the electro-magnet, when a question arose as to the time occupied by the electric fluid in passing through the wire. The reply being made that it was instantaneous, Jackson—recalling the experiments of Franklin—suggested that it might be carried to any distance, and that the electric spark might be made a means of conveying and recording intelligence. This suggestion took deep hold of Morse, who proposed to develop the idea thus originated; and, so quickly did his mind grasp the whole subject, that before the end of the voyage he had drawn out the whole plan of the system of electric telegraphy afterwards known by his name. On his return to New York he resumed his profession, but devoted all his spare time to the perfection of his great invention. Of course he had to face all sorts of difficulties; he received but little encouragement; yet he persevered, and, finally, in 1835 demonstrated the practicability of his invention by completing and putting in operation in the New York University a model of his "Recording Electric Telegraph," the greater part of the apparatus having been made by himself. In 1837 he filed his caveat at the patent office in Washington. The Americans claim that Prof. Morse was thus the inventor of the electric telegraph, but they carry their claim a little too far. Prof. Morse did not discover the principle, but applied it by an invention peculiarly his own. For this the world must give him credit. At the same time, it is only fair to European claimants to the discovery and application of this important agent of intercommunication to state that Mr. Wheatstone, the English inventor of a magnetic telegraph, took out, in conjunction with Mr. W. F. Cooke, a joint patent in England in May, 1837; while Steinheil, in Batavia, invented a system of his own about the same time—both differing from Morse's and from each other. Wheatstone's system is in use in England and other parts of the world; Morse's system is in use throughout America; while Steinheil's system, from its complicated and delicate machinery, has been proved impracticable for extended lines. At a convention held in 1851 by Austria, Prussia, Saxony and Bavaria, for the purpose of adopting a uniform system of telegraphing, that of Morse was, by the advice of Steinheil, selected. In 1840 Morse perfected his patent at Washington, and set about putting his telegraph into practical operation. Four years later the first line on this continent was completed. It extended from Baltimore to Washington. It is less than thirty years since the first line was opened; yet to-day telegraph offices are to be found in every hamlet in North America, the wire in use is many thousand miles in length, the receipts of the companies amount to millions each month, while the benefits which the public reap from the system are beyond value. It is pleasing to know that this great benefactor—unlike many who have laboured for the public good—lived long enough to witness the grand results of his labours, and to receive the well-deserved applause of his fellowmen. Last year his statue was erected in Central Park, New York; on which occasion messages were sent without interruption through a connected line of wires over four thousand miles in length.—*Toronto Mail.*

### VII. Miscellaneous.

#### 1. REST.

Rest for the labourer, rest!  
When the daylight slowly dies,  
When the shadows creep, and welcome sleep  
Comes to the weary eyes.

Rest, for the watcher, rest!  
When the longed for dawning breaks,  
When the gloom of night is put to fright,  
As the day's great splendour wakes.

Rest for the mariner, rest!  
Beyond the angry tide,  
The anchor's cast in the port at last,  
His native shore beside.

Rest for the soldier, rest!  
When the storms of battle cease,  
When the din of war is heard no more,  
And the people dwell in peace.

Rest for the traveller, rest!  
The day's long journey done,  
When, after the tramp, they pitch the camp,  
Beneath the setting sun.

Rest for the mourner, rest!  
When the first wild grief subsides,  
As from the heart dark doubts depart,  
And the peace of God abides.

Rest for the wanderer, rest!  
No more afar to roam,  
When welcomed back from his wayward track,  
Into his long lost home.

Rest for the Christian, rest!  
When the struggle of life is o'er;  
When the race is run, and the crown is won,  
Rest! and for evermore.  
—*Songs of the Heart*, by Blake Atkinson.

## 2. QUEEN VICTORIA "AT HOME."

Very few persons, who have not been abroad, have any idea of the machinery of a state reception by the Queen of England at Buckingham Palace. If you take up the *London Times* some morning, and read an account of "the Court which Her Majesty yesterday held at Buckingham Palace," you will at first be inclined to believe that you are reading the *dramatis personæ* of some fairy extravaganzæ. There is an immense crush of carriages for miles away on either side of the parks and sombre streets, and thousands of the lower classes stand looking admiringly on the glow and glory of fashion in which they can never hope to participate. When the Queen holds Court "Her Majesty's body guard of the honourable corps of gentlemen-at-arms" and the royal body-guard of the yeomen of the guard are on duty in resplendent uniforms. In the court yard of the palace the Life Guards are drawn up in a line, mounted on fleet and sinewy horses. At a little before 3 o'clock in the afternoon the Queen enters the throne-room of the palace, accompanied by members of the family (of course the youngest children), and by an innumerable train of persons of rank who wait upon her. Among these are the mistress of the robes, the lady of the bed-chamber in waiting, the maids of honour in waiting, the lord stewards, the lord chamberlain, the master of the horse, the comptroller of the household, the master of the buckhounds, the keeper of the privy purse, the groom of the robes, the captain of the gentlemen-at-arms, the gold stick in waiting, the silver stick in waiting, the field officer of brigade in waiting and the aides de camp in waiting. This brilliant and somewhat singular throng of servants is made up from dukes, duchesses, viscounts, countesses, colonels and honourables in profusion. The spectacle of the entry is always quite imposing, and the immense hall filled with the *élite* of the land, and radiant with rich dresses and jewellery, becomes a lovely kaleidoscopic vision. The Queen is usually dressed with simplicity. This is a favourite dress of her's on Court occasions:—A black silk dress with a train trimmed with crape and jet, and the usual long white tulle veil surmounted by a coronet of jet. In addition to this she usually wears some jet ornaments, the riband and star of the Order of the Garter, the orders of Victoria and Albert and Louise of Prussia, and many German family orders. The princesses usually wear black and silver, with pearl ornaments; and the attendant throng is dressed with a lavishness unknown to many continental courts.

The presentation of distinguished foreigners by the ambassadors or consuls of their various countries then occurs, and is a long and formal ceremony. All persons who have received or honorably acquitted appointments in the service of the state are also presented, and the archbishops, bishops and other church dignitaries are very numerous. All persons who are on the list of the invited, and who do not appear, are next morning summed up in a list of the official journal as follows: "Of the foregoing, the undernamed were prevented by various causes from obeying Her Majesty's commands." After the presentations the carriages begin to come up, and there is a frightful crush in getting home.

## 3. MAKE HOME HAPPY.

Make your home sunny and happy, if you want to make it attractive. The young heart is boiling over with glee and frolic. God made it so, and it is your duty to accept it and to provide means for innocent recreation. Youth is the period of impression and imitation, and then holy aspirations are most rapidly developed. Provide them with music, books and papers, and pictures and flowers at home; every appliance to awaken all that is pure and noble in mind and heart. Let your children feel that their father's

house is the dearest, happiest spot on earth; and as they pass into life's activities and responsibilities, let them remember the home of their childhood not as the place of bitter words and hard drudging, where they simply ate, and drank, and slept, but as the sunniest spot in all the past, where their sweetest and holiest affections linger, and where all their truest aspirations and their noblest principles were fostered, formed, and fixed.

## 4. CONVERSATION AT HOME.

Children hunger perpetually for new ideas. They will learn with pleasure from the lips of parents what they deem it drudgery to study in books; and, even if they have the misfortune to be deprived of many educational advantages, they will grow up intelligent if they enjoy in childhood the privilege of listening daily to the conversation of intelligent people. We sometimes see parents who are the life of every company which they enter, dull, silent and uninteresting at home among their children. If they have not mental activity or mental stores sufficient for both, let them first use what they have for their own households. A silent house is a dull place for young people—a place from which they will escape if they can. How much useful information, on the other hand, is often given in pleasant family conversation, and what unconscious, but excellent mental training in lively social argument. Cultivate to the utmost all the graces of home conversation.

## 5. EFFECT OF GOOD READING.

A correspondent of the *New York Observer* says: "The pleasure of listening to a good reader was never better illustrated than by a little ten-year old girl of our acquaintance, a few Sabbaths ago. The circumstances of the household were such as to render it necessary for her to be sent alone to church. That day the theme of the discourse was the Heavenly City. It was distinctly and beautifully read, and when the child returned home, she said: 'Father, did you ever read the twenty-first chapter of Revelation, in the Bible?' 'Certainly,' was the reply. 'But did you ever read it aloud to us here at home?' 'I think so,' he answered. 'Well, father, I don't think you ever did; for Mr. F., the minister, read it in church to-day, and it was just as if he had taken a pencil and paper, and pictured it right out before us.'"

## 6. HOW TO BE UNSUCCESSFUL.

- 1st. Consult Tom, Dick and Harry in matters of business, and follow not the best, but the last, advice given.
- 2nd. Instead of marching straight over trouble with the firm front, crouch and let it march over you.
- 3rd. Have no mind of your own, no self reliance. Be unstable and shifting as the sand on the seashore.
- 4th. If you are knocked down to-day, conclude that your place is on your back to-morrow, and the next day, and so on.
- 5th. Because it rains to-day and is dismal, make up your mind that it is going to be rainy and dismal always.
- 6th. Never look among your clouds for silver linings, for rifts through the sky and the sunshine beyond.
- 7th. Follow these directions, closely, and failure will track your steps like a bloodhound; in adversity you will be as worthless as an old rotten sheet for a sail in a gale of wind: when fire comes, as come it must, you will find all the metal you ever had in you turned to iron, and in the fire, you know, dross never purifies or refines—it only burns.

## 7. THE VERITABLE "UNCLE TOM."

Among those present at the late gathering of coloured people at London to celebrate the Emancipation of the Slaves was the Rev. Father Josiah Henson, one of the eldest men in Canada, who has gone through the horrors of slavery, and is undoubtedly the characteristic subject of the well known tale of "Uncle Tom's Cabin." His head has grown white with the cares of eighty-four years, forty-two of which were spent as a slave, in several of the Southern States. He is at the present time a resident of Dresden, where he has a wife and seven children, and no less than thirty-nine grand-children to cheer his declining years with their love and attention. He still works hard on his farm, and on Sundays endeavours to give to his neighbours and relatives a portion of that spiritual grace with which he appears to be abundantly favoured. The old man says that when he heard what freedom was he could not resist the temptation to test it, and determining to die or succeed he left his master, taking with him his wife and carrying his two children in a sack on his back. The journey from Kentucky to Chatham occupied over six weeks, and in that time he met with many hairbreadth escapes. He settled down near Dresden, but he could not rest. He had

tasted the sweets of freedom, and his heart yearned towards those whom he had left in bondage. He crossed the lines a number of times, and by travelling at night, and shunning the light and white folks, he succeeded in liberating one hundred and eighteen of his brethren from the chains that held them. During some of these trips he met with Mrs. Stowe in Ohio, and finding her a friend of his race, told her the incidents of his life, many of which she has graphically woven into that most interesting tale, "Uncle Tom's Cabin." In 1851 he crossed the ocean, and again in 1852. At the exhibition in London he saw and conversed with the Queen, and she has since kindly remembered him by frequently sending him presents as mementoes of their meeting. He is an extraordinary intelligent man, and had eloquently commenced his address when a sudden shower of rain compelled him to stop, and his hearers to disperse. He is very witty, and can amuse his hearers for any length of time, as well as touch their tenderest feelings, by his characteristic descriptions of the terrors of the slave trade.

### 8. THE DEATH OF A SCHOLAR.

Oh, God, again we feel the power  
Of thy mysterious hand;  
And Death has taken one this hour  
From out our happy band.

A few short weeks ago, her face  
Beamed fondly in our glee,  
But now, alas, an empty place  
Is where she used to be.

We miss her at th' appointed hour,  
When she should take her seat;  
And mourn the pure though blighted flower  
Who's gone her God to meet,

We miss her when her class we call;  
Ah, then we miss her most,  
And conscious then, both one and all,  
What we indeed have lost.

We miss her when the bell chimes out,  
The time for sport and play;  
Oh, how we miss her joyous shout  
Among the light and gay.

We miss her at the daily call  
Of each loved pupil's name,  
And at all times, however small,  
We feel her loss the same.

We miss her in the morning bright,  
And grieve her loss at noon,  
And at the gathering shades of night  
We feel she went too soon.

And when we think of that sweet smile,  
That bright expressive eye;  
The artless voice that knew not guile,  
We ask, why did she die?

At home, at school, alike we miss,  
The face to all so dear;  
Nor cease to check the flowing of  
The silent, falling tear.

On earth she lived a holy life,  
We trust she was prepared  
To live with God beyond the strife,  
All in this world have shared.

J. W. REDICK  
Teacher.

Thomasburg, 1872.

### 9. LONDON—ITS EDUCATIONAL INSTITUTIONS.

London, including its suburbs, has a population of 22,000, and a cleaner, more attractive or thriving city is not to be found anywhere in Western Canada. It has a number of fine churches, prominent among which are St. Paul's Cathedral (Rector, Rev. Canon Innes) and St. Andrew's Church. The lunatic asylum, post office and custom house are fine buildings. The market is probably one of the best supplied in the country. There are a large number of oil refineries, and factories of various kinds, several first-class hotels—amongst which is the Revere House—and scholastic institutions equal, if not superior, to any in the Province. It has also railway communication, by means of the G. W. R. and G. T., in almost every direction, and, from its central position, is destined to attain great importance, both as regards agriculture and manufactures. It suffers, however, by the side of Chatham, from one very important drawback, viz: that while the Thames at Chatham is sufficiently navigable to admit of steamers of several tons burthen reaching and trading with the town, the same river at London has but the dimensions of a small creek, and is utterly valueless for commercial purposes.

**THE HELLMUTH LADIES' COLLEGE.**—This institution, inaugurated by H. R. H. Prince Arthur, Sept. 23, 1869, is admittedly the finest and most successfully conducted Female Seminary in the Dominion. Its construction, as well as the success which has attended its management, is mainly due to the present Bishop of the Diocese of Huron—Bishop Hellmuth—whose keen foresight, fine business habits, and untiring energy have crowned everything taken in hand with the most complete success. The Ladies' College is picturesquely situated on a gentle elevation, about two miles from the town, has the most healthy and beautiful surroundings, and is, in all respects, a most admirable institution. We were kindly shown over the College by its new Principal—the Rev. Dr. Irwin—who, at Hobart College, Geneva, and at a Seminary in New York City, did much in educating the sons and daughters of our Church.

Mrs. Irwin is the Lady Principal, and, at the time of our visit, there were no fewer than 130 students, a large number of whom are from the States. We passed through the recitation rooms, the dormitories, chapel and library, and were more than pleased with what we saw. The classification of lessons, or time tables, as it is sometimes called, the work of Miss McClelland, was admirable, and we understand that, another year, diplomas will be granted to all graduating pupils, who, on examination, shall prove themselves to be duly qualified. Considerable attention appears to be devoted to vocal and instrumental music, and every student so desiring is allowed a piano for private practice. In addition to Rev. Dr. and Mrs. Irwin, the following is the present staff of teachers: Miss McClelland, Miss Paley, Miss Carroll, Miss Moule, Miss Clinton, Miss Williams, Miss Hall, Miss Barker, Miss Haywood, Madame Veillard (French Teacher), Herr Kroupa (Teacher of German and Painting), and Sergeant Grey (Teacher of Calisthenics). On the grounds belonging to the Institution is "Norwood House," the residence of Bishop Hellmuth.

**THE HELLMUTH BOYS' COLLEGE.**—Accompanied by the Head Master—the Rev. Francis Checkley, B. A., late Science Scholar, Trinity College, Dublin, we visited the above Institution. We found the College filled with students of various ages, and all industriously employed in preparing for the summer examination. About 50 of the pupils are from the States, some from British Columbia, and others from Equador and various parts of Central and South America. The dormitories and recitation rooms are kept in excellent trim; there are two sanatoria and a convalescent room, and for the recreation of the pupils, a cricket ground, skating rink, gymnasium, Fives' Court, &c. Great stress is now being laid upon the English branches, while due attention is also bestowed upon Classics and the Natural Sciences. The teaching we consider to be thorough and excellent throughout. There is a chapel attached to the Institute, and the utmost care and attention are bestowed on the moral and religious training of the pupils. The medical department, under the charge of Dr. Sippi, M. A., L.S.A., forms a prominent feature of the College. The students in this department attend lectures in Physiology, Osteology, Pharmacy; and Materia Medica, and Dr. Sippi's college and medical standing enables him to give his students certificates recognized by the Universities of Dublin and Edinburgh, and in this Dominion. German and painting is admirably taught by Herr Kroupa, while Professor G. B. Sippi has a large number of pupils, as many as 40, on the piano, violin, flute, and violincello. There are full services in the chapel on Sunday, and short morning and evening services during the week. The following is a complete list of the teachers now attached to the Institute:—Head Master, Rev. Francis Checkley, B. A., late Science Scholar T. C., Dublin; Assistant Masters, Rev. Prof. Halpin, M. A., T. C., Dublin; Rev. W. A. Young; Messrs. Charles A. Sippi, M. A., L.S.A., J. H. Wallis, John Richards, W. Martin, L. Dooner, Bohuslar Kroupa, J. Poper, J. Room Kay, Professor of Elocution, George B. Sippi, Professor of Music, Sergeant-Major Gray, Drill Instructor.

**—NEW SCHOOL-HOUSES IN OPS.**—The school-house in Section No. 4, Ops, which was destroyed by fire in January last, has been replaced by an elegant brick building which will be open for the reception of pupils on Monday, the 26th inst. The trustees have secured the services of Mr. W. J. Carson, late of the Normal School, who obtained a first-class certificate, Grade A, at the late examination. The Rev. M. Stafford supplied maps and apparatus to the value of sixty dollars, as he does with all the first-class schools in Ops, and they were selected at the Department in Toronto by the Inspector of Public Schools. An additional quarter acre of land has been purchased by the trustees, who have shown themselves determined to do everything in their power to promote the interests of the school under their charge. Another brick school-house, similar in design to the above, is in course of erection in Walker's section, Ops, two and a half miles south of Lindsay, and will be finished in October, Mr. Wm. Duffus is architect and superintendent of both these schools; and the people of Ops will learn with pleasure that the system of ventilating and heating introduced in their township three years ago by Mr. Duffus has been adopted in these buildings. This system has been warmly recommended by the Board of Health for the schools in Boston and Massachusetts and it is claimed to be the best in the world.

VIII. Monthly Report on Meteorology of the Province of Ontario.

I. ABSTRACT OF MONTHLY METEOROLOGICAL RESULTS, compiled from the Returns of the daily observations at ten High School Stations, for MAY, 1872.

OBSERVERS:—Pembroke—R. G. Scott, Esq., M.A.; Cornwall—James Smith, Esq., A.M.; Barrie—H. B. Spotton, Esq., M.A.; Peterborough—J. B. Dixon, Esq., M.A.; Belleville—A. Burdon, Esq.; Goderich—Hugh J. Strang, Esq., B.A.; Stratford—C. J. Macgregor, Esq., M.A.; Hamilton—J. M. Buchan, Esq., M.A.; Simcoe—Dion C. Sullivan, Esq., L.L.B.; Windsor—J. Johnston, Esq., B.A.

Table with columns: STATION, BAROMETER AT TEMPERATURE OF 32° FAHRENHEIT, TEMPERATURE OF THE AIR, TENSION OF VAPOUR, and MONTHLY MEANS. Rows include Pembroke, Cornwall, Barrie, Peterborough, Belleville, Goderich, Stratford, Hamilton, Simcoe, and Windsor.

Approximation. dOn Lake Simcoe. eNear Lake Ontario on Bay of Quinte. fOn St. Lawrence. gOn Lake Huron. A On Lake Ontario. i On the Ottawa River. j Close to Lake Erie. m On the Detroit River. n Inland Towns.

Table with columns: STATION, HUMIDITY OF AIR, WINDS, NUMBER OF OBSERVATIONS, ESTIMATED VELOCITY OF WIND, AMOUNT OF CLOUDINESS, RAIN, SNOW, AURORAS, and WHEN OBSERVED. Rows include Pembroke, Cornwall, Barrie, Peterborough, Belleville, Goderich, Stratford, Hamilton, Simcoe, and Windsor.

g Where the clouds have contrary motions, the higher current is entered here. Velocity is estimated, 0 denoting calm or light air; 10 denoting very heavy hurricane

0 10 denotes that the sky is covered with clouds; 0 denotes that the sky is quite clear of clouds.

REMARKS.

Pembroke.—Rain, 1st, 2nd, 4th, 8th, 9th, 11th, 22nd, 24th, 27th, 28th. CORNWALL.—On 1st, Canal opened for navigation. 9th, lightning. 11th, lightning and thunder with rain. 17th, humming bird seen. 18th, some ice still visible on the south shore of the St. Lawrence. 21st, parhelion visible at 6.30 p.m.; also on 27th. 24th, lightning with rain. Frost on 5th. Wind-storm, 9th. Fog 2nd. Rain 2nd, 4th, 9th, 12th, 15th, 19th—21st, 23rd—25th, 27th—29th, 31st.

3rd. Last year the ice had disappeared on 12th April. Frost 2nd—3rd, 4th—5th, (hard). Wind-storms, 9th, 11th. Snow, 2nd, 3rd. Rain, 1st—4th, 8th, 18th, 19th, 20th, 22nd, 24th, 26th, 27th, 30th. PETERBOROUGH.—On 1st, thunder. 2nd, hail. Frost on 3rd, 25th. Wind-storms, 9th, 25th. Hazy on 8th. Rain, 1st—3rd, 8th, 9th, 11th, 22nd, 24th, 26th, 27th, 28th, 30th. BELLEVILLE.—On 27th, thunder with rain. Wind-storm 9th. Fog, 10th. Rain, 1st, 2nd, 3rd, 8th, 18th, 19th, 22nd, 23rd, 24th, 27th, 28th, 30th.

GODERICH.—On 1st, some ice still in sight. 3rd, flurry of snow. 11th and 27th, lightning and thunder with rain. Wind-storm, 11th. Fogs, 7th, 30th. Rain, 1st, 2nd, 3rd, 11th, 18th, 19th, 22nd, 23rd, 24th, 26th—29th. STRATFORD.—On 1st, lightning and thunder with rain 9th lightning. 11th, wild plum trees in bloom. 14th, pear and tame plum trees in bloom. 24th, apple trees in bloom; plum in leaf. 27th, hail. Excess of mean temperature for the month over average of 11 years + 1.01.



Frost, 2nd, 3rd, 4th, 5th, 29th. Wind-storms, 3rd, 9th, 11th, 27th. Snow, 2nd, 3rd. Rain, 1st, 2nd, 3rd, 9th, 18th, 19th, 20th, 22nd, 24th, 26th, 27th, 30th.

HAMILTON.—17th and 18th, the leaves of many trees : maples, horse-chestnuts, apples, plums, cherries, &c., and of many shrubs have come out during this week. 19th, may flies very numerous. 9th and 10th, lightning. 3rd and 27th, lightning and thunder with hail or rain. 15th, Corona 30" in diameter around the moon. Frost, 5th. Wind-storms, 9th, 11th, 27th. Rain, 1st, 2nd, 3rd, 9th, 11th, 18th, 19th, 20th, 22nd, 24th, 26th, 27th, 30th. The observer gives a detailed list of the dates of blossoming of the various plants and flowers during the month.

SIMCOE.—On 3rd, lightning with rain. 9th, lightning with thunder; an auroral arc spanning the heavens from N. W. to S. E. about 3" broad, and in the Zenith, was observed, commencing about 10 p.m. 27th, lightning and thunder with rain. Frost, 6th, 7th, 28th, 29th. Wind-storms, 2nd, 3rd, 4th, 9th, 11th. Rain, 1st—4th, 11th, 18th, 19th, 20th, 22nd, 23rd, 24th, 26th, 27th, 30th. Extremely hot weather during month. The greatest heat and the greatest cold on same day, 6th.

Windsor.—On 2nd, hail. 8th, meteor in S. towards S.W. 9th, lightning-lunar halo, 11th, 14th, 16th, lightning and thunder with rain, 21st, 26th, 29th. Frost, 4th, 5th, 13th, 14th. Wind-storms, 3rd, 9th, 11th, 19th, 26th. Rain, 1st, 3rd, 11th, 15th, 18th, 19th, 20th, 22nd, 24th, 26th, 27th, 29th, 30th.

**IX. Departmental Notices.**

**ASSISTANTS IN HIGH SCHOOLS A NECESSITY.**

Trustees of High Schools will bear in mind that they are required to employ an Assistant Master, in order to give effect to the new programme. The qualifications of these assistants are, that they shall either hold a Public School Teacher's certificate, or at least be certified as an undergraduate in the faculty of Arts, of good standing in some university in Her Majesty's dominions.

The Trustees of each High School, now being established, are required, and consent to employ *two* masters in their School, whatever may be the number of pupils in attendance. In justice to these new Schools, and in order to carry out the prescribed programme of studies in High Schools, this rule will, at the close of the current six months, be applied to all the High Schools in Ontario. When the application of the new principle of "payment by results" (authorized by the Act of last year), will come into force, it will necessitate a more thorough and satisfactory system of instruction than at present exists in many of the High Schools.

**POWER OF THE "RETIRING TRUSTEE."**

In reply to many inquiries on this subject, we answer: That by the New School Act the lost power of the "retiring trustee" has been restored. Up to 1850, he had the same power as any other trustee, but in that year it was enacted that he could not lawfully sign an agreement with a teacher, the duration of which would extend beyond his period of service. That clause has now been repealed and the "retiring trustee" has now precisely the same powers in all respects as either of his colleagues.

**NEW SCHOOL REGISTERS.**

In reply to numerous applications for Public School Registers, &c., we desire to say that the new edition (including the modifications in the courses of study required by the new School Act) has been sent out to the County Clerks for distribution through the Inspectors. No copies will be sent out direct to individual schools from the Education Department. Trustees will, therefore apply to the Inspector for them.

**ASSISTANT TEACHERS' CERTIFICATES.**

The question is sometimes asked if it be necessary that an assistant teacher should hold a legal certificate. We reply: It is absolutely necessary that he should hold one. The law expressly declares that every person receiving any part of the School Fund as teacher shall hold a legal certificate of qualification. The Superior Courts have also decided that trustees cannot legally levy a rate for the payment of a teacher who does not possess the necessary qualifications as such under the School laws.

**SCHOOL PREMISES AND ACCOMMODATION.**

We would request the attention of Inspectors to Note to a of Regulation No. 4 of their "Duties," in which they are directed to call the attention of Trustees to the condition of the School premises. In many School sections the School-house has been allowed to remain in the same state for fifteen or twenty years and longer, often on a bare open space, or on the road-side unenclosed, without a tree or shrub near by to shade it, or any provision being made by the Trustees for the convenience or health of the pupils, or even for their observance of the decencies of life. The Legislature has wisely decided that this state of things shall not continue, but that, as soon as possible, a remedy shall be applied, where necessary. A reasonable time should of course be allowed to Trustees in all cases to set things right; but in the meantime Inspectors will, we trust, not fail to urge upon Trustees the necessity of complying, as soon as possible, with the provisions of the law on this subject.

**"OLD COUNTY BOARD" CERTIFICATES.**

The question is often asked: "Can the present Board of Examiners recall the old County Board Certificates?" We reply: They cannot recall any of the old County Board Certificates which were given for life, or for a term of years. They can, however, at the proper time, recall those which were given for an indefinite time, or during the pleasure of the Board; that is those which on the face of them clearly show that they were given subject to such recall. The Department has in all cases requested the Board of Examiners *not* to recall these latter certificates *this year*, nor until the supply of teachers is more equal to the demands of the schools than at present.

**SCHOOL HOUSE ARCHITECTURE.**

In the *Journal of Education* for February, 1870, Trustees will find a variety of illustrations on School House Architecture, with letter-press descriptions. Extra copies of this journal will be sent free by post, on receipt of 12 cents. There has also been published a useful pamphlet on "The School House, its Architecture," etc., with numerous illustrations, which can also be sent free by post on receipt of 65 cents.

**AUTHORIZED TEXT BOOKS.**

The lists of the authorized Text Books for High and Public Schools, so far as completed by the Council of Public Instruction, is published in the *Journal of Education* for October, and on a separate sheet. Inspectors, Trustees and Teachers will please see that these books are used in the schools.

**PRINTED SHEETS FOR SCHOOLS.**

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|---|-----------------|---|
| 1. The New Programme.....                 | } Large Sheets. | } The ten sheets sent free of postage for 50 cents. |
| 2. The New Limit Table .....              |                 |   |
| 3. A Blank Time Table.....                |                 |   |
| 4. Duties of Pupils.....                  |                 |   |
| 5. The Ten Commandments .....             |                 |   |
| 6. Library Regulations .....              |                 |   |
| 7. List of authorized Text Books.....     | } Small Sheets. |   |
| 8. Merit Cards and their uses.....        |                 |   |
| 9. Hints on constructing Time Tables..... |                 |   |
| 10. Departmental Notices.....             |                 |   |

IN THE PRESS.

**THE ONTARIO SCHOOL LAW,**

Relating to County Councils—Township Councils—City, Town and Village Councils—Township Boards—Union School Sections—Arbitrations in regard to School Sites—County, City and Town Public School Inspections, Boards of Examiners, &c., &c., being Part II. of School Law Lectures. By J. GEORGE HODGINS, LL.D., Barrister-at-Law. Price 75 cts.; by Mail, 80 cts.

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Toronto, 1872.