

# THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

VOL. XV. No. 11.

ST. JOHN, N. B., APRIL 1902.

WHOLE NUMBER, 179.

## FOR HOME and ITS SURROUNDINGS.

### A First Book of Modern Geography.

With Colored Maps and Numerous Illustrations, chiefly Photographs of Actual Scenes.

This Book is a great help to teachers and very useful for Home Study.

PRICE, . . . . . 40 CENTS.

## LIQUID SLATING FOR BLACK BOARDS.

Prices for the Slate Black Board furnished on application.

J. & A. McMILLAN,

BOOKSELLERS AND STATIONERS,

SAINT JOHN, N. B.

98 PRINCE WILLIAM STREET,

## DALHOUSIE COLLEGE, HALIFAX, N. S.

FACULTIES OF  
ARTS AND SCIENCE.

Session begins  
September 10th.  
1901

FACULTY OF LAW.

Session begins  
September 3rd

FACULTY  
OF  
MEDICINE

Session begins  
September, 2nd, 1901.



ENTRANCE  
SCHOLARSHIPS IN  
ARTS AND SCIENCE  
Open for Competition  
at the Matriculation  
Examinations  
in September, 1901.

MACKENZIE  
BURSARY of  
\$200.

Scholarships of \$7  
\$120, \$100, \$90, \$75.

The Calendar, containing full particulars of the courses of instruction, examinations, regulations, exhibitions, bursaries, medals and other prizes may be obtained by applying to the President. The President will be glad to correspond with any student wishing information.

**STUDY** Latin and French by the De Brisay Analytical Method. Our system is endorsed by this Review, by Inspector Mersereau and by scores of teachers in New Brunswick. In Nova Scotia also we have a large number of excellent students. In three months we can give you a sound knowledge of Latin or French. We teach by mail, and can fit you for any examination, so that failure will be impossible. Each course embraces 7,000 words, presented in such a way that ten are as easily learned as one. Exact pronunciation given by means of the phonograph. Our terms are very reasonable.

PART I (LATIN OR FRENCH) 25 cts.  
FIRST STEP IN FRENCH, 35 cts.

CIRCULARS FREE

**Academie De Brisay,**  
Toronto and Rochester.

### MILES ART SCHOOL.

23rd Year Winter and Spring Term of 1901-2.  
OPENS DEC 2.

Drawing, Painting, Oil, Water Colors, Pastiles, etc., Glass Painting and Staining, China Painting, Moulding in Clay. Teachers' Classes at reduced rates. Terms at Studio, Palmer's Building, Princess Street.  
J. C. MILES. F. H. C. MILES

On December 2nd the Miles Art School commenced the twenty-third Term of its existence, at its new rooms, Palmer's Building, Princess Street. The Messrs. Miles recognizing the want of a proper training in drawing for school children will hold a special class after school and on Saturday mornings for the benefit of this class of students. The low rate at which these lessons are given will no doubt result in the formation of a large class. This class will have the privilege of attending at the Studio six days in the week. The regular lesson days will be on Tuesday and Friday from 3.30 to 5 p. m. and on Saturday from 10 to 12 a. m.



**FRANCIS & VAUGHAN,**  
WHOLESALE & RETAIL  
**Boot and Shoe Manufacturers,**  
19 King Street, North Side,  
SAINT JOHN, N. B.  
FINE ROOTS AND SHOES A SPECIALTY

## The Summer School of Science

FOR THE  
ATLANTIC PROVINCES OF CANADA.

The Sixteenth Session will be held at St. Stephen, N. B. It will begin on Tuesday, July 22, and will close on Friday, August 8, 1902.

**Many Departments.**—Instruction will be given in thirteen departments in *Science and Literature*; in five departments in Physical Sciences; in four departments in Biological Sciences; and in four departments in Miscellaneous Subjects.

Send for Calendar, containing full information, to the Secretary.

J. D. SEAMAN, CHARLOTTETOWN, P. E. I.

## MOUNT ALLISON EDUCATIONAL INSTITUTIONS, SACKVILLE, N. B.

University of Mount Allison College.

DAVID ALLISON, LL.D., PRESIDENT.

THE University of Mount Allison College offers to students, whether desiring to take a full under-graduate course or a partial course limited to special studies, advantages unsurpassed in the Maritime Provinces.

The new University Residence has been constructed and is furnished with every provision for comfort, convenience and health.

Annual Session 1899-1900 begins Sept. 21st.

Send for Calendar.

Mount Allison Ladies' College, Owens Art Institution and Conservatory of Music.

REV. B. C. BORDEN, D. D., PRINCIPAL.

INSTRUCTION is imparted on subjects ranging from the primary English branches through the whole University Curriculum to the Degree of B.A. Young ladies studying for the purpose of qualifying themselves to teach may here combine the accomplishments with the thorough drill necessary to their profession.

THE CONSERVATORY OF MUSIC is under the direction of a strong staff of experienced teachers, representing the best conservatories and teachers on both sides of the Atlantic.

Art students have the inspiration which comes from constant contact with the splendid paintings which constitute the Owen's gallery.

Mount Allison Wesleyan Academy.

JAMES M. PALMER, M. A., HEAD MASTER.

NO Institution of learning in the country has had a more successful history, and none is more worthy of patronage for the future. Many of the most prominent men now in professional, commercial and political life in Canada, and in other lands, had their training at Mount Allison Academy. A thorough English and Commercial Education is imparted and students are prepared for College Matriculation and for Civil Service examination. Every care is given to the private interests of the boys, so as to ensure their comfort and happiness.

The building is commodious, well heated throughout by the hot water system, and comfortably furnished.

Expenses very moderate.

For particulars apply to the Principal.

## McGILL UNIVERSITY, Montreal.

THE CURRICULUM comprises courses in Arts, Applied Science, Medicine, Law, Veterinary Science.

Copies of the Calendar containing full information and full particulars of the Royal Victoria College (the new residential college for women students) may be obtained on application.

EXHIBITIONS IN THE FIRST YEAR (value from \$90 to \$200) will be offered in competition at the opening of the Session, September, 1902. Copies of the Circular giving full particulars of subjects required, etc., can be obtained on application to

(Address McGill College, Montreal.)

W. VAUGHAN, REGISTRAR.

**The Royal**

SAINT JOHN, N. B.

RAYMOND & DOHERTY.

Central Location. Pleasant Surroundings.

Blank Books, Writing Pads, Note Papers and Stationery of all Descriptions.

SCHOOL BOOKS and REQUISITES of all Kinds.

Lowest Prices.

Discount to Teachers.

**McARTHUR'S BOOKSTORE, 84 King Street, St. John, N. B.**



Write for Our Complete Catalogue of  
**PHYSICAL, CHEMICAL AND LABORATORY  
 APPARATUS, — FOR — ACADEMIES, HIGH SCHOOLS  
 AND CONTINUATION CLASSES.**  
**THE STEINBERGER, HENDRY CO., Limited.**

37 Richmond St. West, SCHOOL FURNISHERS, TORONTO, Ont.

**ACADIA UNIVERSITY AND AFFILIATED INSTITUTIONS  
 WOLFVILLE, NOVA SCOTIA.**

**ACADIA UNIVERSITY.**

**T. TROTTER, D. D.,** - - - President.

The University has a staff of eleven Professors, all specialists in their respective departments. The Arts' Course, constructed on sound educational principles, includes a considerable body of prescribed studies, with a generous range of electives in the Junior and Senior years. The ideals as to methods of work and scholarship are of the highest. Combined with these ideals there is the constant effort to develop Christian character and foster the Christian spirit.

Send to the President for Calendar.

**ACADIA LADIES' SEMINARY.**

**REV. H. T. DeWOLFE, M. A.,** - Principal.

The Seminary provides a full and well-arranged Literary Course, which prepares for Provincial Certificates or Advanced Standing in the University. Students desiring only a partial-course can always be accommodated.

First-class instruction is also given in Piano, Violin, and Vocal Music; and in Drawing, Painting, Elocution, Shorthand and Typewriting.

The building is a handsome and commodious structure, with every modern appointment for the comfort and health of the students. The institution is, moreover, a delightful Christian home.

Send to the Principal for Calendar.

**HORTON COLLEGIATE ACADEMY**

**H. L. BRITTAIN, M. A.,** Principal.

The Academy is a residence school for boys. It is, and has been from the first, a Christian School. It provides five courses: Matriculation Course, Scientific Course, General Course, Business Course and Manual Training Course.

Expenses vary from \$143 to \$175 per annum according to the number of extras taken.

Nine experienced teachers, four of whom are residents, make up the staff.

The Academy Home has recently been fitted with a hot water heating system, and with electric light, and has been made exceedingly every way attractive and comfortable.

Send to the Principal for Calendar.

**KING'S COLLEGE, WINDSOR, N. S.**

Courses in Arts, Divinity, Engineering and Science. Numerous Scholarships and Prizes. Course leading to degrees open to non-resident students. Women are admitted on the same conditions, and have the same privileges as men.

**THE COLLEGIATE SCHOOL** affords an excellent training for boys. Pupils are prepared for matriculation at the universities, and at the R. M. C., Kingston. Good playgrounds and a well equipped gymnasium, in charge of a skilled professional instructor. Calendars of the College and Prospectuses of the School may be obtained from the President of the College, who will readily furnish any information desired.

**Manchester, Robertson & Allison,**  
 ST. JOHN, N. B.

**Dry Goods.**

Every Department at all times contains the latest novelties and best values in Dry Goods, also Furs, Millinery, Curtains, Portiers, Furniture Coverings, etc.

**Clothing.**

Men's and Boys' Ready Tailored Clothing, the Best Value and Finest Stock in St. John.

**Carpets.**

Finest Stock of Axminster, Wilton, Velvet, Brussels, Tapestry and Wool Carpets. Linoleums, Oilcloths and Cork Carpets, Rugs and Mats.

**Furniture.**

We have the largest and finest stock of Household Furniture in the Maritime Provinces. Parlor Suits, Bedroom Suits, Extension Dining Tables, Side Boards, Easy Chairs, Rockers, Parlor Cabinets, Brass Bedsteads, in all the latest styles.

WRITE FOR PHOTOS.



**DIAMONDS & OPALS**

Gold Chains, Bracelets  
 Watches, Sterling Silver  
 Goods at

A. & J. HAY'S, 70 King Street  
 St. John, N. B.

**NETHERWOOD**

ROTHESAY, N. B.

THE ROTHESAY

**SCHOOL FOR GIRLS.**

Mrs. J. Simeon Armstrong, Principal.

Beautiful Location near St. John.  
 Healthy Home Influences. Limited Numbers.  
 Careful Supervision.

**NEW PUBLICATIONS.****SYNOPTICAL FRENCH GRAMMAR,**

BY J. M. LANOS,

*Professor of Modern Languages, Halifax County Academy.***PRICE 50 CENTS.****OUTLINE MAP BOOKS,***By MISS S. B. GANONG, Halifax Ladies' College.*

EUROPE, . . . . . 10 CENTS      CANADA, . . . . . 10 CENTS.

If sent per mail, 2 cents extra, per copy.

**A. & W. MACKINLAY,**

135 AND 137 GRANVILLE STREET,

HALIFAX, N. S.

**ACADEMIC ARITHMETIC,**

By W. T. KENNEDY and PETER O'HEARN.

**Prescribed for use in the Schools of New Brunswick and Nova Scotia. Price 40 cents.**Evangeline, - - - - - 15 cts.  
Introduction and Notes by Prof. A. B. DeMille.Evangeline, and Tennyson's - - - 25 cts.  
The Brook, and Ode on the death of Wellington.Scott's Lady of the Lake, - - - 15 cts.  
Introduction and Notes by A. Cameron.Milton's L'Allegro, Il Penseroso, - 15 cts.  
Comus & Lysidas. With Introduction and Notes by A. Cameron.Sir Roger DeCoverley Papers, - - 15 cts.  
With Introduction and Notes.Macaulay's Essay on Milton, - - 15 cts.  
With Introduction and Notes by David Solon.**T. C. ALLEN & CO., - HALIFAX, N. S.  
PUBLISHERS, ETC.****Agents for GINN & CO, Boston, and other Educational Publishers**

Write for our Educational Catalogue.



# The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

PUBLISHED MONTHLY.

ST. JOHN, N. B., APRIL, 1902.

\$1.00 PER YEAR.

G. U. HAY,  
Editor for New Brunswick.

A. McKAY,  
Editor for Nova Scotia

## THE EDUCATIONAL REVIEW.

Office, 32 Wellington Row, St. John, N. B. (Telephone No. 1200.)

PRINTED BY BARNES & Co., St. John, N. B.

### CONTENTS:

EDITORIAL.....	225-226
Nature Study and Science.....	227
Cardboard Work, No. 4.....	228-229
Story of St. George and the Dragon.....	229-231
Short Talks about Water.....	231-233
Arbor Day Selections.....	234
Memory Gems for April.....	235
CURRENT EVENTS.....	235-236
Teachers' Institute at Pictou.....	236-239
SCHOOL AND COLLEGE.....	239
'ROUND TABLE TALKS.....	239
RECENT BOOKS.....	240
APRIL MAGAZINES.....	241
Official Notices.....	242
NEW ADVERTISEMENTS— Canada Cycle and Motor Co., p. 242.	

### Always Read this Notice.

*THE EDUCATIONAL REVIEW* is published about the 10th of every month. If not received within a week after that date, write to the office.

*THE REVIEW* is sent regularly to subscribers until notification is received to discontinue and all arrearages paid.

When you change your address, notify us at once, giving the old as well as the new address. This will save time and correspondence.

The number on your address tells to what whole number of the *REVIEW* the subscription is paid.

Address all correspondence and business communications to  
**EDUCATIONAL REVIEW,**  
St. John, N. B.

ATTENTION is directed to the official notices of Chief Supt. Dr. Inch in another column.

A PAPER on "Mental Arithmetic" has been crowded out of this number, with other articles, which will appear in the future.

THE early opening of spring and the small amount of frost in the ground should bring on Arbor Day in April this year.

It is yet time to plant window boxes, and each child should have seeds and a box to himself either at school or at home. Enough seeds should be planted to allow the child to pull one up for study occasionally.

THE April number of *Acadiensis*, published quarterly by Mr. D. R. Jack, St. John, is at hand with over seventy pages, profusely illustrated, and with a table of contents richer in variety than any that has yet appeared of this magazine, which is now in its second year. Among the contributors are Montague Chamberlain,

the Editor, David Russell Jack, Hollis R. Bailey, J. W. Bailey, E. M. Chadwick and Prof. W. F. Ganong. The latter writes on the Use and Value of Historical Museums and the importance of collecting and placing in safe custody relics of the past—a timely hint to all public spirited people. There are poems, an article on book-plates, notes and queries, etc., making up a magazine very creditable to the enterprise and good taste of its editor.

By the will of the late Cecil Rhodes of South Africa, the bulk of his immense wealth, estimated at \$25,000,000, is to be devoted to educational purposes. The details of the scheme are not yet made public, but sufficient has been published to show a great and far-reaching plan which embraces the English-speaking world. It provides for a three-year scholarship, open every year, for each important colony in the Empire and the states of the Union. The holder of this scholarship will be maintained for three years at Oxford. When it is remembered what an impetus was given to colonial education by the Gilchrist scholarships, the importance of the present scheme cannot be estimated in the stimulus it will furnish to ambitious students.

### Our Schools and Teachers.

The reports are before us of the Superintendents of Education for the three Atlantic Provinces of Canada—Nova Scotia, New Brunswick and Prince Edward Island. They contain very much that is encouraging as to the progress and efficiency of our schools, especially in the towns and villages, where intelligence, skill and an increasing public spirit are every year becoming more evident in the direction of public education. We could wish that this were the case with our rural schools. The teaching, equipment and management of these should not be inferior to those in wealthier districts. But a summing up from the different reports leads to the conclusion that the condition of the majority is far from satisfactory.

In the country schools are being educated most of our future citizens, and it is a matter of the gravest concern to all, if a very large proportion of these schools

are in a weak, inefficient and non-progressive condition. The children of the country schools will be at a great disadvantage under the conditions of our modern life, if they go forth from them poorly equipped to enter into competition with those better prepared for the race. The issues that are affecting rural schools elsewhere should receive careful attention here. Among these are the consolidation of country schools with the establishment of rural high schools in the more populous districts, and free transportation of pupils; instruction in the elements of agriculture, with school gardens for this purpose and the better prosecution of nature-study; provisions for manual training; making the school-house, within and without, a wholesome and, as far as possible, a beautiful place, by beautifying the school-grounds and adorning the interior with clean, attractive walls, books, pictures, etc.

It must be confessed that the reports of the Superintendents for the past year show that we have not made much progress in these lines of advance. Consolidation of country schools is a thing only talked about except in one or two places. It is true that the normal schools have been devoting considerable attention to the teaching of agriculture and nature-study, but it is doubtful if much impression has been made upon country schools. Considerable improvement has been made in certain sections in the decoration of school grounds and school buildings, by the observance of Arbor Day and school festivals; but these improvements are rather due to the energy and ambition of a few teachers and school officers than to a general co-operation of the public. Manual training has received a decided impetus from the schools established throughout the three provinces by the generosity of Sir W. C. MacDonald, aided by the fine executive abilities of Prof. Robertson, and the corps of enthusiastic and skilled teachers who are laying a good foundation for the future of manual training here. A law encouraging the adoption of manual training has gone into effect in Nova Scotia, and last year five manual training schools, with an aggregate of 1,238 pupils, went into operation in that province with a prospect of a large increase this year. Supt. MacKay is to be congratulated on such an excellent beginning. Supt. Inch, of New Brunswick, urges the legislature, now in session, to assist in providing suitable accommodation for districts, and to grant amounts to properly qualified teachers for the promotion of manual training in the schools. Dr. Inch says: "It is because I am convinced that the spending of two or three hours a week of the child's school life in training his hand and eye, and his intellectual and moral

character through the exercise of the hand and eye, will quicken rather than weaken his interest in his reading, writing, arithmetic and other fundamental studies, that I recommend with confidence the adoption of the system." We hope that the legislature may carry out the recommendation of Dr. Inch, and that school boards will hasten to give proper encouragement to manual training.

There is one feature in all the Superintendents' reports that must be viewed with grave anxiety and concern, and that is the low salaries paid to teachers. Instead of there being an improvement during the last decade, there has been a slight but steady decrease in salaries paid to teachers of country schools. The effect of this must be a steady decrease in the character of the teaching done in rural sections. Good teachers are seeking other employments where there is decent remuneration. Many who are still in the service are looking for an early opportunity to get out of it; while a great majority of the others are restless and flit about from one district to another seeking to better their condition. In the meantime the average country school board shows no disposition to be more liberal or appreciate more highly the services of experienced teachers. The result may be easily imagined. Cheap teachers are employed. Frequent changes take place; and a lasting injury is being done to the youth of the country.

Superintendent Anderson, of Prince Edward Island, makes out a strong case in his report against the low salaries of teachers, and the consequences that must result from such parsimony. And he has not been contented to use his pen only, but he has taken the platform and used his voice and influence freely in addressing audiences throughout the Island, striving to impress upon the people the vital importance of this matter and their duty. We hope his words may have weight.

The REVIEW has before pointed out that the teachers should do something more than *complain* of low salaries. It has been the burden of endless papers and discussions for years past, and still salaries are decreasing! Some action is required. Teachers should come nearer together, the well paid teachers and those poorly paid—not to complain of low salaries, for that is patent to everybody—but to unite and make a special study of conditions adverse to the rural teacher and how these may be remedied. It should be insisted that a proper salary is only a proper recognition of services well performed, and that the best teaching should not be expected unless teachers are maintained in the condition for doing the best work.

If a united body of teachers—collegiate, high school, intermediate and primary teachers—would apply themselves with the spirit of candor and fair play to this question of low salaries, some of the causes would be found among the teachers themselves. Let teachers apply themselves to putting their own house in order, and then if pleas to the people will not bring improvement in salaries, they should apply for legislative enactment to prescribe respectable minimum salaries,



For the EDUCATIONAL REVIEW.]

## NATURE STUDY AND SCIENCE.

BY JOHN BRITAIN, NORMAL SCHOOL, FREDERICTON.

## Lessons on the Gases of the Air.

(NOTE—Schools which cannot procure the little and inexpensive apparatus required for preparing oxygen on a small scale may begin with Lesson II. Unslacked lime, for preparing limewater, may be obtained at a tannery).

## LESSON I.

Collect two or three bottles, wide-mouthed ones, full of oxygen, from chlorate of potash. (See Outlines of Nature Lessons for Grade VII). Show the children by experiment that this gas will allow a stick to burn in it faster than in air—that it will not turn lime-water milky—that a piece of glowing charcoal (held by a wire) will burn brightly in oxygen for a while but will cease to burn before it is all consumed, and that a new gas, which will turn lime-water milky, is formed in the bottle while the charcoal is burning. They will see that the new gas is not charcoal in the gaseous state, for if it were it would become black and solid again as soon as the contents of the bottle cooled, just as steam, which is ice in the gaseous state, would become ice again if cooled down in the vessel in which the ice has been evaporated. The class may be told that no one has yet been able to get anything out of charcoal (carbon) but charcoal, nor anything out of oxygen but oxygen.

The argument may then proceed along such a line as this: Since the charcoal and oxygen both disappear, as we see, while the charcoal is burning in the oxygen, we think the new gas must be formed of the carbon and oxygen united together, for it is not the same as either alone.

It will seem strange to the children that a substance so different from carbon or oxygen could be made up of these two elements alone. But they can be led to see that this is quite possible. Char a little starch very slowly in a closed tube. They can soon see drops of clear water from the starch gather on the inside of the tube, and may examine the charcoal which remains at the bottom. White starch, then, contains black charcoal, and dry as the starch was it contained water. We say that the charcoal and water in the starch are *chemically united* not simply mixed together, else the starch would be both black and wet. And so we believe that when the charcoal was burning in the oxygen they were uniting chemically to form the new gas—carbonic acid gas—in which the remaining carbon could not burn, and which turned the lime-water milky. We can now explain, too, why charcoal cannot burn in carbonic acid gas.

## LESSON II.

Split up one end of a dry hard-wood stick (about as large as a lead pencil); char this end by holding it in or near a fire; then ignite it and lower it into a wide-mouthed bottle, not too large, full of air, and hold it there until the stick will burn no longer in the bottle. Quickly pour a little clear lime-water into the bottle, cover its mouth tightly with the hand and shake the lime-water through the gases in the bottle until the liquid looks quite milky.

Invite the pupils to ask questions about what they have seen. The following questions will probably be proposed and should be carefully discussed by the pupils and teacher?

Why did the charred stick cease to burn? What was it really doing when it was burning?

Why didn't the lime-water turn milky when shaken through the air at first?

What turned the lime-water milky after the stick had been burning in the bottle?

*Discussion.*—If the teacher will skilfully direct the children's minds to the main facts to be explained, they will argue themselves into the following conclusions: It must be that the air at first contained something we cannot see (a gas) in which a charred stick will burn—that when the charcoal of the stick is burning it is using up this gas in the air so that soon the stick can burn no longer—that when the burning stick is using up this gas (oxygen) which enables it to burn, a new gas is being produced in which the charcoal will not burn, but which will turn lime water milky—and since lime-water does not turn milky when shaken through air, there cannot be much carbonic acid gas in the air, or at least, that gas does not form more than a small part of the air.

Of course, the arguments leading to these conclusions can be made much clearer and more convincing if the school begins with Lesson I.

## Questions for April.

(Answers to all or some of these questions should be sent to the editor of this department by May 15th.)

1. Which of our native trees did you observe in bloom this month? Give the dates, and count (and state) the number of stamens and pistils in a single blossom of each.
2. Make a drawing from the object of a single staminate flower of the willow—of a single pistillate flower—and of one of the bracts.
3. Make a list of the migratory birds you noticed this month. Tell how you recognized each and where you saw it.
4. Describe briefly the first butterfly you see on the wing. Account for its having wings so early.
5. Explain why a stick will not burn in carbonic acid gas. (See preceding lessons).



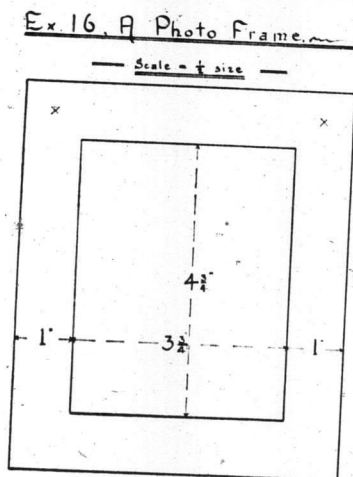
## Cardboard Work — No. 4.

By T. B. KIDNER.

(All rights reserved).

The correlation of the handwork with the ordinary work of the school must be kept steadily in view by the teacher, and the manifold opportunities for it taken advantage of. In most well-arranged drawing courses a place is given to scale drawing, largely on account of the mental training it affords. Several of the succeeding exercises offer good opportunities for concrete work in scale drawing, and its use and necessity can easily be shown. In the lesson introducing it, the teacher may refer to maps, to a plan of the room drawn on the board, etc., as showing the necessity for making drawings of large objects to a smaller scale. The children will also readily see that in some instances, such as parts of insects in nature-work drawings, things have to be drawn on a larger scale than they really are, if we wish to represent them by a drawing. A few mental exercises will help to make the idea clear to the pupils. The door of the room may be drawn on the blackboard to a quarter scale, that is, one-fourth the real size. Give the children the actual size, or, better still, let a couple of them measure it, and let the rest tell the teacher the size it will be reduced to on the blackboard. "How wide?" "How high?" etc. Other familiar objects can be chosen and the practice in mental arithmetic made extremely helpful.

EXERCISE 16.—A cabinet photo frame. As the drawing of this is merely of two oblongs, one within the other, it forms a good exercise for a first attempt at scale drawing. Show the children the finished exercise and lead them to see that they can save a great deal of space by making drawings of the larger objects of the course, to scale. Next the scale must be decided on, say, one half full size. After writing at the top of the page the number and name of the exercise, the date, etc., the scale should be indicated thus—

Scale =  $\frac{1}{2}$  size.

On no account should this be omitted from any scale drawings. Next, the actual size of the frame should be given and the children asked what size *they* will draw it. This is, as remarked above, an opportunity for mental arithmetic, and the questions may be varied. "How large would your drawings be if we made them

to quarter scale?" "How large will my blackboard drawing be if I make it four times the scale?" and so on. The outline being drawn, the width of the margin should be given, the dimensions of the opening calculated, (or *vice versa*) and the drawing completed.

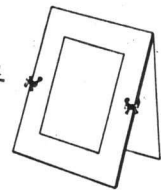
Drawing to scale will necessitate the "dimensioning" of their drawings by the children, if it has not been already practised. The orthodox method of dimensioning is shown in the illustrations, but sometimes a faint line, broken in the middle for the figures, is drawn better by small children than the usual half inch "dash" (—) line as shown. The inches are indicated by two tiny strokes after the figure, as in the illustrations.

For the practical work of Exercise 16, two pieces of card are needed—a plain piece for the back and a piece of fancy or tinted board, very thin, for the front. The variety known as "Royal" Bristol is excellent for this and also for the stamp purse, Exercise 10.

The cutting out of the opening is quite a new operation and a little care and ingenuity are required in doing it. Commence by piercing a hole with the scissors about the centre of the oblong which is to be removed and then cut along the diagonals to each angle. After this has been done, it is much easier to cut along the lines to complete the opening neatly. It will also be found that much better results are obtained if the scissors are held *underneath* the card in cutting the opening. The teacher will, of course, have practised on one or two beforehand and the methods suggested above will be seen to be the best. Three edges of this front piece are then pasted for a quarter inch from the margin and pressed carefully in position on the card forming the back. The illustration shows the frame as an upright one, but it is a good plan to allow the children to choose individually whether they will hang it the other way. If so, the holes for the cord or ribbon will, of course, be punched on one long side instead of as shown. In either case three edges only must be pasted, the frame being left open on one *side* to allow of the photo being slipped in. The holes should be punched *after* the front is pasted to the back.

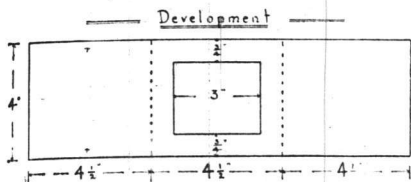
EXERCISE 17.—A small photo frame—to stand. The drawing of this model will involve the principles of development and scale drawing in combination. The teacher's model should be shown and commented on, then unfolded and laid out flat. It will then be seen that the three portions form one continuous strip, and the drawing may be commenced by making an oblong.

Ex 17. A Small Photo Frame.



N.B. Pupils can draw development

to represent it. In deciding on the size of this, the children must be led to calculate the length of the unfolded card, etc., and also the size it must be drawn

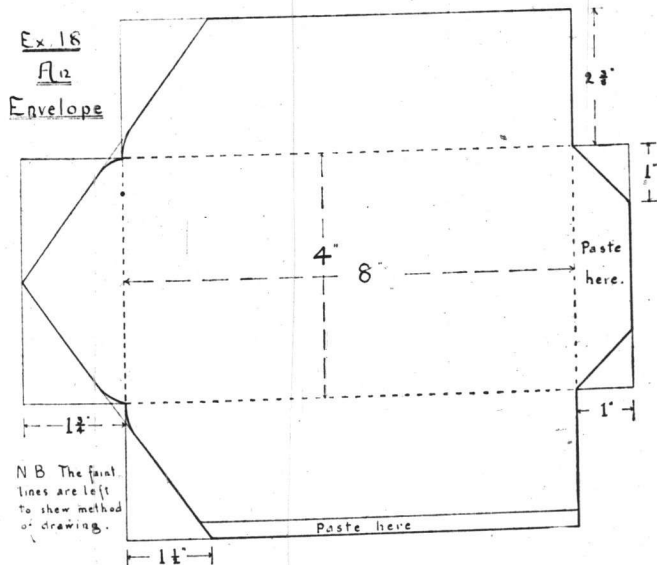


when reduced to the scale decided on. It is so much easier to tell the children this, that this note of warning needs to be sounded, so that the work may not descend to mere mechanical

manipulations. Head and hand must work together if the full benefits are to be obtained from manual training, and it should be an axiom with teachers that it is uneducational to do for the children what they can do for themselves.

The cutting out of the opening is more difficult than the larger one in Exercise 16, but can be managed with a little care. As in the last, the scissors must be held underneath the card, and an incision made near the middle first. Then cut toward each angle and gradually remove the waste and cut the exact size of opening. The front and middle pieces are tied with neat bows of cord or ribbon, and the back piece left to form a leg or rest to enable the frame to stand up.

EXERCISE 18.—An envelope. This may be made any convenient size, but it is a good plan to make it rather large. The size given takes the monthly "record" sheets used in some schools, and keeps the sheet clean



when being carried home for the parents' inspection. It is made of red wrapping paper, to be obtained at any store at almost nominal prices.

The drawing is more difficult than in Exercise 17, though the principle is the same. Commence by drawing the oblong in the centre of the paper and build the

sides, ends and flaps on it. As in the two previous exercises, a good deal of mental work is involved and the remarks on that side of the work apply particularly to this exercise.

The cutting out is simple but the creasing must be very carefully done. Care must be taken, too, in pasting the edges or an excess of paste will squeeze out of the joints and stick the front and back of the envelope itself together. The best way is to hold the edge to be pasted on the edge of the desk, working the toothpick with the paste on in an outward direction. This will prevent paste being scraped off by the edge of the paper and getting underneath it.

### The Story of St. George and the Dragon.

The 23rd of April is St. George's Day. If you live in a town where there is a St. George's Society, you may see the members marching to church on that day each wearing a red and a white rose, or you may hear of some celebration in the evening. You all know that St. George is the patron saint of England, as St. Andrew is of Scotland, and St. Patrick of Ireland.

There is an old ballad that runs thus :

"Read in old histories and there you may see  
How St. George, St. George the Dragon made to flee,  
St. George he was for England, St. Dennis was for France,  
*Honi soit qui mal y pense.*"\*

In Shakespeare, that great storehouse of stories of English history, we find St. George mentioned many times. In the play of King Henry VI, the Duke of Bedford, Regent of France, says :

"Bonfires in France forthwith I am to make  
To keep our great St. George's feast withal."

King Henry V., calling his soldiers on to attack Harfleur, tells them to cry :

"God for Harry! England and St. George."

And Sir Walter Scott, in describing the English army at the battle of Flodden Field, says :

"With all their banners bravely spread,  
And all their armour flashing high,  
St. George might waken from the dead,  
To see fair England's standards fly."

Who was this St. George? And how did he come to be England's patron saint?

Very little can be found out about him, and scholars do not agree about the different stories that are told of his life. It is said, however, that he was born in Cappadocia, in Asia Minor, of noble Christian parents, in the third century; that he was a soldier and distinguished himself by his courage and skill in overcoming his

\* "Evil be to him who evil thinks." The motto of the Order of the Garter.



enemies; that when the Emperor Diocletian, in whose army he served, began to persecute the Christians, he went to see the Emperor, told him that he was a Christian and begged him not to go on with the persecution. When the Emperor would not listen, he resigned from the army, and was at once taken and put to death with cruel tortures because he would not deny his faith nor help to persecute his fellow-Christians. He died on April 23rd, 303, and for hundreds of years his anniversary has been kept, and he has been remembered as a true Christian soldier, too brave to save himself from suffering and death by being false or cruel. His death reminds us that goodness and right will always conquer, for though the Emperor could kill him, he could not make him do what he knew was wrong.

But, you may ask, what has St. George to do with England. Well, in the time of the third Crusade, Richard Cœur de Lion, who, you remember, was a great soldier, was fighting to get the Holy places in Palestine away from the people who were not Christians. He believed that St. George, to whom he prayed, helped him to win a battle, and after this, English people honored St. George particularly. In the year 1222, it was ordered that the 23rd of April should be kept as a national festival, and in the reign of Edward III., there was instituted the "Most Noble Order of the Garter" to which many great people belong, the King being at the head, and which is dedicated to St. George, of Cappadocia, and St. Edward the Confessor. Ever since then St. George has been considered England's patron saint.

But what about the dragon? We sometimes see pictures of St. George on horseback, killing a dragon with his lance. Sometimes he is shown standing with one foot on the conquered beast, and sometimes he is alone, and leaning upon a shield which bears the red cross that we know so well on our flag as St. George's cross. In all these pictures and in the many legends that are told about St. George and the Dragon there is a meaning that is worth our study.

The cross is the emblem of Christianity, and the dragon means sin. So when we see the picture of the Red Cross Knight, as St. George is sometimes called, slaying the dragon, we remember first, how from its earliest days Christianity has been fighting against and overcoming evil ways all over the world; and then how every one of Christ's soldiers has his or her own dragon of sinful thoughts, wicked tempers and wrong habits, to struggle against and conquer.

One of the old stories that are told about the killing of the dragon runs like this:

Once upon a time in a certain old city, the people

were in great trouble and fear about a horrible great dragon who lived outside the walls, and carried off their sheep and cattle. His breath was poisonous and killed people who went near him; so to keep him away they offered him two sheep every day. When the sheep were all gone the people had to give their children instead, and each morning two children were chosen by lot. The king of the city had one daughter, a very beautiful girl named Cleodolinda. One day the lot fell upon her. Her father could not bear to give her up, and he was willing to pay all his gold and treasures for some other child to be offered in her place. But the people were angry and said, "Is it fair to take our children from us to save the city when you will not give up your own child?" So the poor father had to give up his daughter, and after eight days of mourning, the little princess was dressed in royal robes and brought out. She said that she was ready to die for the sake of the other people, and when she had received her father's blessing, she was put outside the gate amid the tears of all the citizens. As she walked along to the dragon's dwelling, she saw the bones of the other poor victims in the path and she wept bitterly.

But just now St. George came by on horseback, and when he saw the beautiful princess in such sorrow, he asked her why she wept. When she told him, he said, "Fear not, I will deliver you!" But she answered, "O noble youth, tarry not here, lest thou perish with me! Fly, I pray you!" But St. George would not; he said, "God forbid that I should fly! Through the power of Jesus Christ I will deliver you."

At that moment they saw the dragon coming towards them, half crawling, half flying. Though the princess was terribly frightened, she cried out, "Fly, I pray thee, brave knight, and leave me here to die!"

But St. George rode toward the dragon, calling on the name of the Redeemer. After a long and hard struggle, he pinned the dragon to the earth with his lance. Then he called the princess to bring him her girdle, and he bound the dragon fast with it and gave the end of it into the hand of the princess. Then they went back to the city, the dragon quite subdued and crawling after them.

The people were very much afraid when they saw them coming; but St. George called out, "Do not fear; only believe in the God who has helped me to conquer this enemy, and be baptized, and I will destroy the dragon before your eyes."

So the king and all his people believed in God and were baptized. Then St. George killed the dragon and cut off his head. And the king gave the knight great rewards and treasures; but he gave all to the poor and



kept nothing for himself. Then he rode on his way, and soon afterwards the persecution came and he suffered martyrdom.

Another beautiful story about the Red Cross Knight is told in the famous poem of "The Faerie Queene," by Edmund Spenser, a great poet who lived in the time of Queen Elizabeth.

The Faerie Queene was holding a great feast, when there came in a tall, rough looking young man. He knelt before the queen and asked her to let him undertake the next adventure that should be found for a knight to attempt. She granted his request and he lay down to rest. Soon afterwards there entered a beautiful lady dressed in mourning and riding upon a white ass. Behind her was a dwarf, leading a battle horse, and on the horse's back were the arms and armor of a knight. The lady told the Faerie Queene that she had come to ask for help for her father and mother, who were kept in a castle by a terrible dragon who would not let them come out.

Then the tall, rough young man started up and said, "Here am I; I will go and kill the dragon and rescue the lady's father and mother." The lady told him that he could not hurt the dragon unless he put on the armor that she had brought. Now this armor was that which is spoken of by St. Paul, "the whole armor of God"—the breastplate of righteousness, the shield of faith, the helmet of salvation and the sword of the Spirit. When the young man had put this armor on he no longer looked rough and clumsy, but "seemed the goodliest man in all that company." Then the Faerie Queene made him a knight, and he and the lady rode away together on the adventure.

This is part of the description of the knight:

"On his breast a bloody cross he bore,  
The dear remembrance of his dying Lord,  
For whose sweet sake that glorious badge he wore,  
And dead, as living, ever Him adored:  
Upon his shield the like was also scored,  
For sovereign hope which in his help he had.  
Right faithful true he was in deed and word,  
But of his cheer\* did seem too solemn sad;  
Yet nothing did he dread, but always was ydrad."†

The Red Cross Knight had many adventures to go through before he came to the castle. It would take too long to tell them, but some day you can read them for yourself in the first book of the "Faerie Queene." After killing one dragon and fighting with false knights, and being led astray by evil spirits and parted from the lovely lady, whose name was Una, at last he was brought to the House of Holiness. There he learned repentance and faith and hope and charity. Then a holy aged man

\* Countenance.

† Dreaded.

showed him a vision of the Heavenly Jerusalem with all the holy angels and saints; and he told him that after he had done his duty and conquered the great dragon he too should go to the Heavenly City:

"For thou, amongst those saints whom thou dost see,  
Shalt be a saint, and thine own nation's friend  
And patron; thou *Saint George* shalt called be,  
*Saint George* of merry England, the sign of victory."

But the Red Cross Knight thought he was too weak and sinful to win such glory. Then the holy man told him that all the saints were once men like him, and sent him on to finish his adventure. So the knight and Una came to the great castle and there was the dreadful dragon. The knight fought fiercely with him for two long days, and on the third day he killed him. Then the father and mother of Una came forth out of the castle in great joy and gratitude, and the Red Cross Knight and Una were happily married. But after he had rested and rejoiced for a time, the knight went back, as he had promised, to the Faerie Queene, to seek new adventures.

[NOTE.—Besides the first book of the "Faerie Queene," Bulfinch's "Age of Chivalry," Mrs. Jameson's "Sacred and Legendary Art," Vol. II., and Ency. Brit. Articles St. George and Knighthood are useful for reference on this subject. Bulfinch quotes from a ballad in Percy's "Reliques":

"St. George, then looking round about,  
The fiery dragon soon espied,  
And, like a knight of courage stout,  
Against him did most fiercely ride.  
And with such blows he did him greet,  
He fell beneath the horse's feet,  
And thus within the lady's view  
The mighty dragon straight he slew."]

E. ROBINSON.

## PRIMARY GRADES.

### Short Talks About Water.

The changeable weather of April makes it very easy to introduce the subject of rain, snow, sleet, fog, mist, and other forms of water. Such every-day matters may seem too familiar to need any discussion, but in reality children are not so intelligent about the common things around them as we are apt to suppose; seeing them so constantly they cease to wonder even before they learn to ask questions. The question, "What is steam?" once put to a class of children five or six years of age brought the reply from one of the brightest boys, "It's hot smoke!"

WATER.—Where do we find it? Wells, springs, brooks, rivers, oceans, lakes, ponds; let the children name all the places they can think of, even puddles and

ditches. From which of these places do we get the best drinking water? Do you know of any country where water is not so plentiful as with us? Why is it so scarce there?

**RAIN.**—We often complain because of wet weather, but there are countries where the people would often be glad to exchange their days of sunshine for some of our dull, rainy ones. What would happen if we had no rain for many months? The ponds, brooks, and wells would be dried up, and what could we have then for drinking? Tea, or coffee? How are these made? Does not the mother put boiling water on the coffee or tea to prepare it for use? Milk? Can the cow give us milk if she has no water to drink for days? And if there were no rain how could the grass grow to feed the cow? What would the gardens and fields look like after months without rain? Name some of the things we would have to do without. Some of the children may remember having heard of the famine in India, and they may have sent money to buy bread for starving children there. Lead them to see that it is lack of rain that causes such distress.

**CLOUDS.**—Where does the rain come from? Looking at the rain we notice that usually it comes in a slanting direction. Why is this? Let the children draw blackboard pictures of a rain-storm with easterly wind, —or with southerly wind. Encourage them to watch for a rain when the drops come straight down. Have the special features of such a storm described. Have various kinds of clouds observed, allowing the children to suggest names to suit.

**VAPOR.**—What are the clouds made of? How does this water get up into the sky? Draw attention to the vapor rising from the damp roofs of the houses on a warm sunny morning. Explain that these tiny water-drops or specks, as we may call them, like to fly up to the sky to form clouds. Leave a saucer of water standing in the room and tell the children to observe what happens. What has become of the water? What is it that we often find making the window-glass so dim? Children sometimes like to draw pictures on the damp window-pane. On winter nights Jack Frost makes pictures on the glass, using this very moisture for the purpose. Let the children breathe on a cold slate, observing the water specks. Then recall the cold mornings of winter when every breath showed so plainly in the frosty air. The water-specks in our warm breath are so tiny that we cannot see them, but on meeting the cold air they join one to another, making larger specks, which can be seen.

**STEAM.**—Have any of the class ever watched water boiling? What do we call the cloud of water-specks

that comes from the spout of the kettle? Explain that though we do call it *steam*, it is really vapor; in true steam the drops are too small to be seen. Close to the spout we may see where the real steam is, and if we should put a finger there it would be badly burned. As the steam meets the colder air the specks become larger. Holding a cold slate over them will cause more of them to join together, and then we have drops of water. Steam is very powerful. When we try to shut it up it pushes very hard, trying to get free. If we were to close up the spout and cover of the kettle, so as to prevent the steam from escaping, it would soon burst the iron kettle.

**DEW.**—Have any of the children ever noticed the drops collected on a pitcher of cold water sitting in a warm room? Does the pitcher leak? Explain that the air is full of moisture, and that the cold surface causes it to condense. Ask if any remember fine mornings in summer when the grass and flowers were covered with drops of water. What is this called? Refer to the drops on the outside of the pitcher and show that when the ground gets cool on a summer evening the moisture in the air forms in drops which disappear in the warm sunshine of the morning.

**FOG.**—Reference should be made to fog, and the difference between fog, mist, and rain noticed and explained.

**ICE.**—Mention may be made of ice, noticing its transparency, its value when stored away for summer use, and its frequent beauty in the form of icicles. Experiments may have been made during the winter showing why the water-pipes burst under the action of frost. In that case review questions should be asked, bringing out the explanation of such an effect.

**SNOW.\***—What is it made of? Let a snow-flake melt on your sleeve and observe how small a drop of water is left. Notice forms of different snow-flakes. Of what use is snow? Refer to the roots of plants protected by it during severe frosts. Also refer to its value to lumbermen and others working in the woods.

**SLEET AND HAIL.**—What is sleet? What is the difference between, sleet, hail, and snow?

During the spring months encourage the children to observe the changes going on around them. Watch the opening of leaf-buds. Keep a black-board record of the order in which the trees come out, and see that the children know the names of the trees about their homes. Notice shrubs also, and while doing so note carefully the pronunciation of "lilac," as children very commonly make mistakes in it.

A grass-sod brought into the school-room at this time of year frequently becomes a thing of beauty, especially if there are a few violet roots in it.

\* For special talks on snow, see EDUCATIONAL REVIEW, February, 1901.



**The Clouds.***(Selected).*

One day John and Mary took a walk with their father. It was a very warm, sultry day, and far up in sky were many clouds.

"Just look," said John, "what big clouds!"

"Oh yes," said Mary; "I wonder what God made the clouds for!"

"The clouds are very useful," said the father; "the clouds are big *curtains*."

"Curtains!" exclaimed the children, astonished.

"Yes, truly," answered the father; "don't you know what we use curtains for?"

"Oh, yes," said Mary, "I know. When the sun shines too strongly, we pull down the curtains to keep out the heat."

"Yes," said the father, "Now, when the sun shines very hot on the fields, the cows in the meadow are weary and restless, and the flowers and plants bow their little heads to the ground. Then God spreads out the clouds before the sun, just as you pull down the curtains, and the cows enjoy the sweet grass, and the flowers and plants lift up their heads again."

While the father was speaking, it began to rain. They went into a farm-house for shelter. The children placed themselves at the window to look at the rain, which was falling in a heavy shower.

"That rain, too," said the father, "comes from the clouds."

"What a pity!" said John; "we cannot walk now; everything is wet."

"True," answered the father. "Still it is very useful. The clouds are made to give rain. They are big *watering-pots*."

"Watering-pots," said Mary, opening her eyes in wonder.

"Yes, my child," said the father. "What does the gardener use his watering-pot for?"

"To moisten the ground," said John quickly.

"Yes," said Mary, "for if the ground is too dry the flowers will not grow."

"Just so," said her father. "But when the great meadows and fields are too dry, what gardener is big enough to water them? And when the farmer's land is so dry that the potatoes and cabbages and the corn won't grow who is to wet the soil about the roots of all these?"

"Oh, I see," exclaimed John. "God takes those big clouds and presses rain out of them."

"He does," said his father; "the clouds are big watering-pots with which God wets this beautiful world of ours as the gardener wets our garden."

The rain was soon over, and the father again went out with his children.

"How pleasant it is," they said, as they breathed the cool, fresh air.

"Yes," said the father; and he added, "Now, look at the clouds."

The children looked up and cried out, "How beautiful!"

There the great clouds floated about in the sky. The sun had just broken through them, and had given them all sorts of fine colors. Some had gilt edges; others were red, like crimson; some again, were purple, pink, light blue and dark blue. Many of them were in strange shapes. On the left-hand side was a bluish cloud, that looked like a large ship with its sails set to the top; on the right was a dark cloud that had very much the shape of a cow with three horns. The children laughed with delight as they found out what the clouds were like.

"Now you see," said the father, "that the clouds are *pictures*, too. We hang up pictures and engravings in our rooms. So God hangs up golden, purple and blue clouds on the walls of the sky to make a beautiful parlor for our whole earth."

**The Rain on the Roof.***Selected from "Song Stories."*

Key G—

{		s <sub>1</sub> : — : —		m   r : —		m   d : —		r   m : —		— : —	}
---	--	------------------------	--	-----------	--	-----------	--	-----------	--	-------	---

1.	Do	you	hear	the	song	of	rain,
2.	Do	you	hear	the	song	of	rain,

{		f : f : m		r : —		m : m : r		d : —		— : —	}
---	--	-----------	--	-------	--	-----------	--	-------	--	-------	---

Patter - ing	down,	Patter - ing	down,
Patter - ing	down,	Patter - ing	down,

{		s <sub>1</sub> : — : m		r : — : m		d : — : r		m : — : —	}
---	--	------------------------	--	-----------	--	-----------	--	-----------	---

In	to	eve - ry	street	and	lane,
On	the	roof	and	win - dow	pane,

{		s : s : f		m : m : r		d : —		— : —		— : —	}
---	--	-----------	--	-----------	--	-------	--	-------	--	-------	---

Pat - ter - ing,	pat - ter - ing	down?
Pat - ter - ing,	pat - ter - ing	down?

{		f : — : s		l : — : r		m : — : f		s : — : —	}
---	--	-----------	--	-----------	--	-----------	--	-----------	---

Splash - ing	down	in	ev' - ry	street,		
This	is	what	it	says	to	me,

{		d : — : r		m : — : d		r : — : m		r : — : —	}
---	--	-----------	--	-----------	--	-----------	--	-----------	---

On	the	man - y	fa - ces	sweet,	
Of	the	child - ren	that	I	see,

{		m : — : r		d : — : s <sub>1</sub>		t <sub>1</sub> : — : l <sub>1</sub>		s <sub>1</sub> : — : —	}
---	--	-----------	--	------------------------	--	-------------------------------------	--	------------------------	---

Of	the	child - ren	that	we	meet,	
They	have	come	through	rain	to	be

{		s : — : —		m : — : r		d : — : —		— : — : —	
---	--	-----------	--	-----------	--	-----------	--	-----------	--

Out	in	the	rain.
With	us	a	gain.



### Arbor Day.

The day is drawing near for planting trees and clearing up and beautifying the school grounds. Much should be done beforehand in awakening an interest in neat and clean school houses. Teachers and children and school boards should work together. A few trees should be planted on arbor day, and if possible flower beds made in the school grounds that are fenced about. Make up a programme of exercises for the day, and let some portion of the time be devoted to learning about trees and birds. The planting of trees and shrubs in the school grounds brings the birds.

#### SONG OF APRIL WORKERS.

Little Miss April, how do you do?  
What do we think of when we see you?  
Of little spring flowers peeping up through the grass,  
Bending low to the winds that pass,  
Of soft spring sunshine, and skies of blue—  
Dear little April, how do you do?

Little Miss April, how do you do?  
Something surely has happened to you—  
For the sunshine has all gone out of your face,  
And what do you think I see in its place?  
A cloud has come over the eyes of blue—  
Dear little April, how do you do?

Little Miss April, how do you do?  
Could I find a better name for you?  
For your face is smiling and happy again  
As the skies are clearer after the rain.  
The sun has come back to the eyes of blue,  
Dear little April, how do you do?

—Anna Kennedy, in *Child-Garden*.

#### THE STORY OF THE MAPLE.

"Did you plant trees on Arbor Day when you were a little girl, mamma?" asked Jessie, when she had been telling grandma about the Arbor-day exercises at school. "No, my dear," grandma replied, "they didn't have Arbor Day when I was a girl; but my little Delia planted a maple-tree on the first Arbor Day that was ever celebrated in Nebraska. I have good reason to remember it, for it's been a very useful tree," said grandma.

"It is more than twenty years ago," she went on, "that a day was first set apart for tree-planting. Every one was pleased with the idea and wanted to plant trees. And how many they did plant! They planted wind-breaks, and street-trees, and shade-trees in the door-yards.

"Delia was only seven years old, and no one thought she was big enough to plant trees. But she was full of the spirit of the day, and she got an armful of twigs and made farms all over the back yard.

"Your grandpa and the boys were setting trees along the street. I wanted a maple by the back door, but grandpa said it would take too much room; and besides, the ground was so hard there, he said, he thought it would die if he did set it.

"And little Delia spoke out, just in fun, 'Why, I'll plant you a maple-tree, mother!' And she ran into the front yard and dug up a little seedling that had come up under one of the maples there, and then she ran back and planted it by the kitchen door.

"It was just a part of her play. She never dreamed it would grow; but the queer part of it was, it did grow. There came a heavy rain that night, and I suppose that gave it a good start. Anyway, it began to grow, and it's kept on ever since, and we're sitting under it now!" said grandma.

"What?" cried Jessie, jumping up. "This great, lovely tree? Isn't that splendid!"

"Yes," said grandma, "and as I said, it's been very useful. I've done my washing under it in the summertime for ten years. And when your grandpa gets tired of working, he comes and sits here to rest; and he's never once said that he thought it took too much room. Yes, I have your mamma to thank for this tree, my dear."—*Mary Elizabeth Stone, in Youth's Companion.*

#### SCHOOL GARDENS.

The school garden is not a fad. It is an entirely reasonable thing. It is in sight. It will soon be here. "Where practicable, a garden and a place for agricultural experiments shall be established in every rural school," so says the school law of Austria. The government of Switzerland appropriates a yearly sum for their establishment. The French normal schools send their students to agricultural schools "to acquire practical training in agriculture and horticulture that will fit them for rural schools." In Belgium the study of horticulture is compulsory. All public elementary schools in that country have gardens. The standard garden is 39½ square rods. There are over 4,000 school gardens in Sweden, averaging from 70 to 150 square rods. In a single province of southern Russia 257 of the 504 schools possess small model gardens, "divided into sections for grain, vegetables and fruit, kitchen truck, grapes, and mulberry trees for the support of silk worms."

Our own state normal schools are preparing for model gardens. We shall soon have teachers who "know how." Nature study and agriculture in the schools will mean something then. Of course there will be a tree section in every school garden. In it young trees will be grown not only for transplanting on the immediate school premises, but along the roadsides. Two-thirds of the entire length of public roads in France have been bordered with trees. Thousands of miles of roads in Germany are shaded by trees. The value of nuts and fruit grown on the wayside trees in European countries runs up into the millions. The school garden is coming and the district school tree planting association should come with it.

There will be more trees planted on the school grounds of Illinois this year than in any two previous years. Celebrate Arbor Day, if the spirit moves,—but plant the trees. They will grow, if well planted, and intelligently cared for, just the same.—*Alfred Bayliss in School News.*

#### THE FIRST STEP IN VILLAGE IMPROVEMENT.

First in order in activities of this kind comes cleanliness. Clean streets and public places, clean private premises—with these secured, the first great transformation in the community takes place. Even nuisance-breeding rubbish-heaps are cleared away, and vacant lots covered with all sorts of litter are cleaned up, everybody notes the improvement and is interested in seeing it maintained. Orderliness, of course, goes hand in hand with cleanliness. The latter cannot be secured without good order. And with good order there is an aspect of neatness that commands popular respect. It pleases the public eye. Nearly everybody will desist from throwing rubbish into a well-kept place, and from scattering torn-up paper, or other litter in a clean street. Public sentiment is easily cultivated in favor of public cleanliness and order. A notable instance of its growth is to be found in the agitation against spitting in public places, since it was determined that the practice was a danger to public health. The posting of notices with regulations against it, and the frequent discussion of the subject in the press, have made a strong impression upon public sentiment, and in consequence the offense is not practised to anything like the same extent in communities where there has been such agitation.—*Sylvester Baxter in April Century.*

## MEMORY GEMS—APRIL.

A gush of bird-song, a patter of dew,  
A cloud and a rainbow's warning,  
Suddenly sunshine and perfect blue—  
An April day in the morning.

—HARRIET PRESCOTT SPOFFORD.

Again the blackbirds sing; the streams  
Wake, laughing, from their winter dreams;  
And tremble in the April showers  
The tassels of the maple flowers.

—WHITTIER.

There is no joy in star or blossom  
Till looked upon by a loving eye;  
There is no fragrance in April breezes  
Till breathed with joy as they wander by.

—BRYANT.

The holy spirit of the spring  
Is working silently.

—GEORGE MACDONALD.

For one swallow does not make a spring,  
Nor yet one fine day.

—ARISTOTLE.

Hark! the hours are softly calling,  
Bidding the spring arise,  
To listen to the rain drops falling  
From the cloudy skies.  
To listen to Earth's weary voices,  
Louder every day,  
Bidding her no longer linger  
On her charmed way;  
But hasten to her task of beauty  
Scarcely yet begun.

—ADELAIDE A. PROCTER.

Oh! proudly then the forest kings  
Their banners lift o'er vale and mount;  
And cool and fresh the wild grass springs,  
By lonely path, by sylvan fount.

—EDITH MAY.

Do you hear the chill rain patter,  
Tiny seeds, beneath the snow?  
And the noisy winds above you  
Come and go?

—ANON.

Who loves the trees best?  
"I," said the Spring.  
"Their leaves so beautiful  
To them I bring."

Who loves the trees best?  
"I," Summer said.  
"I give them blossoms,  
White, yellow, red."

Who loves the trees best?  
"I," said the Fall.  
"I give luscious fruits,  
Bright tints to all."

Who loves the trees best?  
"I love them best,"  
Harsh Winter answered,  
"I give them rest."

—ALICE MAY DOUGLAS, in the *Independent*.

## CURRENT EVENTS.

Westminster Abbey is closed to the public, and workmen are engaged in making the necessary preparations for the King's coronation, which is to take place on the 26th of June.

In Spain, a similar event will take place on the 17th of May, when the young Alphonso XIII, who was born King of Spain, will ascend the throne at the age of sixteen years. In the Spanish ceremonies, there is no actual coronation, the sovereign being merely sworn in as the official ruler of the country, in the presence of the senators and other dignitaries.

A revolution has broken out in the republic of Santo Domingo, and the whole country is under martial law.

The revolution in Venezuela is gaining, and the rule of President Castro, who is a military dictator, rather than a constitutional ruler, will probably end with the triumph of the insurrectionary forces.

The Colombian government troops have recently met with serious reverses on the Isthmus of Panama. Here another General Castro is a leader of the government forces, which makes South American war news at times rather confusing.

The Queen of Holland and her husband, the Prince Consort, will make a four months' tour of the Dutch colonies.

A complete mammoth has been found embedded in ice in Eastern Siberia. It was covered with rather thick red-brown hair.

Some of the railways in the United States will plant trees this year to supply timber for ties and other purposes.

A fourth Canadian contingent, consisting of 2000 mounted men, will be sent to South Africa with the utmost despatch. New Zealand has sent forward her ninth contingent, and fresh troops are continually being sent from England. The speedy termination of the war, either by force or by treaty, is much desired by the imperial government, and there are indications that the Boers are ready to come to terms.

A Boer victory on March 7th, left General Lord Methuen wounded and in the enemy's hands. He was subsequently released by the Boer leader, General Delarey (or De la Rey) in return, it is said, for General Methuen's kindness to Delarey's wife and children.

Commandant Delarey, the most chivalrous of the Boer leaders now in the field, is of French ancestry, as his name implies. He led the Transvaal contingent at the battle of Modder River, where it was he who won the victory, though a Free State leader was nominally in command. He was also Lord Methuen's opponent at the battle of Magersfontein. Before the war, he was one of the political leaders of the party in the Transvaal opposed to President Kruger; and he voted against the declaration of war.

Cecil Rhodes, whose name, attached to the province of Rhodesia, is written upon the map of South Africa, and whose true place in the history of that country a



later generation must determine, died at Cape Town on the 27th of March. He was an Englishman by birth, but for more than half his lifetime a resident of South Africa, and for many years Prime Minister of Cape Colony. To the Dutch hopes of driving the English out of South Africa, he opposed the idea of a United South Africa under British rule, a federation extending from the Zambesi to the Cape; and to him is due the plan of a "Cape-to-Cairo" railway, which should ultimately bring the greater part of the continent under British rule. His great wealth, acquired in the diamond fields, was used to promote colonial extension and to forward schemes that he believed to be in the interests of the empire. He will be buried, at his own request, on an eminence far in the interior of the country, where an important treaty with the natives brought the northern territories of Rhodesia under British protection.

After an interview with Lord Kitchener, acting President Schalk-Burgher of the former Transvaal government, has gone to meet President Steyn, General Delarey and other Boer leaders, to discuss proposals for peace. It is reported that General Botha will also attend this conference and abide by its decision. The peace movement, however, has not interfered with the military operations; and the British, though they have met with more than one serious reverse within the last two months, are gradually narrowing the field of operations and reducing the strength of the enemy.

There was severe fighting all day long on March 31st, in the neighborhood of Hart's River, in the southwestern extremity of the Transvaal, between a force commanded by General Kitchener (brother of Lord Kitchener), and the forces of Generals Delarey and Kemp, resulting in the repulse of the Boers, after heavy losses on both sides. The Canadian Rifles especially distinguished themselves, one party, under Lieutenant Carruthers, holding its post until every man was killed or wounded.

It is reported that a force under General Botha is advancing toward the Natal frontier, and that the town guards of Ladysmith and the nearer towns are under arms to repel invaders.

Negotiations concerning the Manchurian treaty between China and Russia are completed. The terms of the treaty are understood to be satisfactory to Great Britain and Japan.

#### Teachers' Institute at Pictou.

The first meeting of the Teachers' Institute for Inspectoral Division No. 9, which includes the County of Pictou and South Colchester, was held in the Pictou Academy on the 25th, 26th, and 27th of March. There was an enrolment of 170, including the most of the teachers from the towns of Pictou, Truro, New Glasgow, Westville and Stellarton. At the opening meeting on Tuesday evening the Institute received a cordial and well expressed welcome from Mayor Macdonald of Pictou and Principal Maclellan of the Academy. They were followed by Dr. MacKay, the Superintendent of Education.

After making a few local allusions he referred to the tendency to simplify the three R's which are merely instruments and not culture. No teacher could be excused for neglecting the most thorough drill in correct spelling and reading, the most legible and beautiful style of writing, and the most accurate and rapid manipulation of figures. He called attention to the attempts to make spelling more simple, to make writing more brief, as in shorthand, and to make school arithmetic less complicated by the adoption of purely decimal weights and measures. The schoolmaster could not wait for these improvements to come on the stage. He must teach his pupils to master them thoroughly as they stand at present. But they are not culture, only the instruments for the winning of a living and the obtaining of culture.

He next referred to the group of subjects which might be called the "inspirational," because they started the pupil to think in useful lines, enabling him to use the three R's as an implement of culture and industry, the present condition of man as shown in geography, what he has done in history, what he is doing in modern civics, the laws of nature which condition all he does in nature-study. When the three R's formed the whole course of the school, Shakespeare described the school boy "creeping like snail unwillingly to school." With all the crowding of the new subjects the Shakespeare of today would see him "tumbling with merriment and observant fun" to school.

A century ago the training of the boys was a practical apprenticeship to work. The recoil from this experiment during the past century carried all educationists over the world perhaps too far in the direction of a purely intellectual form of education. We are now recovering to the extent of combining the intellectual and the practical. When the hand is trained to draw whatever the eye can see, three-fourths of the training of the muscles for each and every manual employment is virtually obtained, a moral alterative school tonic is given, and the idea of the dignity and utility of skilled labor is suggested at an early age. The manual training school programmes, as well as the domestic science course, the laboratory and field courses of nature-study, and school gardens, develop this combination of the intellectual and the practical still more completely.

He referred in some detail to the history of the experiments made in France during the last quarter of a century in developing the most effective system of rural education. No country appeared to be so free to experiment, and the experiments were considered of such value by the British Educational Commission that the whole of Volume VII of their special reports was devoted to their presentation in a clear form to the British public. He concluded by reading several extracts from the conclusions of the two chief writers and investigators, and of the director of the commission, in which they recommended to the British people and parliament, a combination of intellectual and practical education, and the support of good schools and the best teachers possible in the rural districts of the country as well as in the centres of population. The extracts were in striking accord with the educational reforms which were already introduced in our own province.



Inspector Armstrong on behalf of the teachers replied in felicitous terms to the addresses of welcome. He was ably supported by Principal Soloan, of the Normal School, who utilized the opportunity in impressing upon the teachers many valuable principles of their profession.

Principal Soloan, speaking from some experience as a schoolmaster in Pictou County, assured his younger fellow-teachers that no community was more receptive of new ideas, more tolerant of other standards of thought and conduct than the Highland people of eastern Nova Scotia. An enterprising, practical teacher would find no lack of sympathy with his independence of thought and with his enthusiasm, so long as he was believed to be honest, intelligent and industrious. Let them cultivate well their acquaintance with this community which employed them, and let them work with increasing intelligence to fit their pupils to become leaders in the thought and action of this community. There was little fear that our school studies shall be made too practical; knowledge is a thing to be doubted until it is reduced to practice; and the only ground on which the public is disposed to criticise the education carried on in our schools is that it is not made to apply to the material conditions which surround us. This is the fault of the teacher who administers the school, not of courses of study or of examinations. It is a fault not easily dealt with by inspectors, or superintendents, or councils of public instruction; its rectification lies with the individual teacher.

After the enrolment of members on Wednesday morning the Institute was formally opened by a short address from the President, Inspector Armstrong. He related the various steps that led to the organization of the Institute in his division and expressed the hope that it might become a permanent institution of much benefit to the teachers.

Miss Connolly of Fisher's Grant read a paper on Calisthenics. We expect to publish it in full at a later date. In the meantime we need only say that the lesson by which it was illustrated and the voice and style in which it was delivered left nothing to be desired.

Miss Cassie E. McLean of New Glasgow read an excellent paper on English in Grade V. She pointed out that the teacher should be particularly careful to avoid the careless use of English and should try to familiarize her pupils with suitable literature from the best English authors. Practice is more important than theory. Recitations should therefore be conversational, the pupils being required to take as large a part as possible and to give full and explicit answers. Every mistake in English should be corrected whether made on the playground, in the arithmetic class, or in the grammar lesson; and the pupils should be thoroughly drilled on the correct forms of those expressions in which they are apt to make blunders.

For composition lessons the pupils should be supplied with interesting material,—a good story, an abstract of the nature lessons, etc.

It is a common mistake to attempt too much. Drill on a few common errors until the correct form becomes a permanent possession, and ultimate progress will be sure

and rapid. This point was strongly emphasized by Principals Simpson and Maclellan, who discussed the paper. Principal Campbell would insist on having exercises in composition re-written after they had been corrected, so as to fix the proper form; Principal Soloan would have the teacher use language somewhat in advance of the pupil, so that he might rise to a higher level; and he would call attention to mistakes of style, ambiguity, etc., as well as to grammatical errors. Mr. Smith, of New Glasgow, emphasized the advantages of memorizing good selections of English in all the grades.

Wednesday afternoon was devoted to Drawing. Supervisor McKay read a paper on the general theory. He thought every teacher should, without delay, make a beginning by the use of drawing in almost every study, more particularly in the nature lessons. By continued practice and with the help of such papers as the *Teachers' Art Monthly*, every teacher would acquire sufficient skill to do good work. He was supported by Mr. Matthews, of the Manual Training School, Truro, who exhibited a fine collection of drawings from the common schools of England. This paper was further illustrated by a good assortment of drawings from St. Patrick's Girls' School, Halifax.

Principal Kidner of the MacDonald Manual Training School, Truro, explained and illustrated the theory of paper cutting adapted for every school grade. Our readers are already familiar with the valuable impetus that has been given by him to this work in the columns of the EDUCATIONAL REVIEW.

Mr. Barteaux, of Truro Academy, gave an excellent lesson on Mathematical Drawing.

Wednesday evening was devoted to the consideration of the high school course of study and the high school examinations. Principal Campbell characterized the newspaper discussions on these subjects as being mostly aimless, yet they manifested a certain amount of dissatisfaction with the system. He referred to the resolutions passed unanimously at the Provincial Educational Association in 1891, by which it was decided that "the examination for teachers' licenses be assimilated with the course of study for high schools, each grade representing one year's work; that in connection with examination for teachers' non-professional certificates the Department of Education be requested to provide for the issue of diplomas to graduates of county academies and high schools; and that as soon and as far as circumstances permit the various non-professional certificates should be taken *seriatim*. The course of study slightly revised was adopted two years later.

Mr. Campbell expressed his own approval and that of every teacher in the province of the excellent work the superintendent of education was doing in securing the efficient working of the system and congratulated the profession in having at its head one always ready to carry out their wishes as far as possible.

With regard to the course of study for common schools the speaker took the stand that it was broad, complete, and well suited to the needs of our schools. The three R's form the basis of the work. Manual training, domestic science, and nature study, all have a place in the course proportional to their relative values in education. The great stumbling block to teachers, if

indeed any exists, is the fact that teachers fail to study the requirements of their pupils and attempt to force upon them parts of a course which are beyond their mental capacities. It is the child that is to be taught, educated, developed, trained. The course of study is only the means agreed upon by the best educationists as best suited to bring about that development. In the hands of competent teachers and a judicious principal and school board there is no reason why the present course, subject to revision from time to time, should not meet fully the requirements of our schools.

The high school course of study on the whole is only fairly satisfactory. It is pressing hard on many schools. It should receive a thorough revision and for this purpose the superintendent should have associated with him a committee of high school teachers selected for the purpose. The object before such a committee should be thoroughness of work rather than extent of work.

A greater difficulty than the course of study is the way the course is carried out. The great pressure brought by parents to have their children pass the high school examinations each year has in many places forced teachers largely to leave off teaching and resort to "coaching" for examination purposes. Trustees and teachers should be given more freedom to carry out the course of study according to the requirements of their particular schools. An adjustment of the course to suit the local conditions would do very much to relieve this pressure. It is impossible to do this so long as teachers are required to get up a certain amount of work on a certain order of subjects each year, irrespective of ability of students or local conditions.

Instead of making all the high schools conform to the same course of study in each particular grade and even in each subject of the grade, let the school authorities administer the course as a whole and be judged on the result of their finished work. For this reason the "D" and the "C" examinations of high school students should be abandoned except for teachers' licenses, and the "B" examinations should be made broad, thorough and searching—a leaving examination the certificates of which would be of value to the holder as a proof of thorough high school scholarship.

Mr. Campbell strongly recommended the abolishing of the "D" examination even for teachers' licenses. Out of 1545 candidates for "D" scholarship only 25 licenses of "D" "provisional" were issued. All the others were on scholarship higher than "D" and these were issued chiefly in counties where there is no scarcity of teachers. The money spent yearly on these examinations would do much to help in securing better teachers for the schools.

Examinations in the hands of the teacher and between teacher and pupils are a very valuable part of educational work. They are a stock-taking of the result of a particular period of work. They show the teacher how far the lessons of the period learned, part by part, have been mastered as a whole. They show the teacher the weakness in his methods of dealing with the pupil, and wherein he has failed to grasp the work of the period. When the teacher is also the examiner the benefit of proper examinations can scarcely be over-estimated. Examination by outside examiners serve no

purpose in education. They draw the attention from the true aims of education and reduce the teacher to a "coach." They should be avoided except where a uniform certificate is necessary, as for teacher's license or college entrance.

In the course of his remarks Principal Campbell explained that he had sent circulars to several high school teachers asking their opinion relative to the course of study and that the answers were so diverse as to neutralize each other and leave the course practically in its present form. They would, however, all, or nearly all, prefer to examine their own pupils.

Principal Solon would have our present high standard maintained. Our schools are doing as good work as those of Germany or France—our rural schools are much better than theirs. Those who find our "B" course too difficult should devote two years to it. If the teachers give sufficient attention to general principles the pupils will not find the work too difficult. A better foundation laid in the common schools through all the grades is the great desideratum. An examination in "B" only might have to include chemistry, botany, book-keeping, drawing, etc., subjects now disposed of in the other grades.

Principal Maclellan showed that teachers in self-defence were virtually obliged to prepare as many pupils as possible to pass the examinations successfully, and that owing to local conditions in different sections it was impossible to institute fair comparisons. He would have less reading in the foreign languages in order that grammatical principles might receive more attention. Not easier work is wanted, but the conditions favorable to more thorough work.

Mr. Smith, of New Glasgow, showed that by dropping "D" and "C" examinations a vast majority of our pupils would lose a valuable stimulus which they now possess; that if the "B" examination was the only one it would have to include the whole work of three years in all the subjects, and therefore necessitate a review in the third year, which would lead to much more pressure than the present system; and that if the teachers' examinations were not supplemented and verified by the provincial examinations a local pressure for the grading of unfit pupils would be exerted that only the strongest teachers could withstand. If such an examination did not include all the subjects and the whole work then it would lead to the utter neglect of such subjects as it did not include.

He thought the course included too much work in science and mathematics. Practical experiments required much time.

At the closing session on Thursday the usual votes of thanks were passed. A resolution was moved, recommending among other things an advisory committee on the course of study, and that examinations for non-professional certificates of grades "D" and "C" be discontinued.

It was pointed out that such a resolution might not be advisable in view of Regulation 132 which requires that "all questions and discussions foreign to the practical work of teaching are to be strictly avoided," and that in any case it would be improper to pass such a resolution without time for discussion. They were



accordingly withdrawn and referred to the Provincial Educational Association.

Miss Ethel M. Dickson, of Pictou, gave an admirable lesson on Geography from beautifully drawn blackboard maps, showing the physical features of North and South America.

Miss M. A. O'Brien, of Truro, read a valuable paper on the best method of teaching, without expensive apparatus, the common properties of matter. The suggestions were so practical that the writer was asked to allow her paper to be published.

Principal Maclellan was on the programme for a paper on Teachers' Salaries. Owing to the want of time he gave only an outline of it. His leading idea was that better salaries or a larger government grant implied better trained teachers and better schools. Sections might be required to contribute a minimum sum as a condition of obtaining the grant.

Rev. Mr. Carson read from a phonographic manuscript a strong plea for the study of shorthand, giving a brief account of its history, its utility in many departments of work, its disciplinary value. It affords an excellent training of the eye, the hand, the ear, and in distinct enunciation.

Those who attended several institutes in other countries were enthusiastic in their praises of the papers and lessons given by the teachers of inspectoral district No. 9. There has been within a few years a great improvement in the *personnel* of the teaching profession as shown in the wholesome, good looking, earnest and intelligent faces characteristic of this Institute.

### SCHOOL AND COLLEGE.

The teachers from Nova Scotia and New Brunswick who have been selected to fill positions in the schools of South Africa are the following: From Nova Scotia—Bertha B. Hebb, Bridgewater; Margaret W. DeWolfe, Halifax; Ellen D. Crandall, Walton, Hants; Emma Ellis, Dartmouth, Halifax; Blanche McDonald, Hopewell, Pictou; Ellen M. McKenzie, Stellarton. From New Brunswick—Mabel V. Elliott, Chatham; Sophia M. Pickle, Kingston, Kings County; Ida E. McLeod and Winnifred Johnston, Fredericton; Agnes L. Carr and Annie I. Burns, St. John.

Laleah E. Killam, teacher at Lake Annis, Yarmouth County N. S., with the help of her many friends of that and neighboring places, held a concert and a pie social on the 27th March, and raised the sum of \$17.60, which will be used in procuring a dictionary and equipments for the school.

The proposal made by Sir Wm. E. MacDonald to establish one school in each of the provinces of the Dominion to illustrate improvements in education from the consolidation of several rural schools into one central graded school with school garden and a manual training room as part of its equipment, is awakening much interest in several localities. Middleton, Annapolis Co., N. S., is making a strong effort to secure the location of this school for Nova Scotia at that place. Six or more adjoining rural districts are reported as being willing to unite with Middleton in the maintenance of such a school if established. The inhabitants of Middleton and vicinity are among

the most progressive in the Annapolis Valley, educationally and otherwise, and they are well qualified to give object lessons in improvements in education along the lines outlined by Sir Wm. C. MacDonald. It is doubtful, however, if the scheme is carried into execution this year.

O. P. Goucher, A. B. (Ac.), and Class A., who has been principle of the graded school at Middleton, Annapolis Co., N. S., for several years past, has announced his intention of retiring from the teaching profession at the end of the current school year. Principal Goucher has been highly successful, both as principal of the Middleton schools, and also as principal of the schools at Lawrencetown, Annapolis Co., N. S., which latter position he held previous to his removal to Middleton, and his retirement will be a severe loss to the profession. He has achieved a reputation as a teacher second to none in western Nova Scotia.

The meetings of the Teachers' Institute for Inspectoral District, No. 4, N. S., will be held this year in the old historic town of Annapolis Royal, on the 8th and 9th days of May. As no Institute has been established in Inspectoral Districts Nos. 2 and 3, including the Counties of Lunenburg, Queens, Shelburne and Yarmouth, the teachers of these counties are permitted to attend the meetings of the Institute for District No. 4, without loss of government or county grants.

### 'ROUND TABLE TALKS.

M. M.—Please work out for me in the REVIEW the following problem in algebra, Todhunter, page 158, Ex. 25.—Two trains, 92 feet long and 84 feet long respectively, are moving with uniform velocities on parallel rails; when they move in opposite directions they are observed to pass each other in one second and a half; but when they move in the same direction, the faster train is observed to pass the other in six seconds; find the rate at which each train moves.

Let faster train move at  $x$  feet per second.

“ slower “ “  $y$  “ “

Moving in opposite directions, they approach or separate at rate of  $x + y$  ft., and in same direction at  $x - y$  ft. per second.

$$92 \text{ ft.} + 84 \text{ ft.} = 176 \text{ ft.}$$

$$176 \text{ ft.}$$

$$\frac{\quad}{x + y} = 1\frac{1}{2}$$

$$1\frac{1}{2}(x + y) = 176$$

$$6x + 6y = 704$$

$$6x - 6y = 176$$

$$12y = 528$$

$$y = 44 \text{ ft.}$$

$$73\frac{1}{2} \times 60 \times 60$$

$$\frac{\quad}{5280} = 50 \text{ miles, faster train.}$$

$$5280$$

$$44 \times 60 \times 60$$

$$\frac{\quad}{5280} = 30 = \text{slower train.}$$

$$5280$$

$$176$$

$$\frac{\quad}{x - y} = 6$$

$$6x - 6y = 176$$

$$6x + 6(44) = 704$$

$$6x = 704 - 264$$

$$= 440$$

$$x = 73\frac{1}{2} \text{ ft.}$$

## RECENT BOOKS.

**THE TEACHER'S MANUAL OF OBJECT LESSONS FOR RURAL SCHOOLS.** By Vincent T. Murche, F.R.G.S. For senior classes. Cloth. Pages 306. Price 2s 6d. Macmillan & Co., London. 1902. Rural Reader to accompany the above, pages 292. Price 1s. 9d.

The author of this manual and the reading book which accompanies it has done much to awaken the spirit and habit of observation and to foster a love of nature. He fully sympathizes with the country teacher and his work, and has made his book a storehouse of suggestions and facts from which the teacher may gather abundant material for classes in nature work. Both manual and reader are characterized by simplicity of language and sympathy with child nature.

**THE WAR IN SOUTH AFRICA: Its Cause and Conduct.** By A. Conan Doyle. Paper. Pages 140. Price 10 cents. Geo. A. Morang and Company, Toronto.

This book, in which the causes and conduct of the Boer war are stated with such clearness and evident absence of partiality, should be read by everyone. Its price puts it within the reach of all.

**OUTLINES OF BOTANY.** By R. G. Leavitt, A. M. Cloth. Pp. 272. The American Book Company, New York. 1902.

This new textbook on botany is designed for the high school class room and laboratory, and the author has based his work on Gray's Lessons in Botany. But he goes much further in giving a text more in accord with recent advances in the study of plant life and growth, embracing (1) a series of laboratory exercises in the morphology and physiology of phanerogams; (2) directions for a practicable study of typical cryptogams,

representing the chief groups from the lowest to the highest; and (3) a substantial body of information regarding the forms, activities and relationships of plants and supplementing the laboratory studies.

While the book lacks the clearness and easy naturalness which so eminently characterized Dr. Gray's textbooks, it makes up, in a great measure, by its conciseness, by suggestions to teachers and students regarding equipment, methods of presentation, and choice of material, and by the prominence given to plant life and function.

**ANALYTICAL PSYCHOLOGY.** A practical manual for colleges, normal and high schools. By Lightner Witmer, University of Pennsylvania. Cloth. Pages 251. Price \$1.50. Ginn & Co., Boston. 1902.

The facts and fundamental principles of psychology are here presented in clear, precise, and, as far as possible, non-technical language. Experiments, which the student is required to perform, are described so explicitly that they may be performed without much supplementary assistance from the instructor. Complicated and costly apparatus is not necessary. In fact, all the experiments can, with few exceptions, be performed without any apparatus. To attain this object, in the neighborhood of forty specially prepared charts are bound in with the manual and serve as material with which the student may perform the experiments required.

**TEST PAPERS IN GENERAL KNOWLEDGE.** By H. S. Cook, M.A., Oxon. Cloth. Pages 97. Price 1s. 6d. Macmillan & Co., London.

This little book may help the busy teacher to frame questions upon and stimulate interest in many different topics.

# The Educational Institute of New Brunswick

...WILL HOLD ITS...

## Next Meeting in Fredericton,

An Interesting Programme is being prepared, including Addresses and Papers by leading Educationists Music and Social Attractions.

...ON...  
**JUNE**  
**26 TO 28**  
 .1902.

Teachers who attend the Sessions of the Institute will not be required to teach on Monday, June 30th.

The usual arrangements for reduced rates will be made with Railroads and Steamboat Lines.

JOHN BRITAIN, SECRETARY



**HANDBOOK OF THE TREES OF NEW ENGLAND.** By Lorin L. Dame and Henry Brooks. 12mo. Cloth. XV+196 pages + 87 plates. Mailing price, \$1.35. Ginn & Co., Boston

In this volume is given a complete description, with full-page illustrations, of native New England trees. The illustrations cover every period of growth from bud to fruit, and are of themselves sufficient in most cases for the identification of the species. Although the work was written specially for New England conditions, it is applicable to a much larger area north and south. So far as consistent with precision, popular terms have been used in description, but not when such usage involves tedious periphrase. The book is designed for the use of general botanists, specialists interested in the distribution of trees, and for students in high schools and colleges.

**APRIL MAGAZINES.**

In the *Atlantic Monthly*, Paul G. Huston contributes *The Day's Work of a Forester*, a noteworthy paper upon the government's work of reclaiming and preserving our national forests,—a practical account, touched likewise with poetic insight and an æsthetic charm. Bliss Carman furnishes a noble and imaginative poem, *The Pipes of Pan*... In choice and printing of illustrations the monthly Magazine Numbers of *The Outlook* have greatly improved of late, and the April Magazine Number has pictorially both distinction and variety. Among other notable articles it contains a review of Education in the Philippines by the Superintendent of Schools there, Hon. F. W. Atkinson... Chief among the attractive features of the *Easter Ladies' Home Journal* is the opening instalment of Helen Keller's own story of her life. The new children's

department, called the Good-Time Garden, begins in this number. Mr. Bok discusses several timely subjects on the editorial page, chief among them the growing tendency of the American father to neglect the companionship of his children.... A handsome cover by a Canadian artist encloses the Easter issue of the *Canadian Magazine*. John K. Munro writes of Curling in Canada in a way to interest both curlers and general readers. Arthur H. U. Colquhoun gives many interesting reminiscences of Lord Dufferin. The career of Henry Hudson, the discoverer of Hudson's Bay, is described in an interesting way by George Johnson, the Dominion statistician... There is a very wide range of topics in the *Century* for this month, including fiction, history, biography, travel, literature, and subjects current to the times, among which is a valuable and timely article, *The Beautifying of Village and Town*... The long story in the *April St. Nicholas* ought to be popular with the boys and girls of to-day. It tells of the visit of two city boys to their cousin upon a Texas Ranch. Under his guardianship the slightly morbid city boys grow rugged and strong. They ride, shoot, camp out and hunt. It is a bright, breezy, manly little story well illustrated... An illustrated article of unusual interest describing *The Japanese University for Women* appears in the *Chautauquan Magazine* for April. Another article suggesting the quality of timeliness treats of Heligoland, the Smallest Gem in the Kaiser's Crown. A view of this picturesque land forms the frontispiece... The old-fashioned gardens of half a century ago, with no thought of effect, gave decorative plants their proper position by relegating them to some corner or border location. Oftentimes they were planted near the old-fashioned well-sweep with a clump of trees beyond, simply because they grew so thriftily there under the frequent dashes from the old well bucket. Some of the pleasing effects that one can arrange in planting the home garden are indicated in the *April Delineator*, where the directions are given by a well-known authority on gardening.

**The University of Chicago**  
**THE SCHOOL OF EDUCATION**  
*Francis W. Parker, Director.* *Wilbur S. Jackman, Dean.*  
**SUMMER SCHOOL OF PEDAGOGY**  
 June 19 to August 31, 1902  
 Pedagogical Courses for Primary and Grammar Grade Teachers, Principals, Superintendents, and Normal School Teachers. Academic Courses open to qualified students in all Departments of the University.  
**PEDAGOGICAL COURSES**  
 Philosophy of Education    History    Textiles and Basketry  
 Applied Pedagogy    Literature    Manual Training  
 Kindergarten    Geography    School Library Economy  
 Nature Study    Painting    Physical Training  
 Chemistry    Clay Modeling and Pottery    Speech, Oral Reading, and Dramatic Art  
 Mathematics    Chalk Modeling    Vocal Music  
**Model School**    **Field Excursions**  
 Students can PREPARE FOR COURSES through *The Elementary School Teacher and Course of Study* published monthly by the School of Education.  
 Announcement of Summer Courses will be ready March 1. For information address:  
**SCHOOL OF EDUCATION, THE UNIVERSITY OF CHICAGO - CHICAGO, ILLINOIS**

**INDISPENSABLE TO PROGRESSIVE TEACHERS**  
**The Elementary School Teacher and Course of Study**  
 EDITED BY FRANCIS W. PARKER, DIRECTOR  
 THE UNIVERSITY OF CHICAGO SCHOOL OF EDUCATION  
 Monthly, except in August and September. Subscription Price, \$1.50 in the United States; Foreign, \$2.00. Single Copies, 20 Cents  
 It contains **Practical Teaching Plans** for Kindergartners, Primary and Grammar Teachers, Normal School Teachers, and Pedagogic Classes. These plans embrace all the work of the School of Education, both in the Pedagogical Department and the University Elementary School. They explain the new education and show the correlation of subjects.  
 The journal is helpful in preparing for the regular and the summer courses of the School of Education.  
 For information with reference to clubbing rates, and for sample copies, address  
**The UNIVERSITY OF CHICAGO PRESS, Chicago, Illinois**

**TEACHERS WANTED!**  
 Teachers are wanted by the Educational Review Teachers' Bureau to fill positions. Those who want schools for next term should register early. Apply with stamp for Circular as to terms to the  
**Educational Review Teachers' Bureau,**  
**ST. JOHN, N. B.**

**50 YEARS' EXPERIENCE**  
  
**TRADE MARKS DESIGNS COPYRIGHTS & C.**  
 Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the  
**Scientific American.**  
 A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.  
**MUNN & Co, 361 Broadway, New York**  
 Branch Office, 625 F St., Washington, D. C.

## EDUCATION DEPARTMENT N. B.

## Official Notices.

## I. NUMBER OF TEACHING DAYS.

For term ending June 30th, 1902, the number of teaching days is <sup>121</sup> in the City of Saint John, ~~120~~.

## II. DEPARTMENTAL EXAMINATIONS.

<sup>13 1/2</sup> a. *Closing Examinations for License.*—The Closing Examinations for License, and for Advance of Class, will be held at the Normal School, Fredericton, and at the Grammar School Buildings, in St. John and Chatham, beginning on Tuesday, the 27th day of June, 1902.

The English Literature required for First Class candidates is Shakespeare's "Merchant of Venice," and selections from Keats, Shelley and Byron as found in Select Poems, used in High Schools.

b. *Normal School Entrance Examinations and Preliminary Examinations for Advance of Class.*—These examinations will be held at the usual stations throughout the Province, beginning on Tuesday, July 1st, 1902, at 9 o'clock a. m.

The requirements for the several classes will be found on pages 115 and 116 of the School Manual.

Candidates are required to give notice to the Inspector within whose inspectorial district they wish to be examined not later than the 24th day of May. A fee of one dollar must be sent to the Inspector with the application.

c. *Leaving Examinations.*—Held at the same time and stations as the Entrance Examinations.

These Examinations are based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X and XI.

The subjects for the Leaving Examinations shall consist of English Language, English Literature, History and Geography, Arithmetic and Bookkeeping, Algebra, Geometry, Botany and Agriculture, with any two of the following: Physics, Chemistry, Physiology, Latin, Greek, French.—(Nine papers in all).

d. *Matriculation Examinations.*—Held at the same time and stations as the Entrance Examinations. The Matriculation Examinations are also based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X and XI.

All candidates for Matriculation shall take the following subjects: Latin, Arithmetic and Algebra, Geometry, History and Geography, English Language, English Literature, Chemistry; also, either Greek or French and Natural History.

All candidates for the Matriculation and Leaving Examinations must send in their applications to the Inspector within whose inspectorate they propose to be examined, not later than the 24th day of May. A fee of two dollars must accompany each application. Forms of application may be obtained from the Inspectors or from the Education Office.

The English Literature Subjects for the Matriculation and Leaving Examinations will be the same as for the First Class Candidates at the Closing Examinations.

Examinations for Superior School License will be held both at the June and July examinations.

The First Book of Caesar's Gallic War will be required in both cases. The Mathematical Paper will be based on Wentworth's Trigonometry and F. H. Stevens' Mensuration for Beginners.

e. *High School Entrance Examinations.*—These examinations will be held at the several Grammar and other High Schools, beginning on Monday, June 16th, at 9 o'clock, a. m. Under the provisions of Regulation 46, question papers will be provided by the department. The principals of the Grammar and High Schools are requested to notify the Chief Superintendent not later than May 15th, as to the probable number of candidates.

For further details in regard to the Departmental Examinations see School Manual, Regulations 31, 32, 45 and 46.

## III. PROVINCIAL EDUCATIONAL INSTITUTE:—

The Educational Institute of New Brunswick will be held in Fredericton, on Thursday, Friday and Saturday, June 26th to 28th. Teachers who attend the Institute will not be required to teach on Monday, June 30th.

EDUCATION OFFICE, April 8th, 1902.

J. R. INCH,  
Ch. Sup. Ed.

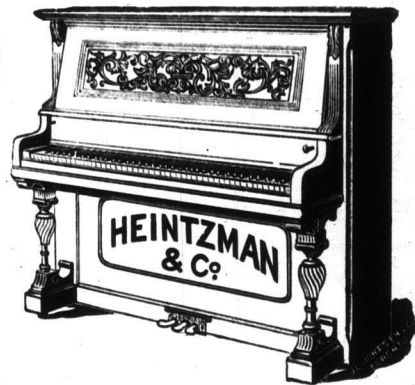
# THE Heintzman & Co. Piano

Is the Best Piano made in Canada.  
The choice of all Leading Musicians  
visiting Canada. \* \* \* \* \*

Prices for Choice Uprights, \$350.00 to \$500.00

Special Discounts and Terms to Teachers.

C. FLOOD & SONS, ST. JOHN, N. B.



## Cheerful Surroundings

Give life and zest to all work in the school-room and make little folks like to come to school. This is the time to brighten up your school-rooms. If you want the walls papered

**REMEMBER** That you can get from us a beautiful paper cheaper than ever before. Send size of school-room, number of windows and doors and their sizes (this is a good exercise in arithmetic for scholars) and we will send cost and samples. Get our figures for

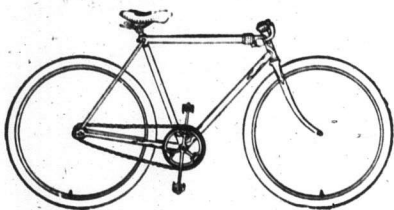
**WINDOW SHADES** We can supply excellent ones at reasonable prices,

**PICTURES FRAMED.**

**MAPS** mounted on spring rollers, and all work of that kind done promptly.

SEND YOUR ORDERS TO

F. E. HOLMAN & CO., 52 King St., St. John, N. B.



## Representatives Wanted!

for a number of unoccupied districts to handle a high grade line of

## BICYCLES.

For particulars, address—

CANADA CYCLE & MOTOR COMPANY, LTD.,  
ST. JOHN, N. B.

## TEACHERS WANTED,

Male or Female, to represent  
**NATIONAL LIFE ASSURANCE CO.  
OF CANADA.** Previous experi-  
ence not required. Address—

W. I. FENTON, Provincial Manager,  
P. O. Box 105, St. John, N. B.

## HARVARD UNIVERSITY. Harvard Summer School.

JULY 5 TO AUG. 15, 1902.

Courses in Arts and Sciences and in Physical Training. The work is especially adapted to the needs of teachers. Women as well as men admitted to all the courses except in Engineering and in Geological Field Work. For Pamphlet, apply to

J. L. LOVE, CLERK,  
Cambridge, Mass.

N. S. SHALER, CHAIRMAN.



**Amalgamation a Great Success !**

**The MANUFACTURERS  
and Temperance and General Life  
Assurance Company**

HAVE HAD A RECORD YEAR DURING 1901.

Applications received amount to over .....\$5,500,000  
Increase over 1900, almost..... 1,000,000  
Total business in force, over..... 27,000,000

NOTHING SUCCEEDS LIKE SUCCESS.

*The E. R. MACHUM CO., Ltd., St. John, N. B.,*

AGENTS WANTED

MANAGERS FOR MARITIME PROVINCES.

Know  
the  
Maritime  
Provinces

Your  
Own  
Line

— THE —  
**Intercolonial Railway's**

PUBLICATION

Contains valuable information for teachers and students regarding the country traversed by its rails.

Write to—

JNO M. LYONS,  
General Passenger and Ticket Agent,  
Moncton.

**University of  
New Brunswick.**

THE next Academic year begins September 25th, 1902, when Fourteen County Scholarships will be vacant. These Scholarships (value \$60 each) will be awarded on the results of the Entrance Examination to be held July 3rd, at all the Grammar School centres. To candidates who hold a Provincial School License of the First Class an Asa Dow Scholarship (value \$100) will be offered in competition in September. The Departments of CIVIL AND ELECTRICAL ENGINEERING are now open to properly qualified students.

Copies of Calendar containing full information may be obtained from the undersigned.

ERNEST BRYDONE-JACK, B. A., C. E., BURSAR OF THE UNIVERSITY, FREDERICTON, N. B.

THERE ARE NO  
**Matriculation Examinations**  
therefore you can enter at any time

**Individual Instruction**

... from ...

**Canadian Books**

... by ...

**Canadian Teachers**

qualify candidates for

**Canadian Offices,**

and none are more exacting.

NOW IS THE TIME TO ENTER.

**Maritime Business College,**

HALIFAX, N. S.

KAULBACH & SCHURMAN, Proprietors.

**CHEMICALS**

... AND ...

**CHEMICAL APPARATUS**

SUPPLIED TO SCHOOLS AND TEACHERS ON  
FAVORABLE TERMS.

**BROWN & WEBB,**

Wholesale Druggists, HALIFAX, N. S.

**Edgehill, CHURCH SCHOOL  
FOR GIRLS.  
WINDSOR, NOVA SCOTIA.**

INCORPORATED 1891.

The Bishop of Nova Scotia, Chairman Board of Trustees.

Miss Lefroy, of Cheltenham Ladies' College, England, Principal.

Ten Resident Experienced Governesses from England. Housekeeper, Matron and Nurse.

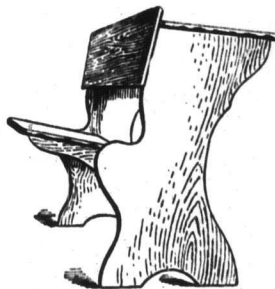
Board and Tuition Fees, including French, Latin or German or Greek, Daily Calisthenics, Class Singing and Needlework, \$225 per annum, or \$75 per term.

Music, Singing, Painting, Drawing, etc., are extras.

Preparation for the Universities.

Michaelmas term begins Wednesday, Sept. 11.

For Calendar apply to **DR. HIND.**



**DOUBLE  
SCHOOL  
DESKS  
FOR  
District  
Schools**

Prices on Application.

**S. B. LORDLY,**

62 BRITAIN STREET, ST JOHN, N. B.

**CANADIAN  
PACIFIC**

**C P R** THE SHORT LINE **C P R**  
TO  
**MONTREAL**

Ottawa, Toronto, Chicago,  
St. Paul, Vancouver, etc. :

**TOURIST SLEEPER**  
Leaves Every Thursday  
from MONTREAL for VANCOUVER.

For Rates, Time Tables and all other information, call on nearest Agent, or write  
**A. J. HEATH, D. P. A., C. P. R.,**  
St. John, N. B.

**SUMMER SESSION  
CORNELL UNIVERSITY,**

July 7 to August 16, 1902.

94 COURSES IN 23 DEPARTMENTS

Single Tuition Fee of \$25 Inexpensive living.

For Circular and Book of Views, address

The Registrar, Cornell University, Ithaca, N. Y.

# MUTUAL LIFE

OF CANADA.  
THIRTY-SECOND YEAR.

**POLICY HOLDERS** Constitute  
the Company and entire  
Profits are their's.

Business in Force, \$32,000,000.

For Rates, etc., Apply to  
**E. M. SIPPPELL,**  
Box 330. SAINT JOHN, N. B.

# FLAGS.

**Dominion Ensigns,** as per official  
Superintendent, of January 2nd, 1900.

...ALSO British and St. George's  
Ensigns, and Fort and  
Union Jacks of all sizes.

Flags With Special Designs Made to Order.

**A. W. ADAMS,**  
North Market Wharf, - St. John, N. B.

## DOMINION ATLANTIC RAILWAY

Royal Mail Steamship "PRINCE RUPERT,"  
1,200 Gross Tonnage, 3,000 Horse Power, ST.  
JOHN AND DIGBY.

Leave ST JOHN Monday, Wednesday, Thursday  
and Saturday, 7.00 a. m., arrive Digby 9.45 a. m.,  
making close connection with Express Trains  
for Halifax and Yarmouth.

Returning, leave Digby same days at 1.00 p. m.  
Arrive at St. John 3.45 p. m.

Royal and U. S. Mail Steamship "BOSTON"  
leaves Yarmouth Wednesday and Saturday, o-  
day on arrival of Express Trains from Halifax,  
arriving in Boston early next morning. Return-  
ing, leaves Long Wharf, Boston, Tuesday and  
Friday at 2 p. m.

Parlor Cars are attached to Express Trains  
running between Halifax and Yarmouth, where  
connection is made with the Halifax and Yarmouth  
railway.

For all information, folders, plans of stateroom  
accommodation, exquisitely illustrated guide  
books, travel pamphlets, etc., gratis and post  
free, apply to Dominion Atlantic Railway Office,  
44 Pine Street, or New Pier, Reed's  
Hotel, St. John.

P. GIFFKINS,  
General Manager

A N & O

Stationers,  
Booksellers,

FAMILY STATIONERY, BLANK BOOKS  
LEAD PENCILS, of all kinds.

P. O. BOX 44.

84 PRINCE WILLIAM ST.,  
SAINT JOHN, N. B.

# SLATE BLACKBOARDS.

CHALK CRAYONS, SCHOOL SLATES,  
SLATE PENCILS, ... LEAD PENCILS,  
SCHOLARS' COMPANIONS.

**W. H. THORNE & CO., Limited**  
HARDWARE MERCHANTS,  
Market Square, SAINT JOHN, N. B.

**MANUAL TRAINING SELBY & CO.,**  
10 AND 10½  
SHUTTER STREET,  
TORONTO.

**The Standard of the World**

IN the manufacture of School  
Furniture we are many laps  
ahead of our competitors.  
For durability, honesty of construction,  
and superior points of merit, our goods  
EXCEL ANYTHING IN THE  
SCHOOL FURNITURE LINE.

Our New Patent "Ball Bearing" School  
Desks are all alike. They are absolutely  
the ONLY School Desks ever made having  
a Permanently Noiseless Ball Bearing  
Seat Hinge.

This device is NOT an experiment,  
but has been thoroughly tested, and  
its practicability proved.  
Our Combination "Ball Bearing"  
Adjustable School Desk is the great-  
est success ever achieved in School  
Desk construction.

The time has passed when students must adjust themselves to  
fit the desks. Health and comfort demand that the desks should  
adjust themselves to fit the students.

Write for Catalogue.

That is why our Adjustable Desk should  
be in every school room in the land.

**Canadian Office and School Furniture Co., Ltd.**  
PRESTON, ONTARIO, CANADA.