

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

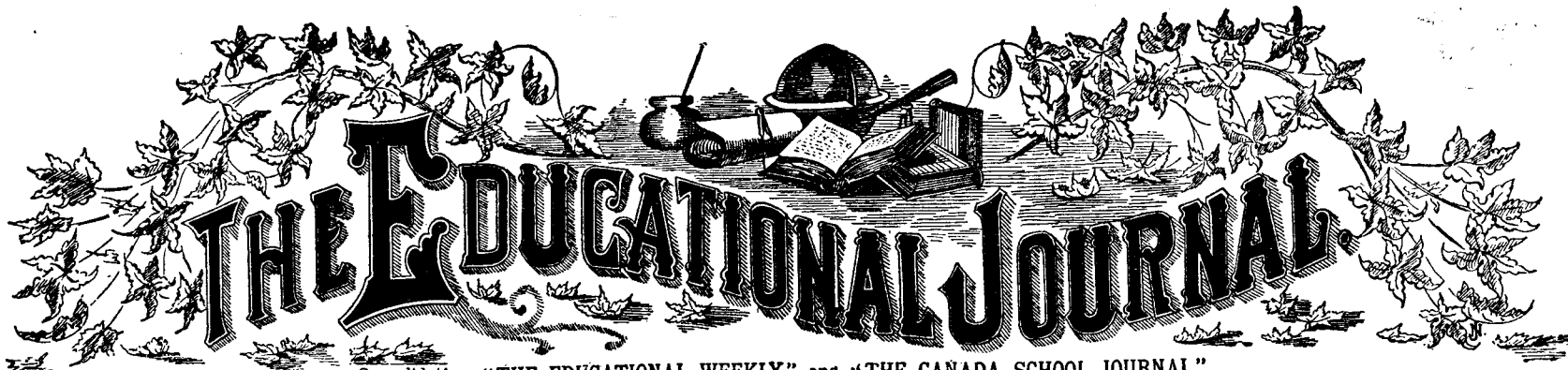
Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

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

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
- Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
- Includes supplementary materials /  
Comprend du matériel supplémentaire
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.



Consolidating "THE EDUCATIONAL WEEKLY" and "THE CANADA SCHOOL JOURNAL."

Subscription, \$1.50 a year.  
In Advance.

TORONTO, FEBRUARY 15, 1894.

Vol. VII.  
No. 19.

INCORPORATED 1886 **TORONTO** HON. G. W. ALLAN PRESIDENT

# CONSERVATORY OF MUSIC

COR. YONGE ST. & WILTON AVE.

University Affiliation for Degrees in Music  
Graduating Courses, Scholarships, Medals, etc.  
Equipment complete. Students receive a thorough and artistic musical education.  
Voices tested free of charge.

CONSERVATORY SCHOOL OF ELOCUTION  
(H. N. SHAW, B.A., Principal.)  
Delsarte, Swedish, Gymnastics, Voice Culture, Literature. Calendar of 132 pages mailed free.  
EDWARD FISHER, Musical Director.

## DELSARTE College of Oratory

FRANCIS JOSEPH BROWN, President.  
(President of the Elocutionists' Association of Canada.)

The Largest and Most Advanced School of Oratory in Canada.

DEPARTMENTS:—School of Voice Culture, School of Physical Culture, School of Dramatic Art, School of Literature.

For Catalogue, giving full information, address the President.  
FRANCIS JOSEPH BROWN,  
The Forum, Toronto.

## McMaster University,

ACADEMIC DEPARTMENTS.

## WOODSTOCK COLLEGE

FOR BOYS AND YOUNG MEN.  
Winter Term opens January 2, 1894

FEATURES.—Physical Culture, Manual Training, Matriculation, Teachers' Courses.

FACULTY OF INSTRUCTION.—JOSEPH I. BATES B.A., Ph. M., Principal, The Bible and Latin and Greek; NEIL S. McKECHNIE, B.A., English Language and Literature; DONALD K. CLARKE, B.A., French and German, and Manual Training; HUGH S. ROBERTSON, B.A., Senior Mathematics, Physics and Physical Training; WILSON R. SMITH, Science and Junior Mathematics; ABRAHAM L. MCCRIMMON, M.A., Latin and Greek; R. D. GEORGE, Preparatory Department College Physician—DR. A. McLAY, Woodstock.

For Information or Catalogue, address the Principal, J. I. BATES, Woodstock, Ont.

## MOULTON LADIES' COLLEGE

FOR GIRLS AND YOUNG WOMEN.  
Winter Term begins January 2, 1894.

A healthy Christian home. Full College Matriculation and Music Courses.

FACULTY OF INSTRUCTION.—ALICE M. D FITCH, M.A., Principal, The Bible; BLANCHE BISHOP, B.A., English Literature and Natural Science; MARY S. DANIELS, B.A., Classics and Natural Science; HELEN S. SHANKS, Modern Languages; ANNIE M. MCKAY, Mathematics; MARY H. SMART, Resident Teacher in Music; H. GERTRUDE HART, Elocution and Physical Culture; IDA E. HOGGAN, Preparatory Department; MRS. MARY E. DIGNAM, Instructor in Drawing and Painting; A. S. VOGT, Piano; W. O. Forsythe, Piano and Harmony; Miss BURKE, Piano.

Students of the course at Moulton College take the chief subjects of the fourth year in the classes of McMaster University. Matriculated Students can also reside at Moulton while pursuing their course at McMaster University.

The aim is that students in both colleges shall be constantly under the same healthy influences which pervade a Christian home.

For information or Catalogue, address the Principal, Miss ALICE M. D. FITCH, 34 Bloor Street East, Toronto, Ontario.

## THE NIMMO & HARRISON Business and Shorthand College

Cor. Yonge and College-Sts., Toronto.

IS IN MERIT AND EXCELLENCE A PEER TO ALL OTHERS.

Courses of study Thorough, Practical and Reliable

The principals besides being qualified teachers, both Public and Commercial, are men of practical experience as stenographers and accountants. Teachers send for circulars and read what we have done for others.

OPEN ENTIRE YEAR. CIRCULARS FREE.  
R. D. NIMMO, JAS. HARRISON, PRINS.

## British American Business & Shorthand College, Toronto.

THE oldest, most reliable, and most thoroughly equipped college of the kind in Canada. Over 5,000 graduates holding remunerative positions in all parts of the world. Patronized by the President of Toronto Board of Trade and leading bankers and business men of the country. Send for circulars to

## O'DEA & HOSKINS,

Confederation Life Building, Toronto.

## CENTRAL Business College.

Cor. Yonge and Gerrard Sts., TORONTO, ONT.

## Central Business College

STRATFORD, ONT.

The Largest, Finest Equipped and Most Progressive Commercial Schools in Canada.

WRITE FOR CATALOGUE.

## SHAW & ELLIOTT,

PRINCIPALS.

## ALMA

The Leading Canadian College FOR YOUNG WOMEN. ST. THOMAS, ONT.

1. Courses in Literature, Languages, Music, Fine Art, Commercial Science, Elocution, Junior and Senior Matriculation, University Affiliation.
2. Staff of 20 Professors and Teachers (University Graduates and Certificated Teachers) carefully chosen.
3. Music.—A staff of seven teachers with an annual enrollment of over 150 students in Piano, Organ, Voice, Violin, Harmony, Musical Theory, etc., etc. Graduates employed in leading colleges.
4. Fine Art.—The best Art room in Ontario, well equipped and highest rec. rd in the "advanced work" in Government examinations. Silver Medal for Design and Bronze in China in last Provincial Art Examinations. Three awards for work at the World's Fair.
5. PUBLIC SCHOOL TEACHERS admitted to collegiate standing, certificates being accepted *pro tanto*.
6. Full courses under competent teachers in Elocution, Callisthenics, Delsarte, etc.
7. Rates for board and tuition from \$40 to \$60 per term; from \$150 to \$200 advance payment. 60 pp. illustrated Announcement. Address

PRINCIPAL AUSTIN, M.A.

## THE EDUCATIONAL JOURNAL.

It Pays Advertisers

BECAUSE it possesses the cardinal features that make it profitable to Advertisers: Brightness, Reliability, Honesty, Purity of Tone, Circulation, and the Confidence of its Readers. These are the characteristics that give a paper that QUALITY that shrewd Advertisers seek.

FIFTH EDITION  
Indispensable to every live Teacher

## Practical Problems IN Arithmetic

For First, Second and Third Classes

By JAMES WHITE, Public School Teacher.  
EDMONTON, ONT.

This book has been prepared especially to suit the convenience of Public School Teachers. It contains about 700 Practical Problems suitable for First, Second and Third Classes in Public Schools. It is very carefully graded, and each principle required to be taught is introduced in logical order. It receives the hearty approval of Teachers and Inspectors.

Read their Opinions.

From ALLEN EMBURY, Esq., Inspector, Peel.

I have examined this little book of Arithmetical Problems, and can give it an unqualified endorsement. The questions are carefully graded, and are especially suited to the wants of our over-worked teachers who have not always the time to devote to the preparation of exercises upon various subjects in the school curriculum. The questions are not stated in the form of propositions; but their statement is incidental, leaving the inner connection of the problems to be discovered by the pupil himself; and in this important feature lies their special adaptability as an educational force. I heartily recommend this book to all teachers wishing to economize time and labor in their preparation for ordinary school work.

From E. TROUGHT, Esq., Teacher, Member County Board of Examiners, Inglewood.

I have examined with some care Practical Problems in Arithmetic for First, Second and Third Classes, by Mr. White, Edmonton. Without the slightest hesitation I say they are the best I have ever seen—the best in selection, the best in grading, and above all, the best for developing the reasoning powers of the child, and for exercising his ingenuity. A special feature of the grading is that the principles which have been introduced are being constantly made use of in the succeeding problems which are in their turn introducing new principles, so that the whole work may be said to be one unconscious review. It is a great boon to Teachers.

Price, Bound in Cloth, 25 cts.

THE EDUCATIONAL JOURNAL,  
Room 20, 114 Richmond W.,  
TORONTO, ONT.

## A BRILLIANT WORK. Cape Breton Illustrated

Historic, Picturesque and Descriptive  
By JOHN M. GOW.  
With 30 Full-Page Photo-Engravings.

Cloth, 423 pages 7x9 inches, - \$3.00  
Morocco, gilt edges, 8x10 inches, \$5.00

The following words taken from the Preface set forth in the fewest possible words the scope of this strong, brilliant interesting work.

"In this volume it is attempted to account for the American Puritan and for his progenitor, the English Puritan; to discuss the spirit and the genius of the men before whom the weak tyranny of kings hopelessly fell. The ancient town and fortress of Louisburg is described, and the story of both sides is told in detail. There is a short account of the Colonial Struggle between France and England, and of its immediate and remote results. The erection of the United States into a Separate Nationality, and the Formation of the Nucleus of the Dominion of Canada. There is also inserted a short History of Cape Breton, with a description of its prospective commercial advantages, and a presentation of its attractions as a summer resort."

The popular, racy style of the author makes the book one of the pleasantest sort of reading. It is a work every intelligent, patriotic Canadian should be proud to possess.

WILLIAM BRIGGS,  
PUBLISHER,  
29-33 RICHMOND STREET WEST, TORONTO.

## A Famous College

The Atlantic Provinces and British Columbia, the territories and provinces between, Bermuda (West Indies), and the United States are TO-DAY represented at . . . . .

## ONTARIO BUSINESS COLLEGE

BELLEVILLE ONT. (28th Year.)  
SEND for the new 144 page catalogue.  
ADDRESS,  
ROBINSON & JOHNSON,  
Belleville, Ont.

## GERMAN LESSONS

H. G. HELLMAN,  
OF HANOVER, GERMANY,  
Imparts a thorough knowledge of German in a short term at reasonable rates.  
18 YONGE ST. ARCADE, TORONTO.

WHEN YOU WANT

## SCHOOL SUPPLIES

WRITE SELBY & CO.,  
23 Richmond St. W., - TORONTO  
Ask for Illustrated Catalogue of Bradley's School Aids and Kindergarten Materials.

## TEACHERS WANTED

TO take orders for the Unrivalled History of the World during spare time; town or country equally profitable; new plan of selling; liberal commission.

McAINSH & KILGOUR,  
Confederation Life Bldg.,  
TORONTO.

## OFFICIAL CALENDAR

—OF THE—

# Educational Department

March:

1. Minutes of County Council to Department, due. [P. S. Act, sec. 114.]
- Inspectors' Annual Reports to Department, due. [P. S. Act, sec. 155 (5).]
- Inspector's summary, township and village Reports to Department, due.
- Auditors' Reports on the School Accounts of High School Boards, and the Boards of cities, towns, villages and townships to Department, due.
- Financial Statements of Teachers' Associations to Department, due.
- Separate School Supporters to notify Municipal Clerk. [S. S. Act, sec. 40.]

Annual Examination, 1894.

## NOTICES.

- April 1. Application for Specialists' Certificates of all grades to Department due.
- May 1. Applications from candidates for the High School Entrance, Commercial and Public School Leaving Examinations to Inspectors due.
- May 3. Inspectors to report to Department number of candidates for same.
- May 24. Applications for the High School Primary, Junior and Senior Leaving Examinations and University Pass and Honor Matriculation Examinations to Inspectors due.
- May 25. Inspectors to report to Department number of candidates for same.

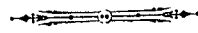
## EXAMINATIONS.

- May 1. Examinations for Specialists' Certificates (except Commercial) at Toronto University begin.
- June 27. High School Primary Examination in Oral Reading, Drawing, Bookkeeping and Commercial course begin.
- June 28. High School Entrance Examinations begin. Public School Leaving Examinations begin. Kindergarten Examinations at Toronto, Ottawa and Hamilton begin.
- July 3. The High School Primary, Junior Leaving and University Pass Matriculation and Scholarship Examinations begin. The Commercial Specialists' Examinations at Toronto begin.

## The Educational Journal.



### BOOK SUPPLY DEPARTMENT.



FOR the convenience of our subscribers who have been accustomed to order educational and other works noticed in our columns through the office of publication

#### WE PROPOSE TO CONTINUE

for the present at least, to furnish such books by post or express at the advertised prices.

#### THE LESSONS IN ENTRANCE LITERATURE

we shall continue to publish in our English Department, but as many teachers will not care to await the slow process of publication in this way we have made an arrangement with the publishers by which we are enabled to send the book promptly by mail, postage paid on receipt of the

PRICE 25 CENTS.

Other books furnished to order as soon as they can be procured from the publishers.

ADDRESS,

**The Educational Journal,**  
Room 20,  
11 1/2 Richmond Street West,  
TORONTO.

### SLATE BLACKBOARD

We handle only the best. Our Board is free from seams and spots and the price such that you cannot afford to use any other Board. GET OUR PRICE.

**E. N. MOYER & CO.**  
School Furnishers, 60 Yonge St.

# MAPS AND GLOBES

ALL KINDS OF BLACKBOARD MATERIAL.

## CHEMICAL, ELECTRICAL

AND PHYSICAL APPARATUS

LARGEST STOCK IN CANADA

LOWEST FIGURES

## Map and School Supply Co.

31 KING ST. EAST, TORONTO

## COLLEGES AND SCHOOLS

WILL FIND NO BETTER MEDIUM FOR  
ADVERTISING THAN . . . .

## THE EDUCATIONAL JOURNAL,

Canada's Leading Educational Periodical.

J. E. WELLS, M.A., Editor and Proprietor.

## INSURANCE COMPANIES

CANNOT DO BETTER THAN AVAIL  
THEMSELVES OF THIS MEANS OF  
REACHING A MOST DESIRABLE COM-  
MUNITY, THE TEACHERS IN SCHOOLS  
AND COLLEGES THROUGHOUT THE  
DOMINION OF CANADA.

FOR RATES OF ADVERTISING AND OTHER  
INFORMATION WRITE . . . .

**THE POOLE PRINTING CO., LTD.**  
ADVERTISING MANAGERS,

8 and 10 Lombard Street, Toronto.

# The Educational Journal.

CONSOLIDATING

"The Educational Weekly" and "The Canada School Journal."

Subscription, \$1.50 a year.  
In advance.

TORONTO, FEBRUARY 15, 1894.

Vol. VII  
No. 19.

## Table of Contents.

PAGE.	PAGE.
EDITORIAL NOTES.....299	SCHOOL-ROOM METHODS—
ENGLISH—	Geometry in the Public School.....305
Public School Leaving Literature.....300	PRIMARY DEPARTMENT—
How to Teach the Adjective.....301	Reproduction Exercises.....307
Answers to Correspondents.....301	Sight Reading.....307
Lady Aberdeen's Most Important Work.....301	MISCELLANY—
HINTS AND HELPS—	The Two Bridges.....308
Mistakes in Discipline 301	Choose the Right Word. 309
EDITORIALS—	EXAMINATION PAPERS—
Announcement.....302	Promotion and Review Examination, East Middlesex.....309
The Ideal School.....302	Uniform and Promotion Examination.....309
About Ourselves.....303	QUESTION DRAWER.....310
A Few Requests.....303	CORRESPONDENCE.....310
Apologetic.....303	BOOK NOTICES, ETC.....310
SPECIAL PAPERS—	
Julius Cæsar.....304	

## Editorial Notes.

### THE ONTARIO EDUCATIONAL ASSOCIATION.

THE thirty-third annual convention of this Association will be held in the Education Department buildings, Toronto, on Tuesday, Wednesday and Thursday, March 27th, 28th, and 29th, 1894. The officers of the Association are: President, Alexander Steele, M.A., Orangeville; Secretary, Robert W. Doan, Toronto; Treasurer, W. J. Hendry, Toronto.

The books of the Association will be opened for registration at 9 a.m. on Tuesday, March 27th, in the Examiners' Room, Education Department. All who wish to become members of the Association are urged to call and register as soon as possible after 9 a.m., and secure their tickets of membership. Membership fee, 50c.

Any information respecting the rooms in which the meetings are held, etc., may be obtained in the above-named room. All requests for the introduction of matters not named in the programme of the General Association must be presented to the Board of Directors. All the departments will meet for organization on Tuesday at 10.30 a.m. Meetings of the General Association will be held during the evenings only.

Following are the departments of the Association as now organized, with their respective officers.

College and High School Department.—Chairman, I. J. Birchard, Ph.D., Toronto; Secretary, J. Squair, B.A., Toronto.

The Modern Language Association.—President, W. J. Alexander, Ph.D.; Vice-President, J. Squair, B.A.; Secretary-Treasurer, W. H. Fraser, B.A.

Natural Science Association.—Hon. President, R. Ramsay Wright, M.A., B.Sc.; Chairman, H. B. Spotton, M.A.; Vice-President, J. B. Turner, M.A.; Secretary, T. H. Smyth, M.A., B.Sc.

The Classical Association.—Hon. President, Prof. Hutton; President, Prof. Dale; Vice-President, J. E. Hodgson, M.A.; Secretary-Treasurer, H. R. Fairclough, M.A.

The Mathematical and Physical Association.—Hon. President, Prof. James Loudon; President, Prof. McKay; Vice-President, W. J. Robertson, M.A.; Secretary-Treasurer, Fred. F. Manley, M.A.

Public School Department.—President, A. McMillan, Toronto; Secretary, A. McQueen, Toronto; Director, C. Campbell, Ottawa.

Kindergarten Department.—Chairman, Miss Laidlaw, London; Secretary, Miss Bowditch, Hamilton; Director, Miss L. T. Newcomb, Hamilton.

Training School Department.—Chairman, T. Kirkland, M.A., Toronto; Secretary, Wm. Rennie, Newmarket; Director, A. Barber, Cobourg.

County Model School Section.—Chairman, M. M. Campbell, St. Thomas; Secretary, A. Barber, Cobourg.

Inspectors' Department.—Chairman, Arthur Brown, Morrisburg; Secretary, J. E. Tom, Godrich; Director, J. S. Deacon, Milton.

Public and High School Trustees' Department.—Chairman, F. S. Lazier, M.A., LL.B., Q.C., Hamilton; Secretary, Geo. Anson Aylesworth, Newburgh, Addington County; Director, Rev. G. G. McRobbie, Ph.B., Sc.D., Shelburne.

Following is the programme of the General Association:

Tuesday, March 27th, 8 p.m.—President's Address: "The Relation of Higher Education to National Development." Alexander Steele, M.A., Orangeville. "Experimental Psychology." Dr. G. Stanley Hall, Clark University, Mass. General Business: Reports, Notices of Motion, etc.

Wednesday, March 28th, 8 p.m.—"Child Study." Dr. G. Stanley Hall. "The Relation of Municipal Councils to Public and High Schools." G. A. Aylesworth, Newburgh, Ont. General Business.

Thursday, March 29th, 8 p.m.—"Written Examinations." William Houston, M.A., Toronto. "Report of Committee on Industrial Education." Geo. Dickson, M.A., Toronto, Chairman. General Business.

Each of the eleven departments announces also a carefully arranged and interesting programme. The whole will comprise a series of papers and discussions on professional and scholarly themes, such as cannot fail to afford an intellectual feast of rare scope and merit. Most of those who will read the papers are authorities or specialists in their respective subjects. We note that in the Public School Department in particular, almost every theme announced is intensely practical in character.

Full programmes of the meetings of the various departments and sections are given in the general circular recently issued by the Secretary. Any teacher who has failed to receive a copy may, no doubt, promptly obtain one on application to the Secretary of the Association, Robert W. Doan, Esq., 216 Carlton St. East, Toronto.

Those travelling to the meeting must purchase First-class Full Rate one way tickets, and obtain a receipt on the Standard Certificate for purchase of tickets from agent at starting point, within three days of the date of meeting (Sundays not included). The Secretary of the Association will fill in the said Certificate, and the ticket for the return trip will be issued at the above rate. The Standard Certificate will be supplied free by the agent from whom the ticket to Toronto is purchased, and no other form will be recognized by the railway companies. In order that the members of the Association may have the full benefit of the reduced rates granted to the Association by the Canadian Pacific and Grand Trunk Railways the Board of Directors specially request all who attend the Convention to purchase tickets as above indicated.

The regulations of the Education Department provide that "Any teacher who has been elected as Delegate by the Association of his County or Inspectoral Division to the Provincial Teachers' Association, shall be at liberty to attend the meeting of such Association for any time not exceeding one week each year, providing he always report to the Trustees such attendance certified by the Secretary of said Provincial Association."

As the time formerly selected for holding the Provincial Convention prevented the attendance of many Inspectors and teachers who took their holidays then, special provision has been made by the Minister of Education to allow teachers to attend the Convention without interfering with their summer vacation. It is therefore hoped that this will be appreciated by the profession, and that every effort will be made to secure a large attendance at this meeting.

WITHOUT any special design on our part this number of the JOURNAL has taken on quite a mathematical character. The very valuable article by Professor Munn has been on hand for some time, having been crowded out of our Christmas number, for which it had been selected by the Mathematical Editor. We feel sure that our readers, especially those of them who have mathematical leanings, will agree with us that the permission to publish the article was too good a thing to lose. Under the heading "Miscellaneous" we have put an extract from a work by Sir Edwin Arnold which we commend to the attention of every reader. It is worth careful reading not only for the excellent pedagogical moral which it conveys, but for the literary charm of the style in which the story is told. We clipped it from the *Christian Register*, of Boston, Mass.

## English.

All articles and communications intended for the department should be addressed to the ENGLISH EDITOR, EDUCATIONAL JOURNAL, Room 20, 11½ Richmond Street West, Toronto.

## PUBLIC SCHOOL LEAVING LITERATURE.

## CVIII.—“TO WINTER.”

CHARLES G. D. ROBERTS.

## I.—INTRODUCTION.

For teaching this lesson it is well to choose weather which corresponds as nearly as possible to that described by the poet. Ask the class the day before the lesson is taught, to come prepared to write a short essay on the characteristics of winter in Canada, or, at least, to enumerate five or six of the most striking ones. Then from these select the features dealt with by the poet, and compare the pupils' method of describing what they have seen with the poet's. Account for some of the differences, e.g. the poet's use of figures of speech, poetic compounds, etc., by reminding the class in a general way of the difference between the diction of prose and that of poetry. After having the class note the use of the word “To” in the title of this poem and several others in the readers, e.g., “To Daffodils,” “To the North East Wind,” they will realize that this is no mere description of winter, but that the season is here personified and addressed as a great king, who rules over one of the four realms or kingdoms into which the year is divided. When this idea has been grasped there will be little difficulty in getting the class to make an outline of the poem under such headings as might be used in the geographical description of an actual country, position, boundaries, climate, animals, (birds), products, etc.

## II.—NOTES AND QUESTIONS.

ll. 1-18.—A difficult sentence. What is it about? Give the grammatical subject. What is said about winter in this sentence? Rewrite in ordinary prose order.

l. 3. “Plains . . . completeness.” What part of the year is here represented? What does this season complete? Let the class describe the “plains” in a few words. (Note the word “plains” is much more suitable here than it would have been in the next line; it suggests the fields of waving grain, while the realms in the next line will include the nooks where the first violets grow, the woods and thickets with their bursting buds, etc.)

l. 4. “Realms . . . sweetness.” What season is here meant? Explain “budding sweetness.”

l. 5-10. From the key-words “crystal,” throne, “keenness,” (Note the metaphor in this, cf. “a sharp morning,” a cutting wind,) “gleaming air,” (a bright, clear day merely, or one when the fine snow gleams in the sunshine like diamond dust?) “glorious,” (justify the poet in this use of the word,) “barren glare,” “sunlit wildernesses,” (snow-clad fields or stretches of frozen lake and river,) “undazzled level glances” (the rays of the sun, bright but almost horizontal. Why?)—let the class reconstruct the weather and landscape present to the poet's mind.

l. 6. “Thy . . . own” How do poets sometimes avoid the slight difficulty in pronouncing such combinations?

ll. 11-12. “Minion” (Fr. *mignon*, darling) a favorite. Probably the minions represent the pine and other evergreen trees, winter showing its favoritism to them by not depriving them of their foliage as it does the other trees.

“Silver tresses.” The needles, etc., of the evergreens covered with hoar-frost or powdered with snow.

“Icy lances”—The icicles hanging from the evergreen trees—very frequently seen. These are the weapons of the “minions” of winter, who are probably conceived by the poet as a self-constituted guard of the living, in return for the special favors bestowed by him.

ll. 13-14. “Universal breathing.” The hoar-frost represented as the breath of the giant King Winter.

“Radiant swathing.” Give ordinary meaning and use of word. How is this breath a swathing? Why radiant?

ll. 15-18. Give meaning in your own words. What is the force of “to” here?

ll. 19-24. “Skilful artists.” Name some of the artists King Winter employs to make his palace and kingdom beautiful.

“In . . . joyest.” “Takest delight in purest forms of beauty—the snow-crystals and hoar-frost (rare use of joy as a verb.) Give grammatical relation of “forms.”

“Frost-caught star-beams . . . tapestries.” From the star-beams that have fallen directly (sheer, perpendicular) from above, the “artists” have woven the tapestries for the palace of winter, the carpets and curtains which to us seem made of the snow-flakes and the crystals of the hoar-frost.

“Fretted.” Give ordinary meaning and use (literally, eaten away). Explain force here. Compare with these lines the first three stanzas of Lowell's “First Snow-Fall,” where the beauty of snow is brought out in such expressions as these, “ermine too dear for an earl,” “ridged inch-deep with pearl,” “sheds new-roofed with Carrara (marble) etc.; cf. also Mr. Roberts' own beautiful poem, “The Silver Thaw:”—

“The silvered saplings bending,  
Flashed in a rain of gems;  
The statelier trees attending,  
Blazed in their diadems.”  
White fire and amethyst  
All common things had kissed,  
And Chrysolites and sapphires  
Adorned the humble stems.”

ll. 25-40. General. An excellent opportunity to impress on pupils the nature, uses and abuses of *digressions*. What is a digression? Point out the digressions in this poem. Of what use is this digression? (Serves purpose of contrast) What objection can be made to it? (Too long, distracts attention from real subject).

“Liquid sobbing brooks.” Better liquid-sobbing. Why?

“Brawling.” Give usual meaning. How applicable to a waterfall?

“Responsive-voiced calls.” The sounds of waters echoed and re-echoed from the hills.

Lakelets . . . napping.” Rewrite using the possessive with “of” to show the grammatical relations of the words.

“Molten-throated . . . soft-voiced.” The verb “to melt” has two past participles, melted and molten, the latter applied principally to metal. The poets (Keats, Shelley) often compare the sound of voices to that made by liquids in flowing.

“Flashing.” What causes the passage of the birds through the woods to seem like a flash?

(The “sudden glare of daylight,” the swiftness of their flight, etc.)

“When . . . down.” The sudden change in the direction of the wind (veering) causes the branches of the trees to part and let the light of day enter.

ll. 40-44. “Alone.” What word does it modify?

“Minstrelsy.” Here music; often applied to the musicians.

“Nodding their heads before her goes  
The merry minstrelsy.”

—Coleridge.

ll. 44-50. “Weak . . . weaves.” Music does but little in winter to engage the attention and captivate the soul.

“Snared . . . delight.” To delight and ensnare the soul. Prolepsis, (prevision, Stedman), or anticipation, in the use of “snared.”

“Sin . . . unchoked.” Here and in “mortal-cloaked” the poet alludes to the belief that men would have faculties of much greater extent and power were it not for the body that weighs them down on account of sin committed. Cf. Paul's exclamation, “Oh wretched man that I am! who shall deliver me from the body of this death, or this body of death.” Rom. VII, 24.

“High-consulting.” Deliberating together on lofty themes.”

ll. 51-52. “Dim harmonies . . . spheres.” According to the doctrine first enunciated by the Greek philosopher Pythagoras, and often mentioned by the poets, the planets were arranged in such order and at such distance that in their revolutions they produced the music of the spheres, cf. “Milton's Hymn on the morning of Christ's nativity,” and note on “mortal-cloaked” below.

ll. 53-54. “Less . . . burst.” Note the alliteration and onomatopoeia. What effect has the repetition of the letter ‘s’ which is usually avoided in poetry? *Silent sunrise sing*. How possible? To whom is it silent, to whom may it sing? A possible allusion to the statue of Memnon, which was said to give out musical sounds when touched by the first rays of the sun.

l. 56. “But . . . keep.” What word should receive emphasis in reading? Why?

67. “Grosbeak.” A small bird of the finch family, which receives its name from its large bill (Fr. *gros*, large). If the pupils know the bird, let them describe it. What other bird might truthfully be mentioned as the snow-bird's noisy companion during our Canadian winters?

ll. 60-63. “Why have these four lines been separated from the others referring to the music of winter?”

“So.” Show force of the word here.

“Neath.” Note throughout the poem the repeated use of such contractions, rendered necessary by the trochaic metre; such connectives usually begin with an unaccented syllable.

“Mortal-cloaked.”  
There's not the smallest orb which thou beholdest,

But in his motion like an angel sings,  
Still quiring to the young-eyed cherubim:  
Such harmony is in immortal souls;  
But whilst this muddy vesture of decay,  
Doth grossly close it in, we cannot hear it.”

—Merchant of Venice, K. 1.

l. 66.—“fulfilling”—Explain. What word used before has the same force?

ll. 67-79. Have the class describe in their own words the scene here outlined.

“laughter-shaken trees.”—Who laughs? For what reason? (The apple-gatherers pleased at the bountiful harvest, or the trees delighted at being relieved of their burden of fruit?)

“girt”—surrounded.

“shod”—The juniper is so much smaller than the pines that it seems to form a covering for their feet.

“juniper”—A shrub from two to six feet high belonging to the cedar family. It bears small purple berries.

“Cottage climbing vines.” “Cottage-climbing.” What difference in meaning? Which do you prefer? Why?

“Sharp-tongued legates.” (Lat. *legatus*, an ambassador). What are winter's legates? What is their message from the king? What feeling does this message arouse in the maples?

ll. 80-82. A brief return to the subject from which the poet again turns in the last four lines to anticipate the coming of spring.

“More richly ordered.” Characterized by richer and more abundant natural beauties.

“Prisoned brightness.” What is here referred to as being bright? What has imprisoned the brightness?

“Lush”—rich, luxuriant. A favorite word of the poets; of Keats, “as the year grows lush in juicy stalks.”

“A gorgeous legend.” The story of the coming of spring told in the glorious panorama of reviving nature in bud and blossom, shrub and tree.” Give meaning of “gorgeous.” To what season would it be more applicable than to spring? Why?

## III.—BIOGRAPHICAL NOTE.

Charles George Douglas Roberts, the son of Rev. Geo. G. Roberts, was born at Douglas, N.B., in 1860. He received his early education at Westcock and at the Collegiate School in Fredericton. Entering the University of New Brunswick in 1876, he devoted his attention particularly to classics and political science, and finally took his honor degree in the latter department, after having been successively teacher in Chatham, N.B., and in Fredericton, and editor of the

*Toronto Week* (1884.) He was, in 1885, appointed to the professorship of English Literature, Political Economy, and Logic in King's College, Windsor, N.S., which position he still holds. The following is a list of Mr. Roberts' works:

- "Orion and other Poems," 1880. (To Winter.)
- "In Divers' Tower," 1887.
- "Translation of De Gaspe's 'Canadians of Old.'"
- "Shelly's Adonais," (edited.)
- "Poems of Wild Life," (edited.)
- "Songs of the Common Day," 1893.

L.L.J.

### HOW TO TEACH THE ADJECTIVE.

BY MAY L. MURRAY, KINGSTON.

HAVING reviewed the noun so as to fix clearly in the minds of the pupils the distinction between the object and its name, using a book in illustration, the teacher again holds up the book and asks, "Give me a word that will describe this book." The pupils give various adjectives, as "red," "large," "thick," and the teacher writes on the black-board:

A red book.

A large book.

A thick book.

"Of what use is the word 'red,' Jennie?" "Red' tells what kind of book it is." "Yes, so it does, but I think you know a word that means to tell what kind, to tell all about anything. Do you know it, Sam?" "Describe." "That is the word I thought of. Now who will tell us of what use is 'red'? John?" "'Red' describes the book." "Of what use is the word 'large'?" "'Large' describes the book." "Of what use is 'thick'?" "'Thick' describes book." "Then all these words do what, Ethel?" "They all describe book." "What book, the word 'book' on the board, or the book in my hand?" "They describe the book in your hand." "But what did we call the book?" "We called it the thing for which the noun book stands." "Now, how many can tell us what 'red' describes? Mary may tell." "'Red' describes the thing for which the noun 'book' stands." "What does the word 'large' do, Maude?" "'Large' describes the thing for which the noun 'book' stands." "What does the word 'thick' do, Willie?" "'Thick' describes the thing for which the noun 'book' stands." "Then these words all do the same thing; what it is, Willie?" "They all describe the thing for which the noun 'book' stands."

"A word which describes anything is called an adjective."

After a short drill in selecting the adjectives and giving reasons, the teacher takes a pencil and deals with it in a similar manner, getting from the pupils "a long pencil," "a straight pencil," "a black pencil." This is followed by another drill, after which the teacher writes:—

A poor lame man.

The pretty little girls.

Those big dogs, etc.,

And the pupils point out the adjectives, giving the reason for each; as "'poor,' describes the thing for which the noun 'man' stands, therefore 'poor' is an adjective."

"When we say 'A poor man,' do we mean any particular poor man?" "No, we mean any poor man at all." "What word shows that we mean any man, Maude?" "'A' shows us." "Yes, 'a' points out that we mean any man, it tells what man we mean, so that we may say it does what?" Some hesitation; at last Elsie's hand goes up. "Well, Elsie, what shall we say 'a' does?" "'A' describes man." "That is right, 'a' describes or points out the man. Then what is 'a'?" "'A' is an adjective, because it describes man."

"How many can find any other words that point out which we mean? Sidney may tell us." "'The' and 'those' point out which we mean." "That is right, now I should like someone to tell us all about 'the.'" Several hands wave wildly in the air. "Willie may tell." "'The' describes little girls, therefore it is an adjective." "That is almost right, but I do not think 'little-girls' are anything." Willie revises his answer and decides that 'the' describes girls. "Now,

Fred may tell us about 'those.'" "'Those' describes the thing for which the noun 'dogs' stands, therefore it is an adjective."

"Now that you have told me about so many adjectives, I should like to see how many can tell me what an adjective is. You may tell, Nellie." "An adjective is a word that describes." "Yes, that is quite right, but I think you can tell what it describes. Does it describe a noun?" "No, it describes the thing for which the noun stands." "Right, now who will tell us all about an adjective? Jennie?" "An adjective is a word which describes the thing for which a noun stands." "That is very well indeed."

This is followed by a thorough drill on the definition, and then the class is given sentences on the black-board from which they select the adjectives and form a list of them on their slates.

### CORRESPONDENCE.

J.A.A.—The printers made nonsense of my answer to S.M. in the *JOURNAL* of January 1st. The sentence quoted should read "I saw the man fall," not "man's," as the context shows. In "I saw the fall," etc., "fall" is a noun. Pronounce Iodine (iō'din' or i'o-din), nectarine (nek'tar-in), quinine (kwīn'ēn, kin'ēn, kwī'nīn), benzine (benzēn' or ben'zīn) paraffine (par'a-fin). Where several pronunciations are given the first is, I believe, the usual pronunciation in Ontario. J.C.B.—Lessons in Public School Leaving Literature are in preparation and will be published shortly.

THEIRIS.—In the clause "Wind is nothing more than air moving over the earth's surface," "than" is a conjunction, and in no sense a preposition. "Than" never had in any stage of its history in English the value of a preposition in requiring the objective case.

### LADY ABERDEEN'S MOST IMPORTANT WORK.

Perhaps the most important work on a wide scale with which Lady Aberdeen has been connected was that which she undertook in the Woman's Liberal Federation, a body of 80,000 women of which she is at this moment President, although she will retire at the next general meeting. She was elected to this post in succession to Mrs. Gladstone, and the very strongest possible pressure has been brought to bear upon her to induce her to reconsider her determination to resign an office, the duties of which she cannot discharge from Ottawa. The Woman's Liberal Federation, it is well to remark, is no mere party caucus. There is no doubt that it was originally started by some wire-pullers of the Liberal Party, who imagined that it might be of good service to bring into existence a Liberal counterpart to the Primrose League. The Woman's Liberal Federation, however, no sooner came into being than it developed into an independent activity of its own which led it to be regarded with the liveliest feelings of resentment by the caucus managers and wirepullers who had assisted in bringing it into being. The association has had a great and beneficial effect in stimulating women to take an intelligent interest in politics and to make their influence felt in all that relates to the moral and social improvement of society. Time and again they have rendered invaluable service to the cause of moral and social reform, and nothing can be further from the mark than to confound such an association of energetic public-spirited women with a mere creature of the party whip. There are women in England who imagine that their only duty in politics is to canvass for a candidate of their party, whoever he may be, and they have formed a small caucus of their own, which is without numbers, without influence and without standing in the country. The Woman's Liberal Federation is a national organization which is growing in strength every year, and which insists on having a voice in the settlement of all national questions. As a means of education as well as an instrument of political influence it fills a very useful part in our political economy. Lady Aberdeen has not been long in the Dominion of Canada, but she has already helped to organize

a National Council of Women, the object being to form a body of women representing all phases of women's work in every centre of population in the whole Dominion.—From *Character Sketch of Lord and Lady Aberdeen*, by W. T. Stead, in the *January Review of Reviews*.

## Hints and Helps.

### MISTAKES IN DISCIPLINE.

1. It is a mistake to try and teach without good order. A prime condition of successful school work is the undivided attention of pupil and teacher to the work in hand. Secure good order before attempting any other work, and, when secured, maintain it.

2. It is a mistake to suppose that "good order" means perfect quiet. The order of a successful school is the order of an earnest, active community, steadily, quietly and cheerfully engaged in the pursuit of legitimate business. This pursuit will necessarily be attended with some noise. The order of life, not of death, is what is wanted. Order may be heaven's first law; but it is not heaven's only law. Order is not repression, but direction. The necessary noise of legitimate work is not disorder.

3. It is a mistake to call for order in general terms, and to hedge the conduct of children with numerous rules. Children usually know what is and what is not proper conduct. Leave them as free as possible to regulate their own conduct, and yourself as free as possible to deal with each offence specifically, and to adapt punishment—when punishment is necessary—to the exigencies of each case as it shall arise. The child who in a moment of forgetfulness asks his neighbor for a pencil is much less a criminal than he who maliciously annoys all around him by talking; but each has equally been guilty of a technical violation of the law which says, "Thou shalt not whisper." No sensible teacher would administer the same punishment to each.

4. It is a mistake to be too demonstrative in maintaining order. Control, as far as possible, without seeming to control. Do not be the most disorderly person in the school in your efforts to maintain order. Banging a bell or pounding a table may attract momentary attention, but will not secure quiet and work.

5. It is a mistake to speak in too high a key. As a rule, the more and the more loudly you speak, the less and the less distinctly your pupils will speak.

6. It is a sad and cruel mistake to compel children to sit quietly in one position for even half an hour. Try so sitting yourself, if you would find one good reason for not making such requirement. Insist upon graceful, healthful positions, but not upon absolute stillness. The younger the pupil the more frequently should be permitted changes of position.

7. It is a mistake to be satisfied with order that continues only while the teacher is present. He who preserves the peace only when under the immediate observation of the police is not usually considered a model citizen. Men and women who possess the power of self-control are the products the schools should return to the State. The less police duty a teacher does—and is compelled to do—the better for the future of the State.

8. It is a mistake to treat pupils as though they were anxious to violate the rules of the school. If you would make a villain of a man, treat him as though you thought him one. The law does not assume that any man is a criminal. But you must distinguish between blind confidence and a frank trust in those who have not proved unworthy.

9. It is a mistake to punish by pulling ears, striking upon the head, etc., or to inflict corporal punishment in any form, except in extreme cases. In maintaining order always appeal to the highest available motive. "Do right for right's sake" should be the rule of action; but secure order by some means.—*Intelligence*.

# The Educational Journal

PUBLISHED SEMI-MONTHLY.

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

J. E. WELLS, M.A., EDITOR AND PROPRIETOR.

**Terms:** One dollar and fifty cents per annum, payable strictly in advance. Clubs of three, \$4.25; clubs of five, \$6.75. Larger clubs, in associations, sent through association officials, \$1.25.

Individual members, subscribing at a different time from that of the formation of the Club, may send their subscriptions to this office. Their orders will be taken at club rates.

New subscriptions may begin at any time. Payment, when by mail, should be made by post-office order or registered letter. Money sent in unregistered letters will be at the risk of the senders.

In case it may be necessary to make change, please send it in two-cent stamps.

The date at the right of the name on the address-label shows to what date the subscription is paid. The change of this date to a later one is a receipt for remittance.

Renewals of all subscriptions should be made promptly.

Subscribers addressing the office on any business will, in all cases, please give the names of the post-offices to which their papers are being sent at the time of writing.

Address all communications except those in relation to advertising to

THE EDUCATIONAL JOURNAL,  
ROOM 20, NO. 11½ RICHMOND ST. WEST  
TORONTO.

ADVERTISING DEPARTMENT.

Rates of advertising will be sent on application to  
THE POOLE PRINTING CO., LTD.,  
Advertising Managers,  
8 AND 10 LOMBARD ST.,  
TORONTO.

## Editorials.

TORONTO, FEBRUARY 15, 1894

### ANNOUNCEMENT.

THREE PRIZES FOR BEST TIME-TABLES.

AS intimated in last number, THE EDUCATIONAL JOURNAL is authorized to offer three money prizes, of Five, Three and Two dollars, respectively, for the best three Time-Tables for use in the Public Schools of Ontario. Following are the conditions prescribed:

(1) The Time-Tables must be suited for an Ontario Public School of forty or fifty pupils, divided among the following classes: First Book, Part I; First Book, Part II Second Book class; Third Book class; Fourth Book class; Fifth Book class—all under one teacher.

(2) The Time-Table must show clearly

(a) What is desk work?

(b) What is "floor" or "class" work?

(c) The time at which the desk work is to be examined?

All manuscripts for competition must be mailed not later than the first day of March, 1894. Each manuscript must be signed at the top with a motto or *nom de plume*, and accompanied with a sealed envelope bearing on the outside the same motto or pen-name, and containing the true name and address of the author.

The names of the examiners will be announced in a later number.

Every Public School teacher in Ontario is interested in this matter. We hope for a very large and vigorous competition. The

approved time-tables will be published, with the names of the authors, in THE EDUCATIONAL JOURNAL, for the benefit of all its subscribers.

### THE IDEAL SCHOOL.

PERHAPS, having ventured to express ourselves so freely in the way of fault-finding with present methods in the schools, it is but fair that we should attempt to give some idea of what we should deem a more excellent way. Herbart's ideal was, we are told, education in the family, guided and assisted by the counsel of an experienced professional teacher. Of course nothing can ever take the place of the home in the training of children. No excellence or skill of the professional educator can ever wholly make good grave deficiencies in the teaching and influence of father and mother. These are, first of all and above all, the child's natural educators. They are held responsible by the highest authority for training both intellect and heart of the child entrusted to them. If they fail in duty in this respect, no one can ever wholly undo the consequences. Their children must be to a greater or less extent the losers through all time. But at the best there is almost always need that the home teaching be freely supplemented by the trained teacher, while at the worst, and as a rule even in ordinary cases, by far the larger share of duty and responsibility must fall upon the professional educator.

Just here we may say that it has often been a matter of surprise to us that so little is done in these days in the way of private teaching. Why are there so few really good private schools in our cities and towns? With the great majority of parents the expense is, of course, an insurmountable barrier in the way of using such schools. But there are thousands in every large community to whom the matter of expense is not a serious obstacle. Could such parents be made to see all that is involved in the question; did they realize the advantages that would result to their children during all the future from having during the most impressible years of their lives been brought into daily contact with a man or woman of the highest character and attainments; one having time and desire and ability to train the mind, the heart, the conscience, of each individually, the question of cost would not have a moment's consideration. In order to the efficiency of such schools, not only should the qualifications of the teacher, intellectual, moral, and we would add, religious, be of the very highest, irrespective of the age or grade of his pupils, but the number of the latter should be strictly

limited to not more than ten or twelve. What might not an educated man or woman of the kind described, accomplish in the education of such a class, in the course of five or six, not to say ten or twelve years, though one or two changes might in the course of so long a period, be desirable. And what higher or nobler profession could any man or woman, desirous of doing a work in the world that will stand the tests of the great future, choose, than that of a teacher of the young under such conditions.

But what advantage would such a school, if we choose to call it by that name, have over the efficient public school under the present system? In answering this question we shall be indicating some of the most serious defects of our public schools as now generally conducted.

In the first place, there would be an inestimable advantage in the matter of numbers. Here is, in our opinion, the great, we had almost said the radical and fatal defect, in existing public schools. The number of children placed under the charge of a single teacher is often such as to render effective individual training impossible, and in most cases individual training is, as we all know, the only effective training. The strain of having sixty, or fifty, or forty, or even thirty children to deal with, is such that we venture to say very few teachers can endure it, and at the same time so concentrate the attention upon the subject in hand and so study the attitude of each mind engaged in it, as to do a teacher's proper work. The necessity of the situation compels the teacher in self-defence to insist upon a degree of quiet which is in itself unnatural and undesirable and which is so difficult to obtain that, save in the cases of a few endowed with special skill and tact, it involves such draft on the attention and such strain on the nervous system as to render the best teaching impossible. Let it be understood that every word spoken, every question asked, every explanation given to an inattentive pupil is so much time and energy wasted by the teacher, so far as that pupil is concerned, while the pupil's time is worse than wasted because he is forming or confirming a habit of inattention which is most detrimental to growth and progress. Is it any wonder that parents so often complain of the slow progress of their children? Can it be doubted that two or three hours a day spent in actual brain-work under such a system as we have indicated would effect more in the way of real mind-culture in one year, than is often accomplished in two under the present wasteful methods.

Setting out from these elementary facts,

which are too nearly self-evident to require proof, it will be seen on a little reflection that the waste of time of both pupil and teacher in the ordinary public school are enormous. It is, indeed, arguable that, even from this point of view, there would be real economy in reducing very materially the number of pupils assigned to one teacher or to a single room. But this is only one of the advantages to be derived under such a method as that described. Other important points must be left for another article.

#### ABOUT OURSELVES.

WE are not in the habit of publishing the kind things which subscribers and other friends are good enough to say from time to time in praise of the JOURNAL. We prefer, as a rule, to leave everyone into whose hands the paper may fall to form his own opinion of its merits, and we are always glad to forward sample copies, *gratis*, to anyone who wishes them. It is, however, natural that those who may be personally unacquainted with the paper, and who may think of subscribing, should wish to know the opinions of others who are familiar with it. We depart, therefore, from our rule for once so far as to publish a very few of the many expressions of approbation which we are constantly receiving. We take these at random, as we put our hand upon them. Had we time and inclination to go through our files we could fill columns with words of praise from Inspectors, Principals, and teachers of all grades. Let us take first the following samples from our exchanges:

The EDUCATIONAL JOURNAL, of Toronto, for December 15, is a large and handsome number. We always value this paper for the soundness of its doctrines and the care in its editing.—*New York School Journal*.

The Toronto EDUCATIONAL JOURNAL is one of the best edited publications of which we have any knowledge.—*Regina Leader*.

Among the many excellent exchanges received by us, few are more welcome than the EDUCATIONAL JOURNAL, of Toronto, Canada.—*Public School Journal, Bloomington, Ill.*

The Toronto EDUCATIONAL JOURNAL published an excellent Christmas number. The steady and marked improvement in the appearance of the JOURNAL during the past year, and its just and discriminating treatment of educational questions, are evidences of its increasing influence.—*The Educational Review*.

It is one of the few so-called educational journals that we find individual and clear-sighted. You are a lever among teachers. The more a paper is such, the better it sells.—*Managing Editor, Kindergarten Literature Company*.

The following are from letters, mostly business letters, received within the last few weeks from teachers:

The JOURNAL is a great help to me, especially the part devoted to methods of teaching. . . . I think no one can appreciate it like a teacher who is isolated. The very sight of the JOURNAL seems to inspire him with fresh courage. I find the JOURNAL an invaluable aid.

I find the JOURNAL very helpful, not only in the line of practical work, but especially in keeping one in touch with advanced and progressive educational thought.

Your journal has been a source of great profit to me during 1893, and I would not care to be without it.

I consider your journal a very valuable one, and will recommend it to all teachers as one which should not be dispensed with by teachers.

I am highly pleased with your journal, and believe it is doing much to broaden the educational horizon of the teachers of this country.

The JOURNAL has been my welcome visitor and most useful friend for a great many years, and nothing but the fact that I am leaving the town and the profession induces me to stop my subscription.

I should scarcely feel competent to teach were it not for the aid of your valuable journal.

The Christmas number is excellent for its purpose. My copies are regularly read with pleasure and profit by my staff of assistants and by my pupils, and I know they will be delighted this morning, on re-assembling, to find such a copy awaiting them.

As before said, we could easily fill columns with words of appreciation similar to the above. But these will suffice for the present purpose. In this connection we desire to express our sincere thanks, not only for the kind words, but for many still more tangible tokens of appreciation and good will, which we are constantly receiving from educators of all grades, from Inspectors downward. Many we should like to thank by personal letter, but want of time forbids. We may just add that our Christmas number met with a most gratifying reception. We printed a very large edition and have still some copies on hand, which we shall be glad to send free to any one desiring a copy.

#### A FEW REQUESTS.

OCCASIONALLY we have complaints that the JOURNAL is not received regularly by subscribers. When any irregularity occurs it is, of course, due to some accident in the mailing department, or in the mails. Such irregularities will take

place now and then, in spite of all our care. We shall be glad if every subscriber whose paper does not reach him within a week of the date of issue will notify us by card at once. We can almost always supply the missing number and shall be glad to do so. When several in succession fail to reach any one subscriber there is something wrong, which should be enquired into without delay.

Subscribers going out of the profession and others sometimes wish their paper discontinued. May we suggest that it will be but a slight trouble in such cases to drop us a card stating the fact. This is pleasanter and more satisfactory than to refuse the paper at the post office, as is occasionally done. Once in a while we meet with one who seems to think that the publisher is trying to force the paper upon him, and that the curt refusal is the only way in which to get rid of it. Of course, we are always sorry to lose a subscriber, for any cause, but we have no wish to force the JOURNAL upon any one who no longer needs it. When the number of those who wish and appreciate the paper becomes insufficient to pay expenses, we will go out of the business. We are happy to say that just now the subscription list is growing encouragingly.

Once more. In writing to ask for a change in the address to which the paper is sent, please do not forget to give the address to which it has been going, as well as that to which it is henceforth to go. Otherwise we cannot find your name among the thousands on the mailing sheets.

#### APOLOGETIC.

IN the JOURNAL of January 15th was an editorial note referring to a letter from Principal McCabe, of the Normal School, Ottawa, which appeared in the *New York School Journal*, and which was said in the note to be copied in another column. We are very sorry to find, at this late date, that the letter was not reproduced in our columns. We discovered the fact only a few days since, when our attention was called to it. Its non-publication puts us in the position of having commented on a communication which we promised to publish, but didn't, an act of seeming unfairness and discourtesy to our correspondent which was, of course, wholly unintentional, and which we regret. The simplest way of making amends is to publish the letter as we now do, with apologies for the accidental delay.

WE hope to publish in next number the able paper on "Written Examinations" which was recently read before the students of the School of Pedagogy, by Mr. John Millar, Deputy Minister of Education.



## Special Papers.

## JULIUS CAESAR.

BY WILL G. ALLISON.

"Death makes no conquest of this conqueror,  
For now he lives in fame, though not in life."

—King Richard the Third.

EVERY age of the world's history has produced its quota of great men, who have left the impress of their lives on the shores of time. Away back through the rich historic past, with its rise and fall of mighty nations, with a never-ceasing ebb and flow of progress, with a galaxy of mighty intellects, we see the name of Julius Cæsar, the brightest star in the coronet of Fame, shining with undiminished, yea, rather increasing lustre as the years march on. Perhaps no state has given more great men to the world than "imperial Rome," and "the noblest Roman of them all," as some aver, "the greatest man of all the ages," was Julius Cæsar.

This man, destined for such a glorious career was born in the year 100 B.C., on the twelfth of that month Quintilis, afterwards named Julius in his honor. Blessed with an acute and versatile intellect, combined with an intense eagerness in seeking information, under the watchful care and judicious guidance of his mother Aurelia, one of the most distinguished women of her day, he soon became versed in all learning, both literary and political, necessary to a public life. Like most young Romans he entered matrimony at an early age. When but seventeen years old he married Cornelia, a daughter of Cinna, a bitter enemy of Sulla, who held the reins of power at that period. Sulla was an aristocrat through and through, thus Cæsar had by this step openly avowed himself as a supporter of the popular party. Naturally such an alliance brought down the wrath of Sulla on Cæsar's head. He was both commanded and cajoled to divorce Cornelia, but Cæsar, having set his hand to the plough, would not turn back. He was forced to fly before Sulla's wrath and owing to the keen pursuit, although suffering with fever, he was obliged to change his abode every night to avoid capture. Thus, at this early stage we see that fixed determination and dogged resolution which formed such a marked characteristic in Cæsar's after life. Through the intercession of friends at Rome Cæsar was pardoned, but on his return, finding Rome too hot for him, he joined the Roman army in the East, where he distinguished himself in several daring exploits, and gained great knowledge of military affairs. In B.C. 78 Sulla died and Cæsar returned to Rome.

After a brief stay in Rome, where he showed that as an orator he was equal to any of his contemporaries, Cæsar set out for Rhodes to study rhetoric under Molo. On the way thither he was captured by pirates. While waiting in their cave to be ransomed he jocosely told them that he would in the near future have every one of them strangled and crucified. After being ransomed he fulfilled his promise to the letter and then proceeded to Rhodes.

While studying in the East Cæsar had been elected to the priestly office of Pontifex, and after returning home once more he was made military tribune. Once started on the road to renown, with his ready eloquence, his charm of manner and lavish munificence, honors followed fast and thick, until Cæsar, the idol of the Roman populi, the commander of four well-equipped legions, consul in the triumvirate with Pompey and Crassus, passed over into Gaul with his forces, holding office for five years. Let us leave Cæsar there for the present, subjugating wild barbaric tribes; writing his immortal commentary on the Gallic wars, and incidentally amassing vast wealth to be used in paying off a debt of \$1,625,000, which had been incurred in wielding that golden lash, bribery; while we turn aside and examine the condition of affairs at Rome.

As Momonseau has vividly expressed it, Rome at this period was an "imbroglio of dark passions." Pompey held the upper hand, but his

sulky rule was often disfigured by wild scenes of anarchy and violence, which shook Rome to her very centre. Political feuds and serious street-brawls were the order of the day. Pompey, in a vortex of political intrigues, moody and distracted, sluggish in his movements, took no measures to quell these frenzied outbreaks and excesses of the democratic party. As it was, the name and fame of Pompey were becoming tarnished owing to his imperious, high-handed and illegal procedures, while the popularity of the absent Cæsar steadily increased.

Although Cæsar was far away from the arena of politics himself, yet eloquent supporters sounded his praises, educated the public mind in his favor, and on the whole, right royally maintained the honor of his cause. But these wheels of political progress had to be well oiled with the best lubricator that has ever been discovered; and this came pouring in from Gallic conquests. Cæsar's nice discrimination and excellent judgment served him in good stead, for his emissaries in Rome under his guidance, succeeded in winning over many influential men and women, pecuniarily embarrassed, to the ranks of the democratic party. So when the time came, Cæsar easily obtained a renewal of his term of office for five years. Through these years Cæsar submitted to indignities and insults from the arrogant Pompey, contentedly biding his time, amassing great wealth, scattering it in princely profusion as bribes or in the erection of public buildings in Rome. At length Crassus died in the East, 53 B.C. Affairs in the capital had now reached a crisis. Pompey and Cæsar stood face to face.

A short review of Cæsar's life and work in western Europe might be appropriate here. While keeping well-informed as to the march of events in Rome, the all-conquering hero had carried the Roman eagles in triumph through barbaric Gaul to the very edge of the then-known world. Here, the chalky cliffs of another land could dimly be seen to the north. Anxious for new worlds to conquer, Cæsar crossed the channel and came to the wooded shores of Britain. The foe which greeted him proved themselves sturdy defenders, and not a few thorns, in the shape of vigorous and successful onslaughts, strewed Cæsar's path of advance, for he had crossed swords with the lion-hearted Celtic race, the nucleus of a world-girdling nation, whose flag should brave "the battle and the breeze" long after proud, imperial Rome should have crumbled to the dust, leaving but a history to shine like a spark through the mists of the years. (Outline conquests in Gaul with leading dates.)

Through his magnificent generalship and his brilliant career of victory during these years of war, Cæsar became the darling of the army and the hero of the Roman people. Now, towards the close of his consulate he stood the revered commander of the best equipped, the most blindly obedient, the bravest and best drilled army that ever closed in battle. Every sturdy, bronzed, athletic soldier was a veteran and considered himself a match for ten untrained foes. Julius Cæsar was not merely their 'imperator,' he was their 'commilito,' their comrade, the sharer of their fatigues and victories, their personal friend, their encourager and rewarder. No man ever endeared himself to his followers as Cæsar did. Not a man among the fifty thousand in his nine legions but would count it a favor and a distinguished honor to die for him who had so often led them on to victory. Such an army and such a leader! what could stand against them?

Cæsar stood backed by this power, when at last the abyss of ambition yawned between him and his quondam friend, Pompey. After several days of the wildest uproar and confusion, at the instigation of Pompey, the Senate had declared Cæsar a public enemy. War had been declared between two of the most illustrious generals the world had ever seen.

In hot haste trusty messengers have brought the long-expected news to Cæsar as he camps with the 13th legion on the borders of Cis-Alpine

Gaul. The river Rubicon, tiny but tremendous in importance, separates him from his native land. Conjure up for yourself the appearance Cæsar must have presented as he stood in the dull grey light of the morning, his men posted in the woods to the rear, the babbling brook before him, so insignificant in itself but which once passed declared him a rebel to the state. Well might "broad-fronted Cæsar" pause for a moment at this crisis of his life. The fate of races yet unborn, the destinies of empires, the sway of the civilized world, hinged on the decision of advance or retreat.

"There is a tide in the affairs of men,

Which taken at its ebb leads on to fortune,'  
The struggle was not for long. Cæsar's moody silence and hesitation gave way to a look of fixed determination and high-souled resolve. The planning and conniving of years awaited but this step to bring them to an issue. Cæsar was not the man to draw back when the moment of decision had come. So, in the character of an avowed foe to the existing government and the champion of the masses, he crossed the Rubicon, exclaiming in a voice surcharged with emotion and pregnant with deep feeling, "The die is cast!" The guerdon of that decision was to be undying Fame.

Having sent orders to the remaining legions to follow, with the 13th legion Cæsar pressed on toward the south. It was a triumphal march for the people flocked in hundreds to his standard. Pompey, dilatory and procrastinating, not expecting such an active stroke on Cæsar's part, was totally unprepared to face him in the field. Cæsar entered Rome in triumph while Pompey fled across the sea to Greece, where he rallied his old veterans and three-fourths of the Roman aristocracy around his standard.

You know the sequel. Once more the goddess of Fortune smiled on "the noblest man that ever lived in the tide of times," and Pompey, crushed and despairing, fled from the disastrous plains of Pharsalus, to seek safety in Egypt. He never reached his destination as a live man, for he was foully murdered as he neared what he deemed a haven of rest. When the bloody head of Pompey the Great was taken to his victorious rival we see Cæsar's true nobility of soul. A man weeping over the remains of his most relentless foe, the one thorn in the path of his ambition, is an act rarely equalled in the historic annals of any land; but great, kind-hearted, noble Cæsar wept over his arch-enemy and deplored his sad end.

It is not our purpose to describe Cæsar's nine months' residence in the land of the Lotus, to tell of the royal entertainment and sumptuous feasting provided by Egypt's voluptuous and beautiful queen, Cleopatra, not yet to narrate his further victories after he had—by a supreme effort of his mighty will—torn himself away from the flesh-pots of Egypt, but to meet him as he returns to Rome once more, the last crowning and brilliant victory of Munda having been won.

The old Appian Way, whose stones had borne the tread of so many heroes, reverberates once more to the clank of steel and crash of music as those "dogs of war," Cæsar's legionaries, press on proudly to the bourne of all their triumphs, Rome. As they pass, we can see by the dinted, battered armor, that every man has tasted the sweets of success many a time before. They glory in their scarce-healed wounds, and exultingly display the scars of former bloody fray. These are the veterans that have followed Cæsar to victory in a hundred fights.

Now the city of the seven hills looms up in the distance, the sunlight playing on the beetling crags, gilding the splendid palaces and temples of the mistress of the world. There she stands, "The Niobe of nations," in all her majestic beauty, ready to welcome her heroes home.

Ah! the citizens crowding the parapets and walls and lining the road, have now caught sight of Cæsar! A mighty shout swells up from ten thousand throats, a great huzza of welcome greets the hero. What a picture he presents as

proud, motionless, his keen black eyes flashing with the consciousness of power, he rides in his war-chariot at the head of his scarred veterans. That sturdy frame, once mocked at as effeminate and feeble seems a model of robustness and strength. As the sunshine glints on his burnished armor, as his gaily-caparisoned steeds cavort and plunge, disdaining the very ground beneath, one can well imagine the warrior before us to be a direct descendant of Venus, to be the renowned conqueror "whose bend doth awe the world." But the glittering pageant has entered the city and Cæsar with his laurels still green rests on his arms.

In rapid succession to this glorious homecoming, game followed game, fete followed fete in ever-increasing splendor. The celebration of Cæsar's triumphs filled day and night with the voice of rejoicing, and transformed Rome into a garden of bliss, where the citizens revelled in the princely liberality and unprecedented munificence of the Dictator.

During the next two years we see Cæsar at the zenith of his power. Honors were literally showered upon him. A cringing senate bowed to his slightest wish. He received the title, "Father of his country," and also that of Emperor, was made Dictator and *præfectus morum* for life, and consul for ten years; a body-guard of knights and senators kept watch and ward, though this precaution was scarcely necessary, for his person had been declared sacred and even divine; his portrait was struck on coins; his statue was set up in the temples; and all public occasions he was allowed to wear the triumphal robe.

"He was great" repeats a modern writer, "in everything he undertook; as a captain, a statesman, a law-giver, a jurist, an orator, a poet, an historian, a grammarian, a mathematician and an architect. He could be writing and reading, dictating and listening all at the same time; he usually kept four secretaries writing at once." No wonder he was the most renowned man of all antiquity!

As an author Cæsar was pre-eminently great. His principal works are his Commentaries on the Gallie War and those on the *Bello Civili*, an account of the civil war between him and Pompey. These military histories of his are models of clearness, simplicity, terseness and graceful diction. There is nothing redundant or ornate about his style, yet it has the very essence of directness and force. No man knew better when to maintain a discreet silence than Cæsar, or when to throw in an artless sentence which would place his actions in a favorable light. Yet little did this great Roman historian think when he hurriedly penned those chapters that they would be read by thousands of students through the lapse of nineteen hundred years. As samples of pure Latin prose his works will never die; they are immortal.

But yet with all these talents and while enjoying such absolute power he did not play the tyrant as many a man with such power had done before him. During these useful years of his life, 45 B.C., he worked assiduously for the good of the republic, but he was ahead of his generation as regards political wisdom.

Cæsar foresaw, and subsequent history substantiates his clear-sightedness, that Rome with her far-reaching dominions could be rightly governed only by an absolute ruler who would wield a strong sceptre. For aiming at the throne Cæsar has been severely blamed, but with the good of his country first and foremost, who can blame him for following the bent of his ambition? If he is to be censured, well,

"If men must sin, the fairest prize of sin  
Should be a throne: else piety is well."

There are many arguments which might be put forth in Cæsar's favor as regards the bestowal of the kingship on his head. Throughout his glorious career Cæsar had always acted with moderation. He had proclaimed a general amnesty to his bitterest foe who had sided with Pompey. He was the antithesis of Sulla in this

respect, indeed a direct contrast to all previous conquerors for he had always shown an unparalleled magnanimity to the vanquished. Surely his life-rule of moderation would not vanish when he mounted the throne! Shakespeare can well imagine an honest man like Brutus saying,

"And to speak truth of Cæsar  
I have not known when his affection sway'd  
More than his reason."

Again, Cæsar had made Rome, not the centre of a thousand feuds and factions, but the proud Empress whose possessions stretched in all their wealth and magnificence from the Orient to the Pillars of Hercules, and north to Britannia's shores and the mouths of the Rhine. Methinks, a diadem to grace the brow of such a leal and loyal son of Rome were but small reward and slight compensation for such an infinitude of mighty deeds and glorious achievements.

But true worth is ever at a discount. Singleness of purpose and nobility of soul is never discovered in a man, or woman either for that matter, till the grass grows over the grave, or till the halo of years floods the past with its roseate light and dispels the darkness of unappreciation. So it was in Cæsar's day; so it is in the 19th century; and so it will be to the end of time. Cæsar's glorious and useful career was cut short by the revengeful and dastardly dagger of the assassin.

Well might misguided Brutus say, even before the bloody act had been accomplished,

"Oh conspiracy  
Where wilt thou find a cavern dark enough  
To mask thy monstrous visage?"

The foul conspiracy succeeded however, and even now 1900 years from then, one's blood boils with indignation to read of the basest murder of all the centuries. What a depth of pathos and gentleness and grief in those three words "Et tu Brute!" that closed the life-work of immortal Cæsar, whose whole career might be summed up in that laconic sentence "Veni, vidi, vici!" once made use of as a despatch from the field of victory. By far the greatest tragedy of all the ages occurred in the old capitol at Rome when:

"Burst his mighty heart;  
And, in his mantle muffling up his face,  
Even at the base of Pompey's statue,  
Which all the while ran blood, great Cæsar fell."

The most infamous conspiracy of all time had done its bloody work, the daggers of the assassins, whetted by malice and envy, struck home, and that great generous heart lay still forever.

A SUPERINTENDENT who had held his post for twenty-five years was laid away to rest. Among those who had formed parts of the long procession to the grave were many former pupils. They had much to say of the man; they did not speak of his learning; they spoke of his character. "His effort was to make us better." What a noble epitaph to put on one's tombstone! What a noble occupation could be summed up in those words! The applicant for the teacher's place is asked a great many questions referring to history, geography, and mathematics; but the question of questions is, "Is your aim to make children better?" It matters not that a man can say he taught them geometry and geology in good style, he must feel as he enters the schoolroom each day, "I am here on a mission of good."—*N. Y. School Journal*.

TEACHER: "Tommy Taddles, what is the meaning of the word 'transparent'?"  
Tommy: "Something you can see through."  
Teacher: "Name something that you can see through."  
Tommy: "A ladder."—*Ex.*

## School-Room Methods.

### GEOMETRY IN THE PUBLIC SCHOOL.

By the kind courtesy of the author and of the publishers we are permitted to give the readers of the JOURNAL the benefit of an essay by Professor P. H. Hanns, of Harvard University. He is the author of several excellent mathematical works and professor of the History and Art of Teaching at Harvard. The publishers are D. C. Heath & Co., Boston; the title of the 52-page essay is *Geometry in the Grammar School*; price 25 cents. At the end of a very interesting and useful discourse on the method of teaching elementary geometry the author says:

"To sum up: Geometry has been introduced into the curriculum of the grammar school because of its educational value—because it yields a peculiar and important kind of knowledge and a highly desirable mental discipline.

That this educational value may be realized, teachers are reminded of the following principles:—

1. Early instruction in geometry should be object-teaching.

2. An accurate record should be made and kept by the pupil of his observations and of the definitions or propositions which his examination of the object or objects has developed.

3. In all this work the pupil should be led to express himself by drawing, by construction, and in words, as fully and accurately as possible. The language finally accepted by the teacher should be the language of the science and not a temporary phraseology to be set aside later.

4. The pupil is to convince himself of geometrical truths primarily through measurement, drawing, cutting, superposition and construction, not by a logical demonstration, but gradually (especially during the last year of the work) the pupil should be led to attempt the general demonstration of all the simpler propositions.

5. The subject should be developed by the combined effort of the teacher and the pupil, i. e. the teacher and pupil are to co-operate in reconstructing the subject for themselves. This is best accomplished by skilful questioning *without the use of a text-book containing definitions, solutions and demonstrations*. The teacher should follow a definite outline, which may be in the hands of the pupils: but, definitions, solutions, constructions, demonstrations and applications should be wrought out and preserved by the pupils. (It is assumed, of course, that the teacher has many books for personal inspiration and that he will, moreover, find in them many exercises which he can adapt to the needs of his classes). The importance of frequent reviews must not be overlooked.

6. The subject-matter of each lesson should be considered in its relation to life, i. e. the actual occurrence in nature and in the structures or machines made by man of the geometrical forms studied, and the application of the propositions to the ordinary affairs of life should be the basis and the outcome of every exercise. That is, the pupil must not only acquire knowledge and skill but he must learn to apply them. To this end many examples for practice are necessary and field work and excursions to shops and factories are well nigh indispensable.

7. Accuracy and neatness are absolutely essential in all the work done by the pupils.

It will be observed that principles 1-5 deal with the acquisition of the *individual notion* and the transition of the *general notion* referred to in the *general principle of method* on page nine, and that the remaining principles provide for the proper application of what has been learned.

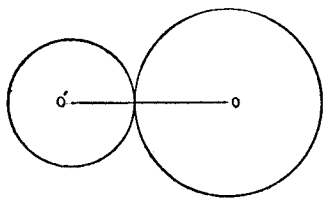
#### ILLUSTRATIVE CLASS EXERCISES.

In order to avoid needless repetition the illustrative class exercises which follow do not all exemplify all the principles above insisted upon. In the actual work of instruction it is expected that all those principles will be regarded in each exercise, so far as possible.

#### I.

The other day when we were looking at the printing press I called your attention to two

wheels in this position (Teacher draws two circles free-hand, thus):—



Teacher.—How would you describe two circles so situated? Pupil.—The two circles just touch each other without intersecting. T.—When two circles touch each other without intersecting we say that they are tangent (writing the word on the blackboard) to each other. T.—What are tangent circles? P.—Two circles are tangent to each other when they just touch each other (when they touch without intersecting each other). T.—Three of you may go to the board and write the definition of tangent circles that you have just given. The others may write it in their note books. Those who are at the blackboard may draw a pair of tangent circles. The class may observe. I shall ask another question presently. Did you know how to draw these circles so that they must be tangent? [Various answers, some of which may be correct but clumsily expressed]. T.—Some of you are right but we must have a better statement for it. Call the first circle O and the second O'. Now join OO'. OO' is called the *line of centres* of the two circles. What is the line of centres of two (tangent) circles? P.—The line joining the centres of two (tangent) circles is called the line of centres. T.—Write that on the board. The rest may put it in their note-books. Now compare the length of the line of centres with the two radii and what do you observe? P.—The line of centres is equal to the sum of the radii. T.—That is a part of the statement we have been seeking. Now when the line of centres is equal to the sum of the radii, what must be true of the position of the circles? P.—When the line of centres of two circles equals the sum of the radii the two circles are tangent externally. T.—That is the statement we have been seeking; you may write it on the board and in your note-books. T.—Can you think of any use to be made of this statement or *proposition*? Some of the pupils may see that it serves to inform the machinist where the centres of two wheels are to be placed in order that the wheels may just touch (friction wheels). Otherwise the teacher brings out this fact by questioning, or partially brings it out and sends the pupils to the machine-shop to get full information.

Who can give examples of tangent circles besides those which we saw in the printing press? Each of you find an illustration, if possible, to put in your note-books before next time.

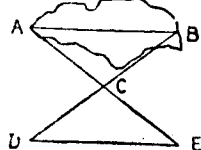
Draw two circles tangent externally, of which the radii are one inch and two inches respectively.

Draw five circles, each having a radius of one inch, and all tangent to a circle having a radius of two inches. Have you ever seen circles arranged in this way? Try to find examples: examine church windows. Can you draw a continuous line passing through the centres of all these outside circles? Draw and describe that line in your note-books.

NOTE.—Of course the case of two circles tangent internally would now be treated in a similar way. So also two circles wholly external, two intersecting circles, and two circles one of which lies wholly within the other.

II.

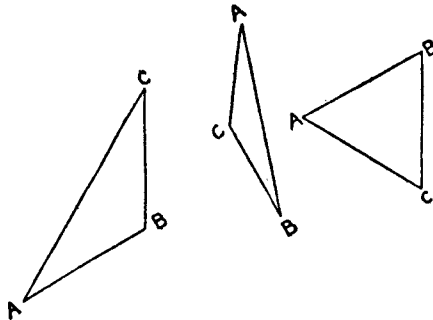
1. T.—Last week we went out to measure the length of — pond without rowing across it. You remember the lines we measured and the rough sketch of our measurements that we made at the time, especially you remember that the line that gave us the length of the pond was quite a distance away from the pond. (To a pupil.) You may go to the board and make a sketch of our measurements. Pupil puts this sketch on the board.



T.—Now what is the length to be measured? P.—AB. T.—What line did we measure? P.—DE because you told us that DE was equal to AB. T.—You may describe just what we did to get the line DE. P.—You sent two boys to the

two ends of the pond, where they placed two stakes A and B. Then one boy selected a point down the road at C from which the two stakes A and B could be seen. Then we measured the lines AC and BC. Then we extended the line AC beyond C until CE was equal to AC and placed a stake at E. We also extended BC beyond C until CD was equal to BC, and placed a stake at D. We then measured DE and found it to be 562 feet; you told us that DE was equal to AB, the length of the pond, and that we could prove it later. T.—That we will do now. Look at the two triangles ABC and CDE and tell me what parts of one were made equal to certain parts of the other. P.—AC equals CE, CD equals CB. T.—Are there any equal angles? P.—The angle ACB equals the angle DCE because they are opposite angles. [The equality of opposite angles has been shown before.] T.—Then, in a single statement, what parts of the triangle ACB are equal to corresponding parts of the triangle DCE? Draw two such triangles on your papers. Letter them, putting your letters inside the angles. (Query: Is it necessary to have the triangles in just the position in which we have them on the blackboard?) Cut these two triangles out. Place them on each other so that the vertex C of ABC falls on the corresponding vertex C of DCE, and so that AC falls on and coincides with its equal CE. Then observe what happens. P.—The two triangles coincide throughout. T.—Show me just what you mean. (Pupil points out that each angle of ABC coincides with each angle of DCE and that each side of ABC coincides with each side of DCE.) T.—Two pupils may go to the board and the rest may take their papers. What parts of one of these triangles are equal to corresponding parts of the other. Tell me *in words*, without naming the sides and the angle. Teacher finally obtains the statement from pupil: Two sides and the included angle of one triangle are equal to two sides and the included angle of the other. T.—What did we then find to be true? P.—All the parts of one triangle equal to all the parts of the other, or the triangles are equal throughout. T.—Put that into a single statement. Teacher obtains from P.: When two sides and the included angle of one triangle are equal respectively to two sides, etc. T.—We can show that this must be true always, as follows. The general proof of the proposition should now be given in the usual way, and need not be inserted here.

2. In the foregoing illustration the work was begun in the field. That may not always be practicable. In that case it is always possible to begin with drawing, as follows: Two pupils may go to the blackboard; the rest may take their papers. Each pupil may draw any convenient triangle ABC thus:—



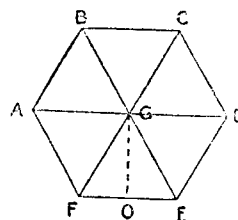
Now at a little distance draw A'B' equal to AB. At A' construct an angle equal to A, and at B' and on the same side of A'B', an angle equal to B. Produce the sides of these angles until they meet at C'. Cut the triangles out and apply A'B'C' to ABC so that A'B' falls on AB; then observe what happens, etc., in the same manner as before.

III.

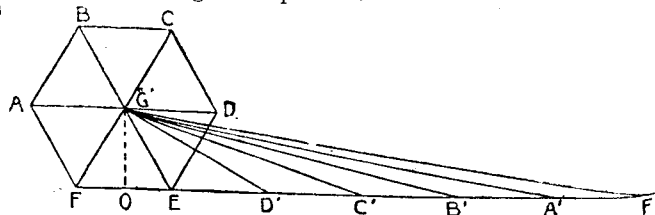
1. T.—It is often necessary to measure the areas of regular polygons, as, for example, regular pentagons or hexagons that form the floors of bow windows or other projections of buildings. Can any one give examples of such polygons? Such areas are very easily measured as follows: Two pupils may go to the blackboard. You may all draw a regular hexagon and find its centre. (This construction is made possible by previous work)

Connect the centre with the vertices. Draw the apothem and letter it GO. How do the triangles into which the hexagon is divided

compare with each other? What is the area of each? Give me a statement for the area of the polygon. By questions T. finally obtains the statement that the area of the polygon is six times one side multiplied by the apothem, divided by two. T.—This is a correct statement, but we can get another which we shall want to prove by and by in proving another proposition.



Produce FE to D' making ED' equal to ED, then produce FD' to C' making D'C' equal to DC, and so on until we have produced FE to F' making A'F' equal to AF thus:—



Now compare the area of the triangle FGE with each of the triangles EGD', D'GC', etc. P.—These areas are all equal. T.—Now compare the area of the triangle FGF' and the polygon ABCDEF. P.—The triangle and the polygon are equal in area. T.—Why? Compare the base of the triangle FGF' and the perimeter of the polygon: The altitude of the triangle and the apothem of the polygon.

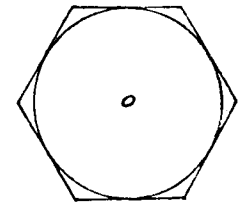
T.—Can you give me a statement for the area of the hexagon in terms of the perimeter and apothem? Teacher finally obtains the statement—the area of a regular hexagon is equal to half the product of its perimeter and apothem, and thence that the area of any regular polygon equals, etc.

IV.

The Area of the Circle.

We want to find out how much tin is required to make the bottom of this circular dish, which is just six inches in diameter. In other words we want to know how to find the area of a circle. This you may discover as follows, but it will take us some time, probably several days. But every step of the process is so interesting that I am sure you will not find the whole process too long.

1. In the first place you may inscribe a circle O in a regular hexagon—make a good large hexagon. Now bisect the arcs intercepted by the sides of the hexagon and draw tangents at the points of division so as to obtain a regular circumscribed dodecagon. Measure the circumference of O and the perimeter of hexagon and dodecagon respectively. Which of them is nearer



the length of the circumference? Bisect the arcs intercepted by the sides of the dodecagon and obtain a regular polygon of 24 sides. Compare the perimeter of this polygon with the circumference. Does it differ more or less from the circumference than the foregoing perimeters differed from it? T.—Suppose we continue this process, what length (line) does the perimeter of the polygon approach? P.—It becomes more and more nearly equal to the circumference of the circle, and when the number of the sides of the circumscribed polygon is very large the perimeter is no longer distinguishable from the circumference. T.—All this time the area of the inscribed polygon has been changing too. What value has it been approaching? P.—The area of the circle. T.—It is usual to express this by saying—if the number of sides of a circumscribed regular polygon be indefinitely increased the perimeter of the polygon approaches more and more nearly to the circumference of the circle and the area of the polygon to the area of the circle.

Now draw the apothems of the three circumscribed polygons you have drawn. T.—As the number of sides of the circumscribed polygons is increased does the apothem change? P.—No. It is equal to the radius of the circle.

Now we have shown heretofore that the Area of a regular polygon equals perimeter times

Primary Department.

REPRODUCTION EXERCISES.

RHODA LEE.

"I have tried to get this new class of mine to reproduce the stories of their reading books and I have failed," said a teacher of a senior first grade the other day. A serious admission of this kind from one more than ordinarily successful in her work surprised me somewhat. We talked over some of the difficulties, and on asking what preparatory training she had given her scholars, I learned that they had been taught the new and unphonetic words, and could read the lesson quite readily, but in reproducing in their own words, important parts would be omitted and facts mixed up in such a way as to render the story almost unrecognizable. I was not surprised that such was the case, and I tried to convince my friend before parting that she was expecting far too much when she looked for anything else than an extremely imperfect and distorted account of the lesson, when they had had no further preparation than a mere knowledge of the words. It suggested the impossible fact of reaching the top of a ladder without the aid of the steps. There are steps that must be taken before we can reasonably expect any such work from children. Of course from the time the child enters school he has had training in oral language, and as soon as he was able to write he had, in addition, written exercises, but we are not discussing the means whereby we can get our children to express intelligibly the thoughts they have gleaned from silent reading. First I would suggest that in the sight reading on the blackboard or in the "cut out" stories, you question as to the thought or story rather than ask the child to read the words as written. Then when we come to the book reading, after the new words have been taken up and time both at home and school given for silent reading, question to see what they have really gained. When the answers can not be given fully, or if there be any doubt as to some particular, allow time to re-read. Occasionally vary the exercise by giving the question first and ask the class to read within a certain time a paragraph in a new lesson in which the answer may be found. Following oral questioning comes that of the blackboard. A step in advance is the writing of a brief outline on the board. This the children follow in reproducing the story. After abundant exercise has been given in all these preliminary steps, and when the work can be done readily, the class will be able to do without the aid of outlines or questions and may produce the story as a whole.

The next time I saw Miss B—— she had tried a new plan and was better pleased with the results. I will give you her method just as I heard it. The lesson was No. VIII. in the First Book, part II., that in which Tommy asks his father to tell him of his young days. Before recess the children read the lesson silently. Then books were closed and returned, and the teacher asked a number of questions, bringing out

the facts in the proper order. During intermission the following questions were written on the board:—

1. What do you know about Tommy's birth-place?
2. What were some of the things he did when a little boy?
3. What accident happened to him?

The curtain was drawn over this until all the children were in their seats and ready for work. As this was the first exercise of this kind, Miss B—— made certain that the questions were clearly understood. Time was then given for writing. The answers were definitely written, and covered the whole story in the majority of cases.

This was certainly more reasonable work for beginners, and the plan, if persevered in, cannot fail to bring satisfactory results.

SIGHT READING.

(TO BE CUT OUT AND MOUNTED ON CARDBOARD)

SANTA CLAUS brought me a book on Christmas. I could not read it then, the words seemed so hard, but I can now.

A stray kitten came to our house last night. It cried so to come in that we opened the door. We kept it till morning, when we found it belonged to a little boy who lives in the same row as we do. He thought his kitten was lost.

How cold it was coming to school this morning. The little birds on the trees looked almost frozen. It was nice to get into our bright, warm school-room.

My cat is a good mouser. She will sit all day long beside a hole and watch for the mice. Last week she caught two in the barn and carried them to the house for the little kitten to eat. She would not look at them but just ran away.

We were given new papers at Sunday School yesterday. There was such a nice story in mine that mother said to take it to school. My teacher liked it, too, and said she would read it to us in the afternoon.

Uncle Bob gave Fred and Nellie each a brand new quarter of a dollar. Nellie had them both as Fred thought he might lose his. But somehow she lost one. At first she thought it must be Fred's. Then a better thought came and she said it was her own she had lost. But Fred would not hear of this. He said if she would not take it all they would have to divide the quarter.

March is a very cold and blustery month. It is a spring month but it feels as though it should belong to winter. My little sister's birthday is in March. She will be four years old on the tenth.

Mary and I are making new dresses for our dolls. Last Saturday mamma cut them out and showed us how they should be sewn. We have learnt how to do plain sewing and hemming, but mamma thinks we will need some help with the dresses.

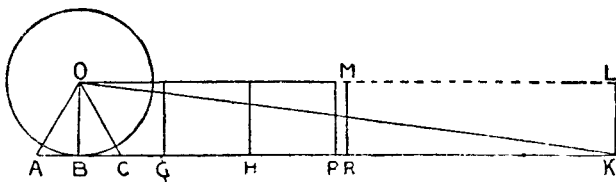
apothegm divided by 2: and of course this rule for the area of a regular polygon is true, no matter how many sides the polygon has, i.e., no matter how near its perimeter approaches the circumference of the circle. In fact you will be able to prove, by and by, that we may actually substitute in the formula for the area of a regular polygon the words *circumference* for *perimeter*, *radius* for *apothegm*, *area of circle* for *area of polygon*, and the resulting statement will be true. If that is so what statement gives you the area of a circle. P.—The area of a circle equals the circumference multiplied by the radius divided by two. T.—If A stands for area, C for circumference and R for radius, we may write briefly  $A = \frac{CR}{2}$ .

Now we have already learned that  $C = \pi R$ . Putting  $2\pi R$  in the place of C in the formula for the area and what do you get? P.—

$A = \frac{2\pi R R}{2} = \pi R^2$ . T.—Now translate your last result into words. P.—The area of a circle equals  $3\frac{1}{2}$  (accurately  $\pi$ ) times the square of the radius.

T.—Now we can return to our question about the amount of tin required to make the bottom of a circular dish, etc.

2. T.—You may also see how the area of a circle equals (about)  $3\frac{1}{2}$  times the square of the radius in this way. You may all draw the circle O at one end of your papers with a radius of one inch. Now draw the radius OB, and draw the



triangle OAC and suppose it to be one of the equal portions of a circumscribed regular polygon. Product BC to K, i.e., until BK equals in length the perimeter of the circumscribed polygon, whatever they may be. Now join OK, and compare the area of the triangle OBK with the area of the regular circumscribed polygon. P.—These areas are equal. T.—As the number of sides of the polygon is increased does BK grow shorter or longer? P.—Shorter. T.—What line does BK approach in length? P.—The circumference of the circle. T.—And what area does the area of the polygon approach? P.—The area of the circle. T.—But the area of the polygon, you said, equals the area of the triangle OBK. So the area of the triangle approaches the area of the circle as BK approaches the circumference of the circle. Now make the line BK just equal in length to the circumference of the circle, i.e., to  $6\frac{1}{2}$  times the radius OB; then, as you will be able to prove by and by, the area of the triangle equals the area of the circle. Now complete the rectangle OBKL, of which the triangle OBK is the lower half. Now bisect the base BK by the perpendicular MR. T.—The line BR is how many times the radius? P.— $3\frac{1}{2}$ . T.—Compare the area of the triangle OBK and the rectangle OBRM. P.—These areas are equal. T.—Lay off the radius on BR as many times as possible, calling the points of division G, H, P, and erect perpendicular at each of these points. You have divided the rectangle OBRM into three squares and a little rectangle, what is the value of each? P.—Each square is the square of the radius, and the rectangle is  $\frac{1}{2}$  the square of the radius, so that the rectangle OBRM is  $3\frac{1}{2}$  times the square of the radius. But the area of the rectangle OBRM equals the area of the triangle OBK, and the area of the triangle of OBK equals the area of the circle O. Therefore the area of the circle O equals  $3\frac{1}{2}$  times the square of the radius, or (accurately)  $A = \pi R^2$ .

ONE of the first, if not the highest aim of education should be to lead a child to think and reflect, to govern and control himself. Until this is learned, but little that is valuable is accomplished. The primary truth should be persistently taught in every school, that self-reliance and self-control form the only substantial basis of a noble character, and that it is upon the energy of will, developed and invigorated by careful training, and wisely directed, that success in life mainly depends.—*Supt. D. Leach.*

## Miscellany.

## THE TWO BRIDGES.

BY SIR EDWIN ARNOLD.

ONE ought never to grudge a little help and patient sympathy to slow-minded people trudging along the road of life. It does not cost much, and oftentimes it results in far more abundant returns than mere material gifts can bring. Most gifts, indeed, demoralize; and it often seems to close observers that more harm than good is wrought by money bestowed upon people never seen, through agencies never overlooked, without that element of human contact which redeems the idle and chilly business. But, if you can help anybody to help himself, that very frequently turns out satisfactory to both. A pleasant instance of it comes to my recollection connected with some early days in my life.

After leaving Oxford, and before receiving the appointment of principal of the Government Deccan College in India, I was chosen by the governors of King Edward's School in Birmingham as a master of the English division of that great educational institution, and passed a brief period there. The school-house, designed and erected by Barry, who built the Houses of Parliament, is of noble aspect and elevation, as everybody knows who is familiar with Birmingham. I have never once been in that city since the year 1836, and can therefore speak only from distant memory of the edifice, its massive structure, stained glass windows, spacious class rooms, and the noise of busy life forever echoing along its front, which looks, I believe, on New Street. But very pleasant days—albeit, no doubt, a little laborious—were those which were passed by me in that stately building, teaching the young mechanics and embryo manufacturers of the city, in company with fifteen or twenty other university men from Oxford and Cambridge, under the kindly sway of our amiable and learned head-master, Archdeacon Gifford. I became immensely attached to my two classes, and was, if I may venture to say so, somewhat popular in the whole school, chiefly, perhaps, because I tried to identify myself with the feelings of the boys, and to render their lessons pleasant and attractive, instead of cramming them artificially with verbs and facts and axioms, as prize poultry are fed. On a certain rather notable occasion, we in concert solemnly abolished the stick as an instrument of education. That detestable implement used to be duly placed on all the desks of the masters, along with the ink-stand and class-list, always to my profound disgust; for he who cannot teach without the stick had better get to some other business. But the thing always lay there; and one sultry afternoon, when Birmingham outside was blazing like one of its own blast-furnaces, and my young brass-founders were all languid with the heat and the involved rhetoric of Cicero, I myself being, possibly, at the time a little dyspeptic, there was a disturbance of order near my chair. "The sight of means to do ill deeds makes ill deeds done," as Shakespeare truly writes. Thus it was that I caught up my cane and gave a hasty cut upon the too-tempting back of one youth who seemed the offender.

"If you please, sir," said the boy, squirming, "I did nothing! It was Scudamore that kicked me in the stomach, underneath the desk."

Now, it is obviously difficult to pursue the study of "De Amicitia," quietly and satisfactorily if you be interrupted in such a manner; and inquiry revealed that the statement was indeed true. Scudamore had demanded from his neighbor, quite illegitimately, the explanation of an obscure passage, and, not being attended to, had taken this much too emphatic means of enforcing attention. Meantime the most guilty party appeared to be myself; and, having called the class up, I said to the doubly-wronged boy, who was still "rubbing the place":—

"It is I who am most to blame for having dealt you an undeserved blow. Take that cane and give it back to me, as hard as you got it."

"Ah, no, sir?" the lad answered; "I can't do that."

The whole great schoolroom was now listening, masters and all; and the scene had become a little dramatic and important. It was necessary, therefore, to go through with the matter; and I insisted.

"Jones, you must do as I tell you. I insist. It is the only way in which we can all get right again."

"I really can't hit you, sir! It didn't hurt me so very much, sir! If you please, I don't want to do it," said Jones.

"Well," I replied, "but you must obey me; and, if you disobey, I am sorry to say that I shall make you write out that page of Cicero three times, staying in to do it."

Whether it was desperation at this dreaded alternative (for it was cricket time) or whether it was that the sparkling eyes of his class-fellows around him, all evidently longing to have the good luck themselves of "licking" a master, suddenly inspired Jones, I know not. What I do know is that he reached forth his hand, took the cane, and dealt me no sham stroke, but the severest and most swinging cut over my shoulders. I had no idea that the ridiculous implement could sting, as it did, like a scorpion. I had never once been caned or flogged at school, nor had ever received a blow of any sort which I did not promptly return. Consequently, the sensation was something of a revelation; and I could well understand at last how mortally boys must hate forever and ever the "glories which were Greece, and the grandeurs which were Rome," when they are recommended to their unwilling intellects by these cowardly and clumsy methods.

"Rubbing the place" in my own turn, I managed to thank Jones for his obliging compliance, and then said to him:—

"Break that detestable weapon across your knee and throw it out of the window. Never again will we have anything to do with such methods here."

But it is time some reason were furnished for entitling my recollections "The Two Bridges." In truth, the thought of Birmingham reminded me of one afternoon when there came to the gate of my garden in Eggeston the boy I considered the most stupid and hopeless in all my classes. He was tall and ungainly, although good looking; very shy and silent; docile and respectful enough, but always behindhand with some among his tasks, and, consequently, forever at the bottom of his form; the sort of lad no master troubles himself about. I must confess I had given up all idea of making anything out of him, at any rate as regarded certain important lessons,—a helpless, dull, unwilling, profitless dunce,—so I imagined; and so I had reluctantly come to treat him. With him came into my garden a pretty girl, a year younger, who explained that "Trotter" wanted badly to see me, but did not dare to venture alone; and so, being his friend and living with his mother, she had accompanied him. Possibly that made me more indulgent to the hulking, stupid, silent youth; for there were great, bright tears in the girl's blue eyes, and she held the big, nervous fellow by the edge of his coat, as if she feared he would run away from shame or fright. And then she softly related how good a boy he was to his mother, and how hard he worked to learn his school tasks, and how miserable he became at his repeated failures, and his perpetual ignominy at the bottom of the form, and how all-important it was that he should pass a forthcoming examination, on which his future bread and meat would depend, and that she had accordingly persuaded him to come straight to me, and now desired very ardently to make me understand that "Trotter" was burning with desire to win my good opinions, and that she and his mother thought he could not be really stupid, because there were other lessons, outside geometry and what not, which he always did well, and he had, moreover, invented two or three remarkable improvements for a steel-rolling factory. So I made the poor lad speak for himself; and then he ruefully explained how he had never for one fleeting moment understood any atom of Euclid, nor why it was ever written or taught at all, with other special difficulties in his course,—certain subjects being all the time, as I myself well knew, easy enough to him. The truth was, he was no more stupid than the other average "Brummagem" boys. He was a proud, silent, well-meaning lad, who had been vilely taught at the beginning; for teaching is a fine art, and very few really understand it. His humility and earnestness melted me, as well as the tears in the blue eyes of his little friend. I sent her home and made him stop to tea, and that afternoon we tore up Euclid by the roots: we divested ourselves of all the false terror inspired in young minds by that ancient name; we went behind the old Alexandrian geometer, and found him out in his plan, his purposes, his beginnings, his fallacies, and his merits. I told "Trotter" not to be ashamed at any little personal difficul-

ties, since King Ptolemy had boggled like himself at the foot of the "Asses' Bridge," and had asked Euclid one day, in Alexandria, if he could not make it all a bit easier, to which the ancient mathematician replied that "there is no royal road to learning." "But there is, Trotter," I said, "a very broad and good King's Highway by means of which nothing is difficult, nothing abstruse. It is just as easy to learn the binomial theorem, or Persian, or Sanskrit, or Euclid, or navigation, or chemistry, as it is to mow grass or shear a sheep. The secret is to be rightly taught, or to teach yourself rightly from the beginning, making sure of every step taken, and bearing in mind that most learning is very simple, and that most school books do their very best to render it obscure and senseless." Well, with that we built up Euclid for ourselves. Trotter came to me privately, day by day; and we attacked that fatal Fifth Proposition of the First Book as Napoleon his enemies at the Bridge of Arcola. We surveyed it, we made colored sections of it. So that he ended by knowing all its intricate triangles. We mapped out and marked its angles and lines, so that we came to be able to prove the theorem by colors or numbers just as well as letters. We worked out deductions and corollaries from it, until, like a kind of geometrical Clapham Junction, or the big railway bridges one over the other at Birmingham, we had all sorts of supplementary propositions built over and under it. And, as he grasped the *raison d'être* of Euclid, his terrors changed to pleasure. The lad became the finest demonstrator in the class, always at top for geometry. His diagrams, charmingly drawn for him by the girl with the blue eyes, were the envy and wonder of the form; and from the despondent victim of conventional and foolish instruction he developed, by getting use of his free reason, into what he was meant for,—a sharp-witted inventor, with an eye every bit as keen as Euclid's for proportion, relation, and subtle feeling of form. "A fine thing," I used to say to him, "if a bald old Greek gentleman of Ptolemy's time is to set puzzles in squares and circles and triangles that an English boy in Birmingham can't understand! Get to the heart of it. Don't grant him anything. Don't be quite sure that the three angles of every triangle are equal to two right angles; and don't at all allow, until you are yourself fairly convinced, that parallel straight lines produced will never meet. Euclid could not have made a steel pen or electro-plated a brass cup; and you must forget the miserable learning by rote forced upon you by imposters who call themselves 'teachers,' and begin where Euclid began." As I have said, the lad became confident, joyous, successful. He passed with elastic step over the "Bridge of Asses," took prize after prize, and when I left Birmingham was on the fair road to be head of his division in the school.

Well, that was one Bridge. As I was crossing Canada many and many a year afterward, in the new and wonderful region which extends between Vancouver and Winnipeg, we came upon a "junction." If all Englishmen and Scotchmen and Irishmen comprehended what a magnificent, imperial estate they own in that splendid country on both sides of the Rockies, I think they would not stay at home so doggedly to grow wheat at the value of its cleaned straw, and to poke about for a miserable living in the moors of the North and the bogs of Clare and Donegal. If capital has its great resource in suspension of work, labor has its best refuge in emigration; and it is mainly the foolish, blind clinging to one spot of the globe, together with the apathy of governments and colonial administrations, which has created the Irish Home Rule difficulty, and which chokes the labor market to an unprofitable point. However, all this is politics and economics, with which these pages have nothing to do. What I would say is that we came through the superb scenery of the Rocky Mountains, past the glories of the Glacier Station, and Banff, and down the foothills to Regina and the prairies, right upon a very important ceremony which was impending at a large prairie town. It was to celebrate the opening of a most remarkable bridge, built over a most impetuous and unrestrainable river, and connecting in a most momentous manner for commerce and intercourse the sister States of a great province. We had to stay overnight at the station, and decided to be present at the inauguration of the new bridge.

Thus it was that, having received a very polite invitation to attend, I repaired to the superintending engineer of the district, in order

to obtain some particulars of time and place. The house was one of those commodious, wholesome, clean-looking abodes of wood which they raise so quickly and paint so prettily in that land of lumber, with all the prairie for its back garden, and a long post and rail in front to which to tie up "any man's horses." Inquiring at the door, I was told that the superintending engineer was for the moment out, but his wife, whose name I did not catch, would see me. Looking round the walls of matchboard in a casual manner, I spied, to my astonishment, among pictures of various kinds, a photographic view of King Edward's School, Birmingham, and close beside it—the Fifth Proposition of the First Book of Euclid, with the angles and triangles done in diverse colors, and underneath it written, "My First Bridge." Near at hand was a truly superb picture of the new Canadian bridge, in all its glory of iron and timber—with the rushing, forest born river innocuously whirling ice slabs and slags beneath its wide arches; while in the corner I read the words, very neatly inscribed, "His Second Bridge." Just then the door opened, and there came in the nicest, brightest, most open-faced matron that can be imagined, leading a handsome boy of ten or twelve years by the hand. In an instant, after all these years, we had recognized each other. She was the very same girl with the blue eyes who had brought Trotter up to me in his deep woe about Euclid; and Trotter—none other than the melancholy Trotter—was the great and glad mechanical hero of the occasion, the triumphant engineer who had spanned the Red River with his world-admired bridge. "His Second Bridge!" she had proudly written it herself upon the plan, to go beside that diagram of the "Bridge of Asses"; although, indeed, my old pupil had done lots of other wonderful engineering work before erecting that *Pons Asinorum* over the great Canadian stream. He had made a fortune,—in fact, was one of the biggest men in his province.—*Published, by permission of the Author, by Mr. Benjamin Armitage.*

CHOOSE THE RIGHT WORD.

PLACE a list of words upon the board similar to the following:

- |      |            |      |               |      |           |
|------|------------|------|---------------|------|-----------|
| 1. { | Residence. | 2. { | section.      | 4. { | posted.   |
|      | house.     |      | neighborhood. |      | informed. |
|      | live.      | 3. { | propose.      | 5. { | most.     |
|      |            |      | purpose.      |      | almost.   |

Correct the errors in the following; the proper word appears above:

- We shall not reside in our new residence this year.
  - The people are sociable in our section.
  - I propose to write a true statement.
  - This man is well posted.
  - I am most through.
- A little study will find an abundance of such exercises.
- Put two or three of these sentences on the board daily; when exhausted construct others. Have pupils write out the correct statements, bring them to the class and inspect:
- The (sculptor, sculpture) (exercised, exercised) his happy skill.—*Dryden*.
  - Vines clustered around the lofty (pillars, pillows).—*Hans Andersen*.
  - The three weird (profits, prophets) on the heath.—*Irving*.
  - (Great, grate) character is as (rare, rear) a thing as (great, grate) (genus, genius).—*Lowell*.
  - A wise ruler (exceeds, accedes) to the demands of the (populace, populous).
  - The Zuider Zee was formed by an (irruption, eruption) of the Atlantic Ocean.
  - The cause invariably (precedes, proceeds) the (affect, effect).
  - A wise man (accepts, excepts) good (advice, advise).
  - We know in part, and we (prophecy, prophesy) in part.—*Bible*.
  - The (medal, meddle) bore an (ingenious, ingenuous) (devise, device).
- Continue at pleasure. It is well to use words found in the reading lesson, as this shows other combinations of words.—*Our Country and Village Schools.*

Examination Papers.

PROMOTION AND REVIEW EXAMINATION, EAST MIDDLESEX, NOVEMBER, 1893.

GEOGRAPHY—2ND TO 3RD CLASS. TIME, 1½ HOURS.

LIMIT OF WORK—SECOND CLASS—Local Geography. Map of school grounds, neighborhood, township, county. Definitions of the chief divisions of land and water. Talks and stories about animals, plants, people, air, sun, moon, and shape of the earth. Pointing out oceans and continents on the map of the world.

- Would you prefer to live in a flat country or in a hilly country? Give three reasons for your preference.
- (a) Make a list of six domestic animals and another of six wild animals that have their home in this country.  
(b) Tell the use of each, and why some are destroyed and some are preserved.
- (a) Draw an outline map of the County.  
(b) Mark the township boundaries and print the names of the townships.  
(c) Place a star to mark the position of this school-house.
- Define each of the following and tell where you have seen an example of each:  
(a) valley.  
(b) shore.  
(c) island.  
(d) river.
- (a) What do you think the nearest railway station?  
(b) In what direction is it from this school-house?  
(c) Tell the name of the railway it is on, and two or more towns to which you may go by its trains.
- In which continent is  
(a) The Province of Canada?  
(b) England?  
(c) China?

- Tell what position Europe occupies with regard to Asia, Africa and the Atlantic Ocean.
- What direction of wind most usually brings rain in this part of the country?  
75 marks; 25 minimum to pass. Values—1.—6; 2.—4+6; 3.—12+12+2; 4.—16; 5.—2+2+2; 6.—2+2+2; 7.—6; 8.—2.

3RD TO 4TH CLASS. TIME, 2½ HOURS.

LIMIT OF WORK.—Definitions continued; first, accurate knowledge, then the memorizing of the definition. The great countries, large cities, and most prominent features on the Map of the World. Maps of the County, of the Province of Ontario, of Canada and America. Map drawing. Motions of the earth, seasons, zones.

- Define and locate a Canadian example:  
(a) Wooded country.  
(b) Prairie.  
(c) Mining district.  
(d) Marsh.  
(e) Fruit-growing county.  
(f) Agricultural tract.
- Describe the use of, and tell where one is:  
(a) Telephone.  
(b) Canal.
- Illustrate by a drawing the shape of a peninsula, of an island, of a gulf, of a river, and of a mountain range.
- Draw a general outline of the map of the three Counties of Essex, Kent and Lambton, marking the boundaries and county towns.
- (a) Draw an outline map of N. America.  
(b) Mark the Countries.  
(c) Mark the Provinces of Canada.  
(d) Mark Winnipeg, Chatham, London, Toronto and Montreal.
- Describe a trip from here to St. Petersburg, Russia, naming in order the countries passed through and the most important cities on your route.
- In what respects do the physical features of North America resemble those of South America?
- (a) Name four kinds of native trees.  
(b) Tell how to distinguish them.  
(c) Tell a particular use for each.

- (a) Of what use may it be to a person to know the position of the North Star.  
(b) Tell how to find it.

Count 100 marks a full paper; 33 minimum to pass. Values—1.—18; 2.—6; 3.—10; 4.—10; 5.—10+5+7+5; 6.—10; 7.—10; 8.—2+4+4; 9.—3+3.

UNIFORM AND PROMOTION EXAMINATION, NOV. 30TH AND DEC. 1ST, 1893, UNITED COUNTIES OF STORMONT, DUNDAS AND GLENGARRY.

GEOGRAPHY—CLASS III.

- What is meant by the natural divisions of the earth's surface? Name five of them.
- Define map, globe, hemisphere, tropic, equator.
- What is a zone? Make a picture of the western hemisphere. Show on it the name and position (1) of the five zones, (2) of the great circles bounding them.
- What and where are the following:—Dar-rien or Panama, Nova Scotia, Newfoundland, St. Lawrence, Andes, Superior and Belle Isle?
- Make a map showing part of Lake Ontario and the names and positions of the counties (with their county towns) bordering on its north and west sides.
- Draw a map of the Counties of Glengarry, Stormont and Dundas, showing (1) location of the townships, (2) railroads (with stations), (3) principal villages, (4) rivers, (5) the county town, and (6) boundaries.  
Values—22½ each.

CLASS IV.

(Marks will be allowed for answers to only five of the questions.)

- What is the cause (1) of the inequality in the lengths of the days and nights; (2) of the changes of the seasons.
- What is meant by the earth's orbit? plane of the earth's orbit? axis of the earth? ecliptic? planet?
- Show by means of a map, the positions of (a) the political divisions of North America, (b) the Rocky and Alleghany Mountains, (c) the Mississippi River (with four tributaries); St. Lawrence, (with principal branch), and Mackenzie; (d) Lakes Ontario, Erie, Huron, Michigan and Superior; (e) Gulfs of Mexico and St. Lawrence, Bays Baffin and Hudson.
- Mark on the map (No. 3) the location of San Francisco, Victoria, Winnipeg, Toronto, Ottawa, Montreal, Washington, New York, New Orleans, Halifax, Chicago.
- Draw a map of the Province of Ontario, showing (1) its physical boundaries, (2) counties touching Lake Huron and Ottawa River, (3) Georgian Bay and rivers emptying into it, (4) Sarnia, London, Owen Sound, Toronto, Brantford, Hamilton, Kingston, Ottawa, Cornwall, (5) position of the main branches of the C. P. R. and G. T. R. passing through it.
- What countries and bodies of water will be passed over by a person travelling from Montreal to Calcutta (a) by the Western route? (b) by the Eastern route?
- Why are the Polar Circles drawn on the map or globe about 23½° from the poles? and the tropics about 23½° from the equator?  
Values—15 each.

AN effective way to excite interest, and that of the right kind, in school, is not to remove difficulties, but to teach the pupils how to surmount them. A text-book so contrived as to make study mere play, and to dispense with thought and effort, is the worst text-book that can be made, and the surest to be, in the end, a dull one. Secure, therefore, severe study. Let the pupils see that you are aiming to secure it, and that the pleasure that you expect they will receive is that of firmly and patiently encountering and overcoming difficulty; that it is your province to lead them forward, and not to carry them. They would soon understand this and like it.—*Jacob Abbott.*

## Question Drawer.

M.L.H.—We find, on inquiry at the Education Department, that the regulation which we quoted from the official volume of Rules and Regulations, was last year altered to the following less ambiguous form:—

The following certificates for Public School purposes may be awarded to candidates who pass the prescribed examinations of the School of Pedagogy:

(a) Inspectors' certificates to teachers with first-class certificates, who have passed the written examination in methods prescribed for specialists, and have the non-professional qualifications required for specialists in any except the commercial department, or a degree in Arts from the University of Toronto with first-class graduation honors in any one of the recognized departments in said University, or an equivalent standing in any other University of Ontario, and who have had at least five years' successful experience in teaching, of which at least three shall have been in a Public School.

(b) First-class certificates to those who have had at least two years' successful experience in a Public School, as certified by the Public School Inspector or Inspectors under whom they have taught.

(c) Second-class certificates to those who have not had the experience required in (b) above.

For further particulars write to the Education Department for a circular.

A.B.—We should not suppose that it would be proper to mark pupils on Register as if present during the days when the teacher is attending the Institute, seeing that such marking would not represent the exact fact. The marking should probably be as in the case of any other holiday. But it is always better to write the Department and procure official instructions in regard to all such matters.

(b) We do not know. Write to Col. Parker's publishers.

(c) No. We have not hitherto issued an index to the annual volumes of the JOURNAL.

W. McK.—The authorized text-book in Physiology and temperance has been ready for some weeks. It can be had from this office, from the publisher, William Briggs, at the Methodist Book-Room, or from any bookseller advertising in our columns. We do not know whether any allowance will be made by the Examiners for the fact that it was not procurable for a few weeks after the commencement of the school year. If we can get any information in regard to it we will publish it in this column.

A SUBSCRIBER.—Yes, most certainly. A man or woman at twenty-two years of age should despair of no reasonable achievement, no matter how defective and faulty his training up to that time. Many a man who did not know his alphabet at twenty-two has won fame as a scholar and thinker. In the hands of a true teacher, or even by dint of private study and effort, if he has but ordinary ability and a fair share of stick-to-itiveness, he may yet accomplish wonders.

J. W. H.—We have no means of knowing what shape the questions in the Public School Leaving Examination will take, save from the official circular. If you have not a copy of that send to the Education Department for one. Your other questions are sent to the English Editor. Watch English Department for answer.

J. G.—You will find answers to most of your questions above. The authorized book differs materially, we think, from its predecessor. We should advise you by all means to get the authorized book.

X.—(a) A protective tariff is a tariff in which the duties on the various articles imported from other countries are arranged with a view, not to obtaining the greatest amount of revenue, but to protecting certain articles of home production from the competition of similar products of

foreign countries. A revenue tariff is, as the name implies, one framed simply with a view to obtaining revenue. For instance, Canada does not produce tea or sugar, but does manufacture boots and shoes and sewing machines and agricultural implements. Hence its people must import the former articles or do without them. If they do import them they must pay the duty on them, and that duty goes into the treasury and adds to the revenue. But they need not send abroad for the articles which are made in the country, and are not likely to do so even if no duty is imposed, unless those of foreign production are thought to be either cheaper or better than those of home production. When the latter is the case, the Protectionist theory is that a duty should be imposed upon the foreign articles high enough to make it to the interest of the farmer or other Canadian purchaser to buy the home-manufactured articles. Of course, if this duty is made so high that no one will any longer send abroad for what he wants, the tax on these articles will produce no revenue to the Government, because none of the articles will be imported, but the sales of the home-made article will be increased and in most cases the prices also, the difference in price going not to the Government but to the home producer.

G. E. A.—The only books with which we are acquainted containing notes on third-class literature are Dawson's Notes on the High School Reader published by the Rose Publishing Co., and one by Wells and Sykes, published by W. J. Gage & Co. Perhaps some reader can tell you of another. We do not know where copies of examination questions, save in special subjects, can be obtained. We do not think they are procurable.

N.B.—Questions on English, Mathematics and Science are sent to the editors of those departments, and will be answered in due time.

## Correspondence.

To the Editor of the EDUCATIONAL JOURNAL:

SIR,—The example of results in "Child Study," which appears in the third column, page 254, of the last issue of the EDUCATIONAL JOURNAL, appeared about two weeks ago in the New York School Journal. To the editor of that paper I sent a letter, of which I give a copy below. If you will kindly insert in next issue of the EDUCATIONAL JOURNAL, this letter, and the copy of that sent to the School Journal, you will much oblige.

Yours very truly,

Ottawa, 10 Jan., 1894. JOHN A. MACCABE.

To the Editor of the NEW YORK SCHOOL JOURNAL:

SIR,—In the Journal of the 23rd inst., occurs the following. [Here is given the extract as published by your Journal.]

Permit me to ask, why an Irish boy?

This little touch of nature on the part of some of your learned professors and doctors reminds me of another instance of the gratuitous insult which is frequently offered to the Irish race by those who do not possess half the honor or politeness of that race. I turn up that well-known book, "The Quincy Methods," and I find on page 198: "Patrick [observe the name] what did you play at recess?" "I played drunken man." Comment is unnecessary.

THE belief that good behavior is to be forthwith produced by lessons learnt out of school-books is a superstition.—Spencer.

ATTENTION is directed to the remarkable progress of the North American Life Assurance Company as set forth on another page of this issue. Nothing could more fully show the benefits of insurance in this Company than the summary of their statement for the financial year ending December 30th, 1893.

## Book Notices, etc.

A NEW edition of the ever popular Rip Van Winkle and Legend of Sleepy Hollow has been published, with fifty-three illustrations, by Geo. H. Boughton, A.R.A. It is a dainty little volume, and the illustrations are exceedingly clever and realistic. Old Rip and Ichabod Crane appear before the reader in many curious and appropriate aspects. Both these stories, of course, are such as lend themselves most happily to the purposes of the decorative artist. Illustrations, it has been well said, either make or spoil a book. In this case they are more than usually happy. The design with which the cover is embellished is suggestive, the thistle-down and poppies typifying the thought and significance of the tales. (MacMillan & Co., London and New York; The Copp-Clark Co., 9 Front St. West, Toronto).

## A LANGUAGE LESSON.

Fill blanks with *set, sat, sit, sitting* or *setting*.

1. The hen is — on her nest.
2. The sun — behind the hills.
3. Who — the basket on the floor?
4. The basket is — on the floor.
5. Will you — on the sofa?
6. I have — there as long as I wish to.
7. John — the box on the table, and it will — there till he takes it away.
8. Where were you — when you — your watch?

For dictation.

1. James' aunt bought ten cents' worth of cheese.
2. To-morrow will be the eighth of February.
3. William, Thomas, and Mary were absent Wednesday.
4. Cross your t's and dot your i's.
5. I'm sure he isn't mistaken.

Fill blanks with *rise, raise, rose, raised, or risen*.

1. The river has — a great deal.
2. Will you — from the floor?
3. I should have — earlier.
4. Be so kind as to — the lamp.
5. I — at six o'clock.
6. Farmers — corn.
7. The sun has —
8. The money will be — to-day.

—Intelligence.

DEAN STANLEY, in his life of Arnold of Rugby, thus describes the methods of teaching of this famous man:

"His whole method was founded on the principal of awakening the intellect of every individual boy. Hence it was his practice to teach by questioning. As a general rule, he never gave information, except as a kind of reward for an answer, and often withheld it altogether, or checked himself in the very act of uttering it, from a sense that those whom he was addressing had not sufficient interest or sympathy to entitle them to receive it. His explanations were as short as possible—enough to dispose of the difficulty, and no more; and his questions were of a kind to call the attention of the boys to the point of every subject, and to disclose to them the exact boundaries of what they knew or did not know. With regard to younger boys, he said: 'It is a great mistake to think that they should understand all they learn; for God has ordered that in youth the memory should act vigorously independent of the understanding—whereas a man can not usually recollect a thing unless he understands it.' But in proportion to their advance in school he tried to cultivate in them a habit not only of recollecting facts, but of expressing themselves with facility, and of understanding principles on which their facts rested. 'You come here,' he said, 'not to read, but to learn how to read.'"

## A Year of Great and Unprecedented Prosperity.

THE thirteenth Annual Meeting of the North American Life was held at the head office, 22 to 28 King St. West, Toronto, on Thursday, the 25th of January, at which there was a large and influential attendance. The report shows that 1893 was its most successful year. The insurance written was in excess of any previous year, while the terminations showed a decrease—an excellent feature—and the total amount of insurance in force reached the large amount of \$13,220,192. A substantial increase was made in interest receipts, and the amount received from that source was more than sufficient to meet all death and endowment claims, and also the payments to annuitants during the year. A very large addition was made to the reserve and surplus funds, being over 58 per cent. of the year's income. The addition made to the net surplus exceeds that of any former year, and aggregates the relatively large sum of \$297,062.26.

Summary of the full financial statement and balance sheet for the financial year ending December 30th, 1893:—

Cash Income.....	\$ 482,514 08
Expenditure, (including death claims, endowments, profits and all payments to policy-holders).	216,792 45
Assets.....	1,703,453 39
Reserve Fund.....	1,319,510 00
Net Surplus for policy-holders.....	297,062 26

Audited and found correct.

JAMES CARLYLE, M.D.,  
Auditor.

WILLIAM MCCABE,  
Managing Director.

The report of the Consulting Actuary, Mr. W. T. Standen, well-known as an eminent authority, went very fully into the position and affairs of the Company, and in tendering his congratulations to all those connected with it for the excellent position it had attained, he stated it was gratifying to him to again report that the actual amounts he was able to allocate to investment policies maturing in 1894, was in excess of the estimated results in the book of estimates in use by the Company's agents. He considered it a matter of encouragement that insurers showed such a marked preference for the Company's twenty year investment plan of insurance, as under that form of insurance it was likely that more satisfactory results would be given to policy holders than on any other plan of insurance. In conclusion he stated that the excellent condition of the Company and its financial management is an augury of future strength, based upon a business that appears to be eminently satisfactory in every detail and requirement. The President, Mr. John L. Blaikie, in moving the adoption of the report, made an admirable address. He referred to the extraordinary financial disturbances in many countries, and especially in the neighboring republic, and said it was cause for congratulation that our own financial institutions remained in such splendid condition, and that so many of them were showing such marked progress, even during such a period of depression. In the case of the North American Life, he pointed out that last year had been the most successful in the Company's history, and made a comparison with the standing five years ago and at the close of 1893. The progress during that short period of time had been something remarkable,

for instance the assets have increased by 151 per cent., the insurance in force by sixty-seven per cent., the cash income by seventy-five per cent., and the surplus, in which the policy holders are most interested, has made the wonderful increase of 481 per cent. In drawing attention to this great increase in surplus, the President pointed out that the aim was to make it a policy holders' company, and from the results they had already paid policy holders, it was felt they had succeeded in doing this, and moreover, from the position attained by the company, there was no reason why it could not do as well for its policy holders, if not better, than any other company. To illustrate this he pointed out that the North American Life during the past year had put by to its reserve and surplus fifty-eight per cent. of its income, whereas from the figures obtainable from the last official reports, there was no American or Canadian Company who had been able to show the like result of saving in one year. The companies included in this comparison were the leading American Companies doing business in this country.

President Blaikie in concluding his speech impressed upon his hearers the fact that notwithstanding the large increase in business, it had all been accomplished at a reduction in the ratio of expense, which is in strong contrast to some of the large companies, whose expenses, instead of showing any reduction show an increase, all of which is detrimental to the policy holders. Vice-President Hon. G. W. Allan, in seconding the resolution, said he fully concurred in the able remarks of the president as to the great progress and success of the North American Life. He said that he felt proud indeed that they had succeeded in building up such a successful institution as the North American Life. He referred in very kind terms to the late lamented President, the Hon. Alex. Mackenzie, and told those present how, although the deceased gentleman was of late in feeble health, he freely gave the Company the benefit of his great ability and excellent judgment.

Mr. James Scott, Merchant, and Director of the Dominion Bank, in moving a resolution of thanks to the Company's auditor, which was seconded by Mr. John Drynan, Director of the Traders' Bank, said that he had given a great deal of time and attention to the Company's investments, and had at the close of the year made a careful investigation of the same. He found that all the investments were made on a most conservative basis, that the interest was well paid, and, moreover, he did not see that there was any likelihood of the Company's investments resulting in any loss. He mentioned that the amount of outstanding interest was small, in fact it only averaged about 3/4 of one per cent. of the total cash investments of the Company, and when compared with other financial institutions it would be found that this was an exceedingly favourable showing, and fully demonstrated what he said as to the excellent investments held by the Company.

On the motion of Vice-President J. K. Kerr, Q. C., seconded by Wm. Lount, Q. C., the allocations of profits to policies in the investment class maturing in 1894 as reported by the Consulting Actuary, was adopted.

His Lordship, Bishop Campbell, in moving a vote of thanks to the Directors, Officers and Agents, said that he was one of the oldest policy holders in the Company, in fact he had almost all his insurance in the North American Life, and having been somewhat intimately connected with its working and knowing

well the inside management of it, said it afforded him very much pleasure in being present and bearing testimony to the great care and skill that has always been shown in the management of the Company.

Hon. S. C. Biggs, Q. C., seconded the motion, and in doing so, said:

"When things are well it is perhaps well to remain quiet. It is perhaps as good a testimony as I could give of my satisfaction, yet if any expression in words is needed I am glad to support the resolution, for if anything can please a policy holder it is to know that his investment is a good one, that everything pertaining to it is upon the soundest and most economical basis, and from the report which I have heard to-day I am satisfied that the Company is conducted upon those sound business principles which enable a policy holder to sleep easy, knowing that if he never wakes up the amount of his insurance will be paid to his family at any rate. Perhaps that ought to be enough to say about any investment, but I think that the energy with which the directors have conducted the business of the Company and the fine showing that they have made in their surplus should give courage to all their agents and friends and be a great inducement to others to follow my example and take as large a policy as they can in this Company.

Hearty votes of thanks were tendered the board, officers and agents of the Company, and at a subsequent meeting of the newly elected board Mr. John L. Blaikie was unanimously re-elected President, and Hon. G. W. Allan and J. K. Kerr, Q. C., Vice-Presidents.

### SOME THINGS WE ARE GOING TO TRY.

1. To HAVE brighter, shorter opening exercises which shall give the key-note for the day.
2. To omit calling the roll. It takes valuable time and is *old-fashioned*, besides.
3. To secure, more than ever before, distinct articulation in reading.
4. To insist upon erect postures. Position of body so influences attitude of mind that we cannot emphasize it too much.
5. To be so courteous to our pupils under all circumstances that they cannot fail to catch a little of our manner and bearing.
- To realize more deeply than ever the value of nature studies, and to put ourselves in such an attitude toward the work that from it we may gain the *real* results in aroused enthusiasm, deepened interest, and a broader love for the Maker of all.
7. To read outside of the text-books prescribed for our grade. By that reading we hope to gain a knowledge of the subject beyond our grade, knowledge of books which will help us to guide our pupils' reading, or if they are too small to read, knowledge and enthusiasm for the world's great thoughts, which in turn we may give to the little children.
8. To remember that a year in which we do not grow, intellectually and spiritually, is a lost year.—*Elizabeth Share, in American Teacher.*

SOME of the best souls in this world have acquired their moral superiority less by an effort of their will than by a natural imitation of the good people who surround them.—*Compayre.*

OF all the ways whereby children are to be instructed and their manners formed, the plainest, easiest and most efficacious, is to set before their eyes the examples of those things you would have them do or avoid.—*Locke.*

## Mothers

suffering with weakness and emaciation, who give little nourishment to babies, should take

## Scott's Emulsion

the Cream of Cod-liver Oil and hypophosphites. It will give them strength and make their babies fat. Physicians, the world over, endorse it.

Don't be deceived by Substitutes!

Scott & Bowne, Belleville. All Druggists, 50c. & \$1.

## Lessons in

## Entrance

## Literature

FOR 1894.

Edited by Fred H. Sykes, M.A.

PRICE 25 CENTS.

Sent Post Paid on Receipt of Price

## The EDUCATIONAL JOURNAL

ROOM 20,

111 RICHMOND ST. W., TORONTO.

## THE FISK TEACHERS' AGENCY

32 CHURCH ST., TORONTO.

It furnishes a medium of communication between Teachers and School Boards. Many good positions in North-West and elsewhere now vacant. Terms to teachers on application. No charge to School Boards. When in the city call and see us.

W. O. McTAGGART, B.A., Manager.

## PHYSIOLOGY TEMPERANCE CHARTS

AND MANIKINS

THE FINEST IN THE WORLD and at Reasonable Prices

E. N. MOYER & CO.

SCHOOL FURNISHERS 60 YONGE ST. TORONTO

Filled with bright, practical, USABLE material. We think you will like it.

MONTHLY. \$1.00 A YEAR.

FREE SAMPLE COPY.

Address BEMIS PUB. CO., 13 Astor Place, N. Y.

Mention this paper when you write.

# TEACHERS' WORLD

A JOURNAL OF METHODS, AIDS AND DEVICES



**NOW READY** Dedicated to the Teachers of Canada

**Patriotic Recitations**

**AND Arbor Day Exercises.**

SELECTED AND COMPILED BY

HON. GEORGE W. ROSS, LL.D., Minister of Education, Toronto.

FULL CLOTH, 8VO., 390 PAGES. - - PRICE, \$1.00

LIBERAL DISCOUNT TO THE TRADE.

THIS volume is essentially Canadian—the first of the kind ever published—and is brought out to meet an expressed desire for such a work in connection with school holiday gatherings specially, and generally for occasions of a similar nature. It is composed of four parts, viz.:

- PART I.—A TALK WITH TEACHERS.
- PART II.—CANADIAN PATRIOTISM.
- PART III.—UNIVERSAL PATRIOTISM.
- PART IV.—ARBOR DAY.

FROM THE PREFACE.

"The patriotic selections are of two kinds, Canadian and general. The greater number of the Canadian selections appear for the first time for the purpose of recitation. They breathe a genuine Canadian spirit and are, moreover, generally of high literary merit. Many of the other selections have become common property for the purpose of public declamation. They have not, however, lost their value either as exercises in elocution, or as the embodiment of a substantial and stirring patriotic sentiment."

In the large list of notable Canadian poets, from whose works selections are taken, are the following names:

- |                         |                      |                          |
|-------------------------|----------------------|--------------------------|
| Hon. Joseph Howe,       | Thos. O'Hagan, M.A., | Miss E. Pauline Johnson, |
| Chas. G. D. Roberts,    | Robt. Kernigan,      | Mrs. Harrison (Seranus), |
| Miss Machar (Fidellis), | Chas. Sangster,      | A. M. Taylor,            |
| A. McLachlan,           | J. D. Edgar,         | Thos. McQueen,           |
| Miss Vining,            | T. D'Arcy McGee,     | Ellen M. Boulton,        |
| Dr. Dewart,             | Chas. Mair,          | Mrs. S. A. Curzon.       |
| Helen M. Johnson,       | W. T. White,         | Arthur Weir.             |
| Rev. W. Wye Smith,      | Dr. Massie,          | W. P. Lett.              |
| K. L. Jones,            | Wm. Kirby            | Chas. Mair,              |

Extracts from speeches of the following Canadian Orators, are given as prose recitations:

- |                        |                    |                             |
|------------------------|--------------------|-----------------------------|
| General Brock.         | Hon. A. Mackenzie. | Sir Wm. Young.              |
| Sir John A. Macdonald. | Principal Grant.   | N. Flood Davin.             |
| Hon. George Brown.     | Dr. Ryerson.       | Sir Richard Cartwright.     |
| Lord Dufferin.         | Hon. E. Blake.     | Hon. R. Harcourt.           |
| Lord Lorne.            | Sir Oliver Mowat.  | Sir John Beverley Robinson. |
| Sir Daniel Wilson.     | Dr. McCaul.        | W. J. Rattray.              |
| Hon. W. Laurier.       | Dr. Withrow.       | Dr. Ormiston.               |

No teacher or pupil in Ontario is obliged to purchase this volume as a textbook for school purposes.

The compiler has no financial interest in the publication. He has given his arduous services solely for the gratification of providing, for those who desire to use it, a collection of literature from the best Canadian sources, which, while it endows and ennobles the intellect, will also develop and cultivate a pure patriotic spirit in Canada's sons and daughters.

**Warwick Bros. & Rutter, = TORONTO**  
PUBLISHERS, ETC.

ESTABLISHED BY A. PIDDINGTON

**Mammoth Book Store**

We have constantly in stock Educational Books of all kinds. Also the late works in Science and General Literature. Any book not in stock supplied on short notice, if in print. All mail orders filled promptly.

**RISSER & CO., - Successors to R. W. DOUGLAS & CO.**  
248 Yonge Street, Toronto, Ont.

**Vannevar & Co.**

Can Supply any Book You Want.

Books not in stock will be ordered from any part of the world with the Utmost Despatch.

Orders by mail will receive prompt attention.

**VANNEVAR & CO., Educational Booksellers, 438 Yonge St., Toronto**

Ye Olde Booke Shoppe

Inspectors, Teachers, and Students can have any Book they require by return mail, by dropping me a card.

University, College and High School Books, new and used Books for the School of Pedagogy, Normal School, and Preparatory Normal School Course.

Classical Teachers send for that admirable little book of "Latin for Sight Translation."

Books for School Entertainments. In fact any Educational work.

ADDRESS **FRANK PORTER, - 353 Yonge Street, Toronto**

**INK. "WORLD'S FAIR" MEDAL INK-POWDER, DUCKETT'S**

Dissolves in cold water, producing the best and cheapest Black School Ink after being written, whereas writings with aniline inks smudge if wetted even months in air. NOT SPOILED BY FREEZING, NEVER MOULDS, NO DREGS.

In canisters for half-gallons, gallons, or two gallons. Over 30,000 one-gallon canisters have been ordered by the Irish Education Department for supply to Irish National Schools.

Canada Agents: THE COPP, CLARK CO., TORONTO; W. DRYSDALE & CO., MONTREAL; D. & J. SADLER & CO., MONTREAL AND TORONTO.

St. Ann's Convent, Prince Albert, Saskatchewan, N.W.T.:—"Madame Collins testifies that DUCKETT'S Ink-Powder makes not only the cheapest but the very best School Ink we have ever used."

**THE LATEST. THE BEST. High School for Girls, Montreal.**

**SIXTH EDITION**

**Arithmetical Problems**

Senior and Entrance Classes in Public Schools,

By G. H. Armstrong, Principal Niagara Street School, Toronto.

This edition contains nearly 900 Problems. The Entrance Papers for the last twelve years are appended, also the Public School Leaving Examination Paper for 1892. The answers to all the Problems are given. No other work possesses these features. Seventy-five per cent. of the Public Schools of Ontario use it, also several Commercial Colleges.

READ WHAT TEACHERS AND INSPECTORS SAY OF IT:

I am highly pleased with your Arithmetical Problems for Senior classes. It suits my Entrance candidates exactly. A book such as this is needed by every Fourth Class pupil.—Geo. KIRK, Head Master M.S., Chatham.

I have just examined your Arithmetical Problems for Senior classes. The problems are very suitable and the collection must prove very valuable to teachers. I heartily commend it.—G. D. PLATT, B.A., P. S. Inspector, Prince Edward.

After a careful examination of your "Arithmetical Problems for Senior Classes," I find them well graded and very suitable for the purpose intended. The teacher who uses them for home or class work, will save himself a vast amount of labor, and in all probability secure to his pupils much better results.—J. S. DEACON, Inspector, Halton.

I have no hesitation in saying that for the purpose for which it is intended the work is infinitely the best with which I am acquainted. Its strong point, to my idea, is the logical sequence in the problems by which the pupil is almost insensibly led on step by step until he reaches quite a difficult style of question. The printer, too, has done his work very well, and there are but few typographical errors. I shall certainly recommend every teacher in my inspectorate to use a copy.—J. C. MORGAN, M.A., Inspector, Barrie.

The Principalship of this school, open to ladies only, is now vacant. The school has in attendance from 400 to 500 pupils, and its course of study extends from the Kindergarten to the University. The teaching staff consists of a Principal and about twenty assistants. The duties of the Principal require tact, discretion and good manners, and call for considerable powers of government and administration. Applications should give full particulars respecting age (which should be between 30 and 45 years), character and disposition, social status, professional qualifications, experience, etc., and should be accompanied by testimonials and references. The present occupant of the position now receives a salary of \$1,500 per annum. Her successor must assume duty not later than 1st September next, or earlier if possible. Communications and applications should be addressed as soon as possible to **E. W. ARTHY, High School, MONTREAL.**

**THE EXCELSIOR LIFE INSURANCE CO'Y**

HOW TO OBTAIN A PENSION

The Coupon Annuity Bonds, as issued by this Company, are peculiarly adapted to the needs of Clergymen, Doctors, School Teachers, and all others who desire a guaranteed competence for themselves after the lapse of a certain number of years, or absolute protection for their families in the event of previous death. These bonds are most liberal and attractive in form, the rates are materially lower than on any other level premium plan issued. On receipt of a postal card with your age and address, full particulars will be mailed you. This Company issue the most attractive plans of insurance in existence. Gentlemen wanted to act as district or local representatives of this staunch and popular Company. Address **E. F. CLARK, Managing Director.**

**QUICK STUDY. LATIN and GREEK at sight, use our "Interlinear Classics." Sample pages and Catalogue of School Books, free. C. DESILVER & SONS, Phila., Pa. Address all orders, wholesale or retail, to THE BAKER & TAYLOR CO., 740 Broadway, N.Y.**

**REMINGTON Standard Typewriter**

**GEORGE BENGOUGH**  
Tel. 1207 10-12 Adelaide St. East, TORONTO

The Educational Journal,  
Room 20, 11 1/2 Richmond St. W.,  
TORONTO.

Librarian House of Com  
Ottawa  
THE EDUCATIONAL JOURNAL is printed for the proprietor on the 1st and 15th of the month by THE POOLE PRINTING CO., LTD., 8 and 10 Lombard Street, Toronto, who are also managers of its Advertising Department.

**THE CANADIAN OFFICE & SCHOOL FURNITURE CO. LTD.**  
PRESTON ONT.  
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS  
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE  
SEND FOR CATALOGUE.