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CHANGE OF TEXT BOOKS IN THE PUBLIC SCHOOLS.

So much misapprehension has prevailed in regard to the change of Text Books in our Public Schools, that the following information on the subject has been prepared for insertion in this Journal. It will be seen, from the facts here given, how entirely mistaken parties have been who have complained of the so called frequent change of Text Books. The changes have been made in most cases but once or twice in Twenty-five Years. Changes have been twice made in the Text Books on Arithmetic and Grammar at the time specified, for the reasons given below.

LIST OF NATIONAL AND OTHER SCHOOL BOOKS FORMERLY SANCTIONED BY THE COUNCIL OF PUBLIC INSTRUCTION FOR USE IN THE COMMON SCHOOLS OF UPPER CANADA.

Name of Book and when sanctioned.	Name of Book and when sanctioned.
<i>First Book of Lessons.</i>	<i>Sangster's First National Arithmetic (Dec. Currency.)</i>
<i>Second do.</i>	<i>Key to Sangster's First National Arithmetic.</i>
<i>Sequel to Second Book.</i>	<i>National Arithmetic in Theory and Practice.</i> 1846.
<i>Third Book of Lessons.</i>	<i>Sangster's National Arithmetic in the Decimal Currency.</i> 1860.
<i>Fourth do.</i>	<i>*Sangster's Natural Philosophy.</i>
<i>Fifth do. for Boys.</i>	<i>*National Book-Keeping.</i> { 1846.
<i>Sixth, or Reading Book for Girls' School.</i>	<i>*Key to do.</i>
<i>Introduction to the Art of Reading.</i>	<i>Colenso's Algebra, Part I.</i>
<i>Spelling Book Superseded (Sullivan's.)</i>	<i>National Elements of Geometry.</i>
<i>English Grammar.</i>	<i>National Mensuration.</i>
<i>Key to English Grammar.</i>	<i>Appendix to ditto.</i>
<i>Robertson's Principles of Grammar (for Teachers.)</i>	<i>National Scripture Lessons—Old and New Testament.</i>
<i>Lennie's English Grammar.</i>	<i>Do. Sacred Poetry.</i>
<i>Kirkham's English Grammar.</i>	<i>Do. Lessons on the Truth of Christianity.</i>
<i>National Epitome of Geographical Knowledge.</i>	<i>Hullah's Vocal Music.</i>
<i>Do. Compendium of do.</i>	<i>National set of Table Lessons—Arithmetic.</i>
<i>*Geography Generalized, (Sullivan's.)</i>	<i>Do. do. do. —Spelling and Reading.</i>
<i>Introduction to Geography and History, (Sullivan's.)</i>	<i>Do. do. do. —Copy Lines.</i>
<i>Geography and History of the British Colonies. (Hodgins.)</i>	<i>Also the National Maps, Maps of Canada and of British America, &c.</i> 1846-1853.
1857.	

The italics indicate those books which have been superseded by the new series. The books marked by an asterisk are still used (temporarily) by teachers in preparing themselves for examination.

Subjoined is a complete list of the Books at present authorized for Public Schools, from which will readily be perceived all the changes that have been made. The dates at which the Books at present in use were severally introduced are appended.

The Irish National Arithmetics in use since 1846 were decimalized and adapted in 1860; these books were afterwards superseded by two others, in 1869-70. No Grammars were ever sanctioned for use in the Public Schools except Lennie's, Kirkham's, the National, and Robertson's (for teachers.) These four books were superseded by two in 1868. No other Grammar was ever authorized for use in the Public Schools of Ontario, although others may have been used in them without authority and even contrary to law. The exclusion of these unauthorized books has, no doubt, been mistaken for and confounded with the recommendation by the Council of Public Instruction of other superior ones in their place. The Council is, however, in no way responsible for the inconvenience caused to trustees and school authorities who persisted in using unauthorized books contrary to law.

LIST OF TEXT BOOKS AUTHORIZED FOR USE IN THE PUBLIC SCHOOLS.

NOTE.—In the following list, some books are *prescribed*, and others when **Books** are *recommended*. The use of the books *recommended* is discretionary **Changed** with the respective Public School Boards. **IN PLACE OF**

I. ENGLISH.

NOTE.—Some of these Text Books, though used, were never authorized.

TEXT BOOKS PRESCRIBED :	
The Canadian National Series of Reading Books. (Authorized edition)	1867 Old National Readers.
The Spelling Book, A Companion to the Readers. (Authorized edition)	1868 Spelling Book Superseded.
Miller's Analytical and Practical English Grammar. (Authorized edition)	1868 National, Kirkham's, Lennie's, Bullion's, (for High Schools), and Robertson's (for teachers.)
An English Grammar for Junior Classes. By the Rev. H. W. Davies, D.D. (Authorized edition)	
A History of English Literature, in a series of Biographical Sketches. By William Francis Collier, LL.D.	1867 Spalding's.

II. ARITHMETIC AND MATHEMATICS.

TEXT BOOKS PRESCRIBED :	
Advanced Arithmetic for Canadian Schools. By Barnard Smith, M.A., and Archibald McMurchy, M.A. (Authorized edition)	1870 } National and Sangster's.
Elementary Arithmetic for Canadian Schools. By the Rev. Barnard Smith, M.A., and Archibald McMurchy, M.A. (Authorized edition)	
Elements of Algebra. Todhunter's or Sangster's	1869 } Brydges and Colenso.
Euclid's Elements of Geometry. Potts' or Todhunter's	1868 National.

III. GEOGRAPHY AND HISTORY.

TEXT BOOKS PRESCRIBED :	
Lovell's General Geography. By J. George Hodgins, LL.D. Barrister at Law. (Authorized edition)	1865 National, Sullivan's and Morse's. (The latter only permitted.)
Easy Lessons in General Geography. By ditto. (Authorized edition)	
A School History of the British Empire. By William Francis Collier, LL.D.	1867 White's, (for High School.)
A History of Canada and of the other British Provinces of North America. By J. George Hodgins, LL.D., Barrister at Law....	1865 Hodgins' Geography and History of British America, &c.
Outlines of General History. By William Francis Collier, LL.D....	1868 White's, (for High School.)
TEXT BOOKS RECOMMENDED :	
The Great Events of History. By William Francis Collier, LL.D.	1868 None, except in the old National Readers.

IV. PHYSICAL SCIENCE.

TEXT BOOKS PRESCRIBED : (See note above.)	
Rudimentary Mechanics. By Charles Tomlinson. Portions relative to the mechanical powers	1871 Sangster's Natural Philosophy, and in the old National
The Animal Kingdom. By Ellis A. Davidson, (22 cts.)	1871 None before.† [Readers.
How Plants Grow : A Simple Introduction to Botany, with Popular Flora. By Asa Gray, M.D.	"

V. MISCELLANEOUS.

TEXT BOOKS PRESCRIBED :	
First Lessons in Agriculture. By Rev. Dr. Ryerson	1870 None before.
Our Bodies.* By Ellis A. Davidson, (22 cts)	1871 "†
Easy Lessons on Reasoning. By Archbishop Whately	1871 "
The Dominion Accountant. By W. R. Orr. (Authorized edition.)	1872 National.
TEXT BOOKS RECOMMENDED : (See note above.)	
First Lessons in Christian Morals. By Rev. Egerton Ryerson, D.D., LL.D.	1871 National in part.
Elements of Moral Science, by Rev. Francis Wayland, D.D., abridged by the author	1872 Do.
A Comprehensive System of Book-Keeping, by Single and Double Entry. By Thomas R. Johnson	1867 National.
Field Exercises and Evolutions of Infantry. Published by authority. Pocket edition (for Squad and Company Drill)	1867 None before.
The Modern Gymnast. By Charles Spencer	1867 "
A Manual of Vocal Music. By John Hullah	No change.
Three Part Songs. By H. F. Sefton. (Authorized edition)	1869 None before.
National Mensuration	No change.
Scripture Lessons—Old and New Testaments. (National)	"
Lessons on the Truth of Christianity. (National)	"
Right Lines in their Right Places. By Ellis A. Davidson, (22 cts.) Teacher's Guide, and Bartholomew's Primary School Drawing Cards. By Miss J. H. Stickney	1871 None before.
The Drawing Book for the Dominion of Canada, in Progressive Studies, seven numbers	1871 None before.
	1871 "

* The following little works are also highly recommended (1871) for perusal, both by Teachers and Pupils, viz. :—"The House I live in," by T. C. Girlin, Surgeon, (Longmans) and "Our Earthly House and its Builder," (Religious Tract Society.) Cutter's "First Book on Anatomy, Physiology and Hygiene, for Grammar Schools and Families," is the prescribed book for High Schools, and may be used by the Public Schools if desired.
† Peck's Ganot's Natural Philosophy, and Hooker's Smaller Physiology were authorized for Grammar Schools in 1867, and were *allowed* to be used in Public Schools, but only if desired.

William Hermes' Drawing Instructor. For advanced students.....	1871	None before.
Writing Copy Books, used in the Normal and Model Schools for Ontario. In Six Parts.....	1871	National.

VI. FRENCH AND GERMAN SCHOOLS.

The following books, approved by the whole Committee of the Council of Public Instruction for Quebec, are also sanctioned for use by French Pupils in Public Schools of this Province in which there are both Protestant and Roman Catholic Pupils.

Cours d'Arithmetique Commerciale. (Senécal, Montreal)	}	1868	None before.
Abrégé de la Géographie Moderne. (Société d'Éducation de Québec)			
La Géographie Moderne. De M. Holmes, M.A.....			
Grammaire pratique de la langue Anglaise. (Par P. Saddler, Paris)			
Traité Élémentaire d'Arithmetique. (Par F. X. Toussaint).....			
Le Premier Livre de l'Enfance. (De Poitevin).....			
Cours de Versions Anglaises. (Par P. Saddler, Paris):	}	1868	
Grammaire Française Élémentaire. (Par F. P. B.).....			
For German Schools, Klotz's German Grammar is sanctioned.....			

BOOKS "PRESCRIBED," AND THOSE "RECOMMENDED."

It will be seen by the foregoing lists, that some books are "*prescribed*" for use in the Public Schools, whilst others are only "*recommended*." The use of the Books "*recommended*" is entirely *discretionary* with the respective Public School corporations. Among the latter class are the "*First Lessons in Christian Morals*," and some other books. (See list.)

"AUTHORIZED EDITIONS" OF BOOKS, THE PROPERTY OF THE COUNCIL.

The Copyright of all the books in the foregoing lists, marked "*Authorized Edition*," is vested in the Council of Public Instruction, (in the name of the Chief Superintendent.) These books may be reprinted by any publisher upon complying with the regulations of the Council on the subject.

I. School Law Decisions.

THE CHIEF SUPERINTENDENT OF EDUCATION FOR UPPER CANADA (NOW ONTARIO), APPELLANT; IN THE MATTER BETWEEN WILLIAM ANSON SHOREY, PLAINTIFF, AND JOSEPH THRASHER, THOMAS DAVEY, AND ALBERT JONES, DEFENDANTS.

School Sections--Boundaries of--Construction of By-law--Map.

The question being whether the plaintiff's lot, 23 in the 8th Concession of Thurlow, was within School section 16, a by-law defining the limits of sections in the Township was proved, which declared the section to be composed, among other lots, of "50 acres of the east side of lot No. 16, all of No. 17, S. ¼ of No. 18, all of 19, 20, 21, 22, 23 and 24," (not giving the concession), "excepting such portion of last mentioned lots as included in sections 18 and 19." Section 18, by the same by-law, was made to comprise parts of lots 16, 18, 20, 21, and 22, in the 8th concession; and section 19 the N. ¼ of 24 in the same concession. *Held*, that the whole by-law taken together sufficiently shewed the plaintiff's lot to be in section 16.

Held, also, that the map prepared by the Township Clerk, under section 49 of the School Act, C. S. U. C., ch. 64, shewing the division of the Township into sections, was admissible as evidence.

This was an appeal by the Chief Superintendent of Education against a decision of the Judge of the Fifth Division Court of the County of Hastings.

An action of trespass was brought by *Shorey* against *Thrasher* and others in the Division Court, to recover damages for an alleged wrongful seizure and sale of a cow of the plaintiff by the defendants.

The case was tried in May last, before the Judge of the County Court of Hastings.

The defendants' contention at the trial was, that they were the trustees of School Section No. 16 in the Township of Thurlow: that the plaintiff was a ratepayer within that school section, and refused to pay his school tax, whereupon they issued a warrant to levy the amount, under which warrant the cow in question was seized, &c. The plaintiff contended that his lot, No. 23 in the eighth concession, was not shewn to be within the limits of school section 16.

In order to shew the limits of 16, the defendants put in a by-law No. 28 of the Municipal Council of Thurlow. "For the better defining and establishing of the boundaries of school sections in the Township of Thurlow," passed on the 22nd of December, 1859, which by-law defined and described the limits of all the school sections in and embracing the whole township. A map was also produced, in reference to which the Clerk of

the Municipal Council swore, that he found it filed among the papers of the Council when he was appointed clerk, and that it so came into his hands as such clerk. He further said that he first saw this map in 1860, when he was a member of the Council. By that map, he stated that the plaintiff's lot, 23 in the eighth concession, was in section 16. The map, which was produced at the argument, had all the various school sections accurately laid down on a scale, the limits of each section being distinguished by a different colour from the adjoining sections, and bore date, Thurlow, December, 1859, and was entitled "Plan of the Township of Thurlow, shewing the boundary of the several school sections in said Township, correctly laid down by a scale of 40 chains to an inch, by *John Emerson*, Provincial Land Surveyor." A reference to this map alone shewed the plaintiff's lot within the limits of section 16.

By the 16th clause of the by-law the limits of section 16 were set out as follows: "School section No. 16 to be composed of that part of lots Nos. 11, 12, 13, 14, 15, 16, and west part of No. 17, lying north of the river, in the sixth concession; all of lots Nos. 14, 15, 16, 17, north half of 18 and 19, in the seventh concession; also 50 acres of the east side of lot No. 16, all of No. 17, south half of No. 18, all of 19, 20, 21, 22, 23, and 24, excepting such portion of last mentioned lots as included in sections Nos. 18 and 19."

The learned Judge was of opinion that the plaintiff's lot was not shewn to be in the section, and he decided on that ground that the plaintiff was entitled to recover, and he ordered a verdict for \$28. Against that decision this appeal was brought, under Consol. Stat. U.C., chap. 64, secs. 108-113.

The grounds of the appeal were, that it sufficiently appears from the by-law of the Township Council, passed on the 22nd of December, 1859, and the Township map, dated December, 1859, that lot 23 in the eighth concession of Thurlow, on which the plaintiff resided, is within the boundaries of school section 16 of said Township, and that the plaintiff as owner or occupier thereof is liable for the school rates levied by the trustee corporation of said section. 2. That the plaintiff acted under the by-law as trustee of the school section, and signed returns relating to the same as such trustee, and is bound by his acts and declarations then made. 3. That the rate in question having been levied by a trustee corporation *de facto*, cannot be recovered back in this action.

Two other cases were appealed of a similar character. *Latta v. The same defendants*: and *Graham, v. The same defendants*, the grounds of appeal being the same, the only difference being in the Nos. of lots, viz: in *Latta's case*, the south half of lot 22 in the eighth concession; and in *Graham's case*, the south half of 24 in the eighth concession of Thurlow.

T. Hodgins, for the Chief Superintendent of Education in *Shorey's* and *Latta's* cases, cited *Simmons* and the *Corporation of Chatham*, 21 U.C.R. 75; *Gill v. Jackson et al.*, 14 U.C.R. 127; *Dwarris* on Statutes, 628. *Henderson* (of Belleville) for the Chief Superintendent of Education in *Graham's* case.

Diamond, for the respondents, cited *Haacke v. The Municipality of Markham*, 17 U.C.R. 562; *McGregor v. Pratt*, 6 C. P. 173.

The facts of the case and the arguments of counsel sufficiently appear in the judgment.

MORRISON, J., delivered the judgment of the Court.

The principal question raised in these three cases is, whether the respective lots in which the several plaintiffs lived are within the limits of school section 16.

It was contended by the respondents that to the by-law alone we must look to ascertain the boundaries of the section in question, and it was further argued that the by-law did not shew that the plaintiff's lot, 23 in the eighth concession, formed part of school section 16, and that the learned Judge below was right in so holding.

Assuming that the map could not be looked at to throw any light on the by-law, we think there is sufficient stated in the by-law to shew that the plaintiff's lot was within the limits of section 16. It is quite apparent that the person who drew or engrossed the by-law omitted to insert the words "in the eighth concession," after and between the figures 24 and the words of exception at the end of the 16th clause, viz.: "excepting such portions of last mentioned lots as included in sections 18 and 19."

Upon examination of the clauses defining sections 18 and 19 in connection with clause 16, the effect of the omission of the number of the concession may be avoided, and the limits of the 16th section and the omitted concession intelligibly ascertained. Clause 16 of the by-law declares that the 16th school section consists of certain lots in certain concessions, and also 50 acres on the east side of lot 16, &c., omitting the concession, excepting, &c., included in sections 18 and 19. Clauses 18 and 19 of the by-law describe sections 18 and 19: that of 18 to consist of, with other lots, 150 acres of the west side of No. 16, north half of 18, certain portions of lots 20, 21, 22, in the eighth concession; and in section 19 is included the north half of 24 in the same concession. It seems to me clear that, as we have first to ascertain what lots are included in sections 18 and 19 to determine a portion of section 16, and we find included in 18 150 acres of the west side of 16, north half of 18, parts of 20, 21, 22, passing over whole lots 17, 19, and 23, all in the eighth concession, and in section 19 part of 24; and as forming part of section 16, we find the corresponding portions of 16, 18, and also portions of the other lots mentioned, and as these were the only lots distinguished by like numbers in 18 and 19, and described as being in the eighth concession, and are the only lots by numbers to which section 16 could have any relation or be connected with in those sections, there can be little doubt what lots are within section 16, and that the lots in question were intended for and are lots in the eighth concession. If the 16th section stood alone, without any reference to sections 18 and 19, it would have been uncertain, but the reference to the 18th and 19th sections is a key to its meaning, and with the aid of a plan of the township, without any sections delineated on it, this section 16 would be clearly made out and distinguished as including within it the lots contended for by the appellants.

We are therefore of opinion that the lots in question are sufficiently shewn by the by-law itself to be within school section 16, and that the appeal upon that ground should be allowed.

With regard to the map produced from the clerk's office, it is shewn that it came from the proper custody, and that it is the map which the 49th section of the School Act, Consol. Stat. U. C. ch. 64, requires the township clerk to prepare in duplicate for the use of the county council and the township clerk's office, and in our opinion it ought to be received as *prima facie* evidence as shewing the limits of the various school divisions. The only object of having such a map prepared and kept as enjoined by the statute, is to afford the municipalities, trustees, and all parties interested the means of ascertaining and knowing what lots and portions of lots are within the respective sections, and to enable the assessor to perform the duties cast upon him by the 33rd section of the School Act, of returning the lands of any person situate within the limits of two or more school sections separately on the roll according to the division of the school sections. The preparation of the map is a statutable duty imposed on the clerk. The map becomes a public document openly and publicly kept and used, and is entitled to confidence as such, and to be received as *prima facie* evidence of what it purports to shew.

The respondent's counsel contended that, assuming that the learned Judge erroneously decided that it did not appear that the lands were within section 16, that still the plaintiff was entitled to

recover, on the grounds that the trustees were not duly elected, and also that the warrant was bad and unauthorized. The learned Judge below gave no judgment on these points. We are unable to see in what respect the election was invalid or the warrant defective, or void. On looking carefully over the evidence we find that at the usual annual meeting in January, 1867, defendant Thrasher was elected a trustee; in 1868 Jones was elected, and in 1869 one Leavitt was elected who declined to act, claiming exemption under the 15th section of the act, and in consequence thereof, at a special meeting on the 20th April, 1869, Davey, the other defendant, was elected trustee, and it further appears that they all acted as such and levied rates. It also appears that the necessary steps were taken in accordance with section 27, sub-sec. 11, for making a rate and levying the same. The warrant is in the usual form. We see nothing defective in it, nor in the levy under the warrant.

We therefore think the appeals should be allowed, and that the verdict be entered for the defendants in the Court below.

APPEALS ALLOWED.

PATTERSON AND THE CORPORATION OF THE TOWNSHIP OF HOPE.

Alteration of School Sections—Notice to parties affected—C. S. U. C. ch. 64, sec. 40.

Section 40 of the Common School Act, Con. Stat. U. C. ch. 64, enacts that a township council may alter the boundaries of a School Section, in case it clearly appears that all parties to be affected by the proposed alteration have been duly notified of the intended step or application.

In this case the only notice given was by the trustees of the section from which certain lots were taken by the alteration to the trustees of the section to which such lots were added—that being the notice which it was alleged had been customary in the township in similar cases. *Held*, insufficient, and the by-law making the alteration was quashed.

The by-law was passed in February, 1870, but the clerk of the Corporation did not notify the trustees of it until August—*Held*, that a motion to quash in M. T. 1870 was in time.

T. M. Benson obtained, during this term, a rule on the Corporation of the township of Hope, to shew cause why by-law No. 250 of the Corporation, amending by-law No. 222, and altering the boundaries of School Sections 15 and 16, should not be quashed, on the ground that all parties affected by the alteration in the boundaries of School Section 16 had not been before the passing of the by-law duly notified of the intended step or application for the passing of the by-law, or for the alteration of the said boundaries.

The by-law was passed on the 28th day of February, 1870. It enacted that lots 11, 12, 13, 14, and 15 in the 8th concession, and two acres of No. 14 and of No. 15 in the 7th concession, be added to School section 15, and then set out what section 16 should consist of, namely, eight lots in the ninth concession and eight in the tenth concession.

It appeared also that by-law No. 222 was passed on the 3rd June, 1868, and that section 16 had then within its limits the lots added by by-law 250 to school section 15.

It appeared from the affidavits and papers filed, that under the provisions of by-law No. 222, passed in June, 1868, the lots and parts of lots now separated by by-law 250 were added to school section 16, and that in the fall of that year the trustees of section 16 erected a school-house at considerable expense, near the centre of the then increased section, to accommodate the portion of the section then added: that on the 27th of May, 1869, a number of the ratepayers of section 15 petitioned the township to pass a by-law to restore to that section the lands separated from it by by-law 222, and that on the 23rd of June, 1869, the inhabitants of section 16 petitioned the Council against taking any land from their section, and praying them to add thereto the north halves of lots 16 and 17 in the eighth concession. Nothing appeared to have been done with either of these petitions, except, according to the affidavit of the Clerk of the Council, that the first petition was ordered to be laid on the table.

A meeting of the Council was held on the 28th of February, 1870, at a place called "Welcome," which was complained of by the applicant as not being the usual place for the meeting of the Council, but it was shewn that it was advertised that a meeting would be held there. At such meeting a petition was presented of the trustees of school section 15, praying that the Council would pass a by-law "giving them back that portion of land taken from them:" that a notice of which the following is a copy, was also presented and filed: "To the Trustees of School Section No. 16, Township of Hope. The Trustees of School Section No. 15 will apply to the Municipal Council of this Township, at its first regular meeting, for the passing of a by-law to make our section equal, or

nearly so, in valuation with other sections in the township, by giving back that portion taken from our section by the Locking^(a) Council, or any part that the Council in their judgment may think proper. By order of the Board of Trustees. Dated 18th February, 1870. (Signed) S. T. Martin, School Trustee," with seal attached.

It appeared that this notice was served on one of the trustees of section 16, on the 18th February, 1870, but the trustees swore they were not aware of the meeting of the Council or where it was to be held until the 25th: that on the 28th February two of the trustees of number 16 attended the meeting of Council at Welcome, and addressed the Council against any alteration, and urged the Council to allow the matter to stand over until notice could be given to the parties affected by the proposed alteration, and stated that they had not had time to call a school meeting or notify the parties, and requested a month's delay to enable them to do so: that the Council refused to postpone the by-law, the Council deciding, as the Reeve swore, that of the then application sufficient notice had been given; and the Council, after considering the object of the application and the two former petitions already referred to, passed the by law 250.

It appeared that there were 46 residents within the section 16, and out of these thirty filed affidavits swearing they had no notice of any intended step or application to be made for the alteration during the year 1870 of their section, until after the by-law was passed, and that no notices were ever given or posted up. On the part of the Corporation it was not contended that any other specific notice was given except the notice to the trustees. The affidavit of the Reeve and others stated that the usual mode of giving notice in cases of alteration of sections in the township was the giving of a notice by the trustees of the section from which the lands were to be taken, and that the sufficiency of such a notice had been discussed from time to time by the Council on previous occasions of alteration of sections, and that such a notice from one set of trustees to the other was held to be sufficient, and was so treated in the alteration of boundaries.

The Secretary-Treasurer of the school trustees of section 16 swore that the first and only notice he had of this application of the school trustees of section 15 was the written notice referred to, and that the freeholders and householders in the section were wholly ignorant of the intended step or application until the by-law had passed; and he further swore that a large majority of them were opposed to the alteration, and that this application to quash the by-law was made at the instance of and under a resolution passed at a meeting of the inhabitants of the section.

Arnour, Q. C., shewed cause, and *C. S. Patterson* supported the rule.

MORRISON, J., delivered the judgment of the Court.

It is to be regretted that the council did not accede to the request of the trustees to postpone the consideration of the by-law for the month. There was abundance of time after February for the consideration and passage of the by-law, as it could not come into force before the 25th December, 1870. The parties interested would then have had sufficient notice and this litigation would have been avoided.

The only question for our consideration is, whether the parties affected by this alteration had due notice of the intended step.

Section 40 of the Common School Act, Consol. Stat. U. C., ch. 64, enacts:—"In case it clearly appears that all parties to be affected by a proposed alteration in the boundaries of a school section have been duly notified of the intended step or application, the township council may alter such boundaries."

No doubt the council can make such an alteration as they have done in this case without any request from any quarter, and even against the will of the majority of the section, but they cannot do so without first notifying the parties affected by such alteration; they must give them an opportunity of being heard: *Ley and the Municipality of Clarke*, 13 U. C. R. 435. And, as said by *Burns, J.*, in *Shaw et al. and the Corporation of Manvers*, 19 U. C. R. p. 294, "The giving of notice is a condition precedent to the council entertaining the application, and this provision must apply as well to the repeal of a law" (as in this case) "which would of itself constitute an alteration, as of a notice in the first case of making a change."

It is not pretended that the parties affected by the alteration (with the exception of the two trustees), had notice of the intended application made by the trustees of section 15, or of any step that the Council were about to take, or of their intention to consider the petition presented in June of the previous year, or the by-law in question—the Council, so far as notice was concerned, relying on an alleged custom in the Township, that a notice by one Board of Trustees to another Board was a notice to all the inhabitants of the section affected. Now the language of the statute leaves no

doubt as to the intention of the Legislature, for the 40th section says: "In case it clearly appears that all parties affected," &c., "have been duly notified," &c., "the Council may," &c. How or in what way notice may be given is not stated. I do not think that a notice to two trustees, as such, is a compliance with the statute. If such was the intention, we may suppose the Legislature would have said so. As to what the Legislature considered notice in other cases, may be found in the 8th, 21st, and 26th sections of the Act, namely, the posting of notices at least in three public places in the section, and at least six days before, &c.; and it seems to me that by analogy such a notice would be sufficient in cases like the present.

On the whole, we are of opinion that the parties affected by the alteration had not due notice of the intended alteration made by this by-law, and that upon that ground it should be quashed.

During the argument it was suggested that from the fact of petitions being presented to the Council in May and June, 1869, for and against such alteration, and which petitions were signed by a large number of the inhabitants of both sections, we might assume that the parties interested had sufficient notice; but as it appears no action whatever was taken on these petitions by the then Council, and that it was only in the end of February, 1870, after a new Council had been elected, and upon a new application of the then trustees of section 15, that these petitions were referred to by the Council, and then without any notice to the petitioners that they would be taken up or considered, we could not under such circumstances assume that the parties had the notice required by the statute.

It is also contended that this application should have been made at an earlier period, but it appears from the affidavits filed on the part of the Corporation that the clerk of the Council did not notify the trustees of the passage of the by-law until the month of August, and between that time and last term the applicant had no opportunity of moving to quash the by-law.

We therefore think the rule should be made absolute with costs.

RULE ABSOLUTE.

II. Correspondence with the "Journal."

To the Editor of the Journal of Education.

SIR,—Perhaps you will allow me a short space in your Journal for a few remarks respecting the salaries at present allowed to the generality of teachers, which I consider are in many cases a very inadequate remuneration for their services. I think no teacher ought to receive less than \$200 per annum for third class teachers, \$300 per annum for second class teachers, and \$400 for first class teachers; but as there are very many School Sections that cannot afford to pay so much I would suggest that the School Inspector should be authorized to make enquiry as to the ability of the ratepayers in every section to pay the above amounts. The Trustees' Assessment Rolls will assist him to form something like a correct opinion on the subject, and he should decide what every School Section should pay, and the deficiency should be made up out of the Government allowance, of course the present annual allowance voted by our Provincial Assembly would have to be greatly increased, but no money could be better spent. This would act as a great incentive to the teachers to qualify themselves for first and second class certificates, as they would then be certain of a fair remuneration for their services, and would not be so likely as at present to make teaching only a stepping-stone to something else. I do not think the new programme is very strictly carried out at present in rural School Sections, and hope that the Inspectors will strictly enforce the new law in this respect; although as respects the school-houses, a strict enforcement of the law in every case would be very burdensome to the ratepayers in newly settled townships where the school-houses are comparatively new. In this respect, but in no other would I recommend leniency on the part of Inspectors. I am not sure whether it will not be necessary to appoint an official to inspect the Inspectors as I fear all of them do not devote five days in the week to the discharge of their duties.

TRUSTEE.

To the Editor of the Journal of Education.

SIR,—As I have occasionally seen articles in favour of temperance in your Journal, perhaps you will kindly give insertion to a few remarks on this subject. One object of the various temperance associations appears to be to induce the Dominion Government to pass a prohibitory law to prevent the manufacture and sale of intoxicating liquors of every description, but I fear such a law would, by encouraging illicit distillation and smuggling, do more harm than good. I would suggest only an alteration in our present

(a) *Sic.*—Mr. Locking was the Reeve at the time the notice was given.

liquor law, depriving the magistrates of the option of inflicting a fine or of letting the offender escape unpunished on the plea of its being a first offence, or by promising to leave the place only to get drunk somewhere else, and making it imperative for them to commit the offender to the common goal of the district for a period of not less than three days or more than one month with hard labour, and a prison diet of one pound of brown bread and five pints of water per day, no matter how cold the weather might be. It is not the severity so much as the certainty of punishment that deters man from crime, and for that reason the committing magistrate should have no option in the matter. But there is another great cause of intemperance which I fear no law could reach, namely, that of having wine at table at our social entertainments, a custom which every body must acknowledge has led many a promising young man to disgrace, poverty and premature death. If two or three of the most influential gentlemen in every town or city would only summon up sufficient moral courage to set the example it would soon be generally followed. I can see no reason why a Christian gentleman should not occasionally give a dinner or supper to his friends, but that is no reason why he should turn his dining room into a drinking saloon. I am no advocate for total abstinence in all cases, but it is difficult to define the limits of moderation. One man may be able to exercise a strict control over himself whilst another cannot take a single glass of wine without taking too much, and therefore it is only right to follow the exhortation of St. Paul, not to do anything whereby a weaker brother may be made to offend. Temperance is best inculcated in young people by training them up in habits of self-denial in everything. I have known instances where a young man who while he was under the paternal roof was never allowed to touch any intoxicating liquor, yet when he became his own master, soon became a victim of intemperance. It is vain to expect the reformation of society by means of temperance societies though they are frequently productive of good as they enjoin total abstinence only as regards strong drink, leaving untouched other evil habits, equally if not so rapidly destructive both of body and soul, which is perhaps the reason why their results are not always permanent. Is there any less whiskey drunk in Ireland now in proportion to the population than there was before Father Matthew commenced his crusade against the distilleries, and if so, is it owing to more generally temperate habits, or to the inability of the lower classes to procure the whiskey. Both in Canada and the United States, where whiskey is cheap, at least as much intemperance exists amongst the Irish in proportion to their numbers as amongst any other class of the population. While not in every case insisting on total abstinence, I am therefore a strong advocate of

TEMPERANCE.

III. Papers on Education in various Countries.

1. MAKING SCHOOLMASTERS IN GERMANY.

The following will interest our professional readers. The process of making schoolmasters in some places we know is shorter and easier:

"We will endeavour to indicate the career of an intelligent village lad who having, at the age of fourteen, completed his school course, resolves to become a schoolmaster. If in Saxony or Silesia, he enters a training school called "proseminar," because preparatory to the seminary or normal school; if in Prussia, he enters the house of a private tutor, probably the local schoolmaster or clergyman. At the age of eighteen he proceeds to the seminary, where he is to spend three years; the first and second to be devoted, according to an elaborate scheme, to all subjects he will have hereafter to teach; the third to be spent in teaching, under the supervision of the director of the seminary, in the "practising school," which is simply the nearest primary school. While in the seminary, he is subject to stringent discipline. He makes his own bed and cleans his own room; he pays for his board and lodging—the former being of a very homely description, and valued at eight-pence or nine-pence a day—and provides his own bread. At the end of the year he presents himself for his first examination, which is conducted by the authorities of the college, under the superintendence of the school councillor. This examination embraces religion, language, arithmetic, writing, drawing and singing, and is partly oral and partly on paper. The performances of the candidates are estimated with great precision, and certificates are given to all who acquit themselves satisfactorily. The teacher is now taken in charge by the department-councillor, who appoints him to a vacancy in his district. He holds, however, only the position and the title of provisional teacher, full status and rank of schoolmaster being withheld until he has passed a second examination, held three years after the first. This examination is rather an investigation into

character and conduct than into attainments. When his last ordeal has been passed, the teacher takes the oath of allegiance and receives a definite appointment as master of the school."

2. KINDERGARTEN SCHOOLS.

The name Kindergarten, or garden of children, is not intended to imply that children are to be instructed out of doors; but that the school is a garden plot, in which the children are the plants, and the teacher the gardener, whose duty it is to give his pupils a kind of care analogous to that which the gardener gives his plants; removing hindrances and heightening all favouring circumstances, so that they may have room and opportunity for development according to the laws of their growth.

The name and the system were originated by Froebel, who devoted half a century to elaborate, by study and experiment, a new primary discipline in accordance with child nature. Already, although this is not yet anywhere a national system, it has spread over Germany, and has been introduced into Scandinavia, Switzerland, Spain, France, Italy and Russia, and is beginning to find its enthusiastic supporters in the United States. It has to contend with some prejudice excited by a class of schools called Kindergartens, which were merely a variation of the ordinary primary schools—an imitation of the real Kindergartens—established by teachers who had read something concerning the subject, but had not had the necessary training and missed the essential idea of the system. To teach the system efficiently, one must thoroughly learn it. The best Normal school for this purpose is that founded by the Baroness Marenholtz Bulow, in Berlin, where she gives free lectures upon the philosophy of the method to pupils, who have an opportunity to observe and practise it in Madame Volger's Kindergarten. A pupil of this school, Madame Kriege, has the only Kindergarten Normal school in America. This is a private school in Boston, where Madame Kriege lectures upon the method, while her daughter teaches the Kindergarten class, which the Normal pupils attend by way of living example. The public school authorities of New York hope soon, it is said, to secure the services of these ladies in the public Normal school of that city. They have now a class of ten or twelve ladies. There will soon be so great a demand for teachers of this kind that those places may consider themselves fortunate which secure the services of one of these.

A lady who travelled in Europe to study Froebel's Kindergartens brought home from Dresden the whole series of work done by a class of children who began at three years old and continued till seven, and no one has seen it without being convinced that it must have educated the children that did it, not only to exquisite artistic manipulation, which it is very difficult to attain later, but to habits of attention which would make it a work of a short time to learn to read, write and cipher, and would enable them to begin a scientific education, and use books with the greatest advantage as early as eight or nine years old. This work is of many kinds, as will be perceived when one considers that in the three hours' daily session there must be two or three different kinds of quiet tasks and two or three active plays. The tasks themselves are play, being some form of interesting instruction. For Froebel, instead of beginning the process of education by paralyzing the child's activities and keeping him still, organizes the play itself into an educating process. He has invented a series of playthings, beginning with solids, (balls, cubes, etc.) going on to plane surfaces, and squares and triangles, and thence to sticks of different lengths, and points (peas or balls of wax) with which the sticks can be inserted, to make frames of things, and symmetrical forms. By this work, superintended with sympathy, interest, and suggestion by the teacher skill, neatness and order become habits. The little tables at which the children sit are marked off in inch squares, and the blocks, planes and sticks are not laid in confused heaps, but carefully adjusted one by one to these squares. When the child has acquired sufficient skill to invent forms which he wishes to make permanent, he is taught to draw or prick pictures, to sew cardboard with coloured threads in regular patterns (no copies allowed) to weave into slitted paper of one colour, stripes of another colour, to fold paper with great exactness in geometrical forms, and unfold it to make little boats, chairs, cups, etc., and to mould figures out of clay.

Calisthenics, ball-plays, and plays imitating the motions of beasts or birds, mechanical labours, etc., are alternated with these quieter occupations, and give grace and agility. These exercises are directed and enlivened with songs.

The teacher, by constant questioning, calls the child's attention to every point of resemblance and contrast in the objects presented to it, and encourages it to relate its little experience, or explain its little invention, so keeping its mind awake and in agreeable activity.

The system of instruction in the Kindergarten is, in fact, simply the carrying out of that education which a loving and sensible mother begins in the nursery, not of set purpose, but by natural instinct, when she plays with her baby, teaches it to notice things, to use hands and feet, talks to it, and interprets its dawning thoughts and wishes into words. If a baby is not played with it ceases to play, and becomes, if not an absolute idiot, at least dull, discouraged and stupid. It is sad to think what immense injury is done, and what waste made of human faculty, by those defective methods of education, which undertake to reverse the order of nature, and make children passive to receive impressions, instead of keeping them active, and letting them learn by their own or a suggested experimenting.

This system of education is not adapted merely to primary schools; the fundamental idea of it is applicable to all instruction, and it is hoped that in time our whole method of education may be reformed by it. Meanwhile the change most needed, and the best beginning of a thorough remodelling of our methods of teaching, is the introduction into our public schools of the Kindergarten.

3. DRILL IN FRENCH SCHOOLS.

What is considered a decided reform is just inaugurated in French Schools, and it is worth consideration elsewhere. After the 8th of this month, drill was to be compulsory in all public schools. The advantages of this method of developing the physical frame of youth are too obvious to need argument, and in fact many English schools adopt the drill system as a valuable part of the regular course. The French method now initiated goes a great deal farther, however, than instruction in bodily carriage and military evolutions, for it embraces training as actual soldiers. For instance, boys will, on reaching a certain degree of efficiency, be exercised with chassepots, and in towns having a cavalry garrison, will be taught riding with the regular army recruits. The population will thus grow up better prepared than formerly to act on the offensive or defensive, as the country may require. We cannot but think that the system might be copied here to some extent, since every man should be prepared to take his part in protecting the national honour and safety. It seems reasonable besides to associate the idea of a militia or volunteer force in which all may be liable to serve, with a branch of the cavalry education as a preparation therefor.

4. COMPULSORY EDUCATION IN MAINE.

The Committee on Education in the Maine Legislature has reported a Bill providing for compulsory education in that State. It provides that parents or guardians having charge of children between 8 and 14 years of age shall send them to a public school at least 12 weeks in every year, not less than six of which shall be consecutive, unless such children are excused attendance by the school officers of the town on the ground of mental or physical debility, or because they are taught the ordinary branches of learning at home or in a private school. Provision is made for the enforcement of the Act by fines for violation thereof. New Hampshire has already a compulsory school law, and several Western States are discussing the subject.

5. EDUCATION AND CRIME COMPARED.

We commend the following statements found in the report of the Commissioner of Education, in regard to the relation between education and crime, or to speak more properly, between illiteracy and crime:

A table of ratios shows that there was, in 1870, one homicide to every 56,000 people in the Northern States, one to every 4,000 in the Pacific States and Territories, and one to every 10,000 in the Southern States.

In 1866, there were 17,000 persons reported in the prisons of the United States; but the statistics on this subject are very imperfectly kept. Prisons and reformatories, in some parts of the country, keeping no record of the intelligence of the persons committed. In New England these statistics have, in some cases, received considerable attention, and the able writer who furnishes the accompanying paper, has drawn the following conclusions:

I. At least 80 per cent. of the crime of New England is committed by those who have no education, or none sufficient to serve them a valuable purpose in life. In 1868, 28 per cent. of all the prisoners in the country, were unable to read or write. From 3 to 7 per cent. of the population of the United States commit 30 per cent. of all our crime, and less than one fifth of one per cent. is committed by those who are educated.

II. As in New England, so throughout all the country, from 80 to 90 per cent. have never learned any trade or mastered any skillful labour; which leads to the conclusion that "education in labour

bears the same ratio to freedom from crime, as education in schools."

III. Not far from 75 per cent. of New England crime is committed by persons of foreign extraction. Therefore 20 per cent. of the population furnishes 75 per cent. of the criminals. It is noticeable, that "the immigrant coming hither with education either in schools or labour, does not betake himself to crime."

IV. From 80 to 90 per cent. of our criminals connect their career of crime with intemperance.

V. In all juvenile reformatories 95 per cent. of the offenders come from idle, ignorant, vicious homes. Almost all children are truant from school at the time of their committal; and almost all are children of ignorant parents. These children furnish the future inmates of our prisons; for "criminals are not made in some malign hour; they grow." In the face of these facts, what can be said but this: "ignorance breeds crime, education is the remedy for the crime that imperils us."

6. PROVINCE OF ONTARIO, CANADA.

The Ontario educational report for 1870, drawn up by the Chief Superintendent, presents many interesting facts; it also shows a very thorough research in all the leading educational systems of this country and of Europe, and a determination to make use of good ideas wherever they may be suggested.

The whole number of pupils in the public schools was 442,518, an increase of 10,083. The total receipts for common-school purposes for 1870 were \$1,944,364. 5,165 teachers were employed—2,763 male, 2,412 female. The highest salary paid to a teacher in a county is \$600—the lowest \$100; in a city, the highest \$1000—the lowest, \$250. The efficiency of public-school education is seriously impaired, as it is so often in our own states, by the action of trustees and parents, "whose aim is to get what they miscall a cheap teacher, and who seek to haggle down the teacher's remuneration to as near starvation point as possible, though, in reality, they are intellectually starving their own children and wasting their time by employing an inferior teacher."

The report covers the last year of the old *regime*, under which the schools might be *free*, or requiring payment of fees, as the local votes in school sections decide. At the present time, however, the public schools of the province of Ontario, by act of legislature, are free to all residents between the ages of five and twenty-one years.

One normal school of over 200 pupils is sustained, and its services are found indispensable. Free public libraries have been organized, containing 239,062 books. Superannuated and worn-out teachers may be pensioned from a fund composed jointly of an annual appropriation of \$4,000 from the legislature, and yearly subscriptions from such able bodied teachers as may in future desire to become recipients.

Many practical points, such as compulsory education, are discussed with much ability in the report, and instructions in drawing and natural science in all public schools is recommended with much pointed argument and earnestness. Our Canadian cousins of the province of Ontario are evidently wide awake in educational matters, and we shall do well to study their systems for our own profit, and to extend to them the right hand of fellowship.—*Conn. S. J.*

7. TEACHER'S SERVICES, AND THE RECOMPENSE OF THEM.

The numerous applications from various parts of the country for school teachers indicate two things, that, the cause of education is still active amongst us, and that good teachers are becoming scarce. Touching this latter point, it must be clear that the high educational status required by the Board of Education for teachers to possess, is incompatible with the low salaries which have been paid hitherto. For many years it was the custom to treat the claims of teachers as of very secondary importance; and to get some one who would teach "cheap" has been deemed an exploit worthy of the concentrated intelligence and united exertions of a whole Board of Trustees. It may be understood that that day has passed, or is fast passing away. It is now being felt that it is not to the interests of parents to commit their children to the care of half-taught, ill-regulated people, and then expect that they will leave school well instructed and well-behaved. The means must be suited to the end, or the desired results will not be attained. The Superintendent of education, Dr. Ryerson, has, amid much hostility on the part of those who should have known better, gradually elevated the whole tone of general education in Canada, and by calling for a high standard of education, and of adaptability on the part of the teachers, has laid the foundation for great progress in this important feature of national life. But the attainments now demanded call for high capability and earnest work. It is not an easy matter to secure a first-class certificate now, and it costs both money, time and labour before any can procure it. With the increasing demand

for intelligent services, not only in Canada itself, but also in the States, it is not reasonable to suppose that they can be procured for the beggarly pittance that was given aforesaid, when a teacher was thought well placed if he could "board around" among the parents, and get enough to have his boots blackened on meeting days, and appear in a good suit of clothes. The time has come when teachers must not only be paid but recompensed. Recompensed for services which, if faithfully rendered, are of untold value to those who are dearest to us, and are destined to follow us in the task of life. It will be necessary, therefore, for a general rise to take place in the salaries of school-teachers. Justice demands it, and the trustees throughout the country will learn by experience, what may prove a more compelling ordinance, that necessity will compel it.

DRAWING has been adopted as a branch of instruction in all the departments of the Public Schools of Philadelphia, except the Primary, and in this department it will be taught as a matter of course. This is considered by the friends of education in that city a very gratifying step in advance.

OXFORD.—The nobleman's gown, and the gold "tuft" on the velvet cap which was formerly worn by peers' sons at Oxford, is now a thing of the past; the "gentleman commoner's" silk gown, too, is all but extinct in the University, and quite extinct at Christ Church, where it formerly prevailed most extensively. Is this a sign of the increasing "liberty, equality, and fraternity" which mark the present age?

DR. HOOKER, of the Royal Botanical Gardens of Kew, England, has gone to Morocco to make a collection of the plants of that country.

THE Emperor of Brazil, who is now on a visit to Europe, and who promises on his return to pay his respects to this country by a short sojourn among us, is a great scholar, and is said to be especially devoted to philology and the study of comparative grammar. He also took a great interest in the exploration of the Amazon by Professor Agassiz.

A most interesting work for the student of ancient geography has lately been published at Berlin by Herr Partney. It is a "Geography," compiled by Dicuil, an Irish monk, in A. D. 855, upwards of a thousand years ago. It is probably the oldest educational work of the kind in existence, with the exception of Herodotus, Aristotle and Pliny.

PRUSSIA.—The Minister of Education in Prussia has drawn up three Bills for educational reform, which are shortly to be laid before the Council of State. The first provides for the establishment of training schools for teachers; the second, for the improvement of imperial colleges, and the third, for the establishment of schools of science. A move is to be made also for the improvement of female education.

OF SCHOOLMASTERS NOW BISHOPS.—Of the famous men of England now living, who were formerly schoolmasters, are the Archbishop of Canterbury, who was master of Rugby; the Bishop of London, who was master of Islington School, and the Bishop of Lincoln, who was master of Harrow.

DON.—In the middle ages the professors of the University of Oxford were called "Dominus," or "Don." In the case of the learned professor whose name is known to scholars as "Duns Scotus," the title was of course conferred, and the opprobrious name, "dunce," came into use somewhat on the *lucus a non lucendo* principle. Hence the common term "dunce."

THE TRAINING OF YOUTH.

The Rev. J. G. D. McKenzie, in his report on the High and Public Schools of Ontario, published in the last education report, says:—"Our drill classes, I am sorry to say, are, with two exceptions, extinct. I may also mention with regret that scarcely any of our High Schools make provision for gymnastic exercises." This is certainly not as it ought to be. Drill and gymnastics at school, besides giving a deportment that cannot be acquired in any other way, are to be highly recommended for physical reasons. A well cultivated mind in a sound body is the great desideratum. A development of the mental powers at the expense of the physical, is, after all, a deformity to be avoided. During school days a healthy foundation should be built up for the constitution, that will enable it to bear up against many of the inevitable shocks of after years, or else the seeds of disease are implanted, which all too soon develop into fruit. During the period

of growth, too much sedentary employment is likely to prove injurious, and as it is during this period that our children must be educated, all precautions ought to be taken to prevent it having any ill-effect. Moderate and regular exercise at drill and in the gymnasium, and by other means during school life, are the best methods of securing a sound constitution. It is to be regretted, therefore, that physical training should have diminished in our public schools, as the Inspector's report indicates.

If these remarks apply to our boys, they are none the less applicable to young ladies attending school. In the rough play that school boys indulge in there is some chance of physical training; but the customs which hedge about a girl from the moment she quits the nursery forbid her partaking in any "unladylike" sport, hence, all the greater need of a systematic course of exercise while attending school. The formal and joyless walk under the mistress' eye often constitutes the only exercise ladies receive during the educational period. While we must not omit the mental training of our youths of both sexes, it is scarcely of secondary importance that their physical powers should also be developed.

Under the late School Act the High School Boards of Trustees are invested with full power to raise all the money they need for the legitimate expenses of the school. In the future it is to be hoped that the sanitary condition of the buildings and provisions for gymnastic exercises will not be omitted, and as for our Lady Colleges, the parents of the pupils have a right to indicate a wish to have their daughters subjected to moderate physical training, and this expression might prove sufficient to bring about the needed reform.—*Toronto Express*.

HOW TO RIGHTLY INFLUENCE CHILDREN.

If you would influence children for the right, win their love. It takes little to do that. A child's heart is warm, ready to give back full measure of love for a tender smile or a helping hand. Do not repulse them if their caresses are rough, or their rejoicings noisy. What is your rumpled collar or aching head to the harm done when you chill the child's affection? Said a stout, rough farmer to me, "I like Will S—, I haven't seen him for years and years, but I like him. He used to let us go with him to the fields, or off fishing, and took pains to make us happy, as if he thought us of some consequence, if we weren't knee-high." Don't scold them. If you must reprove—and children will respect and love you more if you reprove their faults—let your manner be firm and quiet. No bluster avails with them, but they know at once when you are resolute. Above all be sincere. As has often been said, children are the surest detectives. You cannot cheat them with pretence, as you can their elders. To influence them to purity and truth, you must yourself be thoroughly pure and true.

IV. School Accommodation and Sites.

1. INADEQUATE PROVISION FOR SCHOOL ACCOMMODATION.

From time immemorial the country school-house has been an object of satire and ridicule, on account of its cheapness and neglected condition. While great improvements have been made, of late years, in school-house architecture, specimens of the olden style remain in sufficient abundance to confirm and illustrate all that has been said and sung about this monument of public economy. A single glance at its structure, in comparison with the church, the court house, or even the common jail and penitentiary, will reveal how much deeper interest in these was felt by the builders than in that edifice where the young receive those lessons which are to determine the character of their future manhood.

One would suppose that within those walls, where the children are to spend so large a portion of their tender years, some of the comforts which men demand for themselves in mature life might be provided for the young, to mitigate, in some degree, the severity of those tasks which rigid mental discipline requires. But the carpeted floor, the cushioned seat, the frescoed wall of the church, the rich finish and furniture of the bank, or elegant store, would be quite out of place where children are assembled for the culture of the intellect, of refined habits and manners. It is a matter of wonder that those children who come from homes richly supplied with whatever can contribute to comfort, refinement, and the culture of taste, should deteriorate under such surroundings as are too common; or that those whose homes are destitute of comfort and refining influences should fail to receive that culture from coarse surroundings which is a most desirable part of an education.

Sometimes great care is taken to build the house properly, of suitable materials thoroughly put together according to plan and contract. But often here ends the responsibility of the builders. The

money is expended, and, at the last, the very supplies essential for the success of the school fail to be furnished. The tools needful for daily work are wanting. Inadequate provision for warming, or taking care of the premises, or making repairs, occurs oftener than in any manufacturing establishment or mechanic's shop.

A competent teacher works successfully, as does a workman in any other business, only as necessary implements and conveniences are provided for his use. If denied them, his efforts are but a partial success at best. What, then, can be reasonably expected of a poor teacher, with poor pay, in a dilapidated house, without conveniences? Weak points in the system, are they all.—*A. Parish, in Connecticut School Journal.*

2. "ADEQUATE SCHOOL ACCOMMODATIONS."

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

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

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

3. SCHOOL PREMISES AND ACCOMMODATION.

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

4. SCHOOL-HOUSE VENTILATION WITHOUT DRAUGHT.

One of the most essential conditions upon which depends the maintenance of health is the ventilation of apartments, whether living rooms, sleeping rooms or working rooms without the introduction of draughts or cold air at unseasonable times and in improper or dangerous directions. If this problem has not been completely solved, at least a most important contribution to its solution has been made by the system devised by Mr. William Potts, of Birmingham, which has during the last three years been introduced into different hospitals, schools, Government buildings, factories, offices, and private dwellings. According to this plan a hollow cornice, by preference made of zinc, runs continuously round the room, as the ordinary plaster cornice does. This metal cornice is divided longitudinally into two channels. The fresh air is admitted into the pure air channel, or lower chamber through openings in the wall, arranged at intervals according to the purpose for which the room is used, and descends into the room near the wall line through the perforation at the back of the lowest member. These perforations are invisible from the front, and being stopped immediately in front of the openings in the wall, the air cannot fall by a direct stream into the room, but is directed along the channel, and descends evenly and gently by its own gravity, and becomes diffused imperceptibly through the room; because, when first admitted, it is heavier than the vitiated or heated air within, and consequently flows freely in, but in descending it becomes warmed by contact with the warmer air, and thus loses gradually its weight and force; and as it flows down it comes each moment into a cooler and denser atmosphere—thus, from two natural causes, it cannot produce a draught when properly checked and distributed. The upper or foul air channel communicates with the smoke flue or air shaft, or other extracting

channel; it is perforated continuously along the face with ornamental patterns, and the ceiling being darkened at the back, these patterns show as stencilled enrichments on the cornice. The vitiated air, whether from combustion or the human breath, rises when given off, to the highest point, is there drawn by the outward current through the perforations into the channel, and conveyed away by the air shaft or flue. It encounters no opposition to its exit, as the cold air coming in descends for a considerable distance close to the wall line and is admitted at a lower level, and so assists instead of retarding the escape of the vitiated air. This description will be sufficient to show the simplicity of the plan, and at the same time to indicate the principles upon which it is founded. The zinc cornices, it may be added, are far more ornamental and at the same time cheaper than the common plaster ones, and admit of every variety of modification in the shape or design in order to meet the varying circumstances under which they may have to be applied. The plan has already been pretty largely brought into operation, and has been applied with success to the rooms of the School Board, in Bridge street, Blackfriars, and to the kitchens in Somerset House. It may also be applied to the ventilation of ships, especially those employed in the cattle trade, and will, if the hopes of the inventor are realized, go far to supersede the use of punkahs in India.—*London Daily News.*

COMPULSORY SALE OF SCHOOL SITES.—DISTINCTION.

The provisions of the law on the compulsory sale of school sites are twofold, although they have been confounded together. The first part of the Section refers, (1st.) to the selection of land for a school site, and (2nd.) to the selection of land for the enlargement of school premises." In these two cases the Trustees can demand an arbitration, should the owner of the selected or enlarged site refuse to sell, or ask too great a price for the land. In the case of the selection of a new School site, the owner can successfully refuse to sell, or even to submit to an arbitration, when the selected site is within 100 yards of his "orchard, garden, pleasure grounds, or dwelling house," but where the Trustees merely wish to enlarge their existing school premises, the owner has no such right. The provisions of the law giving this right limits it merely to the "selection of a site," and not to the enlargement of the school premises. Two things are specifically provided for in the Act, as we have shown, but the right reserved to the owner of the land refers only to one of them—that is to the case of the selection of a new site, and not to the enlargement of the old one.

The provision of the law does not, in any case, (as has been supposed,) apply to other persons whose house, &c., may happen to be within 100 yards of the proposed site, but who are not in any way concerned in the sale of the site.

V. Papers on Scientific Subjects.

1. SOCIAL SCIENCE IN ST. PAUL'S CATHEDRAL.

A new innovation is reported from England. Social science has obtained a footing in the venerable pile, St. Paul's Cathedral, and Canon Gregory has discoursed on the question, "Are we better than our Fathers?" beneath its magnificent dome. The lecture is the first of a series which are to last till the end of the year. There has been a growing dissatisfaction for some time past at the little use to which the cathedral was put, the services held in it occupying but a few hours weekly, and the week day religious services being attended sometimes by less than twenty persons. Canon Gregory had an audience of 1,200—men only being admitted. Canon Liddell will next month explain one of the epistles. The *London Times* points out that these lectures to be attractive must be different from a Sunday sermon, and no doubt the hint will be taken by the Rev. lecturers. At any rate, no objection on this point could be made to the lecture of Canon Gregory, who treated his subject in the broadest manner. One of his remarks on the question was that "an age of comparative violence had been succeeded by an age of fraud,"—which, we fear, has more of truth than poetry in it. The lectures promise to be very successful.

2. CLASSIC VERSE AND NATURAL SCIENCE.

Shall I shock the taste of any whom I address, if, after having written some thousand Greek and Latin verses in my own school-days, I pronounce them waste of time, and protest against them altogether? They do not cultivate the taste, for reverent enjoy-

ment of the beauty of an author's thoughts is excluded by the labour necessary for a feeble imitation of his diction. They do not train the intellect, for all chances of analysing words and sentences is lost in the necessity of wedging lifeless blocks into the form of a hexameter or Iambic verse. Except in the case of those in whom the 'sacred faculty is innate, and whose genius would find fitter scope in exploring the poetical resources of their own literature and language, they constitute a mere mechanical process, exercising hardly more effect on taste, refinement, imagination, than the compilation of a Chinese puzzle. Their elimination from our school system will be clear gain in itself, and will let free at once a much larger time than is demanded for the prosecution of natural science.—*Rev. W. Tackwell at British Association.*

3. THE MAGIC NEEDLE.

In Europe the chief power of the magnet was perhaps known but never applied, for a thousand years. An Icelandic writer, *Arc Frode*, makes the first mention of it near the year 1100, stating that a hundred years before, a famous pirate went in search of Iceland under the guidance of three ravens, trained for the purpose, since "in those days sailors of northern regions did not yet know the use of the leadstone." For he called it the lead, or leading, stone, from which our loadstone is derived. Even this historian, however, knew only a magnet suspended by a thread, and the compass itself was yet undiscovered. At first, the magic needle was used with amusing clumsiness, as we learn from a manuscript, dated 1203, in the Royal Library in Paris. An ugly, black stone, called *mariniere*, we are told, which sailors valued highly, was taken out when nights were dark, and a needle rubbed with it lightly; the latter was then cunningly placed upon a straw, and set afloat in a basin, when the point would indicate the north.

Another peculiarity of the magic needle was a cause of much anxiety and peril to the discoverer of our continent. When the great navigator had ventured about two hundred leagues into the Atlantic Ocean, on the 14th of September, 1492, he noticed for the first time that the needle, at evening-dusk, no longer pointed due north, but deviated several degrees in a north-westerly direction, and the next morning the deviation had increased. Full of anxiety and wonder, he watched it carefully, and, to his consternation, the farther west he sailed the more the needle appeared to deviate. At first he kept his discovery to himself, fearful lest he should alarm his crew and defeat his purpose; but soon the men at the helm noticed the change, and were filled with grievous apprehensions. They fancied they had penetrated into a new world, ruled by other laws, than those to which they had been accustomed. If the magic needle lost its power what was to become of them on the boundless ocean? Never, perhaps, was Columbus greater than when, sternly suppressing his own fears, he told them that the magnetic needle pointed, not toward the north pole on earth, but toward an invisible part of the heavens, which changed its place together with all the heavenly bodies. They believed the man whose vast knowledge and marvellous energy they had learned to appreciate; their minds were calmed, the voyage continued, and a New World discovered. Henceforth the magic needle achieved triumph after triumph. With such aid, Diaz, Cabral, and Gama, could cross vast oceans, and Magellan and Sebastian Cabot sail around the whole earth—thus ending forever the objections made by superstition and bigotry, and teaching man the true form and nature of the globe which he inhabits. While, heretofore, the majority of vessels, in the Mediterranean even, had been wrecked, or at least had reached their desired haven only with a small part of their cargo now insurance companies are formed in the large seaport towns, and the premiums, even for India voyages, soon became small so as to make insurance the rule.—*Appleton's Journal.*

4. BEAUTIFUL CHEMICAL EXPERIMENT.

Take two or three leaves of red cabbage, cut them into small bits, put them into a basin, and pour a point of boiling water on them; let it stand an hour, then pour off the liquor into a decanter. It will be of a fine blue colour. Then take four wine-glasses; into one put six drops of strong vinegar, into another six drops of the solution of soda, into a third the same quantity of a strong solution of alum, and let the fourth glass remain empty. The glasses may be prepared before, and the few drops of colourless liquids which have been put in them will not be noticed. Fill up the glasses from the decanter, and the liquid poured into the glass containing the acid will quickly become a beautiful red, that in the glass containing the soda will be a fine green, that poured into the empty one will remain unchanged. By adding a little vinegar to the green it will change to red.

5. WONDERS OF SCIENCE.

In a recent lecture by Professor Tyndall delivered at the Royal Institution, London, among other illustrations of the wonders of modern scientific discovery, he exhibited the remarkable powers of the great electro-magnet employed by Faraday, and a model engine by Froment, showing how the force of electro-magnetism may be applied to pumping water and pile-driving. He also showed how a musical tone may be obtained from the rapidly successive clicks produced whenever the electric circuit is alternately made and broken; and then, by an ingenious arrangement of levers and mirrors, he demonstrated the truth of M. Joule's discovery that a bar of iron is lengthened when magnetized, its volume being unchanged. The formation of the magnetic curves, by the movement of iron filings strewn on a sheet of paper placed over two bar magnets, was shewn on the screen by means of the electric light.

6. USEFULNESS OF A PIECE OF COMMON MIRROR.

The trick often played by mischievous children, of reflecting the solar rays by means of looking-glass to a certain spot, thus annoying their neighbours, may be turned in many ways to very useful purposes. In case the bottom of a well needs examining, it is easy to hold a mirror or a piece of the same in such a position as to reflect its rays in the water, so that not only anything floating on the surface can then be plainly seen, but also whether the water be clear. If the contents of the well are not turbid, the smallest object on the bottom can be distinguished. We have in this way traced and recovered objects dropped in wells of 60 feet in depth, and which contained more than 20 feet of water. When the objects are small, or a minute examination of the bottom is required, an opera-glass may be put in requisition. If the top of the well is not exposed to sunlight, a mirror may be placed outside, even at a great distance, to reflect the light over the top, where a second mirror may reflect it downward. Impurities and sediments at the bottom may thus be discovered, and the experiment thus serve as a sanitary precaution. Letting a lamp, candle, or lantern down gives by no means so successful a result, as the light is very weak compared with sunlight, and its glare, even the eyes are shaded from its direct rays, prevents distinct vision. The only thing which can replace solar light in such a case is the oxygen lime, magnesium or electric light, generated above the well, and reflected downward by a concave mirror, or its rays rendered parallel, like solar rays, by means of a large lens.

The method mentioned of two mirrors, one outside reflecting the solar rays in a room, and a second small mirror in its path to reflect those rays into a dark cavity, is at the present day successfully employed by physicians, for the examination of cavities of the body; for instance, to explore the tympanum in the human ear, the larynx or throat, etc.

There is another use of a piece of looking-glass, by which the annoyance of smoking chimneys and even the danger of fire may be saved. It is to hold in the hole in the chimney wall, into which the stove-pipe is to go, a piece of mirror, inclined at an angle of 45 degrees. If the observer can see the light of the sky, he will also see the whole interior of the chimney, and any obstruction in the same. As most chimneys are straight and perpendicular, reflection will make the top opening clearly visible.

7. CURIOSITIES OF ANIMAL LIFE.

"There can be no doubt," writes Mr. Darwin, "that dogs feel shame as distinct from fear, and something very like modesty when begging too often for food. A great dog scorns the snarling of a little dog, and this may be called magnanimity. Several observers have stated that monkeys certainly dislike being laughed at, and they sometimes invent imaginary offences. In the Zoological Gardens I saw a baboon that always got into a furious rage when its keeper took out a letter or book and read it aloud to him, and his rage was so violent that, as I witnessed on one occasion, he bit his own legs until the blood flowed." All animals feel wonder, and many exhibit curiosity, the latter quality affording opportunity for hunters, in many parts of the world, to decoy the game into their power. The faculty of imitation, so strongly developed in man, especially in a barbarous state, is present in monkeys. A certain bull-terrier of our acquaintance, when he wishes to go out of the room, jumps at the handle of the door and grasps it with his paws, although he cannot himself turn the handle. Parrots also reproduce with wonderful fidelity the tones of voice of different speakers, and puppies reared by cats have been known to lick their feet and wash their faces after the same manner as their foster-mothers. Attention and memory are also present in the lower animals, and it is impossible to deny that the dreams of dogs and horses show the presence of imagination, or that a certain sort of reason is also present. Animals also profit by experience, as any man realises who

sets traps. The young are much more easily caught than the old, and the adults gain caution by seeing the fate of those which are caught. Tools are also used by some of the higher apes. The chimpanzee uses a stone to crack a nut resembling a walnut, and the Abyssinian baboons fight troops of another species, and roll down stones in the attack before they finally close in a hand-to-hand encounter. The idea of property is common also to every dog with a bone, to all birds with their nests, and notably in the case of rooks. Nor can a certain kind of language be denied to the brutes. The dog communicates his feelings by barks of different tones, which undoubtedly raise in his fellow dogs ideas similar to those passing in his own mind.—*Edinburgh Review*.

8. THE SONGS OF THE BIRDS.

There is a beautiful propriety in the order in which singing birds fill up the day with their pleasing harmony. The accordance between their songs and the aspect of nature, at the successive periods of the day at which they sing, is so remarkable that one cannot but suppose it to be the result of a benevolent design. First, the robin—not the lark, as has been generally imagined—as soon as twilight has drawn an imperceptible line between night and day, begins his artless song. How sweetly does this harmonize with the soft dawning of the day! He goes on till the twinkling sun beams begin to tell him that his notes no longer accord with the rising sun. Up starts the lark, and with him a variety of sprightly songsters, whose lively notes are in perfect correspondence with the gaiety of the morning. The general warbling continues, with now and then an interruption by the transient note of the raven, the scream of the jay, or the pert chattering of the daw. The nightingale, unwearied in the vocal exertions of the night, joins his inferiors in sound, in the general harmony. The thrush is wisely placed on the summit of some lofty tree, that its piercing notes may be softened by distance before they reach the ear; while the mellow blackbird seeks the lower branches. Should the sun, having been eclipsed by a cloud, shine forth with fresh effulgence, how frequently we see the goldfinch perch on some blossomed bough, and hear his song poured forth in a strain so peculiarly energetic, while the sun, shining on his beautiful plumes, displays his golden wings and crimson crest to charming advantage. Indeed, a burst of sunshine in a cloudy day, or after a shower, seems always to wake up a new gladness in the little musicians and incite them to answering bursts of minstrelsy. As evening advances, the performers gradually retire, and the concert softly dies away. At sunset the robin again sends up his twilight song, till the still more serene hour of night sends him to his bower of rest. And now, in unison with the darkened earth and sky, no sooner is the voice of the robin hushed, than the owl sends forth his slow and solemn tones, well adapted to the serious hour.

SCIENTIFIC NOTES.

RAIN FALL.—Prof. Henry says that the observations of the Smithsonian Institute, which extend over a period of twenty years, have as yet failed to confirm the popular belief that the removal of the forests and the cultivation of the soil tend to diminish the amount of rainfall.

TELEGRAPH WIRES.—A correspondent has been figuring up the miles of existing telegraph wires. It appears there are 450,000 miles in Europe, 180,000 in America, 14,000 in India, 10,000 in Australia, and 30,000 of submarine cable. Total, 684,000 miles, to which there are additions being made at the rate of 100,000 miles per year.

OPEN POLAR SEA.—The following is a translation of the information received at the Navy Department from Dr. A. Peterman, of Gotha: The telegram dated Oct. 3, 1871, which announces the return of Capt. Weyprecht and Lieut. Payer of the Austrian Army, states that in the month of September an open Polar sea was found from 42° to 60° east of Greenwich to the northward of 78° north latitude. The northernmost point reached was 79° north on the meridian 48° east. Here we found the most favourable state of ice towards the North Pole, with probable connection with the open sea, north of Siberia, toward the east. This appears to be the most favourable route toward the North Pole. Dr. Peterman remarks: the last part of this telegram I cannot understand, but I have reason to assume that Carlland, which was discovered last year by the Count Zeil and Theodore Ven Heughir, extends southward to 78° 12' north. The expedition was made in a small sailing vessel and at the expense of the officers. The *Polaris*, Captain Hall, and for the North Pole, left American waters recently.

She will stop *en route* at St. Johns, Newfoundland, for a supply of fresh seal oil, which takes the place of salt junk in the Arctic regions. Captain Hall will then push forward to his winter quarters in the ice pack which fringes the unexplored open sea around the Pole, and with the return of the sun in May next he will endeavour, by ship or by sledges, to reach the Pole. Another Polar expedition is about to be undertaken by Octave Pavy, a member of the French and American Geographical Societies. He believes that Capt. Hall's proposed Polar expedition is impracticable, and purposes to make an attempt himself to reach the North Pole by way of Behring's Strait. He will leave San Francisco on the 15th of July, thence proceeding to Petropaulovski, in Avatcha Bay, Kamschatka. Furs, dogs, three natives (making, with four Europeans, including a Russian and himself, a party of eight), and every necessary will be procured, and shipping taken to the north of the Gulf of Anadyr, whence the party will journey overland to Cape Jakan, on the north coast of Siberia, a distance of 300 miles. Pavy takes with him a boat made of gutta-percha, covered with canvas, and capable of floating five tons weight. He intends to keep up communication with the Russian post at Cape Jakan, by carrier pigeons, and is in correspondence now with the Russian Government with a view to secure the assistance of their officials in Siberia.

SIBERIAN DELUSION DISPELLED.—Mr. Barry's new book tells a different story about Siberia from the ordinary account of travellers. Parts of the enormous area of that country are almost uninhabitable, it is true, but in the regions through which Mr. Barry travelled the climate was everywhere "temperate and endurable," while a great part of it could boast of "a fine agricultural soil, a rich deep black loam," in which anything would flourish. The roads are "as good as those in any part of the Empire," and there is "plenty of pretty scenery, hill, wood, and water." and the posting-houses are "much better than those of many parts of the centre of Russia. The peasants are far more civilized and better educated than those of the other parts of the Empire." And there "woman takes her proper place, looking after her household and her children," instead of being left, as she is in central Russia, "to do the hard work and slave at field labour," while her lord and master drinks and sleeps. As to the mineral wealth of Siberia, it is something of which but a very small number of people have any idea, for at present only a few spots are worked, and those "most unsatisfactory, and under the worst possible management." It seems that "there is plenty of refined society to be met with in all Siberian towns, and the time of one's sojourn there always glides away pleasantly; and regularity and evenness of the climate being an addition to the enjoyment of life." To any one who is desirous of visiting that attractive country, it may be interesting to know that steamers ply daily from Nijny Novgorod to Perm, "doing the distances pleasantly in a week," and the boats are "kept very clean," their provisions "are plentiful and good, and their tariff of charges is moderate."

IRON AND STEEL.—From microscopic examinations of iron and steel, Mr. Schott, of Washington, infers that he can thus determine their various qualities; the height of the crystal pyramids, relatively to the sizes of their bases, and the arrangement of these crystals differing in different specimens.

BARON KRUPP has constructed a model of a new cannon, which, it is said, will batter down the heaviest ramparts at a distance of 13 kilometres, or about nine miles. For the founding of the monster guns great changes have been introduced in the forges of Essen, and several colossal steam hammers have been set up, the cost of each exceeding four millions of francs.

GERMAN TORPEDOES.—During the war the strictest secrecy was observed respecting the torpedoes with which the German coasts were protected, but now further information has been laid before the public. Electrical torpedoes and those exploded by concussion were both employed. The latter were charged with seventy-five pounds of powder, and sunk to a depth of about three feet below the surface of the water. Those exploded from the shore by means of electricity were loaded with two centners of dualine, a charge which is equal to ten centners of powder. They were sunk at a depth of about eight feet. The torpedoes which the Grille attempted to place under the keels of the enemy's vessels were not a new invention, but the old offensive concussion torpedoes, fourteen inches in diameter, and two feet in length, which did not prove very effective. Indeed the war threw but little light on any question connected with these submarine defences. At Pillau, torpedoes charged with four centners of powder were improvised. A company for laying and exploding these engines of war was formed at Kiel. In sinking and taking them up three accidents occurred, and fourteen lives were lost.

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

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

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

Table with columns: STATION, ELEVATION, BAROMETER AT TEMPERATURE OF 32° FAHRENHEIT, RANGE, MONTHLY MEANS, DAILY RANGE, HIGHEST, LOWEST, MONTHLY MEANS, DAILY RANGE, HIGHEST, LOWEST, TEMPERATURE OF THE AIR, TENSION OF VAPOUR.

Approximation. dOn Lake Simcoe. eNear Lake Ontario on Bay of Quinte. fOn St. Lawrence. gOn Lake Huron. hOn Lake Ontario. iOn the Ottawa River. jClose to Lake Erie. k On the Detroit River. m On the Ottawa River. n On the Detroit River. o On the Ottawa River. p On the Detroit River. q On the Ottawa River. r On the Detroit River. s On the Ottawa River. t On the Detroit River. u On the Ottawa River. v On the Detroit River. w On the Ottawa River. x On the Detroit River. y On the Ottawa River. z On the Detroit River.

Table with columns: STATION, HUMIDITY OF AIR, WINDS, NUMBER OF OBSERVATIONS, MOTION OF CLOUDS, SURFACE CURRENT, WINDS, NUMBER OF OBSERVATIONS, AMOUNT OF CLOUDINESS, ESTIMATED VELOCITY OF WIND, RAIN, SNOW, AURORAS.

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

REMARKS.

Mr. O'Beirne who has for many years performed the duty of observer with singular accuracy and regularity, is now succeeded by Mr. Dixon the head master of the Collegiate Institute. Wind storm, 19th. Fog 4th and 20th. Snow, 3rd, 4th, 11th, 13th, 15th, 16th, 18th, 24th, 29th, 31st. Rain, 19th. On 18th, lunar circle at 6 p.m., but sky clear at 10; the circle filled with greyish clouds. A similar circle on 25th. Snow not deep, but sleighing good throughout the month.

18th, 19th, 21st—25th, 27th—31st. Rain, 3rd, 4th, 11th. On 1st a meteor seen in evening, direction N—S, near Zenith, visible for about 20°.
 SIMCOE.—Snow, 15th, 18th, 19th, 22nd, 23rd, 24th, 27th. Rain, 3rd. Diphtheria very prevalent and severe.
 WINDSOR.—Wind storm, 11th, 25th, 29th. Snow, 13, 15, 18, 19, 21st. Rain, 3rd.

VII. Miscellaneous.

FOUR PICTURES.

I.

An angry sea, and a sullen sky,
 A muttered threat in the wind's deep roar,
 A sea-gull fluttering with startled cry,
 As fast and furious the rain-drops pour,
 A brave ship flying, and cold lips sighing,
 "God have mercy!" and then, no more!

II.

A gleam of light on the tall church spire,
 A shepherd's song, on the distant hill;
 A blaze, red-tinged, from the forge's fire,
 One lonely star, shining clear and still,
 And never sleeping, her calm watch keeping,
 The moon looks down on the forest rill.

III.

A white face close to the window's pane,
 And two sad eyes on the busy street,
 Watching patiently, once and again,
 For the absent one they shall never greet,
 And hot tears falling, and voices calling,
 "Love is bitter, and death is sweet!"

IV.

A heavy head on the pillow laid,
 And snowy flowers, strewn one by one,
 A still cold smile, on the lips that prayed,
 Two tired hands folded, and labour done—
 And now forever, across the river,
 Lonely, and fearless, our dear one's gone.

"MARY."

RULES SUGGESTED FOR THE GUIDANCE OF LIFE.

1. Begin and close every day with prayer to God and reading a portion of Scripture.
2. Make the glory of God the chief object of your existence.
3. Think of God more than any one or any thing else.
4. Love God supremely.
5. Be regular in attending the means of grace, and beware of allowing trifling ailments to keep you away.
6. Engage in some Christian work, such as Sabbath-school teaching, tract distribution, or visiting.
7. "Remember the Sabbath Day, to keep it holy."
8. Abstain from all intoxicating liquors as a beverage.
9. Remember that God's eye is watching you night and day, and act accordingly.
10. Always do what, after mature consideration and prayer, you believe to be your duty, and leave the results with God.
11. Keep your mind constantly occupied with some good and useful subject.
12. Never read a doubtful book.
13. Keep your appetites and passions in constant subjection.
14. Aim to comfort your parents in their old age.
15. Never waste the smallest portion of time.
16. Con every day's work and duties the day before.
17. Do every thing well.
18. Never put off till to-morrow what can be done to-day.
19. Seek to do some good to others every day.
20. Cultivate a cheerful disposition.
21. Never indulge in or countenance foolish speaking.
22. Always think before you speak.
23. Avoid detraction. Never say behind persons' backs what you would not say before them.
24. Abstain from flattering others.
25. Avoid asking favours of others.
26. Have as few artificial wants as possible.
27. Never go into debt. "Owe no man any thing."
28. Depend as little as possible on others for happiness.
29. Strive constantly to set a good example to all around you.
30. Increase your capacity for usefulness by careful attention to your health, diet, and cleanliness.
31. Give a fixed portion of your income to the cause of Christ.—
C. H. in Friendly Visitor.

COLLEGE PRESIDENT TO YOUNG MEN.

The new President of Yale College at his recent inauguration gave the following advice to the students for that institution:—
 Young men, you are the architects of your own fortunes. Rely upon your own strength of body and soul. Take for your star, self-reliance, faith, honesty, and industry. Inscribe on your banner, "Love is a fool, pluck is a hero." Don't take too much advice—keep at your helm and steer your own ship, and remember that the great art of commanding is to take a fair share of the work. Don't practice too much humanity. Think well of yourself. Strike out. Assume your own position. Put potatoes in a cart, over a rough road, and small ones go to the bottom. Rise above the envious and jealous. Fire above the mark you intend to hit. Energy, invincible determination, with a right motive, are the levers that move the world. Don't drink. Don't chew. Don't smoke. Don't swear. Don't deceive. Don't read novels. Don't marry until you can support a wife. Be in earnest. Be self-reliant. Be generous. Be civil. Read the papers. Advertise your business. Make money, and do good with it. Love your God and fellow man. Love truth and virtue. Love your country and obey its laws.

SMOKERS.

It is long since James First denounced smoking as a vice "disturbing to the nose, harmful to the brain, and in the black Stygian smoke thereof most nearly resembling that of the pit that is bottomless." Still the "weed" is in favour, and an ever-increasing multitude worship while they burn their idol with might and main, in spite of all arguments and remonstrances to the contrary. The votaries of this narcotic seem to think that they must use it at all times, in all places, and in all companies. Who, but a perfectly selfish heathen, would ever go into a second class railway car and puff that foul smoke of theirs in the faces of poor sick or delicate women and children, or even men, who must submit to constant relays of such fumigation simply because they are poor, and that for days? Yet this is every day done by smokers that call themselves gentlemen! The same thing at railway stations. Non-smokers for the next five months will have only the poor alternative of staying in the stations of any railway in Canada and being choked or going out and being frozen. Ugh! The very memory of what one has suffered from vile tobacco and cabbage cigars at these stations is enough to make nausea return. But it is of no use. "No smoking" flourishes everywhere on the walls, while smoking flourishes everywhere over all the premises.

The *Dublin University Magazine* for September takes up the subject on its bearing on disease, but it might spare its pains. It shows from statistical tables that in Germany, Holland, United States and England, tobacco costs more than bread. The sum spent in England alone in 1868 on tobacco and snuff we are assured was £11,438,290. It is shown that it is poisonous, and produces morbid affections of a very formidable character, "Locomotorotaxy" is one disease specified; the name alone is sufficient to frighten any one, and when it is explained to mean a general paralysis of the nerves, the fear ought to be increased.

A goodly list of other afflictions resulting from the use of the weed is given, such as:—Giddiness, sickness of the stomach, dyspepsia, diarrhoea, angina pectoris, liver complaint, heart complaint, pancreas complaint, nervousness, amaurosis, paralysis, apoplexy, atrophy, deafness, nausea, ulceration of the gums, cheeks, and mucous membrane of the throat, hysteria, hypochondriasis!

All right! says the confirmed smoker, but I must "blow my cloud." There is not a doubt that this tobacco mania is doing more than almost anything else to intensify the nervous dyspeptic character of the generations.

It is a pity that it should be so, but we suppose the reply to all arguments and to all statistics is ready. "I fear I can't answer—but I must have my smoke." Well for pity's sake, at any rate, be as much of a gentleman as not to make your fellow travellers utterly miserable in public places, and public conveyances, by indulging, while in their company, in, to them, your abominable and selfish luxury.—*Globe.*

CHARACTERISTICS OF COURTESY.

It may, perhaps, be questioned whether, in a state of society like our own, roughness and coarseness of manner are always the sign of a want of kindness of spirit. The tree is, no doubt, known by its fruit, but it sometimes happens that a man has grown up in circumstances which hardly gave his better nature fair play. The vine may be of a good sort, but if some of its branches never get warmth or sunlight, the grapes which hang upon them will be very sour; and if a man has lived very much among harsh and boisterous people, he is very likely to have acquired habits and modes of

speech which may be far from representing his real nature and spirit. And I have known men, gentle at heart, who, through living with rough companions, have wilfully cultivated a roughness and even a positive offensiveness of manner, which rendered it intolerable for strangers to have much to do with them. Others acquire the same manner unconsciously. The prevailing spirit and the common habits of the people about us have, perhaps, almost as much to do with the formation of our manner and bearing, as our own disposition; and we shall often be greatly mistaken if we suppose that a man who speaks and acts discourteously, is deficient in right feeling. There is, indeed, a certain refinement and perfection of courtesy, which is the result of successive generations of culture and ease, and of intercourse with people of distinction. It requires a very felicitous temperament, and very felicitous circumstances. But even in the higher ranks of English society, it is said that the grace and dignity and gentleness of which I am speaking are comparatively rare. I remember that Mr. Arthur Helps dwelt upon the perfection of manners which characterized the late Earl of Clarendon as one of his most remarkable qualities, although he was also distinguished for a certain measure of genius, for great practical sagacity, and for an extraordinary knowledge of foreign affairs. This exquisite Courtesy—a beautiful and invaluable thing in its way—is not to be looked for among ordinary people. It is one of the fine arts. It is almost as rare as the higher forms of eloquence. A faultless refinement of manner is no more possible to most of us, than white and soft hands are possible to a ploughman or smith. We must be content with something less perfect and charming. It is enough if we cultivate a right spirit in our treatment of other men, and if we remember habitually that it is a duty to treat all men courteously. Discourtesy is, I fear, a very common sin among Christian people, and it arises, principally, from serious defects in our Christian life. We speak to men harshly; we are irritable and impatient; we are domineering; we wound their feelings; we sneer at them; we treat them contemptuously; we make an ostentatious use of our power over them; we compel them to feel—and we do it intentionally—that we attach not the slightest value to their judgment; and that we have no desire to give them pleasure. I do not know that those who are guilty of these offences are likely to be much influenced by the consideration of the pain and annoyance which they inflict on others by this treatment of them; and yet they ought to remember that a great part of the misery of the world arises from the wanton disregard of the claims of every man to consideration and respect.

VIII. Educational Intelligence.

—SOUTH HASTINGS TEACHERS' ASSOCIATION.—At the recent meeting of this Association, Prof. Macoun then introduced the subject, "How far should the teacher assist the pupil," by stating that the education of a person commenced when but a few days old, and only ceased with their existence; that education was not confined to the school-room, but that the child is being educated at home and on the street, and that there are many schools besides those bearing that name. Some are held on the corner of the street, others in the Churches, and others again in the rooms of the Young Men's Christian Association. He also stated that all teaching should be by induction, and that moral training should be first mental, and then physical; that many teachers failed from overteaching, being too indulgent; that teaching means communicating ideas; that the child should be taught to think, taught to rely upon and use its own powers. Tact in teaching is the art of communicating knowledge so that the pupil can comprehend the idea, and that no difficulty should be told a child, but that it should be encouraged to overcome these obstacles. There are three systems of teaching in this country: 1st, the old, or rote system; 2nd, the cramming system, which is an improvement on the first method; 3rd, the thinking or intellectual system, which is the true method of teaching. The rote system as still pursued to a great extent in our Sabbath Schools, is decidedly wrong, the child repeating Sabbath after Sabbath a number of verses without ever attaching any ideas to what it is saying. To teach properly is to train the child to originate ideas. The Prof. then proceeded to give a general view of his method of teaching, stating that text-books were only aids in teaching, and that the teacher should not trust to the supposed knowledge of the child, but should satisfy himself that it thoroughly understands what it is endeavouring to learn.

He should do what is right and leave the results with God—do everything in the fear of God, taking the Bible for his guide, and God will assist him. Prof. J. T. Bell then delivered his lecture, "Science vs, Classics," before the Convention, having previously been elected an Honorary Member of the Association. It is impossible here to give even a brief resume of the lecture. Suffice it to say that the lecturer, in an able and eloquent manner, for more than an hour, proceeded to prove the superiority of the study of Science over the Classics, for improving the mind, drawing out the finer faculties, and extending the sphere of our usefulness. The lecturer was frequently applauded during his discourse, and the lecture itself was certainly an intellectual treat, every line of it seemed replete with instruction, and every sentence to afford ample food for thought. The Convention then proceeded to elect their officers for the ensuing year as follows:—President—J. Johnson, Inspector of Schools. Vice-President—Prof. Macoun, M.A. Secretary—J. C. Squier. Treasurer—W. G. McLachlin. Corresponding Secretaries—Prof. McGann, C. P. Kellogg, S. A. Gardner. The meeting, which was the most interesting, instructive, and successful one that the Association has yet held, then closed. Over seventy persons were present. Much credit is due the Inspector for the energetic manner in which he has worked to bring the Association up to its present standing.

—PRESBYTERIAN COLLEGE ENDOWMENT.—The general Assembly of the Canada Presbyterian Church at its recent sitting adopted the following resolutions of a Sub-Committee:

I. The Sub-Committee having read the resolution of the General Assembly relating to the effort to be made to raise \$250,000, and understanding that it contemplated that the amounts already received and invested towards the endowment of the two Colleges, should be thrown into the General Endowment Fund in connection with the effort to raise the amount specified, and with a view to its equal division between the Colleges, is of opinion that the movement in its present form to endow the Colleges can only be successful by adhering to and acting on this understanding. II, The Sub-Committee is of opinion that there should be at the very earliest period in each college not less than four professorships for the following departments, viz.: Systematic Theology, Exegetical Theology and Biblical Criticism, Apologetics, Church History, Homiletics, Pastoral Theology and Church Government. III. The Sub-Committee recommends that the subscriptions should be made payable in three equal annual instalments or six semi-annual instalments, and that no payment shall be called for until \$200,000, including the amounts on hand, be subscribed. IV. (a) The Sub-Committee is further of opinion that it would contribute to the success of the movement if a special trust was constituted by the General Assembly for the purpose of holding and investing the endowment fund, and of distributing the proceeds to the boards of management of Knox College, Toronto, and of the Presbyterian College, Montreal, in such parts that including in this estimate the proceeds of the moneys already invested by the boards of the respective colleges for ordinary college purposes the colleges shall be possessed of the same revenue from these sources. (b). The Sub-Committee recommends that the Trust should consist of five persons elected by the Assembly, two of whom should retire each year, and be ineligible for re-election until a year thereafter. (c). The Sub-Committee recommends that the money should be invested in unquestionable securities, such as government or county debentures, more with a view to absolute security than a high rate of interest. (d). The Sub-Committee further recommends that a professional accountant should be appointed to audit the accounts, and to report to the General Assembly from year to year. V. The Sub-Committee is of opinion that it should be an understanding that the capital fund of the endowment should not be infringed upon for any purpose, and that no part of the annual increase therefrom be applied to any other purpose than the payment of the salaries of the Professors and officers of the colleges at Toronto and Montreal, or the increase of the capital funds. VI. That the following persons be requested to visit the cities and larger towns of Quebec for the purpose of soli-

citing contributions from the members and adherents of the church in these places towards the endowment of the colleges, viz.: For Montreal and Quebec, Drs. Topp and McVicar; Toronto, Rev. Wm. McLaren and Hon. George Brown; Hamilton, Prof. Inglis and Mr. King; London and Brantford, Dr. Waters and A. Skinner, Esq.; Ottawa, Kingston and Belleville, Mr. Cochrane; Guelph and Galt, Mr. Moore and Professor Caven—the canvass of the above mentioned places to be completed, if possible, before the second week of January, 1872. VII. That a Sub-Committee consisting of five persons be formed, one in Montreal and one in Toronto, whose duty it shall be to arrange for the visitation of every congregation in the church within their respective districts, by a minister or laymen, for the purpose of taking up subscriptions in concert with Presbyteries and members of the committees.

—BLANDFORD PUBLIC SCHOOL.—The competitive examination the schools of the above municipality took place according to announcement. Quite a large assembly of children, parents, trustees and teachers assembled. Dr. A. J. Campbell, of East Oxford, and Wm. Carlyle, Esq., County Inspector, conducted the examination, and a very comfortable lunch was provided in the afternoon. Mr. Carlyle, and Dr. C. each addressed the audience at the close of the examination. The last mentioned, announced that his intentions were to bring before the municipal council, the propriety of providing a medal for the township, to be annually competed for. The whole affair was a perfect success, making due allowance for the inclemency of the weather, and considering it to have been a postponed meeting, owing to the stormy nature of the day on which the primary appointment was made. We congratulate Dr. Campbell on the success of this his second effort. Competitive examinations, such as those provoked by our worthy friend, have much to commend them to our notice, and if the council of the township would accept the suggestion, and award a medal, we have no doubt it will supply a further incentive, and go far to establish these competitive examinations as a feature in our school system.—*Woodstock Times*.

—OTTAWA. The *Ottawa Citizen* says a movement for the establishment of a Normal School at Ottawa city has been set on foot and will be vigorously prosecuted. There are many reasons certainly why such an institution should be established at the Capital, and we hope to see the idea carried to a successful issue by those who have taken it in hand.

—QUEBEC TEACHERS.—At the Annual Convention of the Protestant Teachers' Association of the Province of Quebec, in his inaugural address the President, Professor Graham, spoke of the advantages of graded schools, and advocated their establishment in the Province. Rev. Professor McKay read a paper on the etymology of words, and Prof. Hincks, of McGill Normal School, a paper on "Teachers' means of professional improvement." These subjects were discussed by Mr. Treasurer Robertson and others.

—ROMAN CATHOLIC EDUCATION IN ENGLAND.—The *London Weekly Dispatch* of the 18th ultimo says: "A public meeting was held on Thursday, at Willis' Rooms, in order to receive the report of the committee engaged in promoting Roman Catholic education in Great Britain. The Duke of Norfolk presided. The honorable secretary, Mr. Allies, read the report, by which it appeared that £47,000 had been subscribed during the past year; that the Roman Catholic population of Great Britain is about a million and a-half; that 138,000 children are at school, and that 92,000 still require to be provided for. During the last year one hundred and thirty new schools were built, thirty-four were enlarged and sixteen hired. It was also stated that, in addition to the sum named above, local efforts had produced about £65,000. The Marquis of Bute moved a resolution in favour of a continued action, and said that he had hope for the future of Catholicity in England. Several other speakers addressed the meeting; the report and the resolutions were adopted, and the usual vote of thanks having been passed, the proceedings terminated."

—RUSKIN has endowed a professorship of drawing in an English school, feeling the want of such instruction himself

—RUGBY.—The Senate of the University of London have created great dissatisfaction in Church circles by their nomination of Dr. Temple, Bishop of Exeter, as one of the Governors of Rugby School.

—QUEEN'S UNIVERSITY.—The convocation of the Queen's University, Dublin, agreed to a report opposing the introduction of a denominational system of education into the Irish University.

—Professor Geikie has been appointed to the Chair of Geology and Mineralogy in the University of Edinburgh.

—GLASGOW UNIVERSITY.—Mr. Disraeli has been elected Lord Rector of the University of Glasgow, over Prof. John Ruskin, who also was nominated for the honour.

—SIR R. CHRISTISON.—Dr. Robt. Christison, Professor of Materia Medica in the University of Edinburgh, has had the honour of a Baronetcy conferred upon him. That the honour of a Baronetcy should be conferred on him is due to his distinguished service to the University, to medicine, and to science.

—CORNELL UNIVERSITY is to teach literature by a five years course, designed to be a preparation for journalism.

XI Departmental Notices.

FIRST-CLASS CERTIFICATES OF QUALIFICATION GRANTED BY THE COUNCIL OF PUBLIC INSTRUCTION.

Dated May 26th, 1871.—(Special Examination.)

GRADE A.

Alexander, W.	McCaig, D.
Burrows, F.	McCausland, W. J.
Clapp, D. P.	McFaul, J. H.
Gordon, N.	McKinnon, D. J.
Hilliard, T.	Ross, G. W.
Kidd, W. G.	Somerset, J. B.
Little, R.	Tilley, W. E.
Miller, J. R.	Willis, R.

Dated September 12th, 1871.

GRADE A.

Cameron, John	Ross, A. M.
Hay, Andrew	Ross, W. H.

GRADE C.

Mactavish, P.	Tod, A.
Rae, A. M.	Woodhull, T. B.
Thompson, J. C.	

Dated January 26th, 1872.

GRADE A.

Derness, John	Hands, Jonathan G.
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GRADE C.

Brown, Arthur	McCull, Malcolm Chas.
Davis, Percy S.	Nugent, Matilda
Emerson, Samuel	

3. CONDITIONS REQUIRED OF CANDIDATES FOR CERTIFICATES OF QUALIFICATION AS TEACHERS.

1. To be eligible for examination for a third class (county) certificate, the candidate, if a female, must be 16 years of age; if a male, must be 18 years of age; and must furnish satisfactory proof of temperate habits and good moral character.

2. Candidates for second class (Provincial) certificates must furnish satisfactory proof of temperate habits and good moral character, and of having successfully taught in a school three years, except in the special cases hereinafter provided.

3. Candidates for first class (Provincial) certificates must furnish satisfactory proof of temperate habits and good moral character, and of having successfully taught in a school five years, or two years if during that period he has held a second class certificate, granted under these regulations.

EXPLANATORY NOTE.—1. Attendance at the Normal School for Ontario, with the required practice in the Model Schools,

and passing the requisite examinations for a First Class Certificate, shall be considered equivalent to teaching five years in a public or private school. So, also, attendance at the Normal School, with the required practice in the Model Schools, and passing the requisite examinations for a Second Class Certificate, shall be considered equivalent to teaching three years in a public or private school.

2. In regard to teachers in French or German settlements, a knowledge of the French or German Grammar respectively may be substituted for a knowledge of the English grammar, and the certificates to the teachers expressly limited accordingly.

VALUE AND DURATION OF CERTIFICATES.

The certificates to be awarded under these regulations are :

First Class Certificates, Grade A.
Do. do., Grade B.
Second Class Certificates, Grade A.
Do. do., Grade B.
Third Class Certificates.

1. First and Second Class Certificates are valid during good behaviour and throughout the Province of Ontario ; and a First Class Certificate of the highest grade (A), renders the holder eligible for the office of County Inspector.

2. Third Class Certificates are valid only in the county where given, and for three years, and not renewable, except on the recommendation of the County Inspector ; but a teacher, holding a Third Class Certificate, may be eligible in less than three years, for examination for a Second Class Certificate, on the special recommendation of his County Inspector.

PUBLIC SCHOOL TEACHERS' EXAMINATION.

In accordance with the General Regulations on the subject, the Examination of Candidates for Public School Teachers' Second and Third Class Certificates, will be held (D.V.,) in each County Town of Ontario, commencing on MONDAY, 16th JULY, at 9 a.m.

The Examinations for FIRST-CLASS CERTIFICATES will be held at the same place, commencing on TUESDAY, 23rd JULY, at 9 a.m.

Candidates will be required to notify the Inspector not later than the 25th JUNE, of their intention to present themselves for examination ; and the Inspector will inform the Department not later than the 28th of JUNE, of the number of Candidates for each Class of Certificates, as the Examination Papers cannot be printed off until this information shall have been received from every one of the Inspectors. The omission of one Inspector to give this information as requested may delay the printing and despatch of the whole of the Examination Papers.

The Normal School Students will be examined in their respective counties, with the other candidates.

NOTICE TO CANDIDATES FOR CERTIFICATES, RESPECTING THE EXAMINATION IN THE SUBJECT OF NATURAL PHILOSOPHY.

Candidates, for *second class certificates*, will be examined in statics, hydrostatics and pneumatics. They are referred to "Peck's Ganot," but it is recommended that on the subject of *statics*, that part of "Tomlinson's Rudimentary Mechanics," which relates to the mechanical powers, be also consulted.

As the examination will be on the subject generally, those who have already provided themselves with Dr. Sangster's work, will find the necessary information in it.

Candidates, for *first class certificates*, will be examined in statics, dynamics, pneumatics, hydrostatics and hydrodynamics. They are recommended to consult, besides "Tomlinson's Rudimentary Mechanics," the "Manual of Mechanics," by Rev. Samuel Haughton, M.D.

NOTE.—The highest standard in all subjects will be maintained for first class certificates.

Candidates are strongly advised to procure copies of the examination papers used at previous examinations, as they will be of material assistance in indicating the kind of examination they will be required to undergo. Bound copies may be procured at the Depository at 60 cents per set, free of postage, or 50 cents exclusive of first class papers.

TEXT BOOKS FOR FIRST CLASS TEACHERS.

To the Editor of the Journal of Education.

As I have received a considerable number of letters in regard to the text-books which should be studied or consulted by teachers who intend to offer themselves as candidates for First-class Certificates, I think it may be well to insert a letter on this subject in the Journal of Education.

The examination papers will be framed, as far as possible, in such a manner that a well-instructed candidate shall be able to answer them, from whatever source his information may have been obtained. The other examiners agree with me in thinking that what should be sought to be ascertained, is, not a candidate's acquaintance with details peculiar to any one text-book, but his general knowledge of the subjects of examination.

At the same time, as the Council of Public Instruction has prescribed or recommended certain text-books in connection with particular subjects, respect will be had to these in framing the examination papers. As a rule, no question will be asked, which lies beyond the range of the books prescribed. If any questions beyond this range should be put, they will not be taken into account in determining the total value of the paper in which they occur ; and they will thus, while doing an injury to no candidate, serve the purpose of rewarding superior attainments.

I have been asked specially regarding Geography, Algebra, Mensuration, Natural Philosophy, and Chemical Physics. In Geography, the prescribed text-books are Lovell's Geography and Keith on the Globes. In Algebra, the prescribed text-book is Sangster's Algebra ; but any other work, that treats of the subjects discussed in Sangster, will do equally well :—for example, Colenso's Algebra. In Mensuration, Sangster's treatise is sanctioned for the Normal School ; and the work in the Irish National series, for the Public Schools. Either of these may be studied. In Natural Philosophy, the Council of Public Instruction recommend candidates for First-class Certificates to consult Haughton's Manual of Mechanics, and Tomlinson's Rudimentary Mechanics. Some portions of the former of these works are too advanced for the generality of candidates ; but a judicious student, by omitting sections in which advanced mathematics are used, may derive much benefit from a perusal of the other parts. Candidates for Second-class Certificates may consult Peck's Ganot and the chapter in Tomlinson's Mechanics on the Mechanical Powers.

On Chemical Physics, the chapter in Peck's Ganot, which treats of Light, Heat, and Electricity will be found sufficient.

I am, Sir,

Your obedient servant,

GEORGE PAXTON YOUNG.

Toronto, 16th April, 1872.

SCHOOL LAW LECTURES.—Part I.

The Law and Official Regulations relating to Public School Trustees in Rural Sections—Public School Meetings—Selection of School Sites—Erection of School Houses—Levying Rates—Collectors—School Auditors—Arbitrations—Awards—Non-residents—Public School Teachers—Relation of Inspectors to Teachers—Duties of Pupils—Terms and Vacations—Examination of Teachers—Superannuation Fund, &c. Part II will contain the law relating to Township, City, Town and Village Councils ; City, Town and Village Boards of Trustees ; Inspectors, &c.

With Decisions of the Superior Courts thereon :

Being the substance of Lectures to Normal School Students, by J. GEORGE HODGINS, ESQ., LL.D., Barrister at Law,
Price 50 cents : Free by post, 55 cents. The Trade supplied. Send orders to
COPP, CLARK & CO.
Toronto, April, 1872. 17 & 19, King St. East.

IN PRESS, PART II :

Relating to Township, Town, City, Village, and County Municipalities. Boards of Trustees in Cities, Towns and Villages, etc., etc.