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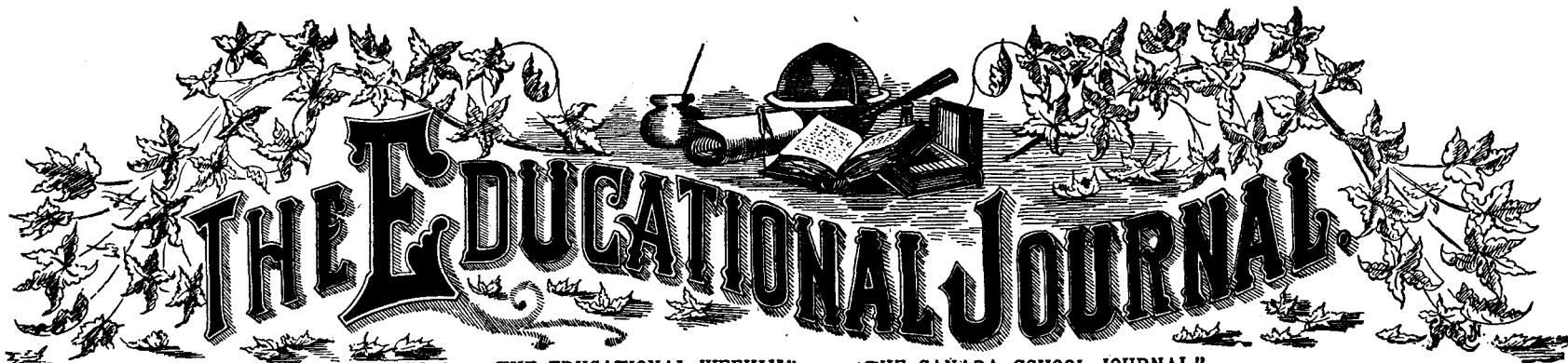
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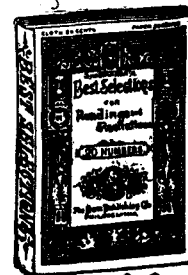
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OFFICIAL CALENDAR

- OF THE -

EDUCATION DEPARTMENT

December:

- 20. Reports of Principals of County Mode Schools to Department, due.
- Reports of Boards of Examiners on Third Class professional examinations to Department, due.
- 21. Provincial Normal Schools close (Second Session).
- 22. High Schools close, first term. [H. S. Act, sec. 42.]
- Public and Separate Schools close. [P. S. Act, sec. 173 (1); S. S. Act, sec. 79 (1).]
- Last day for notice of formation of new school sections to be posted by Township Clerk. [P. S. Act, sec. 29.]
- 25. CHRISTMAS DAY (Sunday).
- New Schools go into operation. [P. S. Act, sec. 81 (3); sec. 82 (3); sec. 87 (10); S. S. Act, sec. 4.]
- Alteration of school boundaries in unorganized Townships takes effect. [P. S. Act, sec. 41 (2).]
- 28. Annual Public and Separate School meetings. [P. S. Act, sec. 17; sec. 102 (1); S. S. Act, sec. 27 (1); sec. 31 (1).]
- Last day for submitting by-law for establishing Township Boards. [P. S. Act, sec. 54.]
- Semi-Annual Reports of High Schools to Department, due. [H. S. Act, sec. 14 (12).]
- Protestant Separate School Trustees to transmit to County Inspector names and attendance during the last preceding six months. [S. S. Act, sec. 12.]
- Rural Trustees to report average attendance of pupils to Inspector. [P. S. Act, sec. 206.]
- Semi-Annual Reports of Public School Trustees to Inspector, due. [P. S. Act, sec. 40 (13).]
- Semi-Annual Reports of Separate Schools to Department, due. [S. S. Act, sec. 28 (18); sec. 62.]
- Trustees' Report to Truant Officer, due. [Truancy Act, sec. 12.]
- Auditors' Report of cities, towns and incorporated villages to be published by Trustees. [P. S. Act, sec. 107 (12).]

It having been decided to hold two sessions the School of Pedagogy each year, applications for admission to the session beginning on January 17, 1893, should be made to the Deputy Minister on or before the 1st January, next.

Special attention is drawn to a circular issued by the Education Department in which the co operation of inspectors and teachers is requested in the preparation of a collection of pupils' work from the schools of Ontario, to be exhibited at the World's Columbian Exhibition in Chicago, 1893.

The specimens should be sent to the Department through the Inspectors and High School Principals not later than February 15, 1893, and will include the following:

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- 6. Natural Science—Specimens of Plants, Woods, etc., or Mammalia Birds, etc.
- 7. Photographs—Buildings, Grounds, Laboratories, Gymnasiums, etc.
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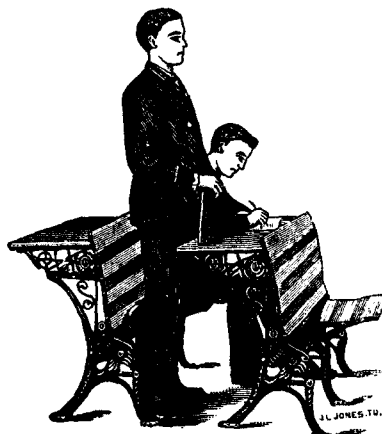
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TORONTO, DECEMBER 15, 1892.

Vol. VI.
No. 15.

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To all our subscribers and readers we most cordially wish a happy Christmas!

AT the recent meeting of the East Middlesex Teachers' Association a committee was appointed to report on what teachers may do to promote the observance of the recently-passed Ontario Act respecting the using of tobacco by school children and minors. This is a very good and, we have no doubt, very necessary move. Such a law unenforced is far worse than no law at all. We know not how it may be elsewhere, but in Toronto it is no unusual thing to see boys who must be within the prohibition age, openly smoking cigarettes, the very worse form of tobacco-smoking we believe, on the public streets.

A COMPARATIVELY influential School Board in England recently advertized for a head master "age between twenty-five and thirty. This is bringing down the age limit with a vengeance. The "deadline" for pastors is said to be drawn by some churches at fifty, which is bad enough in all conscience. But when it becomes general to superannuate masters at thirty, young teachers will be at a premium. They ought to be, if they are going to lay by for their old age—from thirty upwards—from the proceeds of the five years within which they are eligible as teachers.

TOUCHING the subject of learning to write with either hand, referred to in last number, Mr. John Preston True, of Boston, writes us that "a back-hand printing script is the easiest to acquire" with the left hand. Mr. True informs us that he

keeps a large ledger, in which the right-hand page is posted with the right-hand and the left-hand page with the left-hand. His card to us is written one half with the left-hand and the other half with the right-hand. It is hard to say which is the better specimen. Both are quite legible, but no one would suspect that they were written by the same person.

OUR thanks are due to the Copp, Clark Co. for a specimen copy of *The Canadian Almanac* for 1893. It is made even more valuable than hitherto, by the introduction of several new features, among them a list of barristers and solicitors of the province an enlarged clergy list, now including all denominations in the Dominion, etc. Of course all the old features are retained. Every teacher would find it a convenience and help to have access to this treasury of useful information. In it would be found the answer to many questions touching our Dominion and Provincial Governments and Legislatures and various other matters which are being constantly sent to us.

THE Educational Department has announced a session of the School of Pedagogy to begin January 17th and to close about the first of May. This will be a convenience for candidates who were unable to attend the present session, as well as for those who find four months too short to get up the large amount of work prescribed for the course. It will also be an advantage to the High Schools, as many of them engage new teachers in September. It is intended to have a practical examination in December for those who secure "Interim" certificates in April. The coming session will be held in accordance with the present regulations except that the requirements regarding age will not be exacted.

MR. ACLAND the new head of the Education Department in England and his coadjutors, find it sometimes difficult to secure the faithful observance of the new School Act, so far as it provides for free education. There is a tendency on the part of the denominational schools not only to retain their fees, but to associate the provision for free schooling with pauperism. For instance, Mr. Acland found it necessary

to address a parent who had written him on the subject, as follows:—

"I have read with surprise and regret the printed circular issued from Hyde British School, and bearing upon it the names of the managers. It is an astonishing thing that such a circular issued on the 11th of last month should contain these words, 'There is no such thing as free education,' and should add that upon proof of 'poor circumstances' a remission of fees will no doubt be obtained. It cannot be too clearly and widely understood that under the Act any and every parent in England and Wales, irrespective of any question as to his means, is entitled to claim completely free education for his children, and that it is the statutory duty of the Department to see that free education is provided accordingly."

Mr. Acland also hints that further legislation, making such a publication as the circular referred to impossible, may be found necessary.

THE Board of Education of the city of Detroit passed, a few weeks since, the following resolution:—

Whereas, It has been thoroughly and satisfactorily demonstrated that teachers in our schools who have not received their education in our public schools do not show as good results in their work as those who have secured their education in our public schools; now be it

Resolved, That hence no person shall be eligible to teach in our public schools who has not received his or her entire education in our public schools, and shall be a graduate of one of our higher schools.

The *New York School Journal* thinks that in point of narrow-mindedness this action is on a par with that of the strikers at Homestead. "Belong to our clan or you get no work," was their motto. "Graduate from our schools or you cannot teach here," says the Detroit Board of Education. This, it seems to us, is hardly fair to the Homestead strikers. Their action, however ill-advised it may have been, was in the direction of improving the condition of their fellow-laborers everywhere. Its underlying principle was, we must pull together or we cannot obtain our rights and elevate our standing." The Detroit resolution, whether the offspring of trustees or teachers—for the honor of the profession we hope the latter had nothing to do with it—is conceived in a spirit of the narrowest "Know-Nothing-ism." We assume, of course, that the ostensible reason is too absurd to be accepted as the real one.

* English * *

Edited by Fred. H. Sykes, M.A., EDUCATIONAL JOURNAL, Toronto, to whom communications respecting this department should be addressed.

AIDS TO THE STUDY OF MACBETH.

BY J. W. TUPPER, B.A.

WHEN Shakespeare is read for recreation merely, it is not well that the text should be accompanied by a host of critical and explanatory notes, or that the mind of the reader should be burdened with the work of commentators. In the case of the careful student the situation is, however, different; while the casual reader may grasp the general meaning of a play, he cannot by unaided reading form such a clear conception of the workings of the grandest mind in English literature, as does the person who, availing himself of the productions of the many critical students of Shakespeare, investigates the smallest details of the play. Hence I have thought it expedient that a few of the many works on *Macbeth* should be laid before the readers of the Educational Journal, that they may have an opportunity to consult them as occasion requires.

Among the editions of the play that can be strongly recommended, the following may be mentioned:—The *New Variorum Edition of Shakespeare*, Vol. II, edited by H. H. Furness, is undoubtedly the best. It is published by Lippincotts, Philadelphia, and is sold for \$4.00. In this volume are contained the text of the play of *Macbeth*, with critical notes, selected from all the commentators, up to date of publication, articles on the sources of the plot, the date of the play, the characters, the witches, etc. For ordinary class use Rolfe's edition of *Macbeth*, published by Harper Bros., N. Y., containing, besides the text, good explanatory notes, and short notices dealing with historical and critical subjects in connection with the plot and characters, is very suitable. Hudson's edition of Shakespeare, published by Ginn & Co., is also valuable for its notes and comments. Of the English editions, for school purposes the Clarendon Press copy of Clark & Wright is very good. Macmillan & Co. also publish a neat copy of *Macbeth*, edited by K. Deighton. Of late years one or two Ontario High School teachers have used Sprague's edition with success, but Rolfe's edition is, as far as I know, that most in use in Canada and the United States.

The origin of the play is most fully given in the *New Variorum Edition*. Quite a lengthy extract from Holinshed, Shakespeare's principal authority, is given, being fifteen pages in this edition. By the side of this account, which is, of course, not to be regarded as the unvarnished truth, Furness gives a condensation of Chambers' *Caledonia*, Bk. III, ch. VII. Thus a very interesting comparison may be made between the truth of history and the fiction of tradition as given in Holinshed, and the magnificent working up of the plot as we have in the tragedy before us. In the same volume is also given an extract from Wintownis' *Cronykil*, Bk VI, ch. XVIII, which is a metrical rendering of the story of *Macbeth* and *Macduff*.

In regard to the date of the play, as determined both by external and internal evidences, besides what Mr. Furness says, Prof. Dowden's *Shakespeare Primer*, and Mr. Fleay's *Shakespeare Manual* furnish all the necessary information. In the two last mentioned works particular emphasis is laid on the internal evidences, such as the verse texts, and the general style of the plays. The relation of all plays to one another has been determined with considerable accuracy, and in either of these works is clearly set forth. For ordinary use the *Primer* is the more convenient.

For the verbal interpretation of the text with regard to grammatical forms, Abbot's *Shakesperian Grammar* is a necessary reference book for every student of Shakespeare. In other respects almost every well edited copy of *Macbeth* will furnish sufficient notes for a clear understanding of obsolete and difficult forms. In this connection Clarke's *Concordance to Shakespeare* might be mentioned as affording opportunity for the comparative study of the words and phrases in the play.

The critical works on the play are very numerous. To be able to intelligently teach any one of Shake-

speare's works a person should have a good general knowledge of the mind of Shakespeare as revealed in his other works. A very valuable work in this connection is Swinburne's *A Study of Shakespeare*. This volume is a splendid example of high æsthetic criticism and brilliant writing. The work is divided into three chapters dealing with the three periods of Shakespeare's authorship, (1) First Period—Lyric and Fantastic, (2) Second Period—Comic and Historic, (3) Third Period—Tragic and Romantic. The inter-relation of all these plays to one another, so well shown by the author, makes this book particularly valuable. Another work of a somewhat similar purpose is Prof. Dowden's *Shakespeare—His Mind and Art*. In this, besides the general survey of the growth of Shakespeare's mind, is a fine analysis of various typical plays, among which is *Macbeth*. The course which the soul of *Macbeth* takes in its downward career, and his relations with the witches and his wife, are clearly and eloquently presented. This is one of the best books that can be read on the development of the poet's mind, and it will be found helpful in any æsthetic study of Shakespeare.

In Prof. Corson's *Introduction to Shakespeare* are two articles, one dealing with the witch agency in the play, the other with Lady *Macbeth's* relations to her lord. The former essay is an argument that the witches are not the original instigators of the tragic event of the play, but that they were welcomed first as guests to his bosom, and that they have done their duty by him as agents of the devil. In the latter paper the author says, "that the part played by Lady *Macbeth* was in the service of a wifely sympathy with her husband's o'ermastering desire for sovereignty, and not of an independent ambition; a desire with which, as far as the evidence goes in the play, she had originally nothing to do."

J. C. Bueknill, in his work, *The Mad Folk of Shakespeare*, makes a psychological study of the character of *Macbeth* and Lady *Macbeth*. The progress of the man in his criminal career, and the frightful effect on his burdened mind, form the principal subject of his treatment of the play. In the course of his remarks he says, "Macbeth descends from the light a fearful example of a noble mind depraved by yielding to the tempter; a terrible evidence of the fires of hell lighted in the breast of a living man by his own act." "The character of Lady *Macbeth*," says Bueknill, "is less interesting to the psychological student than that of her husband. It is less complex; drawn with a classic simplicity of outline it presents us with none of those balancing and contending emotions which make the character of *Macbeth* so wide and varied a field of study." The turning point of her madness is shown to have been the "state of inactivity into which she fell when her husband broke away from her support into that bloody, bold and resolute career which followed the murder of Banquo." The dramatic character of her end, so full of interest to the student of psychology, is well presented. A pretty picture of Lady *Macbeth*, as she would appear in the flesh, is given in this connection. A plea is made against representing her as a large woman, of coarse, masculine features, and his argument that she is a small, delicate woman of fiery temperament seems to be well borne out by the many gentle references to her throughout the play.

Hazlitt's *Characters of Shakespeare's Plays* has some pertinent suggestions on the structure of this play. He says: "*Macbeth* is done upon a stronger and more systematic principle of contrast than any other of Shakespeare's plays." This idea he develops and shows how far the various personages conduce to this effect. The faithfulness of Shakespeare to nature is pointed out in the person of this hero.

Moulton in his work on *The Ancient Classical Drama* has a chapter, in which, for the benefit of English readers of Greek tragedy, he puts the play of *Macbeth* in the form of the old Athenian drama. Although the essential features of the play remain the same, the setting is completely changed. This treatment of our play is of not much interest to others than those acquainted with the form of the Greek tragedy, but it is instructive as showing how universal is genius, and how immaterial is the form in which a work of art is cast, so long as a grand mind is its creator. The same writer has another valuable book entitled *Shakespeare as a Dramatic Artist*.

In the *Notes and Essays on Shakespeare*, J. W. Hales has an article on the Porter in this play. He combats the theory that the Porter scene is an interpolation, and makes the following points:—(1) That the Porter speech is an integral part of the play, (2) That it is necessary as a relief to the surrounding horror, (3) That it is necessary according to the law of contrast elsewhere obeyed, (4) That the speech we have is dramatically relevant, (5) That its style and language are Shakesperian.

Mrs. Jameson's *Characteristics of Women* contains a sketch of Lady *Macbeth*, along with the rest of Shakesperian heroines. Other books of reference are Hudson's *Life, Art, and Characters of Shakespeare*, Ulrici's *Shakespeare Dramatic Art*, Coleridge's *Lectures*, a work not altogether reliable for he often goes sadly astray, and Uze's *Essays on Shakespeare*.

In the Reviews there are many papers dealing with various subjects connected with the play. In *Fraser's Magazine* of Nov., 1840, March and October, 1841, and Jan., 1842, are four papers written by "an apprentice of the law." The writer treats of the tragedy generally, and goes into an elaborate consideration of the character of *Macbeth* and his lady, and of the source and characterization of the play. He also devotes a chapter to a comparison between *Macbeth*, Satan and Sylla—a rather forced effort it seems to me. In *Macmillan's Magazine*, vols. 16 and 17, are a couple of articles, one on the characters in *Macbeth*, the other on that of Lady *Macbeth*. In vol. 41 of the *Westminster* is a review of Knight's Cabinet Edition of *Macbeth*, and at the same time a criticism of the play. In the *Fortnightly* of 1867 is an article on *Macbeth* and Lady *Macbeth*. P. W. Clayden, the writer, says, "Macbeth and his wife were well mated; she had in her the making of a heroine and he the making of a hero. Ambition destroyed them both." The *Dublin University Magazine*, vol. 65, has an article of interest to the student of philosophy, on the "ethics of *Macbeth*."

CORRESPONDENCE.

INEXPERIENCE.—(1) The lines in the "Cloud,"
"An eagle alit one moment may sit
In the light of its golden wings,"

find their interpretation through the nature of the simile. The sun with "his" burning plumes sailing on the cloud is like the eagle with "its" golden wings outspread—not folded, for it does not settle to rest.

(2) The gerundial infinitive is the infinitive denoting purpose, intention; as in "He went there to see you"; "There is bread to eat." It was distinguished by a special form in Old English from the simple infinitive.

(3) Spencer in his *Philosophy of Style*, to which you no doubt refer, presents the subject of economic order as follows: "A reader or listener has at each moment but a limited amount of mental power available. To recognize and interpret the symbols presented him, requires part of this power; to arrange and combine the images suggested by them requires a further part, and only that part which remains can be used for framing the thought expressed. Hence the more time and attention it takes to receive and understand each sentence, the less time and attention can be given to the contained idea; and the less vividly will that idea be conceived. * * * Let us inquire whether economy of the recipient's attention is not the secret of effect, alike in the right choice and collocation of words, in the best arrangement of clauses in a sentence, in the proper order of its principal and subordinate propositions, in the judicious use of simile, metaphor, and other figures of speech, and even in the rhythmical sequence of syllables."—*Essays*, II., pp. 335-6.

The following letter speaks for itself. We should be glad to find this appeal on behalf of the weaker brethren answered:—

"I wish very much that some of the best English teachers in the Province could be induced to give us, through the JOURNAL, one or two lessons on Wordsworth; I am sure they would be valued by inexperienced teachers like myself.

I should like to see the following questions discussed:

1. Wordsworth is the poet of the few, Tenny-

son of the many.' From this ode (Ode on Intimations of Immortality) show how this is (if it be) the case.

2. Compare Shelley with Wordsworth in the matter of the selection of subject, matter and treatment. Contrast 'The Cloud' with 'Michael' in these respects.

3. Is the 'Ode to Duty' a poem of perception, feeling, thought, or action?

4. Is the poem 'Ode to Duty' a result to any degree of the historical and social circumstances of Wordsworth's day, or does it rest upon less fleeting foundations?"

Science

Edited by W. H. Jenkins, B.A., Science Master, Owen Sound Collegiate Institute.

EDUCATION DEPARTMENT, ONTARIO.—
ANNUAL EXAMINATIONS, 1892.

THE HIGH SCHOOL SENIOR LEAVING AND UNIVERSITY
HONOR MATRICULATION.

CHEMISTRY.

Examiners: { G. CHAMBERS, B.A., M.B.
J. J. MACKENZIE, B.A.
A. C. MCKAY, B.A.

1. STATE Avogadro's hypothesis and give the evidence in support of it. Deduce the general statement that if M be the density (Hydrogen = 1) of any substance in the gaseous state, M grammes of that substance in the gaseous state will occupy approximately 11.16 litres at 0°C and 760^{mm} Bar.

2. 0.6 grammes of a certain metal when dissolved in dilute Sulphuric Acid liberates 558 c.c. of Hydrogen at 0°C and 760^{mm} Bar. A determination of its specific heat gave .25. Find the atomic weight of the metal.

3. (a) Describe experiments illustrating the difference between (i) Nascent Hydrogen and Hydrogen, (ii) Nascent Oxygen and Oxygen.

(b) Write equations illustrating the action of Nascent Hydrogen upon (i) Nitric Acid, (ii) solution of Arsenious Oxide, (iii) Nitric Oxide.

4. Describe experiments illustrating how you would detect

(a) Potassium Nitrite in presence of Potassium Nitrate.

(b) Potassium Sulphite in presence of Potassium Sulphate.

(c) Potassium Chloride in presence of Potassium Bromide.

(d) Arsenic Hydride in presence of Antimony Hydride.

5. (a) How much Oxalic Acid ($\text{C}_2\text{H}_2\text{O}_4$) must be heated with Sulphuric Acid to prepare 145 litres of Carbon Monoxide at 17°C and 800^{mm} Bar?

(b) Explain what occurs when a mixture of Carbon Monoxide and Chlorine is exposed to sunlight and the product shaken up with water.

(c) If 100 c.c. of a mixture of Carbon Monoxide and Hydrogen gas were given you for analysis, describe how you would proceed to determine the volume of each gas in the mixture.

6. Describe, giving equations, what will occur in each of the following experiments:—

(a) A piece of yellow phosphorus is suspended in Chlorine in a bottle.

(b) The product of reaction (a) is shaken up with water.

(c) An electric spark is passed through the air in a closed flask containing also a small quantity of a solution of Potassium Iodide.

(d) Hydrochloric Acid is added to a few crystals of Potassium Chlorate in a bottle and Hydrogen Sulphide is then passed into the bottle.

(e) Lead Nitrate is heated and the gas given off is gradually cooled down to -20°C .

7. Describe the relations which Sodium and its compounds bear to Potassium and its compounds.

8. (a) In the periodic arrangement of the elements Manganese is placed in the same group as Chlorine. Write the formulæ of the compounds of these elements that illustrate this relation.

(b) Write equations showing the action of (i) concentrated Sulphuric Acid on Manganese Dioxide, and (ii) dilute Sulphuric Acid and Potassium Permanganate on Ferrous Sulphate.

HINTS AND ANSWERS.

1. Consult any text-book for Avogadro's hypothesis.

Boyle's and Gay Lussac's Laws support the hypothesis. Since equal volumes at 0° and 760^{mm} contain equal numbers of molecules, and the weights of equal volumes are as M to 1, the molecular weights are as M to 1. Then if 1 gramme of hydrogen at 0° and 760^{mm} occupies 11.16 litres, M grammes of a substance must occupy the same volume.

2. Atomic weight \times Sp. heat = 6.25, a constant
 \therefore atomic wt. = 25
558 cc. of Hydrogen at 0° and 760^{mm} weighs .05 grammes

.6 grammes of metal liberate .05 grammes
 x " " " (i.e., x = at. wts.) liberate $\frac{x}{12}$

But this when Sulphuric Acid is used should be equal to 2 grammes, $\therefore x = 24$ or a multiple. One method confirms the other.

3. (a) (i) Bubble Hydrogen through Sulphuric Acid; no action. Heat copper with Sulphuric Acid. Hydrogen is first liberated and then reduces the Sulphuric Acid, forming Sulphur Dioxide.

(ii) Place a colored cloth in a bottle of Oxygen. No action ensues. Moisten the cloth and liberate the Oxygen from the moisture by Chlorine. The cloth is bleached.

(b) (i) $2\text{HNO}_3 + \text{H}_2 = 2\text{NO}_2 + 2\text{H}_2\text{O}$
This action may be continued.

(ii) $\text{As}_2\text{O}_3 + 6\text{H}_2 = 2\text{AsH}_3 + 3\text{H}_2\text{O}$

(iii) $2\text{nO} + \text{H}_2 = \text{n}_2\text{O} + \text{H}_2\text{O}$.

4. (a) Treat with Permanganate of Potash; if Nitrite present the solution loses color.

(b) Add Iodic Acid and starch; a blue indicates presence of a Sulphite.

(c) Precipitate with Silver Nitrate, filter and wash. Treat with concentrated solution of Ammon. Carb. Filter, neutralize filtrate and add Silver Nitrate.

(d) Ignite and hold a cold porcelain plate in flame. Then treat spots formed by Sodium Hypochlorite. If any disappearance arsenic is present.

5. (a) 145 litres of Carbon Monoxide at 17° and 800^{mm} equal $\frac{273}{290} \times \frac{800}{760} \times 145$ at 0° and 760^{mm} .

22.32 litres of CO at 0° and 760^{mm} weigh 28 grammes; the weight, therefore, of the CO evolved equal $\frac{273}{290} \times \frac{800}{760} \times 145 \times \frac{28}{22.32}$ grammes.

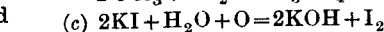
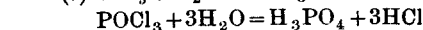
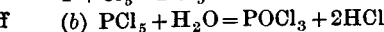
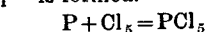
To obtain 28 grammes of CO requires 90 grammes Oxalic Acid, whence the weight of Oxalic Acid required for the amount of CO required equals

$$\frac{273}{290} \times \frac{800}{760} \times 145 \times \frac{28}{22.32} \times \frac{90}{28}$$

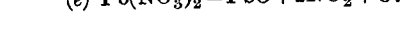
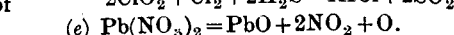
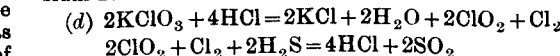
(b) Carbonyl Chloride COCl_2 is first formed; this is decomposed by water, forming Carbonic Acid and Hydrochloric Acid.

(c) Pass in a known volume of Oxygen and explode; note diminution in volume. Add a few drops of strong solution of KOH; any further diminution will be due to Carbon Dioxide which may have been formed. Knowing the proportions in which Hydrogen and Oxygen unite to form water, the amount of Hydrogen which united with Oxygen can be determined.

6. (a) If the Phosphorus is dry and the Chlorine is pure, a quick flash is seen, and a white powder is formed.

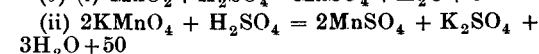
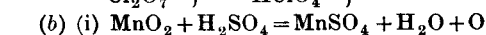
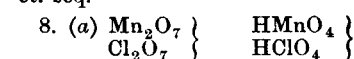


Ozone is formed, and this decomposes the Potassium Iodide.



When the gases are passed through a tube with freezing mixture around, the Peroxide of Nitrogen is liquefied or solidified, while the Oxygen passes on.

7. See Remsen's Inorganic Chemistry, page 478, et. seq.



SIMPLE APPARATUS.

EVERY chemical laboratory requires some convenient method for the rapid preparation of such gases as CO_2 and H_2S , and also apparatus for storing quantities of commonly used gases such as H and O. Mr. W. H. Muldrew, Madoc High school, sends this week the following descriptions of cheap and efficient substitutes for the more expensive pieces:—

GAS GENERATOR AND HOLDER.

I. Soluble gases CO_2 , H_2S .
Take (a) A quinine bottle with wide mouth.
(b) A tube of smaller diameter than (a), (a small lamp-chimney answers).
(c) Corks fitted carefully to both ends of (b) and well soaked with melted paraffine, as a protection from acids. One of these carries a small glass tube with a rubber extension, on which is fitted a pinch-cock, while the other is perforated by three or four holes with or without glass tubes.

(d) A cork collar loosely fitting around (b), and of such size as to serve as a plug for (a).

Fill (a) about $\frac{2}{3}$ full of dilute HCl and introduce into (b) some fragment of limestone, iron sulphide, or other materials as may be required. Close rubber tube by pinch-cock and introduce (b) nearly to bottom of (a). When gas is wanted, make necessary connections and remove pinch-cock. The involved hydrostatic principles will suggest themselves.

II. Insoluble (nearly) gases, O, H, CO, etc.

Take (a) A large bottle, such as acids are bought in.

(b) A cork to match (a), and fitted with (1) a thistle tube reaching to near the bottom, (2) an elbow-tube of equal length and extending outwards and downwards from above a few inches, (3) a short elbow-tube just passing through the cork inwards, and fitted with a rubber extension governed by a pinch-cock outside.

Fill with water and attach (3) to gas supply. When full apply pinch-cock and set away till needed. To get out the gas, make connections and pour a steady stream of water down thistle-tube. Works well for H and O and with alkaline solutions instead of H_2O , answers admirably for CO as ordinarily prepared.

For pinch-cocks, clothes-pins with steel wire springs are excellent substitutes, and may be made still more efficient by driving a two-pointed tack into one jaw with its axis lengthwise.

THERE should be no rule which looks like exacting a penalty for leave to withdraw from the room; for if the child is honest, his request should be granted as a matter of course, and if dishonest, he should be reached in some other way.—*Supt. Edwin P. Seaver, Boston.*

NOT in vain the distance beacons,
Forward! forward! let us range;
Let the great world spin forever
Down the ringing grooves of change.
Through the shadow of the globe,
We sweep into a younger day,
Better fifty years of Europe,
Than a cycle of Cathay. —*Locksley Hall.*

A TEACHER'S character and habits exert an unconscious influence on pupils, but this influence is very different on different pupils. A habit of carelessness will make a careless boy more careless, but a neat and careful boy is not likely to be effected. A bad habit will encourage a boy that has the same bad habit, or a tendency to it. While it will repel a boy of an opposite tendency already established. —*Palmer, in Science of Education.*

The Educational Journal.

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A JOURNAL DEVOTED TO LITERATURE, SCIENCE, ART
AND THE ADVANCEMENT OF THE TEACHING
PROFESSION IN CANADA.

J. E. WELLS, M.A. - - - - - Editor.

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1. Any person who regularly removes from the Post Office a periodical publication addressed to him, by so doing makes himself in law a subscriber to the paper, and is responsible to the publisher for its price until such time as all arrears are paid.

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✻ Editorials. ✻

TORONTO, DECEMBER 15, 1892.

DR. RICE AND THE AMERICAN SCHOOLS.

DR. RICE is continuing in the *Forum* his interesting and instructive series of papers upon the Public School system of the United States. In the December number he contrasts two systems of supervision, as illustrated in the cities of St. Louis and Indianapolis, respectively, greatly to the advantage of the latter. In St. Louis four superintendents are employed in making day-to-day visitations of the schools. Now it is evident that under such an arrangement the power put into the hands of these superintendents is tremendous. They may, in fact they must, if they perform the duties required of them, virtually mould the whole system of teaching pursued in the city. If well educated and broad-minded men, who have thoroughly studied the science, history and methods of teaching, it is in their power to raise the city schools to a very high level. We may, however, just add, in passing, that such men would, in our opinion, best accomplish this object, not by seeking to reduce the teaching and discipline to a dead uniformity, in accordance with some ideal

which they may have set up in their minds as the best or perfect one, but by giving to the individuality of each teacher the freest possible play, consistent with conformity to the most approved general principles. But if Dr. Rice's observations and descriptions may be relied on, the very opposite of all this is the case. The worst possible method seems to have been adopted and to be carried out with a mechanical rigidity which can hardly fail to produce almost the worst possible results. Setting out, apparently, with the view that the true test of education is the rapidity and accuracy with which facts of certain classes are stored away in the pupils' minds, they test the efficiency of the teachers by an examination of the pupils, and this examination is directed to ascertain, not what the children can do—to what extent their powers of attention and thinking and reasoning are being developed—but what they know, as measured by a technical standard. That being the case the main efforts and energies of the teachers are directed to the storing of the young minds, or rather memories, placed under their charge, with facts of the particular kind which they are expected to bring forth when called upon. The natural result is the prevalence of harsh and mechanical methods, as indicated by the following extract from Dr. Rice's article:

"To secure the desired results is now her aim, and to secure them the child is ever relentlessly pushed. The fact that the child is a child is entirely forgotten, and the characteristic feature of the St. Louis schools—absolute lack of sympathy for the child—ensues. The unkindly spirit of the teacher is strikingly apparent; the pupils, being completely subjugated to her will, are silent and motionless; the spiritual atmosphere of the class-room is damp and chilly.

"In one regard the treatment of the children cannot be considered otherwise than barbarous. During several daily recitation periods, each of which is from twenty to twenty-five minutes in duration, the children are obliged to stand upon the line, perfectly motionless, their bodies erect, their knees and feet together, the tips of their shoes touching the edge of a board in the floor. The slightest movement on the part of the child attracts the attention of the teacher. The recitation is repeatedly interrupted with cries of 'Stand straight,' 'Don't bend the knees,' 'Don't lean against the wall,' and so on. I heard one teacher ask a little boy, 'How can you learn anything with your knees and toes out of order?' The toes appear to play a more important part than the reasoning faculties. The teacher never forgets the toes, every few moments she casts her eyes 'toe-ward.'

"That such a barbarous procedure should be tolerated in a civilized community to-day is surprising; and when we consider that it exists in a city which may be called the home of the kindergarden, it becomes truly marvellous."

Under the method of inspection prevailing in Minneapolis, on the other hand, the superintendent directs his attention to the teacher, rather than to the pupil. Instead of taking charge of the school himself for the time being, he devotes his time chiefly to observing the way in which the teacher does her work—a much more rational and hopeful method, seeing that it affords at the same time an equally good means of ascertaining what the children are capable of doing, the manner in which their minds are trained to work, the progress they are making from month to month, and the relations of sympathy, trust and affection, or the opposite, which obtain between teacher and pupils—a most important consideration. An illustration of the results of this method, as seen in a single department of one of the schools will be found in one of the practical departments of this paper. We commend it to the attention of our readers, not so much as the result of any one particular method either of inspection or of teaching, as showing what can be made of the work of instruction by a teacher who understands her work, whose mind and heart are in it, and who is not "cabined, cribbed, confined, bound in," by the rigidity of a cast-iron system, or the necessity of cramming pupils for a coming examination of the type with which we all are but too familiar.

ETHICS IN THE SCHOOL-ROOM.

PROF. G. H. PALMER, of Harvard University, writing in the *Journal of Education*, makes a distinction between ethical teaching and moral training in the schools, which is worthy of thoughtful consideration, though we are not quite prepared to endorse his conclusions to their fullest extent. That is, however, largely a question of definitions, of the distinction drawn between the two things. Two or three quotations will throw some light upon this question *e. g.*:

"Ethics is the science of conduct; morality its practice. The one has its rise in conscious and ordered knowledge; the other more often in inherited and half instinctive custom."

"Consciously directed conduct is vague, slow, and vacillating. In the region of the personal life, especially during the early years, consciousness distorts and breaks up that swiftness, sureness, and firmness which characterize instinctive action. Virtue is not knowledge but habit, and ready habit, so far from being induced by knowledge, is, especially in the initial stages of knowledge, enfeebled or altogether broken."

"But the benumbing influence which results from the failure to comprehend the abstract statement of a living thing is not the gravest danger. For here and there a pupil will discover what his teacher is talk-

ing about. Moral consciousness will be stirred, the self-questioning spirit aroused, and instead of entering heartily into outward interests the little moralist will henceforth occupy himself with analyzing his motives, assessing the worth of his performance, and cringing under the lash of duty. Nothing more easily becomes morbid than the young conscience. Particularly in New England, and among those of the finest fibre, the disease of over-conscientiousness is widespread."

Prof. Palmer goes on to maintain that if ethics, the conscious realization of moral principles, is unfit for the teaching of schools, it should always have an honored place in college instruction. With that we have not now to do. We are not yet sure that we understand Prof. Palmer's meaning. If by ethical teaching he means study of philosophical text-books and formal lectures on the abstract principles of ethics we are quite ready to agree with him. But if he is of opinion that the work of moral training can be effectively carried on without any reference to motives; that the teacher's sole aim is to correct wrong habits and form such as he deems virtuous, without trying to induce moral thoughtfulness in the child, we have no faith in such a course, and can predict nothing but failure as its result. Every child is a moral agent. The very fact that he is endowed with a moral nature, a conscience, and that this is so easily reached, as Prof. Palmer's dread of "over-conscientiousness" implies, seems to us the best of all reasons why that conscience should be cultivated and strengthened. Of course, in this as in all other kinds of teaching, a sound, not a morbid development, should be aimed at. But there is surely a great difference between training a child to do this thing and avoid that, as a matter of habit, and teaching him to do the one because it is *right* and avoid the other because it is *wrong*. The child's judgment as to the specific right and wrong may be often mistaken, as are those of older people, but he cannot, in our opinion, too soon begin to act on deliberate moral judgments. We do not mean that an ethical system should be taught him, but that he should be encouraged and sometimes aided in deciding questions of conscience for himself. Habits of conduct not based on conviction may be superseded by other habits, when surroundings are changed, but the habit of acting conscientiously goes deeper and will usually endure. Subject to the exceptions indicated, we heartily agree with the concluding words of Prof. Palmer's paper:

"Though ethical training, too, may have no place in the schools, it should not be forgotten that moral training is and must be perpetual there. From the very beginning of his life, the youth inhabits a moral world

and encounters a moral order wherever he turns. Institutions encompass him. Each person is not called upon to think out and construct for himself a moral universe, but rather to adjust himself harmoniously to the one in which he finds himself. And in this work of assisting natural adjustment to already existing institutions, every well-ordered school may bear a helpful part. The help will come not so much through conscious appeal to will and intelligence, or instruction, as through what may be called moral suggestion, that is, the unconscious influence by which the little life is surrounded. For purposes of moral discipline, the management and temper of the school are more important than any text-book. A courteous, thorough, honest teacher is engaged in moral suggestion all day long. Care, too, should be taken that the ideals of good form which prevail in the school are wholesome and remote from pettiness. And, lastly, no more helpful stimulus can be given to a young man than to meet every day a teacher whom he admires and wishes to resemble."

CHRISTMAS AND ITS CUSTOMS.

WE learned the other day of a case in which a gentleman donated a considerable sum of money to a most worthy charity, saying that the amount had been saved for the purpose instead of being expended in Christmas gifts to members of the family and friends. While we heartily appreciate the motive of those who thus deny themselves—we were about to say "and their relatives and friends," but that might sound satirical and we are not writing in a satirical vein—we cannot but feel, on further reflection, some serious doubts as to the wisdom and *rightness* of this particular form of self-denial. A friend, to whom we mentioned the matter, said, "It would have been a very easy thing for me to have disposed of the Christmas business by giving the twenty dollars which I have set apart for gifts, to some charitable institution," the tone seeming to imply that from the purely selfish point of view it would have been a decided relief and have saved a good deal of time and perplexity to have done so. But then she went on to point out some of the good results which attend the old fashion of Christmas gifts which could not be gained from the wholesale bestowment of the amount upon the very best religious or benevolent society in the world. It is, indeed, no small blessing that it compels even members of the same family to think particularly of each other for weeks or months, with a view to conferring a pleasure, while giving or sending a token of love. In fact, there are many scattered

families whose members would be in some danger of almost forgetting each other but for this delightful custom. The same is true to a still greater extent in the case of old-time friends. Even parents and children, and brothers and sisters living in the same household are often, we have reason to believe, drawn nearer to each other at Christmas than at any other time. The little token of loving remembrance—and be it remembered that its true value is by no means measured by cost in money—the little token, which carries with it the assurance that the receiver has been in the thoughts of the giver for weeks or months, and that his or her known tastes and habits have been carefully considered, fulfils often a noble mission. True, there is danger of abuse, as when the tyrant custom or fashion—or the fear of being outdone by others, or of being thought mean or stingy, constrains the weak-minded to go beyond their means and makes Christmas a time to be dreaded for the pecuniary burdens it brings, or the extravagances it fosters. Against such abuses let the wise set their faces as a flint.

But above all for the sake of the children let the good old Christmas customs be maintained. To multitudes of children it is the day of days. They look forward to it and backward to it during the greater part of the year. Who would not gladly deny himself some little comfort or indulgence in order to summon to the beaming face of childhood the flush of joy anticipated, and joy realized, which are associated with this day? But let it be the joy of giving, no less than the joy of receiving. We have the very highest testimony that the former is the higher type of blessedness, and it is a type which can easily be cultivated in most child-natures. There are few moral influences more salutary or more lasting in the life of the child than those which are wrought out during the process of a self-denying purpose followed for days or weeks to make others happy by Christmas gifts lovingly chosen and bestowed. Let us keep up the old Christmas customs so far as they are good and elevating. A blessing is in them.

WHILE we willingly publish the article which appears elsewhere on the limiting of third-class certificates, we cannot say that we are convinced by the writer's reasonings. We can still see no good reason why, in all except very peculiar cases, the young man or woman who has obtained a third-class certificate may not in three years fit himself or herself for one of higher grade. It seems to us that every ambitious teacher, who means to remain in the profession, will strain every nerve in the effort.

Primary Department.

A BRIGHT WORKSHOP.

ARNOLD ALCOTT.

SPONTANEITY was evident everywhere. Miss Bright never found fault. She always praised the effort rather than the result, and so encouraged everybody. There was one thing which she never did, and that was scold. At a summer school I heard the following remarks made by a wise educationist. He said:—

"If you were to practise five hours a day in music, or sketching, or any other occupation for a year, you would be accomplished in that at the end of the year. Teachers, do you want to be an accomplished scold, after five-hours-and-a-half practice a day, for a year?"

The children were at the multiplication table of eight. They had been taught according to the methods formerly given for the four simple rules in these columns of the JOURNAL. The table was taught by means of addition. Now, Miss Bright was drilling and fixing this work on the memory, so she said:

"Sevens," and pupils put down fifty-six; "nines," and pupils wrote seventy-two, and so on. It is not necessary to say eight sevens, eight nines, and so on, because the pupils understand that we are drilling on the table of eight. The teacher gave about six numbers in this way.

The next work is to add a constant figure, for example four. Thus, "fives," the answer is forty-four; "sevens," the answer is sixty.

This is followed by a drill in the factors involved in this table.

Pupils are asked this, "What will one factor be?"

They say "Eight."

Teacher says "Twenty-four."

Pupils put down 8×3 "sixty-four," and pupils write 8×8 .

The next sequence is division by eight.

The teacher says, "Into forty-eight;" pupils write six.

"Into seventy-two;" pupils write nine.

To make this work systematic have the slates or pads prepared at the beginning of the lesson thus:—

1	2	3	4
56	44	8×3	6
72	60	8×8	9
So on	So on	So on	So on
So on	So on	So on	So on
So on	So on	So on	So on
So on	So on	So on	So on

The answers to one set of questions to be placed one under the other, beginning in

column marked one; then in number two column and so on.

Another method of reviewing past tables is as follows. Its only fault is that the correction would take up rather too much time. The teacher may give the following as a time test. These numbers are in a column so:

4 Opposite these are to be placed in
9 the first column the products when
7 these are multiplied by *two*; in the
6 next column by *three*; then by *four*;
2 then by *five*, and so up to the table
3 being learned at the time.

8 Another plan is to say, "Pupils take the even numbers and multiply by all your tables, or the odd numbers"

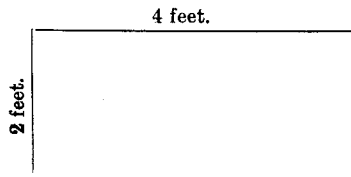
When giving methods in Arithmetic some time ago, I said not to let the scholars put down the multiplier, the divisor, or the carrying figure. Now, in teaching problems, of course this does not hold, because in the latter we wish not for the result alone, but for the means whereby that result was reached, and therefore the work must be indicated.

"Do you ever have your pupils make their own problems?"

"Well, no, I had not thought of doing so, Miss Bright."

"Then let me advise you to try assigning problems to be made by the pupils as homework."

There are some very interesting problems sketched as well as worked.



How much will it cost to trim this table drape for our schoolroom, with fringe at 15c. a yard, the drape being 4 feet long by 2 feet wide?

$$4 \times 2 = 8 \text{ feet.}$$

$$2 \times 2 = 4 \text{ feet.}$$

$$8 + 4 = 12 \text{ feet, but } 3 \text{ ft} = 1 \text{ yard.}$$

$$\therefore 1 \text{ "} = \frac{1}{3} \text{ "}$$

$$\therefore 12 \text{ "} = 4 \text{ "}$$

$$15c. \times 4 = 60c.$$

Again, how much ribbon will it take to stretch round a two-inch square?

Again, what will it cost to purchase a silk curtain for our blackboard. We need one yard and a quarter, and the silk is worth twenty cents per yard?

So much for new methods in Arithmetic. I have new hints in Opening Exercises, in Language Work, in Oral Expression, and also some devices for making "Charts," "things of beauty and a joy forever." Manilla paper and oil crayon are not the prettiest things we have seen. But space does not permit now. Perhaps the new music chart, and the new ideas in the teaching of music, may be developed at a future time.

I promised, under the head of "Supplementary Reading," to give you some dialogues in this number. But, having written this article especially for Second Book classes, and finding it longer than I expected, I shall have to withhold my promise until the New Year, for which my best wishes to you are given.

CO-OPERATION.

RHODA LEE.

I HAVE in my mind to-day the little folks of the ungraded schools. The children of the primary classes in graded schools get every attention. Their teacher is not burdened with the work of five or six divisions. She has her own little flock engaged on the same work, and all on or about the same level. How different in the ungraded school! Considering the manifold duties of the teacher, it is surprising that the little ones get as large a share of the time as they do. Preparation for the work of the higher classes occupies so much of the teacher's home-time that many of the good ideas she has for the little folks are simply crowded out.

A teacher who realized the needs of the primary classes, with very great wisdom set her seniors to work for them. The idea was excellent. Co-operation and sympathy between the higher and lower classes is a most desirable thing.

In a quiet, earnest talk with the older scholars she managed to interest them in the work of the others. And not the work only, but in the general welfare of the children. One little fellow who was addicted to teasing, frightening, and otherwise annoying the scholars on the way to and from school, was put in the care of some particularly thoughtful and reliable boys, and the effect was good.

But as to school-work. During the first week the pupils of the higher divisions made a collection of pictures suitable for language lessons and story writing. The week following, a collection of stories culled from Sunday-school and other papers was made for supplementary reading. In a variety of ways they displayed their willingness to work. Slate-frames were covered with bits of felt, calendars cut up and boxes of numbers made, spelling books ruled, lead pencils sharpened and whittled at one end to resemble a pen, (this for an exercise in pen-holding) and an honour-roll made on the black-board. So did the seniors assist.

But this is only one side of the story. If the children had been allowed to take all this help as a matter of course, and without any feeling of gratitude, it would have been all wrong. But such was not the case. The kindness was appreciated, and as a proof of their appreciation, the teacher suggested that they might do something in return. With her help they made pen-wipers for everyone in the room who used ink. They also remained after school and practised for a concert, to which they treated the others on Friday afternoon.

The sympathy and co-operation in that class, while not without jars at times, was beautiful to see. There was wonderful unison in the working of the school. Self-control and thoughtfulness characterized the older ones, and the good example was not lost upon the little ones.

HOW'E'R it be, it seems to me
'Tis only noble to be good.

Kind hearts are more than coronets,
And simple faith than Norman blood.

—Locksley Hall

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO—
ANNUAL EXAMINATIONS, 1892.

THE HIGH SCHOOL JUNIOR LEAVING AND UNIVERSITY PASS MATRICULATION.

ENGLISH POETICAL LITERATURE.

Examiners: { W. J. ALEXANDER, PH.D.
J. E. BRYANT, M.A.
F. H. SYKES, M.A.

NOTE.—Candidates for Matriculation will take sections A and B. Candidates for the Junior Leaving Examination will take sections B and C.

A.

1. Describe the poem, "Geraint and Enid," so as to give a clear and accurate idea of it to a person unacquainted with any of Tennyson's works.

(N.B.—The candidate is warned against spending much time on the story, which ought to be outlined in the briefest possible way; whereas a full description is expected of the style, versification, merits and defects, as well as of the general impression left on the reader by the poem. These points may be illustrated, in as far as the candidate deems proper, by short quotations.)

B.

2. (a) Tell in your own language the story of "The Revenge," reproducing, in as far as you are able, the spirit of the original.

(b) What are the characteristics of this poem which make it unlike the other poems of Tennyson prescribed for study?

3. Describe the life and character of the person who is supposed to give utterance to "Locksley Hall" in as far as these appear in the poem itself.

4. Give a clear, concise and accurate interpretation of the meaning of the following passage, clause by clause, carefully indicating the connection of thought:—

Ev'n now we hear the inward strife,
A motion toiling in the gloom—
The Spirit of the years to come
Yearning to mix himself with Life.

A slow-develop'd strength awaits
Completion in a painful school;
Phantoms of other forms of rule,
New Majesties of mighty States—

The warders of the growing hour,
But vague in vapor, hard to mark;
And round them sea and air are dark
With great contrivances of Power.

Of many changes, aptly join'd,
Is bodied forth the second whole.
Regard gradation, lest the soul
Of Discord race the rising wind;

A wind to puff your idol-fires,
And heap their ashes on the head,
To shame the boast so often made,
That we are wiser than our sires.

5. Either—Quote one of the two poems, "St. Agnes' Eve," "Of old sat freedom on the heights."

Or—In regard to each of the two poems, "Locksley Hall" and "The First Part of the May Queen," describe the stanza employed, the number of accented syllables in each normal line, and the form of the predominant foot; also point out the peculiarities in versification which make the rhythm of the "Conclusion of the May Queen" different from that of the "First Part."

6. (a) Mention some of the chief peculiarities of poetry as distinguished from prose.

(b) In the following extract point out some of the cases in which the expression is markedly poetical, and such as would not be employed in simple prose.

It little profits that an idle king,
By this still hearth, among these barren crags,
Match'd with an aged wife, I mete and dole
Unequal laws unto a savage race,
That hoard, and sleep, and feed, and know not me.

* * * * *
* * * * * Life piled on life
Were all too little, and of one to me

Little remains: but every hour is saved
From the eternal silence, something more,
A bringer of new things; and vile it were
For some three suns to store and hoard myself,
And this grey spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought.

C.

Upon the hour when I was born,
God said, "Another man shall be,"
And the great Maker did not scorn
Out of Himself to fashion me;
He sunned me with His ripening looks,
And Heaven's rich instincts in me grew,
As effortless as woodland nooks
Send violets up and paint them blue.

Yes, I who now, with angry tears,
Am exiled back to brutish clod,
Have borne unquenched for four score years
A spark of the eternal God;
And to what end? How yield I back
The trust for such high uses given?
Heaven's light hath but revealed a track
Whereby to crawl away from Heaven.

Men think it is an awful sight
To see a soul just set adrift
On that drear voyage from whose night
The ominous shadows never lift;
But 'tis more awful to behold
A helpless infant newly born,
Whose little hands unconscious hold
The keys of darkness and of morn.

Mine held them once; I flung away
Those keys that might have open set
The golden sluices of the day,
But clutch the keys of darkness yet;—
I hear the reapers surging go
Into God's harvest; I, that might
With them have chosen, here below
Grope shuddering at the gates of night.

O glorious Youth, that once was mine!
O high Ideal! all in vain
Ye enter at this ruined shrine
Whence worship ne'er shall rise again;
The bat and owl inhabit here,
The snake nests in the altar-stone,
The sacred vessels moulder near;
The image of the God is gone.

7. (a) In a single phrase or short sentence, state the subject of this poem.

(b) In a single phrase or short sentence state the main idea brought out in each of the eight-line stanzas, and show the connection of each of these ideas with the subject of the poem.

(c) State frankly your opinion of this poem, and what, if anything, you admire in it.

UNITED COUNTIES OF STORMONT, DUNDAS AND GLENGARRY — UNIFORM AND PROMOTION EXAMINATIONS.

NOV. 24TH AND 25TH, 1892.

ARITHMETIC.

CLASS II.

(ALL the work must be put down. Only ten questions may be worked.)

1. Find the sum of 9824, 7968, 7492 and 10596.
2. Find the difference between 860542 and 1097289.
3. What is the difference between one thousand and one, and one hundred and one thousand?
4. Find the value of $8945 - 3786 + 101 - 1009$.
5. Find 9 times the sum of 8754 and 6964.
6. How far would a steamboat run in 17 days of 24 hours each at 27 miles an hour?
7. Divide 879125 by 5; by 25; by 375.
8. A has \$84; B has twice as much as A, and C has twice as much as A and B together. How much have they altogether?
9. I bought 8 sheep at \$3.50 each, but two of them died. At what rate each must I sell the remainder to gain \$8.00 on the transaction?
10. A teacher earns \$728 a year and pays \$2 per week for board. How much does he save a week? (52 weeks in a year.)
11. Write out the table of 8 times.
Values—10 each.

ARITHMETIC.

CLASS III.

(All the work must be put down. Only ten questions to be attempted, in which No. 1 and No. 2 must be included. No value for Nos. 1, 2 and 10 unless the work is absolutely correct.)

1. Find the product of the sum and difference of 100,865 and 19,428.
2. Divide five millions by 89.
3. A, B and C buy a farm worth \$5,700 on equal shares. A not having his money by him, B pays \$2,500 and C \$3,200; how much does A (1) owe B; (2) how much does he owe C?
4. When wheat is 80 cents per bushel, and wool 35 cents per lb., how many lbs. of wool should be given in exchange for 105 bushels of wheat?
5. How many times can 2 days, 11 hours, 50 minutes, be subtracted from 29 days, 22 hours?
6. A man exchanges 59 acres of swamp land, worth \$13 per acre, for 19 acres of tilled land. What should he get for 9 acres of the latter?
7. A merchant pays \$18.60 more for a load of 125 bushels of potatoes than he would had there been 30 bushels less in the load. How much did the load cost him?
8. How many pickets 3 in. wide, placed 3 in. apart, are required for 40 rods of fence?
9. Two men start from the same point and walk away from each other in a straight line. If one walks at the rate of 3 miles, 165 rods in an hour, and the other at the rate of 2 miles, 155 rods, how far apart will they be at the end of 7 hours?
10. Write out the table of Linear Measure.
11. A farmer sold a merchant 24 doz. of eggs at 16½ cents per doz.; and 24 lbs. butter at 20½ cents per lb. He gets 12 lbs. of tea at 74 cents per lb. How much is still coming to him?
Values—10 each.

ARITHMETIC.

CLASS IV.

(Only ten questions are to be worked, of which No. 1 must be one. All the work is to be put down.)

1. Multiply 340,650 by 9870, and divide the product by 7989. (No value to be given for this unless the work be absolutely correct.)
2. The bushel contains 2150.4 cubic inches. How high must a bin that is 8 ft. long and 3 ft wide, be, to contain 100 bushels?
3. Find the value of four and three-quarters, minus seven-eighths, plus five and three-fifths, minus five twenty-fourths, plus seventeen eight-eighths, minus two and eight ninths, minus seven and twenty-nine ninetieths.
4. John Smith borrows from James Stowell \$650.50, on the 24th of October of the present year, agreeing to repay it on the 24th of December following, with interest at the rate of six per cent. Write out the note he would give.
5. How much will John Smith have to pay to take up the note when due, (366 days to the year, and no days of grace)?
6. If for an article costing \$49, a man gets \$56, what is his gain per cent.? If a man gets only \$65 for an article that cost \$75, what is his loss per cent.?
7. When oats are 34 cents, and peas 45 cents a bushel, what is the exact amount a man should pay for 34 lbs. of a mixture of peas and oats, the peas being 25 per cent. of the whole weight?
8. A garden is 4 rods wide and 10 rods long. How many feet (board measure) of one-and-a-half inch plank will be required to make a four foot walk around the outside of the garden?
9. A piece of land contains one-fifth of an acre, and is 16 yards wide. How many feet long is it?
10. A man sells cordwood, which is long to be of standard length, at \$3.90 per cord. After getting his pay, it is found that the wood is only 3¼ ft. long. What does he really get a cord?
11. A farmer hired a boy for a year and agreed to give him \$64 and a horse. The boy quit at the end of 9 mos., and received \$30 and the horse. What was the horse worth?
Values—10 each.

For Christmas.

A LETTER TO SANTA CLAUS.

DEAR SANTA CLAUS,—I write to you
To ask you to remember
A boy who lives in our street,
When you come next December.

He is a good boy, Santa Claus,
He's better far than I ;
Once when I hit my sister Kate
So hard it made her cry,

He said to me, "Why, Jimmy Hart !
How could you hurt her so ?
I'd never treat my sister thus,
But always kindness show."

He's always good when he's in school,
And always kind at play.
And when he's out of school he helps
His mother, every day.

His father died a year ago,
And they are very poor.
Last Christmas when I showed my gifts
(I'd ten, I think, or more),

I said, "Now, Harry, show to me
Your books and all your toys."
He said, "Oh Santa Claus is not
Acquainted with poor boys."

So I would like to introduce
My dear friend, Harry Gray,
And will you not remember him
On the next Christmas day ?

And if you have not toys enough,
Then why not pass the door,
This year, of those who have so much,
And give some to the poor ?

—School Journal.

CHRISTMAS BELLS.

I HEARD the bells on Christmas day
Their old, familiar carols play
And wild and sweet
The words repeat
Of peace on earth, good-will to men !

And thought how, as the day had come,
The belfries of all Christendom
Had rolled along
The unbroken song
Of peace on earth, good-will to men !

Till ringing, singing on its way,
The word revolved from night to day,
A voice, a chime,
A chant sublime,
Of peace on earth, good-will to men !

But in despair I bowed my head,
"There is no peace on earth," I said,
For hate is strong,
And mocks the song
Of peace on earth, good-will to men !

Then pealed the bells more loud and deep,
"God is not dead, nor doth he sleep !
The wrong shall fail,
The right prevail,
With peace on earth, good-will to men !"

—Longfellow.

FOR NEW YEAR'S EVE.

RING out wild bells to the wild sky,
The flying cloud, the frosty light :
The year is dying in the night
Ring out, wild bells, and let him die.

Ring out the old, ring in the new,
Ring, happy bells, across the snow :
The year is going, let him go ;
Ring out the false, ring in the true.

Ring out the grief that saps the mind,
For those that here we see no more ;
Ring out the feud of rich and poor,
Ring in redress to all mankind.

Ring out a slowly dying cause,
And ancient forms of party strife ;
Ring in the nobler modes of life,
With sweeter manners, purer laws.

Ring out the want, the care, the sin,
The faithless coldness of the times ;
Ring out, ring out my mournful rhymes,
But ring the fuller minstrel in.

Ring out false pride in place and blood,
The civic slander and the spite ;
Ring in the love of truth and right,
Ring in the common love of good.

Ring out old shapes of foul disease ;
Ring out the narrowing lust of gold ;
Ring out the thousand wars of old ;
Ring in the thousand years of peace.

Ring in the valiant man and free,
The larger heart, the kindlier hand ;
Ring out the darkness of the land,
Ring in the Christ that is to be.

School-Room Methods.

WORK IN GEOGRAPHY.

THE pupils want to know just what you want to know about any new thing that you see. What is it good for? Of what use is it and why?

If teachers will ask such questions as these of their pupils and follow them out in detail, they will teach the most important facts of geography, and more than that they will teach the importance of these facts and their relations. Most countries owe their importance to the fact that they produce something that mankind use in one way or another. Study, then, the productions, at least the most important ones, and also give the reasons why certain countries have certain productions and not others. This will bring in matters of temperature, rainfall, elevation, latitude, nature of the soil, etc.; and the children will see why they are required to learn these facts, and they will seem realities. Find out what other countries have the same productions, and which produce the greater amount, with causes, etc. Many of the teachers would astonish their pupils by asking them why the United States produces large quantities of corn, while England produces none, or why the coasts of Mexico have productions different from the inland regions, or why Russia is anxious to get control of Constantinople, etc.

But the use of a country does not depend alone upon what it can produce; it also depends upon its advantages for sending away what is not used at home, and also for getting the products of other countries which it does not have. The study of this question will involve the proximity of a country to the sea coast, its navigable rivers, railroads, canals, etc., thus bringing out the vital points and showing their importance. The pupils are thus learning the facts as means to an end, and not as a large assortment of dry, disconnected ends.

Much value may be derived from the study of the various countries of the earth, as to their desirability as a place of residence, especially with the older pupils. Ask them if they would rather live in Mexico than England, and why? Always why? Interesting and animated debates may often be carried on informally by different members of a class in this way.

A country may also be studied with reference to the interesting and curious facts that may be found out about it. Italy, England, Egypt, etc., offer many illustrations.—Country Schools.

ARITHMETICAL ANALYSIS BY COMPARISON.

BY M. A. WHITNEY.

THE method in arithmetic which requires the greatest amount of thought and reasoning on the part of the pupil, and yet is simply and easily understood, is undoubtedly the best one to follow.

It is, at least, far superior to those mechanical processes which refer every problem to a set rule or formula.

Arithmetical analysis assumes the unit to be the fundamental idea of arithmetic. It compares numbers through their relation to the unit. It comprehends a fraction by a clear apprehension of the

relation of the fractional unit to the integral unit. The simplicity and beauty of this process is seen in the fact that the unit is the fundamental idea of arithmetic. Arithmetic begins with the unit, all numbers arise from a repetition of the unit, fractions have their origin in the division of the unit. Hence, in the comparison of numbers, the unit naturally becomes the basis of the reasoning process. We reason to the unit, through the unit, and from the unit.

A few examples will illustrate the manner in which this method may be applied to the various subjects of arithmetic. Take first a simple example:

If 3 apples cost 6 cents, how much will 7 apples cost?

The following is the analysis for the blackboard:

$$\begin{aligned} 3 &= 6c. \\ 1 &= 2c. \\ 7 &= 14c. \end{aligned}$$

The sign of equality is to be interpreted according to the meaning of the problem, and thus any apparent incongruity is avoided. The complete oral analysis of the above problem, which the pupil should in all cases be required to give, is as follows: If 3 apples cost 6 cents, 1 apple will cost one-third of 6 cents, or two cents; seven apples will cost seven times 2 cents, or 14 cents.

Take an example in fractions:

If $\frac{3}{4}$ of a yard of cloth cost 32 cents, how much will $\frac{1}{2}$ of a yard cost?

$$\begin{aligned} (\text{Cost.}) \\ \frac{3}{4} &= 32c. \\ \frac{1}{4} &= 16c. \\ \frac{1}{2} &= 48c. \\ 1 \text{ yd. or } \frac{4}{4} &= 48c. \\ \frac{1}{4} &= 6c. \\ \frac{1}{8} &= 42c. \end{aligned}$$

This is a simple and concise analysis and the method of comparison by reducing to unity is strictly followed. The explanation of a problem written out in this manner is so simple that it will not be given here.

To the principles of percentage this method may be applied to better advantage than to any other subject of arithmetic.

Take such a problem as, 18 is 3 per cent. of what number?

$$\begin{aligned} 3\% &= 18. \\ 1\% &= 6. \\ 100\% &= 600. \text{ Hence } 18 \text{ is } 3\% \text{ of } 600. \end{aligned}$$

The same clear and complete oral analysis, as given in the first problem, should follow the written work. Pupils should not be allowed the short cut of calling a certain per cent. such a fractional part of 100 until the idea of percentage is well fixed in their minds. Percentage is a decimal relation and should be treated as such.

Take one of the more difficult problems of percentage:

A man bought a pair of horses for \$450, which was 25 per cent. less than their real value, and sold them for 25 per cent. more than their value. What was the gain?

$$\begin{aligned} 100\% &= \text{the real value of the horses.} \\ 100\% - 25\% &= 75\%, \text{ or the price paid.} \\ 100\% + 25\% &= 125\%, \text{ the price received.} \\ 75\% &= \$450. \\ 1\% &= \$6. \\ 125\% &= \$750, \text{ the price received.} \\ \$750 - \$450 &= \$300, \text{ the gain.} \end{aligned}$$

A problem worked in this manner explains itself, but the pupil has been compelled to do considerable thinking and reasoning, as each step has been taken.

One more example of a different nature will be sufficient to illustrate this method in percentage:

A man having \$250, spent \$80; what per cent. of his money did he spend?

$$\begin{aligned} \$250 &= 100\%. \\ \$1 &= \frac{2}{5}\%. \\ \$80 &= 32\%, \text{ what he spent.} \end{aligned}$$

The same method may be applied to denominate numbers, interest, proportion, etc. It is logical and simple. It involves the use of a certain form of the equation, and thus leads the pupil up to algebra. Teachers who use it never complain of pupils asking them whether they shall divide or multiply in a given problem, or "which is the base and which the percentage," "which term would you place first and which second," in a proportion, and many questions of a like nature, which pupils confined to rules and formulas will ask. This method commends itself, because it is logical and simple.—The Public School Journal.

* Hints and Helps. *

GRADING COUNTRY SCHOOLS.

GRADING the country schools means a simple, progressive line of education followed intelligently from term to term, year to year.

It means that the country schools, instead of drifting here and there, are marching forward upon a well developed plan of educational purpose, with a methodical tread, not with a chaotic stumbling.

In 1879 a plan for grading the country schools of Michigan was submitted to the educational head of each county, and a majority of the counties accepted the plan and are now following it with wonderful results, among which may be named :

1. Better scholarship.
2. Better attendance.
3. A greater number of boys and girls taking a liberal education.
4. A much greater interest is taken in education by the patrons of the schools.
5. Teachers are hired by the year and paid better wages.
6. School keepers are giving place to school teachers.

In Oceana county, since the adoption of the graded plan, we have graduated twenty pupils, twelve of whom, after teaching one year, were rehired in the same schools at an advance of wages. Our attendance has increased ten per cent. greater than increase of population.

Our boys and girls, when intelligently started in grades remain therein until graduation.

Patrons see that a good country school gives a good foundation, educationally, to their boys and girls, many of whom never attend any other school.

Our teachers learn that efficient work in the school-room gives them a reputation which raises their wages; this leads them to make a better preparation for the great work of teaching, and this results in an additional uplift to the country schools.

We have a graded course of reading for the boys and girls in our country schools, beginning with the young pupils and running through the whole country school life. We are thus broadening and supplementing the text book; giving the children a love for a pure literature; planting their feet and establishing their way upon the solid ground of a nobler manhood and womanhood. The graded course of reading affords entertainment as well as instruction for our country boys and girls: life is less sombre and the greensward is being broken for a higher, nobler life.—*D. E. McClure, Commissioner Oceana County Schools, Mich., in Popular Educator.*

SUGGESTIONS TO TEACHERS.

BESIDES LESSON GRINDING.—Now you may not think it to be so, but really these things are more important than the reading, the arithmetic, and the geography. I have seen schools where the teachers aimed at the lessons and cared nothing for the moral, religious, and æsthetic side of the child's nature. Possibly they thought these things would take care of themselves. That is a great mistake. If the forces within us are properly directed we shall grow up to be lovely and of good report. This is what is meant by the expression, "Through nature up to nature's God." The school-room must cultivate the whole nature of the child, and you should ask yourself every day: Are the souls of these children growing beautiful? Do they love to do right? This will not come through lectures and scolding, never from scolding. Possibly the hardest thing of all that you will undertake will be to cause growth in the moral, religious, and æsthetic directions. Almost any one can make a child learn some lines in a book and recite them; few can say they know how to cause a child to love to speak the truth and to do what is right.—*Journal of Education.*

FOLLOWING is the description given by Dr. J. M. Rice, in the *Forum* for December, of his visit to a Primary school in Indianapolis:

"I entered one of the rooms containing the youngest children at the time of the opening exercises. The scene I encountered was a glimpse

of fairyland. I was in a room full of bright and happy children, whose eyes were directed toward the teacher, not because they were forbidden to look in any other direction, but because to them the most attractive object in the room was the teacher. She understood them, sympathised with and loved them, and did all in her power to make them happy. The window sills were filled with plants, and plants were scattered here and there throughout the room. The teacher's desk was strewn with flowers, and upon each of the children's desks flowers had been placed to welcome the little ones to school.

"After the children had sung a few little songs the first lesson of the day was in order. This was a lesson in science; its subject was a flower. It began with the recitation of a poem. The object of introducing these poems into the plant and animal lessons is to inspire the child with love for the beautiful, with love for nature and with sympathy for all living things. In the lower grades of the schools of Indianapolis much more stress is laid upon the life of the plant and the relation of the child to the plant than upon its structure, and the child is taught rather how to preserve and to protect it than how to dissect it, so that lessons upon plants, and animals, partake as much of moral as of science lessons. Before the teacher endeavoured to bring out the points to which she desired to direct the special attention of the class, the children were urged to make their own unaided observations and to express them. As each child was anxious to tell what he had observed in relation to the plant itself, what he otherwise knew of it, how it grew, where it grew, and perhaps some little incident which the flower recalled to him, the class was full of life and enthusiasm. A few minutes sufficed to bring the children to the point beyond which they could not proceed unaided. When this point was reached the teacher came to the rescue, and by careful questioning led the children to observe the particular things to which she had decided to call their attention that morning.

"The book used during this reading lesson was the book of nature—the plant they had just been studying. The scene presented by the happy little children, each with a flower in his hand, surrounding the teacher, who was smiling upon them, was truly beautiful. For reading matter the children were called upon for sentences expressing thoughts concerning their flowers. The sentences were written upon the board by the teacher, and when a number of them had been written the pupils began to read them. The children were interested because they all took an active part in the lesson from the beginning to the end. They were all observing, all thinking, they all had something to say, and were glad of an opportunity to tell what they had to say. The teacher was fully as enthusiastic as her pupils."

Teachers' Miscellany.

A TRUE STORY ABOUT A NEWFOUNDLAND HERO.

THE *St. John's Mercury* says: The following beautiful lines were written on a touching incident which occurred during the great storm in 1885, on the coast of Labrador. We are in a position to guarantee the truth of the narrative on which they are founded, in every particular, as we were the first to give it publicity. The boy's name is Willie Smith, and his father a humble fisherman, resides in Cupids, Conception Bay. The story was given us by the lady who, hearing of the brave boy's deed, visited their home and obtained the particulars:—

During one of the gales of October, 1885, a fishing smack, whose name the paper did not give, went down off the coast of Labrador. The boats being swamped, nothing was left for the men but to swim for the shore. Among the crew was a boy, some eleven or twelve years old, who had accompanied his father on the smack. In order to save his life, the father lashed the boy upon his back, and set off to swim for land. Finding that they made very little headway, and that they were in immediate danger of being drowned, the boy begged his father to go alone

and to "let him be," and upon the father refusing, the boy actually worked himself free from the rope, and would probably have been drowned had not a huge wave at that moment flung both of them upon the rocks. Afterwards to the lady the boy said, simply: "I thought poor father was going to be drowned, and what would mother do then, so I got off his back."

'Twas in eighteen eighty-five,
Off the coast of Labrador,
'Mid the breakers' dreadful roar,
That the fishing-smack went down;
All the men were left to make
O'er the sea their way or break
Heart or muscle in the effort, and to drown.

Then a father took his child,
And, amid the curling brine,
Lashed him safely with a line
To his shoulders, as he buffeted the wave;
What the end shall be I trow
Only heaven's white angels know.
But 'tis home and help for two, or one sea-grave.

There were little ones at home
And their mother to be fed,
And he earned their daily bread
Who was struggling in the sea;
And the brave young fisher knew
One could never swim for two,
So he said: "My father, go, and let me be."

'Twas a twelve-years' child who spoke;
But for that completed deed,
Thank God's grace! there was not need
Underneath the veiled sun;
For the hissing breakers curled
Helpful arm around, and hurled
Child and man high up the shore, and home was won.

Many deeds men's hands have traced
On our history's golden page,
And from waning age to age
Is their glory handed down;
But not Aulis' sight, nor Troy's
Out-sublimes this unknown boy's,
Asking simply to be left alone to drown.

Think that boy is still alive;
And, in distant Newfoundland,
Where the blue waves lap the sand,
He is now at work, at play!
Let us bare our heads to him,
Whilst our eyes grow moist and dim,
In this unheroic day;
'Twas in eighteen eighty-five.

A POET'S PRAYER.

THE three-page poem by John G. Whittier, which appeared in the November *St. Nicholas* Magazine, commemorates a visit of a party of young girls to the poet's home. It contains the following lines, which have a peculiar significance now that the good old Quaker poet has passed away:

"I would not if I could repeat
A life which still is good and sweet;
I keep in age, as in my prime,
A not uncheerful step with time,
And, grateful for all blessings sent,
I go the common way, content,
To make no new experiment.
On easy terms with law and fate,
For what must be I calmly wait,
And trust the path I cannot see,—
That God is good sufficeth me.
And when at last upon life's play
The curtain falls, I only pray
That hope may lose itself in truth,
And age in Heaven's immortal youth,
And all our loves and longings prove
The foretaste of diviner love!"

It is better to postpone the development of a mental faculty than to exhaust the possibilities of development by erroneous education. * * * We need neither despair of a child because he cannot go to a kindergarten at three, nor conclude with Rousseau, that the time spent in systematic discipline before twelve is worse than wasted.—*Palmer in Science of Education.*

* Special Papers. *

GEOGRAPHY IN THE PUBLIC SCHOOLS.*

BY MARTIN KERR.

IN preparing my paper I have taken my points directly from observation. It is the work of experienced, practical teachers, those who believe in educating their pupils instead of preparing them for an examination. If my views coincide, as they undoubtedly do, with those of eminent educators, it is but a further proof of the truth and value of my statements. The aim of my paper will be, not so much to discuss some methods of teaching a few lessons in geography, which might be altogether impracticable to the majority of our teachers, as to point out what I think is a tendency to neglect some of the first great principles involved in the study of geography. After that to give a general, yet definite, method of assisting to reach the high aim of the study of geography. So much has been said and written on how to teach geography to junior classes, that I pass over this feature of the work hurriedly. There are, however, what I consider important points to be kept in view.

There has been for some time, and there still is a tendency to attempt to teach geography to primary classes, with an entire neglect of mind development. The usual study of mere forms of land and water is but a very insignificant part of what should constitute the work. Rather lead pupils to discover the relations of these forms to forces or working agencies as they affect the development and distribution of plant and animal life and the human race. A curriculum of the elementary course ought to have in it a study of the earth as a living, working, producing organism, of course in a line adapted to the minds of children. Note the forces at work wearing and building, the conditions that establish the distribution of life. "The hillside leads to the greatest slopes of earth; the running water illustrates the principles of drainage of the largest rivers; the little delta shows how vast alluvial plains are formed; each blade of grass and tiny earthworm obeys the same forces that cover the earth with flora and fauna."

But pupils must study the relations of forms, forces, and conditions *in nature*, before they can imagine them on the grander scale on which our planet is constructed; for in the development of mind, perception must precede imagination. And here I want to say, always keep before your class a globe; if moulded and having the different features standing out in relief, so much the better; relief maps and moulding-boards ought to be an indispensable feature of every school-room. And this is neither impracticable nor impractical. Such violent, such distorted concepts of the planet are formed by some pupils as cause us to wonder what concepts their teachers had of the planet on which we live.

I should like to draw particular attention to the importance of cultivating the power to imagine the great natural features of the earth, by describing them to pupils as soon as their types in the school district have been studied. By such teaching, the grove becomes a luxuriant *silva*, the brooklet increases to a continental Amazon, the hill towers into the grand image of the lofty mountain. Children have very clear mental pictures of the scenery that surrounds them. From their mental images, they can easily describe these objects. By relating stories, it is easy to lead them to view, with their mental vision, features that lie beyond their sense-grasp. The novelist understands this power to picture scenery. From the top of a mountain, his reader views the roaring torrent; through the valley, on the bosom of a silver stream, he carries him along. He paints vivid word-pictures. The modern historian takes his readers to Italia, and there they follow the trail of a Hannibal over the mountains and through the valleys of that historic land. Now, the work of the teacher is in kind precisely the same. What the novelist and the historian can do, can be done by the skilful teacher of geography. In short, through the geographical forms about their homes, pupils should be led to study similar types of great natural features, till the whole world is pictured from the district.

The aim should be, not knowledge of particular foreign forms, but power to imagine them. This is one of the most important steps in the teaching of primary geography. "All children revel in analogies, because they lead to the region of fancy where all childhood must wander, till the discovery of natural cause and effect reveals true relations governed by physical laws, and admits to the higher realm of imagination."

May I be permitted to say here a few words about specializing any subject? No subject should be commenced by any teacher, without his pointing out the relation of that subject to other subjects, and its location in the circle of the sciences. Knowledge exists too much in eddies and detached parcels in most minds, even of our better class of teachers. The relations of the various subjects are almost entirely neglected, and they are studied as they are taught, as having no connection with each other, and not infrequently without teacher or pupil perceiving any relations existing between his subject and any object in the heavens above, the earth beneath, or the waters under the earth, save the text-book and an examination day. Let the teacher lay a broad foundation for every subject. "The study of any item or detail becomes of vast importance when we appreciate its relations to the great organism of life. There are no trifles in real teaching. The child studying the root, stem, leaves, flowers, and fruit of a plant is gaining essential elements of all knowledge. What he learns is organically related to all truth. All sciences, though isolated in name, are the organic factors of one great whole;" each is inseparably related and bound to all; thorough knowledge of one means thorough knowledge of all. We find the true value of one science in its relations to the complete circle of the sciences. And just in the degree in which we keep in view the one motive of man's broadest development, so do we come to the practical uses of geography.

Now let me repeat what I have already stated in different form. Geography provides a common foundation for the special sciences that relate to organic matter—the plant, the animal, the races of men; the conditions that render life possible, as found in heat, moisture, atmosphere, and soil. It has its highest usefulness in revealing the process by which the differences of climate, soil, productions, and races of men on the earth arise and develop.

While geography is so important as a foundation of culture, it is generally acknowledged by enlightened teachers, that it has suffered more than any other branch of study through the prevalence of bad methods. Mere detached details of topography have been memorized while the working agencies of earth, water, and atmosphere, that go to produce the features of the earth's surface, have been neglected. The teaching of the earth-process has not yet—while it should have—taken the place of mere topography, though practical reforms have been made in certain lines. It is this earth-process that I wish to discuss in the second part of my paper.

From the study of the working forces of the earth that produce its differences of climate and soil, and thus favor or retard its occupation by man it is but an easy step to the study of heat and moisture in their effects on fertility and the distribution of plants, animals, and the races of men, and from this intermediate step, to matters relating to politics and society. It is necessary to utter a caution here. Guard against losing the idea of the whole in a multitude of details. Now then, the simplest general whole should be the first point. This is found in the river-basin, and second, in the continent, each made up of simple slopes.

The pupil has a concept of the earth's surface, but very much so-called teaching of geography consists of a study of maps and maps alone, which have not the remotest relation to the reality. Now, have the pupils form a proper concept of the surface of the earth. The earth's surface must be neither perfectly smooth, not a confused irregularity. For it is obvious that a description of the earth's surface would be extremely simple were it perfectly smooth, but the remembrance of localities would be nigh impossible. Places could be located only as they are upon the high seas. The smooth surface would have no character. So the same difficulties of the location of places would be pre-

sented by a confused irregularity of surface; great difficulties are met with by travellers who try to thread that labyrinth of Dakota, the Bad Lands.

The pupil notices this first truth then, that the surface of the earth is arranged in long and wide-inclined slopes. The vast depressions, formed by these great slopes hold "old ocean's solitary waste." These same slopes, joined at their upper edges, form the great continents. Now notice, each continent consists primarily of two slopes divided by an axis. Then the first view of a continent must be of these all-embracing slopes. We notice it broken into immense river-basins. Other minor slopes form the basins of the tributaries, and thus we can follow the complications down to the tiniest brooks. The pupil sees that the earth's surface has character, and it is this character of surface that is the essential and indispensable basis of the remembrance of places and events.

Now carefully follow. I have made an abridged outline of a course of study in geography, and because my own views are in entire harmony with those of a living, eminent educator, I use his own words. He says: "The continents are the abodes of men. The vast oceans furnish the life-blood of the firm land. The immense body of atmosphere, that surrounds and encloses both water and land, is the breath of the world. But the firm land, the ever-moving waters, and their vast envelope would ever remain in lifeless stillness, in eternal death, were it not for the infinite energy imparted by the sun. Under the mighty influence of heat the waters of the oceans move in vast currents—rivers in the ocean; the atmosphere is filled with moisture by the same inexhaustible power: immense volumes of air sweep regularly from pole to pole, bearing their precious freight of vapor to pour in life-giving rain upon the long slopes, which bear it through soil and in surface floods back to the ocean again, but not till it has done its marvellous work in the production of plant life. The distribution of heat depends upon the inclination of the axis and the rotation and revolution of the earth, but the use of heat to the land in furnishing the conditions for the life of man, depends upon the nature and arrangement of the inclined slopes."

A concept of the earth with all these factors arranged and related is the true basis of political geography. This department of the subject is made nearly the sole aim of the school work under the prevailing mode of teaching geography. Now what does a pupil study when the political divisions of a continent are under discussion, without a concept of the structural basis? You will not have far to seek the answer. He studies a map, and nothing but a map, and has not the slightest thought of the continents themselves. But with a clear concept, corresponding to the continent, political geography becomes a study of the division of living, mentally-pictured surface into the artificial regions. Any map before the pupil is glowing with life. He arranges and relates one division structurally, not only to the continent, but to the whole world; he knows the soil, climate, vegetable products, animal life, races of men, everything. Everything thus learned enters into an organic body of knowledge. The memory grows as the mind grows. That which is thus learned is never forgotten, can never be forgotten. Spend a few weeks in the study of political geography, after the foundation is well laid, and your pupils gain an excellent, intelligent knowledge of all political divisions.

The science of geography is not only the real inception of all the natural sciences, but these are almost contemporary studies with it. For, studying the structure of the surface of the earth leads directly to the study of the history of its construction, geology; the study of the effects of any force, as erosion, of moving air, running water, or heat, brings physics into the circle; the study of the changes wrought in organic and inorganic matter leads the way to the grand old science, chemistry; water, as it percolates the soil as it goes to plants carries the observer to the study of botany. It is then but a step from the study of plants to the study of animals, and from this to the race of men.

My paper proper is finished, but I want to claim your indulgence for a few moments more, while I call your attention to what I consider an important result of true teaching of geography—the cultivation of a fresh, lively, patriotic spirit. There is a prevalent idea that we must narrate stirring scenes of bloodshed, or show how mighty victories have been won on field or sea, to obtain this result.

*A paper read before the Elgin Teachers' Association. Published by request of the Association.

These are right in their place, they have their place, but how infinitely better is that plan of bringing before the study of the pupils all the great possibilities resulting from illimitable resources and a vigorous climate—a land peculiarly adapted to grow *men*—to hold before the pupils the future of such a land, such a people. Taking for details subjects that are found in such glowing descriptions as I am going to repeat, what girl, what boy, will not find all the spirit within him roused to that pitch where men willingly lay down their lives to preserve their land, the fairest under heaven's blue sky.

"I call it a northern nation, for such it must become. Men do not talk on this continent of changes wrought by centuries, but of the events of years. Men do not vegetate in this age, as they did formerly, in one spot, occupying one portion. Thought outruns the steamcar, and hope outflies the telegraph. We live more in ten years in this era than the patriarch did in a thousand. The patriarch might outlive the palm tree which was planted to commemorate his birth, and yet not see so many wonders as we may witness in a decade. What marvels have not been wrought in Europe and America in twenty years! And who can say the world, or our own portion of it more particularly, is incapable of maintaining to the end of the century the ratio of the past progress? I for one cannot presume to say so. I look to the future of my country with hope, though not without anxiety. I see in the not remote distance one great nationality bound, like the shield of Achilles, by the blue rim of ocean. I see it quartered into many communities, each disposing of its internal affairs, but all bound together by free institutions, free intercourse, and free commerce. I see within the round of that shield the peaks of the Western mountains, and the crests of the Eastern waves, the winding Assiniboine, the five-fold lakes, the St. Lawrence, the Ottawa, the St. John, and the basin of Minas. By all these flowing waters, in all the valleys they fertilize, in all the cities they visit in their course, I see a generation of industrious, contented, moral men, free in name and in fact—men capable of maintaining a constitution worthy of such a country."

THE LIMITING OF TEACHERS' CERTIFICATES.*

I MAY tell you at the outset that I am very strongly opposed to the present system of limiting Teachers' Certificates. I am aware that it is a delicate, if not dangerous, thing to oppose long established customs or laws; that questions of a revolutionary character should be approached with caution, still my convictions are of no mushroom growth. They are deep rooted and having put my hand to the plough I will not turn back.

As first-class teachers have prepared, or are preparing themselves for a higher grade of work than that belonging to the Public School, my remarks are not intended to apply to them, unless they choose to remain within the domain of the Public School Teacher.

I hope to be able, as I think I shall be, to show you that the present law, with respect to the limiting of certificates, is both unfair and absurd. But in any comparisons made between those of the Third Class and those of the Second, let it be borne in mind, that I have no intention to cast the slight-reflection upon the latter. My only purpose is to point out as clearly as possible a most serious disadvantage and wrong under which the Thirds labor, to show whence these troubles arise, and to suggest a remedy.

According to the School law, what is the real difference between the qualifications of those holding Third Class Certificates and those holding Second Class Certificates? And what is the difference in the treatment meted out to those teachers? The Third may have made high marks at his examination, and yet, he is limited to three years. The Second may have made low marks, but he is permitted to teach for a lifetime. I admit that the latter has covered a little more ground than the former, and that he has gone a little deeper into some subjects, but for all practical work of the school-room their qualifications are not widely different. Is there then, I ask, any just comparison

between the educational requirements of the two, the fetters placed upon the Thirds, and the freedom accorded the Seconds? With only a moderate difference in their qualifications there is an almost unbounded difference in the privileges granted.

But it is sometimes said that the present system of limiting certificates begets ambition in Third Class Teachers. At one of the meetings of the International Convention, held in Toronto last year, the Hon. Minister of Education, when speaking of the school system of Ontario, said of teachers holding Third Class Certificates, that those among them who lacked the ambition to rise higher had their heads lopped off into the waste paper basket at the end of three years. As I understand this it is virtually an assertion that the Third who does not become at least a Second is without ambition. Now, upon what ground did the Hon. Minister make that statement? How does he know the history of each teacher in this Province? How does he know the disadvantages with which each student has been obliged to contend, the obstacles that have lain in his way, the privations he has endured to obtain even a Third Class position? There was certainly an attempt to be funny; but, to me, the utterance was a poor sample of wit. At the same time I thought it unfounded, in fact unkind and offensive. Well, coming back directly to the contention that the limiting of the Thirds makes them ambitious, we may ask what kind of ambition is meant? Is it an ambition to excel as teachers? An ambition that enables them to come before their critics and friends with a consciousness of having done their duty? Is it an ambition to be highly esteemed? An ambition that leads to noble resolves and energetic action? No, that cannot be the ambition said to be created and fostered by the limiting process. If that laudable ambition, to which reference has been made, may be satisfied, and so annulled, by obtaining a Second Class Certificate, then it would be well to wipe out the Seconds rather than lose the ambition. But no, that is an ambition which may be lessened, partially deadened or smothered, but it cannot be destroyed. It is inborn and will last as long as life lasts. It depends, let us be thankful, upon no human law. Consequently those who plead for the present limitation of teachers' certificates can, by ambition, mean nothing better than a mere desire to save oneself from the miserable law that now blots our statutes.

Again, compare the manner of judging the fitness of the Thirds, and the treatment subsequently meted out to them, with the manner of judging the fitness of those of other professions or callings and the treatment afterwards given to them. We shall find the one sadly out of joint with the many. The law student goes up for his examination, and having succeeded is allowed to practice his profession in our courts. No matter how low the marks he may make, so long as he obtains the requisite number, he is not told that at the end of three years his head must go to swell the refuse heap. The doctor may have graduated low in his class, yet no three-year limit is applied to him. He is not decapitated, at any time, regardless of his success or want of success. And the same line of argument applies to the druggist, book-keeper, salesman, to the conductor who has charge of a railway train, to the engineer upon the locomotive, and to the mechanics of the various trades. But when we come to Third Class Teachers the whole scene changes. They, we are to suppose, are a peculiar people—a unique class in this great world of humanity—and cannot be treated as other classes. The Third may have well earned his certificate, he may have been a most successful teacher, but at the expiration of three years off comes his head. And this, we are to understand, is partly, at least, for the purpose of making him ambitious. Well, I think that the man or woman whom such treatment would make ambitious might be profitably exhibited as a living curiosity. Yes, the law would have us believe that the Third, no matter what his care or application in the pursuit of his profession, is, at last, hopelessly lost in the mazy labyrinth of dunce-land; and he is treated accordingly.

Now, I hold that the teacher who was qualified three years ago, and has since been honestly engaged in his profession, is better qualified now than when he first received his certificate; but that if he is not qualified now, he most assuredly was unqualified when his certificate was granted him.

And these things being true, those who plead that the present limiting system may continue have put themselves in a sorry plight. They are guilty either of defaming the teachers, or of misleading the public. If he was qualified when he received his certificate, and has since kept himself abreast of the times, then those responsible for annulling his certificate and thus of representing him as unqualified, should be prosecuted for libel. On the other hand, if he is not qualified now, then he was not at the time of his examination, and those responsible for sending him forth as a teacher have been guilty of misleading the public—of causing a misappropriation of public funds—and should be indicted for fraud. On one or the other horn of the dilemma they are impaled.

And, now, before leaving my subject I will suggest certain changes which I think it would be wise to make. Let all teachers new to the profession start out on a probationary course of three or four years, and after that let the perpetuity of their certificates, as of others, depend upon the ability of the holders as teachers, their standing to be judged by reports from the inspectors, trustees, and from themselves. These reports should be prepared, in blank, by a board of Public school inspectors and Public school teachers, while the same board should receive the reports and decide upon the merits of those engaged in the profession. The result of the test should be published each year, that the teachers might know how they were estimated by their peers, and that the public might know who were the most worthy. Then the present law would be found only in history as a relic of past stupidity and injustice. In place of the discouragements, the shackles, and the lulling of the Seconds into repose, a healthy stimulus would be given to action; more life and energy would be carried into the school-room; the teaching profession would rise to a higher plane, and bear fruit in a more rapid educational development of our pupils.

Book Notices, etc.

Any book here reviewed sent post-paid on receipt of price. Address The Grip Printing & Publishing Co., Toronto.

Epochs of American History. The Colonies, 1492-1750. By R. G. Thwaites. Pp. 300, 4 maps. Longmans & Co.

The three volumes of this series form a history of the United States, comprehensive yet compact, containing a clear outline which traces the development of ideas and institutions; and giving a bibliography which will enable the reader to track down any special detail. Such is the claim of the preface, and it seems to be fairly well founded. The struggle for civil and religious liberty is told in a simple, impressive style.

Public School History of England and Canada.

By W. J. Robertson. Pp. 273. Price, 30c. Toronto, The Copp, Clark Co.

The writer of a summary of history such as the one before us, has very narrow limits within which to win success. He is not expected to be a historian but a compiler, hence we expect merely a fair presentation of the results of the most careful historical investigation. If we find these stated briefly, and in such a way as to awaken some love of history in the child's mind, the author has achieved success. This, in the main, we think Mr. Robertson has done. His book tells the story of England and Canada, fairly and impartially, and in words which children can readily understand. At times the language becomes picturesque and forcible, approaching to something like style. The volume is consequently a manifest improvement on the late *P. S. History*, and will be found we believe, generally acceptable to the teachers of history in our schools. We cannot but express our regret that the book is not embellished with more and better illustrations; in this respect it is antiquated even now when compared, for example, with the fascinating pages of histories of the United States published by Ginn or Harpers.

Several minor errors that disfigure the present

*A PAPER, by Mr. D. C. White, read before the Norfolk Teachers' Institute, held in Simcoe, on Oct. 20th and 21st, and published by request.

edition will no doubt be removed in the next. We note, for instance, that *witangemot* occurs twice in p. 7 for *witangemot* (*witena* being the only possible form for the genitive plural—the *gemot* “of the wise men,”) and as pointed out in a recent issue, “sixteenth century,” should read “seventeenth century” in p. 197. F. H. S.

Shelley's Defense of Poetry. Edited, with introduction and notes, by A. S. Cook. Pp. 86. Boston, Ginn & Co.

We had occasion to notice the reprint of Sidney's *Defense*. The continuation of the series of English æsthetics is the present reprint of the admirable though brief essay of the poet Shelley. It is unnecessary at this time to praise the essay itself—its splendid style, its keen analysis, its wealth of pregnant thought expressed in perfect language, sayings that have become proverbs, all of which unite to make the essay of the most important contribution for its length ever made to the criticism of literary art. Professor Cook's introduction discusses Shelley's prose—not poetic prose, yet with some of the words and qualities of poetry—compares him with Sidney, finding they agree in the main, both holding to the supreme ethical import of poetry, to the “faculty divine,” to the delightfulness of poetry combined with didactic efficacy and elevation as the test of poetry, but differing in their point of view. Sidney is more cautious and sober—more a Roman, Shelley is lofty, lyrical—more a Greek. Finally the introduction criticises adversely Shelley's remarks about the impotence of the will in the production of poetry. The volume closes with a short treatise, *The Four Ages of Poetry*, by Thomas Peacock, a friend of Shelley, but with views different enough to make the poet write his own treatise, “designed as an antidote” to his friends. The volume is fully provided with ample and scholarly notes, and is bound in cloth gilt. F. H. S.

First Latin Book. By John Henderson, Principal of the Coll. Inst., St. Catharines, and John Fletcher, Prof. of Latin, University of Queen's College. Copp, Clark & Co., Toronto.

This new introductory Latin book is superior to any book heretofore in use in our schools. While the accident might perhaps be reduced with benedictory to Cæsar, the work has, nevertheless, been fit, and the sentences made more distinctly preparatory in a very painstaking and practical manner. In a second edition some slips, such as *Maturimus*, p. 57, and *andace* (i), etc., on p. 52., should be corrected.

The exercises in Latin composition are exceedingly good, and no book has heretofore covered this portion of the University requirements for Matriculation.

In other respects the book is similar to the old but excellent “Principia,” and differs from it only in greater fulness and completeness. Those teachers who have pinned their faith to that thoroughly good work will welcome this as a very great improvement.

The Step by Step Primer. By Eliza B. Burnz. New York: Burnz & Co., 24 Clinton Place.

This very attractive little reader forms a connecting link between the script work of the blackboard and the printed lesson of the book, being published throughout in the Burnz pronouncing print in which the different letters are marked to denote the forty or more separate sounds existing in our language. In addition to this help, silent letters are put in a hair-line type and occasionally a very irregular word is put in purely phonetic spelling. If all literature were published in this form the work would be an excellent one. As it is, the primer is valuable for the able and comprehensive treatment of phonics and also as being a quick route to thought getting.

The Children's First Reader. By Ellen M. Cyr. Boston, U. S. A.: Ginn & Company, Publishers, 1892.

This is a charming little book. Paper, print, and illustrations are first-class, and the binding is neat and attractive. What is much more important, he easy sentences which make up almost its entire

contents are framed and graded with excellent taste and judgment, and admirably adapted to interest the young reader and lure him on, step by step, until by the time he reaches the end he will have learned to read, having been scarcely conscious of any effort which was not also a pleasure. What a pity that our cast-iron Canadian text-book system takes away all inducement from our publishers to produce books similarly attractive.

THE *Expository Times* for December is to hand with its customary freight of good things for the Bible student. Its “Notes of Recent Exposition” are always fresh and hopeful, and seem unusually full in this number. Among the subjects discussed more at length by able and learned writers are: “Is the Revised Version a Failure?” “The Gifts of the Evil One,” “Our Debt to German Theology,” “The Panoply of God,” etc. “Requests and Replies,” “Contributions and Comments,” “Exposition of the International Lessons,” and other usual departments fill up the number of this excellent periodical. To be had of The Presbyterian News Co., Toronto.

For Friday Afternoon.

A CHRISTMAS GIFT.

BY LIZZIE WILLS.

YES! Christmas is coming, that wonderful time
When bells from each steeple ring out a glad
chime;

When angels in heaven, and men upon earth,
Unite to sing praises for Jesus Christ's birth.
There's peace upon earth and good-will among
men,

At Christmas old friendships are made up again.
At Christmas we give gifts to those whom we love,
God gave us on Christmas His Son from above.
His unspeakable gift—a Saviour—a King
Whose praises the angels unceasingly sing.
Then give Him, this Christmas, some gift in re-
turn;

“A cup of cold water” the Lord will not spurn.
If given to one for the sake of the Lord,
It is given to Himself, He says in His Word.
But best of all gifts you can give to your King,
Though silver and gold and rare jewels you could
bring,

Is the gift He has asked for; He asks not your
pelf,
He asks for your heart's love, He asks for yoursel

✻ Correspondence. ✻

To the Editor of THE EDUCATIONAL JOURNAL.

DEAR SIR,—The success of the Ontario Educational Association meeting during next Easter holidays will be so largely conditioned by the attendance and assistance of teachers of rural schools, that I hope you will kindly allow me sufficient of your valuable space to call the attention of your readers to the following:—Chap. IV., sec. 73, clause 7, of the recent Departmental Regulations says:

“Any teacher who has been elected a delegate, by the Association of his county or inspectorial division, to the Provincial Teachers' Association, shall be at liberty to attend the meeting of such Association for any time not exceeding one week each year, providing always he shall report to the trustees such attendance, certified by the secretary of said Provincial Association.”

Many familiar faces were missing at the last Convention owing to this clause, which renders it impossible for rural teachers to attend unless they have been appointed delegates by their Conventions. The difficulty can be overcome by appointing delegates at the regular Association meetings, or by empowering the secretary of the County Association to appoint as delegates all who signify their desire to attend the Provincial Convention. As the general meetings of the Association are to be held hereafter only in the evenings, it is necessary to prepare much longer programmes for Departments than formerly. Any who would be willing to read papers or who desire to suggest the names of others, would confer a favor by communicating with the Sec-

retary, R. W. Doan, Esq., 216 Carlton Street, Toronto, or with the Secretaries of the respective Departments. It is desirable that such communications be sent prior to Jan. 1st, 1893.

Very truly yours,
S. B. SINCLAIR,
Pres. O. E. A.

HAMILTON, Dec. 1, 1892.

Educational Notes.

APPOINTMENT OF EXAMINERS FOR 1893.

At a meeting of the Joint Board, held at the Education Department on 10th inst., the following examiners were appointed to prepare the various papers required for the High School Leaving and University Matriculation Examinations for 1893:—

English:—Professor J. Alexander, Ph.D.; J. E. Bryant, M.A.; F. H. Sykes, M.A.

Classics:—Professor A. J. Bell, Ph.D.; Professor J. Fletcher, M.A.; W. S. Milner, B.A.

Mathematics:—Professor A. R. Bain, M.A., L.L.D.; A. T. DeLury, B.A.; Professor A. C. McKay, B.A.

Moderns:—Professor J. Petch, M.A.; Professor J. Squire, B.A.; A. H. Young, B.A.

Science:—C. A. Chant, B.A.; E. C. Jeffrey, B.A. Professor A. P. Knight, M.A., M.D.

FOLLOWING is a list of the members of the new Dominion Parliament:—

Sir John Thompson, Premier and Minister of Justice; Hon. Mackenzie Bowell, Minister of Trade and Commerce; Hon. G. E. Foster, Minister of Finance; Sir A. P. Caron, Postmaster-General; Hon. John Costigan, Secretary of State; Hon. C. H. Tupper, Minister of Marine and Fisheries; Hon. John Haggart, Minister of Railways and Canals; Hon. J. A. Ouimet, Minister of Public Works; Hon. J. C. Patterson, Minister of Militia; Hon. T. M. Daly, Minister of the Interior; Hon. A. R. Angers, Minister of Agriculture; Hon. W. B. Ives, President of the Privy Council; Hon. John Carling and Hon. Frank Smith, Ministers without portfolios; Hon. J. J. Curran, Solicitor-General; Hon. N. Clarke Wallace, Controller of Customs; Hon. J. F. Wood, Controller of Inland Revenue.

ST. NICHOLAS FOR YOUNG FOLKS.

JOHN G. WHITTIER long ago wrote of *St. Nicholas*, “It is little to say of this magazine that it is the best children's periodical in the world.” Edward Eggleston, the author of “The Hoosier Schoolmaster,” says of it, “There is not one of the numbers that does not stir the curiosity, inform the memory, stimulate thought, and enlarge the range of the imagination.” Founded in 1873, and from the first number edited by Mary Mapes Dodge, *St. Nicholas* is now entering upon its twentieth year. The most famous writers have contributed to its pages in the past, but never has its editor been able to offer a better programme or a more distinguished list of contributors than for 1893.

There is to be a series of illustrated papers on “The Leading Cities of the United States,”—the story of each city told by a prominent resident. Edmund Clarence Stedman will write of New York; Thomas W. Higginson, of Boston; New Orleans will be described by George W. Cable, and Baltimore by President Gilman, of the Johns Hopkins University. Dr. Lyman Abbott will tell the story of Brooklyn, and other cities will be treated by other famous men. There will be articles on the World's Fair, and a number of pages of funny pictures and humorous verses.

Mrs. Kate Douglas Wiggin, the well-known author of “The Birds' Christmas Carol,” etc., will contribute the leading serial for *St. Nicholas* during the coming year. The November number opens with a three-page poem by John G. Whittier, which has in it some of the most beautiful lines the good Quaker poet has ever written, describing the visit of a party of young girls to his home.

The *School Journal* says, “Place *St. Nicholas* in your household, and you need have no fears for the lessons taught your children.” The magazine is the greatest aid that the teacher and the conscientious parent can possibly have. It entertains, and at the same time educates and instructs. The subscription price is \$3 a year. Remittances may be made directly to the publishers, The Century Co., 33 East 17th St., New York.

To teachers and those interested in the young we would point out the necessity of caring for the eyesight of the children. Exercise books are now being issued made of a light grey tinted paper, chosen by Dr. G. Sterling Ryerson, N.C.D., Toronto, as least trying to the eyes. These may be seen at any bookseller or stationer's, or a sample copy will be sent to Principals of Public Schools upon application to the publishers, The Copp, Clark Co., Ltd. On the cover of each book is a copy of certificate given by Dr. Ryerson, approving of the shade.

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The Almanac for 1893

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James Bryce, M.P., Will consider "American Influence on English Political Institutions." This is a field in which Mr. Bryce is a master.
Penelope's English Experiences, by Kate Douglas Wiggin.
Studies in American Biography.
The Feudal Chiefs of Acadia, by Dr. Francis Parkman.
Improvement of Living.
Papers by thoughtful writers on The Preservation of Country Beauty, on Libraries, Art Museums, Museums of Science, etc.
Education.
A prominent place will be given to the discussion of educational topics. Among other subjects, papers on the structure and decoration of school-houses, school gardens, etc., will be presented.
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Special studies in English Literature and impartial criticism of current literature will constantly appear.
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Scribner's Magazine for 1893.

Partial Prospectus

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Will contribute the first serial to appear in a magazine from her pen for many years, entitled "The One I Knew the Best of All."
H. C. Bunner
Will furnish a series of six sketches entitled "Jersey Street and Jersey Lane." Illustrated.
Robert Grant
Will relate the further experiences of Fred and Josephine in "A Sequel to the Reflections of a Married Man." Illustrated.
Harold Frederic
Will contribute a political novel of great power, entitled "The Copperhead."
By The Author of "Jerry."
Miss S. B. ELLIOTT, the author of "Jerry," will write a realistic story of life among the Tennessee Mountaineers, "The Durket Sperrret."
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Some Unpublished Letters of Carlyle to Edward Irving and others. Recollections of Lincoln and Sumner. An Artist in Japan. Historic Moments.
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The World's Fair In Chicago.
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