

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
									✓		

The Canada School Journal.

AND WEEKLY REVIEW.

VOL. X.

TORONTO, OCT. 29, 1885.

No 39.

Table of Contents.

	PAGE
EDITORIAL:—	
The World.....	457
The School.....	457
The Teacher Out of School.....	459
SPECIAL —	
Elementary Chemistry	460
High School Literature	461
The Historical Development of Education	462
EXAMINATION PAPERS	463
PRACTICAL DEPARTMENT —	
Drawing	464
EDUCATIONAL NOTES AND NEWS	465
QUESTION DRAWER	467
LITERARY CHIEF-CHAT	468

The Canada School Journal and Weekly Review.

An Educational Journal devoted to the advancement of Literature, Science, and the teaching profession in Canada.

—o—T E R M S .—o—

THE SUBSCRIPTION price for THE CANADA SCHOOL JOURNAL is \$2.00 per annum, strictly in advance.

DISCONTINUANCES. THE CANADA SCHOOL JOURNAL will not be sent to any person after the expiration of the time for which payment has been made.

RENEWALS of subscriptions should be made promptly.

ALL BUSINESS communications should be addressed to the business manager. Articles intended for publication should be addressed to the editor. Post Office Orders to be made payable to J. L. Robertson.

ADVERTISEMENTS of a suitable nature will be inserted at reasonable rates. See schedule of rates in another column.

CANADA SCHOOL JOURNAL PUB. CO. (Limited)

OFFICE: 423 Yonge St., Toronto.

The World.

Year by year the condition of the wretched inhabitants of the Labrador Coast seems to become more hopeless. The fisheries, on which they relied almost solely for subsistence, have fallen off, and the condition of the poor people during the long winter must be pitiable in the extreme. In the midst of such hardships and privations the inhabitants cling with singular tenacity to their inhospitable country, in spite of the offers of free transportation to more genial climes. The name *Terra Labrador*, cultivable land, given by the Portuguese discoverers, to this region, sounds almost like a cruel irony. It is to be hoped that our Canadian Northwest may yet derive many industrious settlers from the Labrador Coast. They should be admirably fitted for our cold but fertile prairies, and would find them a paradise in comparison with their old homes.

The despatches mentioned last week in regard to the military movements of Servia, were at least premature. No invasion or collision, has yet taken place in the disturbed localities, but the problem is still unsettled and the future full of uncertainty.

In this, as in all such cases, the prospects of a peaceful settlement, are improved by delay. The military enthusiasm of weak nations like Servia, is very apt to cool under a waiting policy, almost as fast as it originally waxed warm.

Another change in the map of the world is foreshadowed. The scene this time is in Asia, where another slice is about to be added to the British dominions. The empire of Burmah, what is left of it, has, including tributary states, an area of somewhat over 150,000 square miles and a population estimated at from three to four millions. The country lies between 19° 29' and 28° N. latitude, and 93° to 100° E. longitude. On the North lofty mountains separate it from Assam and Thibet. Its vegetable productions are various and valuable, including inexhaustible forests of teak and *hopnea*. The staple fruits are the plantain or banana, and the mango. Rice, wheat, cotton, indigo and tobacco are cultivated. The government is a pure despotism and it is the arrogance and cruelty of the present despot, King Thebaw, which are at least the ostensible causes of the coming conflict and subjugation. The country is contiguous to Tonquin, where the French have been this last year or two gaining an unenviable notoriety, and rumor ascribes the insolence and hostility of Thebaw, which have provoked threatened invasion, to French instigation. In all probability, the fear of a French occupancy or protectorate may not be without effect in determining the action of the British Cabinet. At any rate a force is being now marshalled in India for the invasion and conquest of Burmah, and the King is preparing for resistance to the utmost extent of his feeble resources. The issue of the conflict is not doubtful. An unknown but important factor of the ultimate results is that the occupation of Burmah will make the British Empire coterminous with that of China for hundreds of miles. From the moral standpoint the best that can be said in favor of the expedition, apart from its alleged necessity as a measure of self-defence, is that the despot does not represent the people, and that it is not unlikely the great majority of the latter may prefer the beneficent rule of England.

The School.

ERRATA.—In Mr. Packer's advertisement of last two weeks, the word "Rational" was, by printer's error, made National. The title of his book is "The Rational Method of Teaching Reading."

There is also an error in Mr. Asher's article on "Divisions of Time," in No. 37, page 440, which we now correct. The clause reads, "If his time-piece indicated Intercolonial time he would need to add 4 hours," &c. It should be "subtract."

Owing to pressure of other engagements, Mr. Wells has retired from the editorial management of THE SCHOOL JOURNAL.

though he will still continue to write for its columns. All communications of whatever nature, whether relating to the editorial or business department, should henceforth be addressed to Mr. J. L. Robertson, Educational Emporium, 423 Yonge Street, Toronto. Let him be notified promptly of any irregularities which may occur, and they will be as promptly rectified. The new arrangements are now complete. Punctuality, efficiency, and progress are the watchwords, the determination being to make the paper better than ever.

Philadelphia has fallen into line in the work of industrial training in the schools. The Board of Public Education of that city has opened a Manual Training School for the instruction of boys who have graduated from the grammar schools, in the use of mechanical tools. A suitable building has been fitted up and furnished with all needful appliances, and competent instructors have been appointed to superintend operations. It is not the trade, but the use of tools that is to be taught, or, in other words, the school is strictly for manual training. Of course, as every educator knows, the training of the hand means the training of eye, taste, judgment, and all the correlated perceptive faculties as well. This institution is understood to be but the commencement of a system which is to be gradually extended down through all grades of the Public Schools. These new departures in the direction of industrial training, which we are chronicling from week to week, will be watched with great interest by students of the hard educational and moral problems which are everywhere pressing for solution. It seems scarcely too much to hope that in a wise and skilful combination of industrial and mental training is to be found a means of deliverance from much of the moral and social evil which is the outgrowth of the helplessness of large classes who are growing up in the city for lives of poverty, vice, and crime. The argument which the *Bulletin* so well puts for Philadelphia admits of a much wider application.

"Whatever adds to Philadelphia's industrial forces, whatever increases the class of her skilled mechanics; whatever tends to dignity manual labor; whatever enlarges the opportunities of honest self-support, puts money into Philadelphia's pocket and reinforces the elements of Philadelphia's greatness. These training schools have come into existence by no fanatical creation of educational theorists, but as the necessity of the times, and as such they must be liberally supported. Whatever they cost will come back to Philadelphia a hundred-fold."

Principal Grant, in his address at the anniversary of Queen's College the other day, referring to the proposed university federation scheme, said:—"The so-called confederation scheme has not a single clause to secure the continued existence of the colleges, we now have, much less a single word indicating a desire to improve them." In these words Dr. Grant puts his finger upon the weak point in the scheme of federation as finally modified. The great end to be sought in any such movement is the expansion and vigorous life of the colleges. A central university, surrounded with a cordon of teaching institutions, each full of vigorous life and of possibilities of unlimited growth, might give a mighty impulse to the higher education of the country. A central university, constituted to

relieve the colleges of a portion of their legitimate work, and thus acting as an enervating rather than stimulating force, would be a very questionable boon. Not as a help to existing theological schools, but as a means of fostering sound and broad literary culture, would the federation be justifiable.

"An Old College Boy" writes to the *Mail* on the Upper Canada College question. Speaking for many other old college boys as well as for himself, he says:—"We believe that the college in its present situation is an anachronism, while we also believe in the vital necessity for its continuance as part of our educational system." With the first part of this sentence every intelligent educator in Ontario must agree. The college is an anachronism. With the second part most such, old college boys perhaps excepted, will, we think, differ. Having admitted so much, the burden of proof rests upon those who can suppose that the mere removal of the institution to the outskirts of the city will make it the less an anachronism. It is to be hoped that the suggestion that a meeting of old college boys be called to discuss the question, may be acted on. We should be glad to learn what can be said and all that can be said in favor of continuing as a part of our educational system an institution which has outlived its special usefulness, and is now doing merely the same work that is being done by numerous collegiate institutes, doing it no better and at ten times the cost.

The abuse of the written examination which has made the name a synonym for "cram," is leading to a very natural but illogical result. The whole system of outside examinations is being vigorously denounced in many and even in very high quarters. This is, we think, a mistake. We know no other method at all equal to it for compelling the pupil to conceive clearly, think closely and reason logically. Nor can we conceive of any substitute, at all comparable to it, as a means of testing the reality and extent of a student's acquirements, a desirable and often necessary thing. The root of the evil is not in the system but in the kind of examinations. Examining is a science and an art and should be raised to the rank of a profession. We believe it quite possible so to frame a set of questions on almost any subject as to give the death-blow to cram, by rendering it useless, and so to estimate the value of answers as to recognize only genuine, intelligent, and conscientious work, and developed brain-power, and to recognize these in whatever form they may appear.

The *Globe* in a recent article defends the one text-book system in the following remarkable manner:

"If the last book authorized is really the best text-book on the subject, why not allow it to displace all the others on the list? Is it not a positive loss to a school to be using inferior text-books? Is it not the truest economy to use the best implements, as it is admitted to be the most economical to engage the best teachers? And this brings us to consider the second proposition, that there should be but one authorized text-book on each subject in the Public School course. To this it is objected, that you limit the choice of the teacher and consequently dampen and perhaps cramp his energies. But the teacher is after all a public officer, appointed for a well-known

purpose. We limit him to certain subjects. He is not allowed to teach classics or even moderns in the Public School. He is required to teach according to a certain programme, neither more nor less. Is not this cramping his energies? Now if, in the public interest, he is "cribbed, cabined, and confined" in these respects, why not limit him in the choice of text-books also, *if it can be shown to be for the public advantage?*"

Sir Lyon Playfair, in his Presidential address to the British Association at Aberdeen, severely reproached the British Government, for not aiding more liberally the secondary and higher education of the country. He put in a strong plea, not only for more State aid to colleges and universities, but also for bringing the secondary and higher education more immediately under State control, by the appointment of a Minister of Education. With all respect to the learned President's scientific attainments, we doubt if enlightened public opinion will follow his lead in the domain of political economy. If we mistake not, the trend of modern liberal thinking is in the direction of more voluntarism rather than more State control and support of higher education. In regard to the second point, the making the Superintendent of Education a Cabinet Minister, the *Educational Times* deals trenchantly with Sir Lyon's appeal to the example of France and Germany. It quotes M. Jules Simon to show that whatever may have been the cause of the intellectual sterility of France during the Napoleonic regime it could not have been due to the want of connection between the higher education and the State. The organic Decree of 1808 created a chief with absolute authority over all educational institutions, public and private. "It was an intellectual despotism side by side with a political and administrative despotism." The *Times* adds.

"It is not to France alone that we need look to find evidence that a Minister of Instruction may possibly use his authority to extend his own power and to crush out all ideas that conflict with his own. It was the Cultus-Minister of Prussia, Raumer, who, suspecting Froebel of socialism and irreligion, issued an edict forbidding the establishment of schools after Friedrich and Karl Froebel's principles;—uncle and nephew included in one condemnation, although it was only in respect of the latter that there could have been any foundation for the suspicion of the Minister."

Are these the historical models after which the educational system of Ontario is being moulded?

DON'T RING SO MUCH

Some teachers make their call-bell an intolerable nuisance. They strike it for classes to rise, to pass, to sit, to turn, &c. When possible, adopt signals that promote silence. An upward movement of the finger may bring pupils to their feet; a side movement may tell them to pass; a downward movement, to sit; and so on through the whole day. Eye signals are preferable to ear signals.—*School Education.*

THE TEACHER OUT OF SCHOOL.

The teacher in school affords a fruitful scheme for educational journals, and one that we suppose will not soon be exhausted. The great business of a teacher is, of course to teach, and to teach in the very best manner. And the great business of a teachers' journal is to afford the teacher the best possible hints

and helps in becoming what every individual teacher should aim at becoming—a thorough master of his profession. But, in addition to being an educator of the young, the teacher is also a man or a woman, or, as perhaps we should say, in conformity with the current fashion in speech, a gentleman or a lady. We see no reason why every teacher should not eventually become a gentleman or a lady in the highest and best sense of the term, that is to say, a man or a woman of the highest mental culture and the highest moral character. We are well aware that Public School teachers in Canada often begin their professional life without having enjoyed the highest advantages, either educational or social. But, it after ten, or fifteen, or twenty years of service in a profession which holds out so many opportunities and inducements for self-improvement, the teacher does not at least approach the standard indicated, it must be largely his own fault.

In the first place, there are very few occupations which afford so much time for self-improvement as that of teaching. In most cases the industrious teacher can secure some hours every day and a large part of one day every week for his own purposes. We are well aware that this statement needs many modifications. The popular idea that the position of the schoolmaster or schoolmistress is a very easy one because of the shortness of the hours of labor is very erroneous. The teacher who has done his whole duty for five or six hours in the school-room has done a hard day's work, and has not much nervous energy to spare at its close. Especially is this the case when, as in most country schools, the two hard duties of instruction and government have to be carried on at the same time. The comparative shortness of the work day and the yearly vacations alone render the mental strain of such a work endurable. Those who have tried both will testify that they have often found their energies more completely exhausted, their sense of fatigue greater, at the close of a six-hour day's work in the school than at the close of a ten-hour day's work in the harvest field or at the mechanic's bench.

Happily, however, the truest rest is not necessarily cessation from labor. With the mind, as with the body, a change of employment is often the best remedy for fatigue. A couple of hours spent in a brisk walk in the open air, or in a leisurely stroll in some inviting field, will generally prove a most effective restorer of tired nature. Nor need such walk or stroll be barren of higher results than mere recuperation of exhausted powers. To the open eye and ear Nature addresses a varied language, and her teachings are always full of interest and profit. One may have a keen eye for the beauties of landscape. Another may delight in the study of plants, or birds, or insects, or mineral specimens, or geological formations. There is no good reason why almost every teacher should not be an amateur artist or scientist in some special department. The opportunities afforded by these hours of recreation for social intercourse should not be overlooked. Kindly and sympathetic intercommunication with the minds and hearts of others is one of the best means of self-improvement as well as one of the highest of human duties.

But, apart from the work and the necessary recreation, there will still be left a few hours of every day for reading and writing. How many men and women of literary tastes and hungry minds would give almost anything to secure a couple of hours every day for study and thought. Two hours a day for 300 days in the year: 600 hours, or 100 six hour days. In ten years 1,000 days of six hours each, or about three working years, all to one's self. How much should be accomplished in that time! And what is to prevent almost every teacher from securing at least so much? Are we not then speaking within bounds when we say the teacher ought to be among the foremost in every department of social and literary culture?

But there are lions in the path. Yes, we know it; many and formidable they often are. The want of books in rural districts and, with the pittance received as salaries, the want of means to buy them. The claims, lawful and right within certain limits, but to be resisted when ruinously excessive, of pleasant companions and social gatherings. Most to be dreaded in these days of "cram," the preparation of examination questions, the reading of reams of foolscap in the shape of answers, and the getting ready each evening for the everlasting drill of the morrow. The first of these obstacles is serious, often insurmountable. Where schools are sufficiently near each other the formation of teachers' reading clubs will materially help by dividing the difficulty. But why confine such clubs to teachers? Are there not in almost every district a few like-minded persons intelligent enough to take part in carrying on the work of such a club? The temptations to fritter away precious hours in nonsense and gossip can be conquered only by moral strength and courteous firmness on the part of the teacher. For the third difficulty we know no remedy save the good sense of public educators, which is already tending to reaction from the absurd and killing extremes to which the examination craze has swung. But, after all, the proof of the strength is to be found and often the highest benefit reaped, not in the removal, but in the overcoming of obstacles. The teacher who will may eventually take his place amongst the wisest and best in any land. The true man and woman will cherish no lower ambition.

Special.

ELEMENTARY CHEMISTRY.

CHAPTER IV.

SECTION II.

CARBON.—(Concluded.)

Symbol C. Atomic Weight, 12 (11.97), Molecular Unknown.

102 Reducing power.

Exp. 7. — Heat a glass tube in the spirit-lamp and draw it out to a point. Drop into the point of the tube a very small quantity of arsenious oxide, As_2O_3 , and above it place a splint of wood charcoal. Heat the charcoal red-hot in the flame of the lamp, and gently raise the hand so as to bring the oxide into the flame without taking the charcoal out of it. The

arsenious oxide will volatilize, giving up its oxygen to the carbon, and deposit metallic arsenic on the cold part of the tube.

The affinity of carbon for oxygen at a high temperature is very great. It deprives most metallic oxides of their oxygen and thus brings them into the metallic state. It might almost be said that the art of metallurgy, as it now exists, is based upon the affinity of carbon for oxygen at a high temperature.

103. **Indestructibility.**—Charcoal, and carbon in most of its forms, is extremely indestructible unless exposed to an elevated temperature. Hence stakes and fence posts, if charred before they are put into the ground, last very much longer than when this treatment is neglected. For the same reason it is a common practice to char the interior of tubs and casks destined to hold liquids.

104. **Lampblack.** This form of charcoal is obtained by burning turpentine, resin, or other vegetable matters rich in carbon, with a limited supply of air. It is not pure carbon. It always retains a portion of incompletely burned compounds of carbon and hydrogen. It furnishes the most indestructible of black pigments, and has long been employed on this account as the basis of printing ink.

105. **Animal Charcoal.**—Charcoal manufactured from animal substances, is called *animal charcoal*. When bones are strongly heated out of contact with the air the variety of charcoal thus produced is called **Bone-Black**, and is much used by sugar refiners.

106. **Graphite.**—This is a crystalline form of carbon occurring in massive or hexagonal plates. It is also called plum bago, and is more familiarly known as black-lead. It is obtained from the earth in large quantities, and is used for the manufacture of lead pencils, and for giving a black polish to iron articles, such as stoves, &c., and for protecting them from rust.

107. **The Diamond.**—The Diamond is another form of crystalline carbon, occurring in well-defined crystals belonging to the regular system. It is the hardest substance known. Besides its extraordinary value as a gem it is used for cutting glass. Very small diamonds are said to have been lately prepared artificially by a Glasgow chemist. If the diamond be suspended in a cage of platinum wire, heated to bright redness, and then plunged in oxygen gas, it will burn with a steady red light, and with the production of pure carbon dioxide.

108. **Allotropic Forms.**—Charcoal, graphite, and the diamond are but different forms of the element carbon. They differ in hardness, in color, in specific gravity, and in many other physical properties. They are alike infusible, alike able to resist the action of substances which attack most other bodies, alike in being combustible, and alike in the same weight of each yielding the same quantity of carbon dioxide when burned. Such phenomena as these afford strong grounds for believing that our present elementary substances may have a composite structure.

QUESTIONS ON CARBON.

1. Give an account of the different methods employed for preparing charcoal from wood. How would you demonstrate the preparation of charcoal on the small scale?

2. Carbon is said to exist in three allotropic modifications. Describe why diamond, graphite, and charcoal are considered to be modifications of the element carbon.

3. How may the presence of carbon in organic matter be shown?

4. What happens when a piece of perfectly dry charcoal is placed in a jar of ammonia gas? If the jar of ammonia is standing over mercury and a piece of dry charcoal is placed in it what happens? What is the cause of the change?

5. What happens when charcoal is heated with a solution of indigo or logwood? Which kind of charcoal acts most readily on these bodies, and to what useful purpose is it applied?

6. How does charcoal act as a disinfectant?

How is animal charcoal prepared and what are its properties?

Describe the allotropic forms of carbon. How would you prove that these different substances consist of the same element?

HIGH SCHOOL LITERATURE.

BY J. E. WETHERELL, M. A.

SECOND PAPER.

The Rime of The Ancient Mariner.

1. What does "Rime" of the title mean? Why is it not "Rhyme"?

2. In what year was the poem published, and how old was the poet at the time?

3. What was the name of the volume of verse in which the poem first appeared? What is meant by calling it a "joint volume"?

4. Why was the year in which "The Ancient Mariner" was written the most remarkable year of the poet's life?

5. How does "The Ancient Mariner" in its present form differ from the original poem?

6. What is the "gloss" of the poem? What filled the place of the "gloss" in the first edition? Point out any literary merits of the "gloss." Show that it serves to link Coleridge's philosophy to his poetry.

7. Give Wordsworth's account of the origin of "The Ancient Mariner."

8. What part had Wordsworth in constructing the scheme of the poem? Did he contribute any details?

9. What was the origin of the main fancy of the poem?

10. What led to the introduction of the Albatross?

11. Give the substance of the Latin quotation prefixed as a motto to the poem. What do we learn regarding Coleridge's predilections from the knowledge that he had dipped into the theories of such visionary moralists as Burnet?

Mention all the *Naturas invisibiles* of the poem.

12. To what compact between Coleridge and Wordsworth does the poem owe its praeternatural element?

13. What does Coleridge mean by "the two cardinal points of poetry"? Towards which of these points does Coleridge's poetry gravitate?

14. What is meant by "poetic faith,"—an expression used by Coleridge himself in connection with his romantic poems? What means does the poet employ in "The Ancient Mariner" to secure this "poetic faith"?

15. Show from the poem that Coleridge was a keen observer of nature.

16. "What the poet himself was in the world, his Mariner is in the poem."

Illustrate this statement.

Refer to passages in the poem that lead us to think of the poet. What is meant by the terms "objective" and "subjective" in literature? Refer to passages in the poem by way of illustration. Is the mode of treatment in "The Ancient Mariner" mainly "objective" or "subjective"?

17. How do the fanciful pictures of the poem compare in vividness with the realistic scenes?

18. Discuss the following theories regarding the object of the poem:—

(a) The object of the poem is "to inculcate a love of all the works of creation, especially all living beings."

(b) "The Ancient Mariner is a system of Christian philosophy, describing the fall from innocence and faith and the return to virtue and belief."

(c) "It is an unconscious allegory."

(d) "It is a work of pure imagination."

19. What was Coleridge's answer to the criticism that the poem is improbable and that it has no moral?

20. Is it true that "The Ancient Mariner preaches no sermon"?

21. What constitutes the main charm of the poem? Refer to some of the minor attractions.

22. How do you deal with the criticism that there is a disparity between the crime of the Mariner and his terrible and lasting punishment?

23. How do you answer Swinburne's criticism that "the great sea piece might have had more in it of the air and flavor of the sea"?

24. What do you think of Wordsworth's remark that "the imagery of the poem is somewhat too laboriously accumulated"?

25. Do you think it is a fault in the poem that "The Ancient Mariner is always passive"?

26. Why did Coleridge, in editions subsequent to the first, eliminate from the poem the description of Death?

27. Show that the Mariner's punishment of continued isolation is in keeping with the nature of his crime.

28. How do the spiritual creations and situations of the poem compare in point of invention, grace and delicacy with the super-naturalism of other English poets?

29. How do the repeated interruptions of the Wedding Guest affect the "unity" of the poem?

30. On what grounds has it been said that "The Ancient Mariner is one of the supreme triumphs of poetic art"?

31. Into how many parts is the poem divided? How is this number employed in the story itself? What are the other "mystical" numbers used in the poem?

32. How does "The Ancient Mariner" compare with the old English ballads

- (a) in length,
- (b) in the number of divisions,
- (c) in diction,
- (d) in metre,
- (e) in subject?

33. "The Ancient Mariner is a most striking and thrilling invention considered as a picture; but, considered as a train of causes and effects in the poetic domain (to say nothing of the facts of nature), it seems to me essentially meagre—defective in the core of common sense."—*W. M. Rossetti.*

How can this criticism be answered?

34. "Coleridge has been assailed as an unmeasured and disingenuous borrower."

On what ground has De Quincey accused Coleridge of plagiarism in the "Ancient Mariner"? How can the charge be met?

35. "The poem has some of the terminology and quaint conceits of the old ballads."

36. "The wandering of the Mariner is doubtless imitated from that of the wandering Jew." Narrate the legend of the wandering Jew. In what famous collection of ballads did Coleridge find it?

37. Remark on the melody of "The Ancient Mariner." What poem of Coleridge's has been characterized as "the supreme model of music in our language"?

38. Describe in detail the metro of the poem. By what name is the metro known? To what hymn-metre does it correspond?

39. Explain the metrical terms, *heptameter*, *trimeter*, *tetrameter*, *sextain*, *quatrain*, *quintain*, *amphibrach*, *catalectic*, *anapest*, *accephalous*.

40. What is "middle rhyme"? In what lines of the quatrain may it be used? Why may it not be used in the third and fourth lines of quatrains?

"The long lines never rhyme." What exceptions to the rule?

42. What is "double rhyme"? By what other name known? Give an example from the poem.

THE HISTORICAL DEVELOPMENT OF EDUCATION.

BY DAVID ALLISON, LL.D., SUPERINTENDENT OF EDUCATION
FOR NOVA SCOTIA.

(Continued.)

Admitting the thousand imperfections that still attach to the methods of our school-rooms, who can over-estimate the importance of this grand development? Who does not see that it is to the recognition of education as a science, with practical methods corresponding to its theoretical principles, that we owe all that is most hopeful in our present condition and outlook, our professionally trained teachers, our kindergartens, our object lessons, our teaching of grammar by practice, and of science by observation and experiment, not to omit the aspirations which are cherished for some really effective mode of intermingling in our schools the literary and industrial features of education? It is easy, and right, too, to regret that all teaching is not natural, sympathetic, efficacious: that so much of it is mechanical, traditional, haphazard, a case of "the blind leading the blind." But a broad view inspires hopefulness. False and unnatural methods are at least beginning to die out, and even the fact that they are rooted and grounded in the tenacious soil of human inertia cannot secure their permanent vitality.

3. The last topic to which I propose to refer is the *relation of education to the State*. Dealing with this subject in its historical aspects, I am not called on to discuss the abstract principle of the obligation of a State to provide for the education of its youth—its future citizens. Whatever differences of opinion exist among those who recognize the general validity of that obligation, as to the precise theoretical grounds on which it rests, and whatever diversities of practice may prevail as to the mode and limits that govern the application of the principle, this much at least is clear, that the civilized nations of modern times agree to treat education as a national necessity. Some State systems of education are more elastic, more tolerant of agencies outside of state control, than others, but the universal law of nations recognizes the instruction of youth as a matter within the proper scope of public authority, and as thus prescribing specific duties to the national understanding and conscience. Legislation ordains systematic provision for organizing and operating the forces of education, establishes regulative principles for their operation, and in many cases enforces by positive statute the use of the opportunities thus provided. My purpose being historical rather than controversial, I content myself with two brief observations. The assailants of the theory of a State control of education find themselves confronted by the almost insuperable difficulty of laying down lines and principles of attack, which do not virtually involve the annihilation of the elementary ideas of national existence and authority. To this may be added a simple statement of the fact that the forces which have operated in some countries and in certain states of society to retard the full development of that theory, are manifestly growing weaker and weaker. The obvious tendency is towards a complete nationalization of education.

But how does this question stand related to history? We are without opportunity for thoroughly studying in their organic character the educational instrumentalities of the ancient nations. The schools of Greece and Rome, if not strictly *state* schools, were certainly secular in the sense of providing a course of training for the general duties of citizenship, without reference to special cult or any ecclesiastical function. And being of this character, instruments designed to furnish a culture necessary for all, we naturally find no historical grounds for supposing that in the earliest centuries of Christendom, advantage was not taken of their facilities by Christians as well as others. The steps by which education came in after times chiefly within the control of a particular class, the clergy, I need not trace minutely. The tremendous cataclysm which swept away the Roman Empire swept with it all vestiges of an organized system of public instruction. The cause of learning had been lost but for the fidelity to its interests of those who ministered at the altar. It is not enough to say that in those ages of upheaval and dissolution the Church was the agency best adapted to foster intellectual training. As respects many centuries, a comparative mode of speech is out of the question. There was no other agency. But for the efforts of pious churchmen society would be absolutely overwhelmed by the deluge of barbarism. Undoubtedly their primary impulse to educational work was a moral and religious one. Conditioned to a narrow field of effort, shut up to do only a part of that which was desirable, it was natural and right that they should lay the chief emphasis of what was of the highest import. But it would be to defame the Church of these troublous times to say that she had not a distinct conception of the value of education in itself and for its own sake. You search her annals in vain for any trace of sympathy with the notion which magazine writers of our own day have undertaken to sustain, that the spread of popular education tends to the increase of crime. She looked upon *intellectual* as the natural ally of *moral* culture; and this view determined her policy in dealing with the barbarous people for whose salvation she labored. Her watchwords did not anticipate the modern maxim, "If you educate a man's intellect only, you but make him the greater scoundrel," a maxim capable of a true sense, indeed, but too often quoted, I fear, in support of the God-dishonoring falsehood that the pursuit of the so-called secular knowledge has a *per se* tendency towards moral depravation.

But erroneous conclusions must not be drawn from the admitted relations of the Church of the Middle Ages to education. The efforts to which I referred did not proceed on the score of a theoretical repudiation of the right of the State to interest itself in the same subject. The Church simply recognized the duty that devolved on herself, and, with exceedingly limited agencies at command, discharged that duty in such a manner as to evoke the admiration and the gratitude of succeeding ages. But when at times the idea of nationality came forth into special prominence, and great rulers like Alfred and Charlemagne had help to offer, she freely yielded to the representatives of the State the right to direct the currents of national education. There are far better historical grounds for regarding our noble Saxon king as the inventor of "compulsory education" than as the originator of "trial by jury" or founder of the University of Oxford. As for Charlemagne, the great organizing genius of the central medieval period, while many of his plans perished with himself, the schools which he founded survived the wreck of his imperial policy and became permanently incorporated in the general structure of European society.

Much the same lesson is taught by the history of the universities of Europe, those famous institutions whose degrees, "the stamp and seal of profound erudition," were once in as high esteem as a patent of nobility, or even as "the Golden Rose" itself. In their earliest manifestations, as is well known, they were not the product of religious impulses or ecclesiastical degrees at all. They owed their origin to clearly traceable historical causes, events which filled Europe with a new race of scholars, and brought those scholars together at various points for the purposes of mutual aid, comfort, and protection. And when at a later period the universities received the patronage, and came, to a greater or less extent, under the control of the Church, there was a collateral development of a relation to the State in which each institution was planted. In process of time the universities, as a rule, became distinctive national institutions; without them the national life and activity were felt to be unorganized and incomplete. Speaking generally, the national note or characteristic is retained by the universities of Europe until this day. They are part of the organized life of the nation, and while accumulating and distributing the priceless treasures of learning, they play an important part in developing the impulses of patriotism.

We thus see that in the Old World the development of the doctrine of State interference in primary education was subsequent to a long settled practice of founding and liberally endowing institutions, providing special culture for the few. On this continent the manner and order of evolution have, to a certain extent, been different. Here alongside of a practically unanimous recognition of the right of the State to direct elementary education, there has grown up a theory that beyond that sphere national interposition is uncalled for and improper. Conspicuous cases may be quoted to show that this theory is not universally held either in the United States or Canada, but that it has been determinative of the educational policy of large sections of the people there can be no doubt. Is it a sound one? Mature reflection has convinced me that it is not. This is assuredly a case of "all or nothing." The regulative right which is theoretically admitted in respect to the education of children cannot be denied in respect to the education of young men and women. Frame any theory you like to justify State interposition and control in education at all, and it will logically include the whole reach and scope of education, or it will be found wanting as a theory altogether. Even assuming that as one who would

"A hair divide
Betwixt the nor' and nor'west side,"

we had found the theoretical limit of national right and responsibility, who can undertake to draw the line practically with any assurance of accuracy? Who, amid the changing conditions of industrial and social life, can venture authoritatively to say to the State: "Thus far shalt thou come but no farther?" The fact that many of the High Schools of to-day are better equipped and manned than many Universities were forty years ago, would suggest the inference that the line between what the State may rightfully do and not do in the matter of education shifts with the progress of civilization!

So much on the score of theory. Those who object to my conclusions can point to justly distinguished seats of learning, such as McGill, or Queen's, or Victoria, built up by the purely voluntary efforts of private individuals or religious denominations. But it is quite possible that some, or even all, of these institutions owed their origin to the failure of the State to discharge its obligations in respect to higher education. If so, the fact simply increases the claim of such Universities and their founders on our admiration and regard. But I am prepared to contend for the general principle that it is undesirable to cut university education adrift from the corporate national life altogether, that by doing so we needlessly sacrifice elements of power which every true patriot should take into account. While admitting the impossibility of sketching a typical university that would suit all lands alike, and that the conditions of each country must largely determine the moulds in which its institutions should be cast, I venture to think that the neighboring Republic suffers greatly from the "free and easy" voluntarism that characterizes its university system. An American college president Dr. Barnard, of Columbia—after referring to the rigid control exercised by the Governments of Europe over the erection of universities, states the results as follows: "The sources of honor are so few, their characters are so high, their teachers are, in general, so celebrated and of so universally recognized authority, and finally the tests to which they subject aspirants are so rigorous, that a certificate of proficiency received from them has a meaning that all the world can understand."

He then adds:—"All these advantages we have thrown away. We have not only multiplied almost indefinitely these fountains of honor, but we have taken no care that, in their composition, they shall either represent learning or command reverence. A village parson, a village doctor, and a village lawyer, supported by a banker, a shopkeeper or two, a manufacturer, and perhaps a gentleman farmer, constitute very commonly the tribunal who are to dispense the precious distinctions which the conservative wisdom of other times entrusted only to the honored hands of those whom universal consent pronounced to be the wisest and the best." The remedy he suggests for what he calls "this miserable business" is an invocation of the authority of the State. In a portion of the press of my own Province, which, as you may know, has five degree-conferring institutions or universities, I am sometimes assured that the policy of dotting the country over with small colleges has worked well in the United States. Dr. Barnard does not seem to think so. A mere statement of facts almost forces on us the belief that it must to many be accompanied by a lowering, an unspeakable lowering, of the true ideal of university education. There are, if I recollect aright, forty-seven (Commissioner Eaton's report gives the

exact number) chartered, degree conferring colleges or universities in the State of Ohio. Now there is not a member of your Association who could not name off hand the universities of the United Kingdom; scarcely one, I think, who could not, unprompted, give the names of the chief universities of the German Empire. Ohio is separated from Ontario only by the narrow waters of Lake Erie, yet I pledge my word that there is not a member of your body who has ever heard of three of her forty seven universities. And such is fame!

And if now, with considerable venturesomeness for an outsider, I allude to your own magnificent Province, it is not because I suppose that any such state of things as that which I have just described exists here. I know well that it does not. The institutions which exist side by side with your noble Provincial University have an honorable record of self-sacrificing and successful endeavor, and the vigor with which they have maintained true university standards has long attracted my notice and my admiration. I venture to allude to Ontario because, more favored than most, she seems possessed of conditions for realizing what, perhaps after all, is the ideal type of the university, that which joins to national authority, prestige, and power, the free play of individual philanthropy and denominational zeal.

Logical order and completeness would require me to return from the digression into which I have wandered, and trace out somewhat minutely the law which has thus far guided the development of popular education. But I must forbear, having, I fear, already trespassed beyond the bounds of reason on your patience. Let it be enough to congratulate ourselves that, though there may still be in connection with this great question some unsettled problems of no inconsiderable magnitude, history has indicated the substantial soundness of the principles which guide our labors. No pessimistic apprehensions, no *a priori* demonstrations of failure, can gainsay the great fact and lesson of human progress. The goal towards which all civilized nations are rapidly moving is the conception of organized public education, not as an economic arrangement for lessening public expenses, nor as a charitable contrivance to benefit the poor, but as the means by which a free people, appreciating the unspeakable blessings of knowledge, have determined and decreed to make those blessings both permanent and universal.

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO.—JULY
EXAMINATIONS, 1885.

FIRST CLASS TEACHERS—GRADES A AND B.

CHAUCER, POPE, AND WORDSWORTH.—(Continued.)

Examiner—John Seath, B.A.

III.

5. Give the substance of the sonnet in which Wordsworth enunciates his theory of the poet's art. Apply his canon to the sonnets.

6. "Some of the noblest of Wordsworth's sonnets are consecrated to liberty; some describe with incomparable felicity the personal feeling of the writer; some might be termed simply descriptive, were it not that even these are raised above the rank of descriptive poetry, by the pure and lofty imagination of the poet. 'The light that never was on sea or land,' pervades the humblest of these pieces, and throughout there is inculcated a cheerful, because divine, philosophy."—Dennis.

Justify this criticism in detail, giving in each case one well marked illustration from Matthew Arnold's collection.

7. It is a beauteous Evening, calm and free;
The holy time is quiet as a Nun
Breathless with adoration; the broad sun
Is sinking down in its tranquillity;
The gentleness of heaven is on the sea:
Listen! the mighty Being is awake,
And doth with his eternal motion make
A sound like thunder—everlastingly.
Dear Child, dear Girl! that walkest with me here,
If thou appear'st untouched by solemn thought,
Thy nature is not therefore less divine:

Thou liest in Abraham's bosom all the year ;
And worshipp'st at the Temple's inner shrine,
God being with thee when we know it not.

(a) Designate this sonnet by an appropriate title.

(b) Write explanatory notes, giving a concise account of Wordsworth's philosophical tenets as embodied in this sonnet.

(c) By what this sonnet is regarded as one of the finest in our language. Show, as well as possible, wherein its perfection consists.

IV.

8. Contrast the styles of Chaucer, Pope, and Wordsworth, illustrating your answer from their works.

9. In the same manner, contrast the attitudes of these authors towards Man and Nature.

GEOMETRICAL OPTICS.

Examiner—J. C. Glashan.

1. State the laws of reflection of light.

Determine the position of a luminous point so that its four images formed by one reflection at each of four vertical plane mirrors may lie in a straight line.

2. Determine the geometrical focus of a pencil of rays after direct reflection at a spherical surface.

If a pencil of rays issue from a point P in a diameter AB of a sphere of radius r , and if u and v be the distances from A and B respectively of the geometrical focus after direct reflection from A and B , show that

$$(2r - u + v)(r - u + v) = (u + v)^2.$$

3. State the laws of refraction of light.

The rays of a luminous point 12 inches above the surface of still water 12 inches deep, enter the water, are reflected from the bottom of the vessel, and emerge. Determine the position of the final image formed.

4. Determine the geometrical focus of a pencil of rays after direct refraction of a spherical surface.

A small pencil of rays directly incident on the surface of a refracting sphere of radius 2 inches, is brought to a focus at a point $3\frac{1}{2}$ inches from the centre of the sphere. Find the refracting index, the origin of the pencil of rays being 10 feet from the centre of the sphere.

5. Show how to determine by experiment the focal length of a lens.

The back of a double convex lens is quicksilvered. A small pencil of rays directly incident on the lens, enters it and is reflected. Find the geometrical focus of the emerging rays.

6. Describe the Galilean telescope and determine its magnifying power for an eye that cannot see distinctly beyond x feet. What are the advantages and what the disadvantages of this telescope?

The magnifying power of an opera glass when directed to a distant object is 4, but when adjusted to an object at a distance of 30 feet from the object glass, the magnifying power is 5. Determine the focal lengths of the eye-glass and the object-glass.

7. Determine the image of a straight line reflected in a spherical concave mirror.

Practical Department.

One of the most objectionable practices in recitation is the habit, still tolerated in many schools, of the children thrusting up their hands, beating the air, and snapping the fingers, whenever a special question is put to one of their number. The result is confusion of the mind and intimidation of the spirit of all save the few whose power of the rapid phrasing and ready reckoning brings them to the front in this cheap sort of competitive recitation. Every pupil in a class has a right to a quiet and respectful attention, and ample time and favorable conditions for putting his knowledge of a subject into suitable language. The great danger of our graded school-work

that the brilliant group at the head will do the work, and the rank and file be left practically untaught; and the habit of which we speak is mischievous in producing this result.

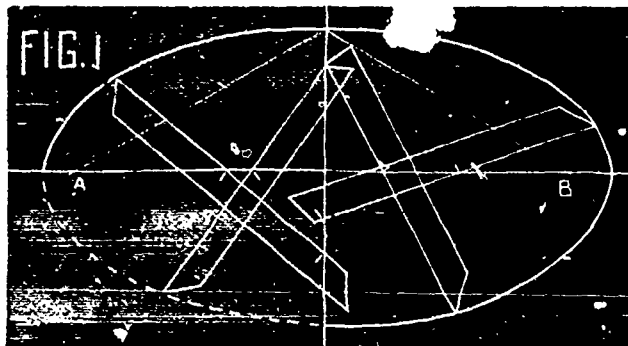
DRAWING.

BY WILLIAM BURNS, DRAWING MASTER, HIGH SCHOOL, BRAMPTON.

(The Editor of this Department will be glad to answer questions for information addressed to him in care of the SCHOOL JOURNAL.)

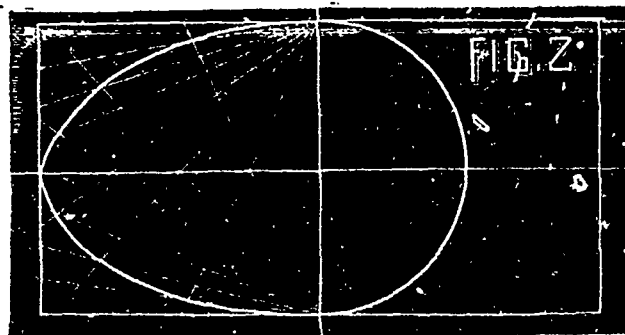
VI.

In our last paper we discussed the drawing of circles, before giving many examples of patterns composed of these, let us first describe some of the modes of drawing the ellipse and oval, curved figures which are generally more artistic in their combinations than the more regular form of the circle. An ellipse is a curved figure with two axes, the transverse and conjugate, or major and minor; if these cut at right angles we have a right ellipse, (Figs. 1 and 2),



if at any other angle, an oblique ellipse, (Fig. 3). The length of the semi-major axis, measured from the extremities of the minor will give the foci (A, B, Fig. 1).

The best practical plan of drawing an ellipse, if of large size, is to find these foci, then placing two pins at the points take a double piece of string equal to twice the length of one of the foci from the other extremity of the major axis, by keeping the string on these pins, the point of a pencil stretching it will describe an ellipse; thus this figure can be drawn even on rough ground. Another plan (Fig. 1) is to take a small slip of paper, mark the lengths the semi axes from the same end, then keeping these two points continually on the axes, its end will mark an ellipse, and a series of



points will be found through which the figure can be drawn by hand,—this freehand work has, in fact, to be done in every case. In (Fig. 2), another mode is adopted—through the extremities of the axes draw lines parallel to them, forming a rectangle, then divide the semi-axis, and the semi-side of the rectangle into the same number of equal parts, join the points in the axis with the opposite end of the undivided axis, and produce these lines into the opposite quadrant, next join the other end of the undivided axis with the points marked on the side, the intersection of these lines will give a series of points in the ellipse, through which the figure may be drawn in Fig. 1. The advantage of this method

is that it is equally applicable to an oblique ellipse, as is shown in Fig. 3. The chief difficulty in obtaining a correct drawing of this figure lies in getting the pupils to recognize the true shape of the curve; if they are shown one drawn correctly, and better still if they draw some correctly themselves by one of the above modes, there will be far less difficulty in obtaining them afterwards by freehand, although in every case it is better to have the axes drawn, and generally if unequal in length, to lightly outline the circumscribing rectangle or parallelogram. A plan frequently adopted is to describe four arcs of circles through the four extremities of the axes, using the semi-major axis to draw those on the semi-minor, and the semi-minor to draw those on the semi-major, then completing the ellipse by a curved line between these circular arcs. This plan is evidently false, because no portion of an ellipse can possibly be a circular arc.



An oval is properly made up of a semi-ellipse and a semi-circle. This is shown in Fig. 2, where, in place of completing the ellipse in the same mode, we have drawn the semi-circle on the minor axis, thus producing an oval form.

We have given these figures thus carefully drawn, not that it is necessary for junior pupils to draw them quite so elaborately, but in order to assist the teacher in getting a correct form by which he may illustrate the true shape required, when, as before remarked, the class will much more readily comprehend the end in view. Still we have found but little difficulty in getting the pupils to draw them by these methods after a little careful explanation, and the correctness of eye attained is well worth the time spent upon it.

EXERCISES.

1. Draw two lines at right angles, 3 inches and $1\frac{1}{2}$ inches long respectively, and bisecting each other. On these two as axes draw an ellipse.
2. On same two lines draw an oval, so that the upper end of oval is $1\frac{1}{2}$ inches in width.
3. Draw an oblique ellipse of same size.

After these have been drawn thus mechanically, let them be drawn by freehand, using only the axes as guiding lines.

"What is a lake?" asked the teacher. A bright little Irish boy raised his hand. "Well, Mickey, what is it?" "Sure, it's a hole in the kettle, mum."

Educational Notes and News.

Chesterville Public School has a fifth class of ten.

There are 78 teachers in training in Stratford Model School.

Mr. A. C. Smith, assistant in Morrisburgh school, was successful at the first class examinations, having secured grade C.

Dundas Teachers' Association will meet at Morrisburg on Thursday and Friday, October 29th and 30th.

Mr. Butchart has been engaged to take charge of New Sarum school next year.

Mr. Marton, B.A., of Exeter, has been engaged as principal of the Watford schools, at \$600 a year.

Mr. R. Henderson has resigned the principalship of the Blyth Public School to begin ministerial studies at Knox College, Toronto.

Miss Minnie Baskott, teacher of S. S. No. 21, Southwold, has been appointed to succeed Mrs. Wallace, in Fingal, at the beginning of 1886.

Mr. McCabe, late teacher of the Separate School, Amherstburg, has entered the Medical College, Toronto, and Mr. Geo. Famolart has succeeded him.

Mr. John A. McPhail, late headmaster of the Fanning School, Bedeque, P.E.I., is attending McGill College, Montreal, for a university course.

A local teachers' association has been started at Wellesley village. The teachers in the vicinity are determined to make the exercises interesting and profitable.

There will be a convention of the East Victoria teachers held in Lindsay, on Friday and Saturday, 6th and 7th of November, at which subjects of an instructive nature will be discussed.

Mr. Rogers has resigned the headmastership of Cambray school. He intends to prepare for a university degree. Mr. D. McMillan has been engaged as teacher for the ensuing year.

Mr. O. T. Mother, Lynn Valley, Oxford county, has given up his school to attend the Ingersoll High School, to study for a first-class certificate. We hope he will be rewarded with success.

Mr. John Campbell has been re-engaged as Principal of the Public School in the village of Gorrie. He has been eight years in that position.

Mr. Chas. B. Rao has resigned the principalship of the Cass Bridge school. Mr. Casey Smith, a newly-fledged Normalite, takes his place.

Mr. Arthur Whitney, a son of W. A. Whitney, M.A. headmaster, Iroquois High School, is succeeded in the Boyne School, Winchester, by Miss J. M. Gardiner.

Messrs. J. G. Harkness and Jno. Stuart Carstairs were successful at the recent examinations in Toronto University. The former is in his first year, the latter in his second.

Mr. Jameson, brother of Headmaster Jameson of Morrisburgh High School, has been engaged as a third class teacher in that institution.

Mr. D. C. Smith has resigned the mastership of Islay School for the ensuing year. Although offered an increase in salary he could not be induced to remain, having decided to attend the Collingwood Collegiate Institute, to study for a higher grade of certificate.

J. Houston, B.A., formerly teacher in the London Collegiate Institute, and recently Principal of the Collegiate department, Portage La Prairie, has been offered the position of English teacher in the Winnipeg Collegiate Institute.

Mr. Jas. Crawford, formerly teacher in S. S. No. 9, Mosa, has given up charge of his school and gone to Toronto to study Medicine. The vacancy occasioned by his departure is filled by Mr. Foy, a former head master of the Glencoe Public School.

The Dominion Business College, Kingston, of which Messrs. McKay and Wood are the principals, is meeting with laudatory remarks from the local press, and a large number of students are now in attendance, many of whom are from the United States.

The High School buildings, Lindsay, are reported by the H. S. Inspector as unsuitable. It is quite time that a better building should be erected, worthy of such a town as Lindsay, for the present structure is more like a barn than a school.

In our last issue it was stated that Mr. Irwin is president of the Normal School Literary Society. This is an error, as the president is Mr. Joseph A. Snell, 1st A. man. Mr. Irwin is attending the Normal School.

In a letter to the *Toronto Mail*, Dr. Collinge, of Fort Qu'Appelle, Assiniboin, says:—"There can be no doubt as to the increase of insanity in the higher civilized communities. May not the over-taxing of the brain in our schools be one of the many causes of the increase in Canada? I am strongly of opinion that it is."

The phonic system of teaching reading is used in most of the schools of Stratford. It was introduced since last vacation, and its adoption has been most successful. Dr. McLellan, on visiting the Model School recently, expressed himself as greatly pleased and surprised at the progress made in reading by the use of the method.

Miss Eason has been very successful in her kindergarten work in the primary class under her charge in Stratford. The singing of motion songs by the little ones before the teachers' convention was highly creditable, and elicited a cordial vote of thanks from the members.

Mr. R. E. Brown leaves No. 5, Colborne, at the end of this year. His place will be taken by Mr. Alex. Watson, of Toronto Normal School. Mr. Brown has been very successful and popular, being at present in the honorable position of president of the West Huron Teachers' Association. We have not been informed of his plans for the future.

Mr. N. Gordon paid an official visit to our school last week. His report was satisfactory. An interesting feature in his report was the necessity of providing another teacher. It appears the new Act states that for every fifty of school age in the section there shall be a teacher. We cannot see the virtue of this law as the necessary number of teachers should be in proportion to the average attendance.—*Shelburne Free Press*, Oct. 15th.

The Davies School, Summerside, P. E. I., loses one of its efficient teachers in the person of Mr. A. A. McLellan, who left recently for Montreal to enter McGill College as a medical student. Mr. McLellan is a young man of good habits, and much respected in the community. His musical talents made him a useful member of society, both as leader of the band and often of concerts got up by local talent. We wish him success in his chosen profession.
Pioneer.

Educational matters are reported progressing favorably in Algoma District. The Public School Inspector is laborious and painstaking in his duties, but bad roads and the large number of schools in the inspectorate render his task no sinecure. Schools are now built and flourishing in places where only a few years ago the beams roamed without restraint. As the inspectorate is 500 or 600 miles long, teachers cannot regularly attend the conventions. They are, however, earnest in their work, and are producing excellent results.

The following questions are suggested on Dr. McLellan's talk on the A B C of arithmetic.—What is an "Intuition?" Do children learn numbers intuitively? Should numbers or figures be taught first? When should you teach the number "5?" What should a child learn about "five?" Should the first notions of numbers be got from seeing and handling objects? Have you an intelligent method of teaching notation? On what knowledge, already in possession of the child, do you base your first lesson in fractions?—*St. Thomas Journal*.

Messrs. Houghton, Mifflin & Co., publishers, Boston, Mass., have published a pamphlet on "Method of Teaching Literature." It gives the opinion of several leading American teachers on the subject, and in the circular which accompanies the pamphlet the publishers say, "It has occurred to us that the readers of your paper might be interested in a statement of the methods discussed in the pamphlet. We have a few copies left which we shall be willing to send without charge to teachers who are really interested in teaching literature." This is an opportunity that should not be neglected.

Mr. Van Slyke, late principal of Ingersoll Model School, and successor to Mr. Deacon in the principalship of the Woodstock Model School, began his duties here on Monday, 12th inst. As Mr. Van Slyke has a most enviable reputation in Ingersoll, Hamilton and elsewhere, we have no doubt that the standard of our Model School, already high, will be raised still higher under the new management. The number of student teachers now in attendance is twenty. The following are those who compose the class:

Misses M. Moncur, E. Campbell, A. White, M. McPherson, J. Robb, A. Gades, J. Sherran, S. Stephenson, L. Overholt, M. Topping, E. Dambrook, A. Palmer, C. Bertrand, N. Milne, Messrs. C. F. Lyster, W. H. Falconer, J. Millar, T. Heoney, J. McLain, J. Robson. It is creditable to the Woodstock High School to mention that fourteen of the above received their literary training in that institution. *Woodstock Sentinel Review*.

In the report of the East Middlesex Teachers' Convention, as given in the *London Free Press*, the Minister of Education in giving an address said that "Henceforth there will be no division in second class certificates. The distinction will be made by the standing taken at the Normals, with or without honors. The course would also be on the same line as the matriculation in Arts. Matriculation with three first-class honors will be considered equal to a first-class grade C certificate." If more honors, medals, and distinctions were given for practical professional work, in both the Normals and in the Public Schools, it would, we think, be productive of better results in actual work of teaching. The best scholars are not always the best teachers.

The *Victoria Farder* gives a timely hint to the Managing Committee of the East Victoria Teachers' Association, as to the propriety of billeting the visitors who are to assemble in Lindsay at the approaching Convention. It says: "When a conference, synod or assembly is held in a town, the ministers are billeted with friends of the cause; and we see no reason why our teachers should not be so honored. As a rule teachers are poorly paid, and few of them can afford to pay railway fare and hotel bills for a couple of days even to attend a convention, therefore many of them stay away altogether. We feel sure there are dozens of homes in Lindsay where two, three, or four of the Victoria teachers will be most heartily welcomed for the two days. Let the managing committee make the announcement that they want applications from the citizens, and we are sure a ready response will be given by our townspeople. The suggestion is very commendable, and if carried into effect generally, teachers would not be ungrateful for the courtesy thus conferred.

The Public School teachers section, at the last provincial association, made several suggestions with respect to the new regulations, which, coming from such a source, are entitled to special attention. The details of any system are best understood by those who are engaged in carrying out its provisions. Among other recommendations we notice the following as being in the right direction:—(1) That a set of drawing models be added to the school apparatus. (2) That the arithmetic for third class be greatest common multiple, least common multiple, reduction, compound rules, vulgar fractions, and mental arithmetic. (3) That the history for the fourth class be the leading features of Canadian history and one period of English history, to be changed from time to time. (4) That presiding examiners at departmental examinations and members of county boards of examiners should be selected from teachers actively engaged in the profession. (5) That graduates of a university, in order to qualify as Public School inspectors, shall have not less than five years experience in teaching, three of which shall have been obtained in a Public School.—*St. Thomas Journal*.

The teachers' examinations were concluded on Wednesday. We believe there were twenty-four candidates, about one-third of whom wrote for second. Complaint is made by the friends of the Iroquois school here that the mode of conducting the examination, or rather of publishing the result, is unfair to this school. It is said all old teachers, no matter where educated, all students from Public Schools in the county, and from all schools outside of the county, are required to go to Morrisburgh for examination, while only the pupils from the Iroquois High School remain here, and that the published lists of successful candidates make it appear that all this mature and garnered culture is the result of Morrisburgh High School work. If this is correct, the Iroquois school is very heavily weighted indeed. We are all very prone to judge by results, and if we see two or three times the number of teachers credited to Morrisburgh that Iroquois can claim, we will be very likely in choosing a school to give that one the preference.—*Iroquois Correspondent of the Morrisburgh Courier*.

It is rumored that the Peterboro' Board of Education has expressly forbidden the absence of their teachers to attend the Convention which was announced to be held in Peterboro' on the 22nd and 23rd insts. It may be that the Board are of opinion that Conventions should be held in the vacation months, and, as the *Peterboro' Examiner* puts it, "Not upset the attendance of over one

thousand school children, as now, and demoralize to a certain extent the school system." The Convention is, however, postponed until an opportunity arises when it may be held without interfering with the regular attendance of the school children. The expression of the Board was directed against the absence of teachers from their duties, on frivolous excuses, but it has been interpreted as being levelled against the Teachers' Institute. Surely the Board did not mean that!

There has been, and still is, a great deal of discussion going on in Perth, of affairs connected with the High School. A local correspondent writes a very pointed letter to the *Perth Courier*, Oct. 16, from which we clip this extract:—"Has the school been a failure under the present principal? Let us see. Mr. Rothwell took charge of the school in 1882. At the first examination in July, 26 passed the intermediate, one took a scholarship at Queen's University, and one at Cobourg—total, 28. In 1883, 45 passed the intermediate, and one in Toronto University—total, 47. In 1884, 43 passed the intermediate, and three at Toronto—total, 46. In 1885 the intermediate examination was done away with and one for teachers' certificates substituted, thus reducing the number able to pass in this year. Ten passed at this examination, four at Toronto, one at Queen's, and one at McGill. This high record was attained by the principal under very discouraging circumstances."

The direct effort to prevent the re-engagement of Mr. Rothwell as Principal of the Collegiate Institute, having either failed, or it being attended with difficulties not easily overcome, those who have control of the Board at present seem to have adopted the expedient of lowering the salaries of the teachers for the ensuing year, under the supposition and hope that two of the staff will decline to re-engage in such a contingency. In this they are no doubt right. It is not likely Mr. Rothwell would accept any Principalship under \$1,200, for the position, responsibilities and troubles are worth all that. But the Board know well, and the ratepayers also should know and consider it, that the result of this reduction would be a lowering of the grade of the Collegiate Institute accordingly, and likely reducing its status to that of an ordinary High School. If the school is to be kept up, good salaries will have to be paid, and the grade of teachers kept up. It is full time the people were showing their wishes and opinions more decidedly in these school matters and the "machine" management of them.—*Perth Courier*.

QUEBEC.

From our own Correspondent.

The educational institutions of the Province opened in September under favorable circumstances. An unusual number of our leading schools changed teachers this year. Among the more important changes may be noted, the Rev. McAdams' arrival at Bishop's College, Lennoxville; the Rev. Dr. Kennedy's at Stanstead College, and Mr. Bannister's at St. Francis College, Richmond. The collapse of the two denominational Ladies' Colleges of the Province is a significant fact in the history of Protestant education of the Province. Notwithstanding a special Government grant of three hundred dollars to each of these institutions, Compton College has been closed for a year, and a recent effort to re-open it has proved unsuccessful. Dunham College, which has been fighting for an existence for the past two years, has been compelled to close its doors, with a large debt upon the late Management. It is impossible for these Protestant Colleges for young women to compete with the numerous excellent Convents of the Province. These institutions furnish board and tuition at such low rates that Protestant parents swallow their principles and place their daughters there for their education, rather than pay the higher rates which Protestant institutions are obliged to charge.

Religious Instruction.—The question of religious instruction in the Public Schools has been receiving considerable attention of late. Religious instruction is obligatory in all the Public Schools of the Province; ratepayers may refuse to pay their taxes if religious instruction is not given. The selection of text-books on this subject rests in the hands of the Priest or officiating minister. This provision was made with special reference to the Roman Catholic population, where it works satisfactorily, but in districts where several Protestant denominations are represented, it is not easy to determine who is to make choice of text-books on religion and morals for the Protestant pupils. It is now proposed to give the selection of text-books on religion and morals to the Protestant Committee of the Council of Public Instruction so far as Protestant schools are concerned.

Montreal.—The small-pox epidemic has seriously interfered with the educational work of the city. The city schools have about one half of their usual attendance; but the High Schools and the University have their usual quota of pupils. The accountant of the Protestant Board of School Commissioners has been unfortunate in his funds. On three different occasions large sums of money have disappeared while under his care, and no really satisfactory explanation has been given. The recent loss of \$2000 has induced the Commissioners to seek the services of another accountant.

McGill University has improved its accommodation for students very greatly during the Summer holidays. The Arts and Medical buildings have been thoroughly renovated and improved and furnished with the best modern appliances. A dinner and public meeting was held by the Medical Faculty in honor of their entrance upon their new and spacious class rooms.

The Fraser Institute.—After years of litigation, the funds which were left to establish a public library have been made available for the citizens of Montreal. A very central site has been secured in the old High School building, and the opening was made the occasion of a large public gathering.

The French Secretary of the Department of Public Instruction.—The appointment of a successor to the late Oscar Dunn, is the chief subject of conversation in Quebec circles at present. The question is an interesting one: There are two secretaries in the Department, one French and one English. They are appointed by the Government, upon the recommendation of the Committees of the Council of Public Instruction.

In September, after a severe contest between the *Castors* and the other members, the Roman Catholic Committee recommended M. Paul de Cazes to the Government for appointment as French Secretary. M. de Cazes is a Clerk in the Department, having a thorough knowledge of the business of the Department—and every way a desirable man for the post; but he is a brother-in-law of the Hon. Mr. Mercier, the leader of the opposition. The question upon everyone's lips is "Will the Government appoint M. de Cazes?"

The Colonial and Indian Exhibition.—The Lieutenant-Governor has appointed a Commission, consisting of the Hon. Gédéon Ouimet, Rev. Dr. Bégin, Rev. Elson, J. Rexford and M. Paul de Cazes, to prepare an Educational Exhibit from the Province of Quebec, for the London Exhibition. The Commission has issued circulars to the various educational institutions and bodies throughout the Province, giving information concerning the preparation of materials for the Exhibition, and calling upon all persons interested in the work of Education to cooperate with the Commission in preparing an exhibit that shall worthily represent the educational system of the Province.

Question Drawer.

QUESTIONS.

Dear Sir, - I wish to submit the following for the consideration of your readers: -

According to the rule found in Mason's Grammar (new edition) anent the use of the comma, we should punctuate as follows: - "Poetry, music and painting are fine arts." Professor Nichol, in his English Composition, ch. ii., 4 b, gives sanction to this. Dr. Davies, in his "blue" book, that was the terror of our youthful days, gives it thus: - "Poetry, music, and painting, are fine arts." Dr. Reid, in his "Composition," § 1, I., gives sentences similarly punctuated. Then we have as a medium between these two methods, Mason (old edition), § 483-5, where he gives us, "Poetry, music, and painting are fine arts."

Now, what are we to do when doctors disagree to so great an extent? Method No. 3, as far as I can see, is the one most in vogue in the new Ontario readers. I think it is followed in every series of words.

I am very anxious to hear your own opinion and that of any of your readers. JNO. STUART CARSTARES.

The following points have come up in the class-room; your correspondent in some of the cases has not a great deal of confidence in the meaning he attaches, therefore he would desire the editor's opinion.

Ancient Mariner: -

"With far-heard whisper, o'er the sea,
Off shot the spectro bark." - Part III., 59-60.

Who whispered? Why far-herd? Explain fully by a paraphrase.

"From the sails the dew did drip."—Part III., 66.

Why was there so much dew? Why were they parched with thirst when there was so much dew?

"I looked upon the rotting sea
I looked upon the rotting deck."—Part IV., 17-19.

Why is the sea called rotting? Why is the deck called rotting, remembering that in the 32nd line it is said, "nor rot nor reek did they"? Is the sea called rotting because * "the corruption of death was begun to ferment with new forms of life? While the great body as a whole was torpid and passive, every separate member began to feel with a sense, and to move with an energy all its own."

"Her beams bemoeked the sultry main."—Part IV., 44.

What is the meaning of bemoeked? its subject? beams or main? With either construction, explain the exact meaning.

"An orphan's curse would drag to hell
A spirit from on high."—Part IV., 34-35.

Does the Ancient Mariner mean to say that he is under an orphan's curse? Paraphrase these and the two succeeding lines.
J. S. C.

Please furnish arithmetical solutions for the following.—1. In what time can a column of men clear a defile 3 miles in length, supposing this column to consist of 10 battalions, each extending over 176 yards, and that the rate of marching over the last mile is reduced on account of the difficulty of the road, from 75 paces of $2\frac{1}{2}$ feet each, to 40 paces of $2\frac{1}{2}$ feet each per minute?

(Matr. Victoria Col., Sept. 1891.)

2. I invest \$5,592 in the new three per cents at $87\frac{1}{2}$, and if I sell out at the end of 3 months at 90, after having received one-half year's dividend, what sum, including interest, shall I have gained; the brokerage being 25s. 6d. per cent. on the investment as well as on the rate of stock, and the income tax on the dividend being 4 d. in the £?

(Ibid.)

3. What is the cost price of cloth per yard when 6 yards more for \$1.05 lowers the price $2\frac{1}{2}$ cents per yard?

4. How long will it be before \$2,500 put out at Compound Interest at 10% per annum will obtain to \$1,727.58 $\frac{1}{2}$ as interest?

5. What helps to form a complete Predicate in "Where are they"?

ANSWERS.

In answer to Student in No. 37.

Solve. $x^2 + y = 7$ (1).
 $x + y^2 = 11$ (2).

First Solution. By adding (1) and (2) $x^2 + x + y^2 + y = 18$
 $x^2 + x + \frac{1}{4} + y^2 + y + \frac{1}{4} = 18 + \frac{1}{4} + \frac{1}{4}$
 $(x + \frac{1}{2})^2 + (y + \frac{1}{2})^2 = (\frac{73}{4}) + (\frac{5}{4})$

Each side being the sum of two squares it only remains to find to which the $(\frac{73}{4})^2$ belongs. The square of x added to y gives a smaller number than the square of y added to x . It is evident therefore that $x < y$, or thus

$$\begin{aligned} x^2 + y &< y^2 + x \\ \therefore x^2 + y - (x + y) &< y^2 - x - (x + y) \\ \therefore x^2 - x &< y^2 - y \quad \therefore x < y \\ (x + \frac{1}{2})^2 &= (\frac{73}{4})^2 \quad x = 2 \\ (y + \frac{1}{2})^2 &= (\frac{5}{4})^2 \quad y = 3. \end{aligned}$$

Second Solution. $x = 11 - y^2$
 $x^2 = 121 - 22y^2 + y^4$

Substituting this in the first Equation we get
 $y^4 - 22y^2 + y + 114 = 0$
 $y^4 - 3y^2 + 3y^2 - 9y^2 - 13y^2 + 39y - 3S + 114 = 0$
 $y^2(y-3) + 3y^2(y-3) - 13y(y-3) - 3S(y-3) = 0$
 $(y-3)(y^2 + 3y^2 - 13y - 3S) = 0$

Hence. $y - 3 = 0$; $y = 3$, &c.
Third Solution. $x^2 + y = 7$, or $y - 3 = 4 - x^2$ (1)
 $y^2 + x = 11$, or $y^2 - 9 = 2 - x$ (2)

That is to the unknown squares are attached the largest squares found in the unknown quantities.

$$\begin{aligned} 4 - x^2 &= (2+x)(2-x); \text{ hence from (1) we have} \\ \frac{y-3}{2+x} &= 2 - x = y^2 - 9 \quad (3) \end{aligned}$$

* Macaulay, — Lord Clive, § 19.

$$\text{or } y^2 - 9 = \frac{y}{2+x} - \frac{3}{2+x}$$

$$\therefore y^2 - \frac{y}{2+x} = 9 - \frac{3}{2+x} \text{ Solving as a quad.}$$

$$y^2 - \frac{1}{2+x} \cdot y + \left\{ \frac{1}{2(2+x)} \right\}^2 = 9 - \frac{3}{2+x} + \frac{1}{4(2+x)^2}$$

$$y - \frac{1}{2(2+x)} = 3 - \frac{1}{2+2+x} \therefore y = 3, \text{ \&}$$

Fourth Solution. $x^2 + y = 7$ (1)
 $x + y^2 = 2$ (2)

Subtracting (1) from (2) we get $x + y^2 - x^2 - y = 4$, or $(x-y) - (x^2 - y^2) = 4$, or $(x-y)(1-x-y) = 4$.

Now since (vide 1st Solution) $x < y$, $x-y$ is negative, therefore 4 is the product of two negative quantities, and they can not be equal, for let $x = y = 1$, $x = y$, and we get $x = \frac{1}{2}$, which value does not satisfy the equations. 4 must be the product of two negative unequal factors; -1 and -4 are the only two such integral factors found in 4.

$$\therefore (x-y)(1-x-y) = -1 \times -4.$$

Then by trial we find $x - y = -1$; $1 - x - y = -4$.
From which $x = 3, y = 2$.

The three first solutions are from Gage's School Examiner, I think, the last is my own, and consequently I have some doubt in offering it.
J. S. C.

NOTE.—Queries from "Excelsior," "Subscriber," C. S. E., G. H., J. D. B., and others are crowded out this week. They will appear in next issue.

Our friends are invited to send answers to questions that are published in this department. Doing so will improve themselves and be a benefit to others. They are left unanswered by the Editor for that purpose.

Literary Ghit-Chat.

Gunn & Co., Boston, will publish about December 1st, a translation of Hermann Lotze's "Outlines of Psychology." The translation is by Prof. Ladd, of Yale. This volume will be fourth in the series, the "Metaphysic," "Philosophy of Religion," and "Practical Philosophy," having already appeared.

The *North American Review* is following the sensible example of *The Century*, in falling back so as to make the issue correspond with the date. The December number is to be issued on the 25th of November, and henceforward the magazine will appear on the first day of the month of which it bears date.

The Life and Letters of John Brown, Liberator of Kansas and Martyr of Virginia, is a large volume of more than 600 pages, edited by F. B. Sanborn, and published by the Roberts Brothers, Boston. Twenty six years ago John Brown was executed as a felon at Charlestown, Virginia.

The American Tract Society has recently published an interesting book on home life in China.

It is said that Mr. F. T. Palgrave will be the candidate for the professorship of poetry at Oxford, formerly held by Matthew Arnold and Professor Sharp.

Matthew Arnold's "Discourses in America," recently published by Macmillan & Co., consist of his lectures on "Numbers," on "Literature and Science," and on "Emerson." The first and last were written specially for America.

Edward Eggleston is with his family at a little town in Canton Vaud, Switzerland.

Contrary to previous rumors, the *Athenaeum* states, that Lord Tennyson's forthcoming volume will consist almost entirely of new poems, some of them of considerable length.

It is reported that Mr. Howells, in addition to placing all his new writings at the disposal of the Harpers, is beginning with the January number, to edit an Editor's Study, or Literary Column, for Harpers' Magazine.

"The Future of the Struggle for India," is the title of a book which has been published in Paris. The author is Prof. Armenius Vambery, an authority on Asian questions.

The biography of Louis Agassiz, which has just appeared, shows that the great Nationalist was to the end of his life a steadfast opponent of the theory of evolution. His belief in the Creator was, his biography says, the keynote of his study of nature.