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## N. B. Education Department.-Official Notices.

## I. Departmental Examinations.

(a) Ciosing Examinations for License.-The Closing Examinations for License, and for Advance of Class. will be held at the Normal School, Fredericton, and at beginning on Tuesday, the 12th day of June, 1900 .

The English Literature required for First Class candidates is Shakespeare's "Merchant of Venice," and selections from Krats, Shelley, and Byron as found in Select Poems, published by the W. J. Gage Co., 1896.
(b) Normal School Entrance Examinutions and Preliminary Ex-
aminations for Advance of Class.-These examinations will be held at the usual stations throughout the Province, beginning on Tuesday, July $3 \mathrm{rd}, 1900$, at 9 o'clock a. m.

The requirements for the several classes will be the same as last year, except that Candidates for First Cuass will be examined on the First. Quadratic Equations.

Candidates are required to give notice to the Inspector within whose inspectoral district they wish to be examined not later than the 24th day of May. A fee of one dollar must be sent to the Inspector with the application.
(c) Junior Leaving Examinations.-Held at the same time and stations as the Entrance Examinations.
The Junior Leaving Examinations are based upon the requiremients of the course of study for Grammar and High Schools as given in the syllabus for Grades IX and X, and will include the following subjects: Arithmetic and Book-keeping; Algebra and Geometry; History and Geography; Botany; Physiology and Hygiene; and any two of the rollowing: Latin, Greek, French, Chemistry, Physics. [Nine papers in all]
The pupils of any school in the province are eligible for admission to this examination. Diplomas are granted to successful candidates.
Fee of I'wo Dollars to be sent with application to Inspector, not later than the 24th of May.
The English Literature for the Junior Leaving Examinations will be Select Poems of Goldsmith, Wordsworth and Scott, as found in collection published by W. J. Gage Co., 1896.
(d) University Matriculation Examinations.-Held at the same time and stations as Entrance Examinations. Application to be made to Inspector, with fee of two dollars, not later than May 24th.

The Junior Matriculation Examinations are based on the requirements for matriculation in the University of New Brunswick, as laid down in the University calendar. (Candidates will receive a calendar upon application to the Chancellor of the University, or to the Education Office.)

The English Literature subjects are Shakespeare's "Merchant of Venice," Rolfe Fditon, and Selections from Keats, Shelly and Byron, as found in Select Poems, published bv the W. J. Gage Co. Toronto, 1896 High school Course for 1890 in Grades IX, X and XI.

The Department will supply the necessary stationery to the candidates at the July examinations, and all answers must be written upon the paper supplied by the Supervising Examiners.
In the June examinations the candidates will supply their own stationery.

Examinations for Superior School License will be held both at the June and July examination. The First Book of Cæsar's Gallic War will be required in both cases.

Forms of application for the July examinations will be sent to candidates upon application to the Inspectors, or to the Education Office.
(e) High school Entrance Examinations.-These examinations will be held at the several Grammar and other High Schools, beginning on Mouday. June 18th, at 9 o'clock a. m. Under the provisions of the Regulation passed by the Board of Education in April, 1846, question papers will be provided by the department. The principals or the Grammar and High Schools are requested to notify the chief superinte
II. Teaching Days and School Holidays, 1900.

Summer Holidays. Six weeks, beginning July ist In cities, incorporated towns, and Grammar and Superior School Districts in which a majority of the ratepayers present at the annual school meeting voted for extension of vacation, eight weeks beginning July 1st,

Christmas Holidays. Two weeks, beginning on December 22nd.
Other Holidays. Good Friday, the Queen's Birthday and Thanksgiving Day ; also, in the City of St. John, Loyalist Day.

No. of Teaching Days, First Term, 123; in St. John, 122.
No. of Teaching Days, Second Term, 94 ; in cities, etc., 84.
III. Empire Day.

Wednesday, May 23rd, is to be observed in all the schools as Empire Day by carrying out a programme of such exercises, recitations a ad addresses as will tend to promote a spirit of patriotism, and to impress upon the pupils adequate views of their privileges and duties as Canadian citizens and subjects of the British Empire

Trustees are urgently advised to provide for the school-house, whereever practicable, a Canadian Flag and a flag-staff; and teachers are instructed to see that the Flag is raised on Empire Day. the Queen's Birthday, Dominion Day, Thanksgiving Day, and other national anniversaries.
IV. Text Books.

The First and Second Primers of the New Brunswick Series of Readers, [according to notices in Royal Gazette dated August 10th and August $29 t h, 18997$ have now superseded the Primer and First Book of the Royal Reader Series. It is intended that the remaining numbers of the "New Brunswick Readers" will come into use at the opening of the 'Term in August next. During the present Term it is permissible to use the First Bhich it may be found necessary to purchase new Readers for Grade III Education Office. January gad, 1900,
J. R. INCH,

Chief Supt. of Edication.


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ST. JOHN, N. B., MARCH, 1900.
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Editor for New Brunswick.

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## Always Read this Notice.

THE EDUCATIONAL REVIEW is published about the 10th of every month. If not received within a week after that date, write to the office.
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Each subscriber should examine carefully the number after the name on the wrapper of the Review. This is a receipt for the subscription, and in the case of many it is the only receipt sent from the office. It shows the number of the paper to which the subscription is paid. Thus No. 151 shows payment up to Jan. 1st, $1900 ; 154$ up to April 1st ; 156 up to June 1st, and so on.

We ask the attention of our readers to the article on School Gardens on another page, by Mr. Percy J. Shaw of Berwick, N. S. Mr. Shaw is a firm believer in the laboratory method of teaching agriculture in our schools. The Review is thoroughly in accord with him in this matter, as we believe are its readers who have given this subject attention. We hope the day is not far distant when every town and country school will have a school garden attached to it ; just as much a part of the "furnishing " as maps and black boards are. Then with
teachers who have themselves been trained in practical agriculture on the laboratory plan, with such a course imperative in the normal schools, we may hope for somé effective and common-sense teaching of agriculture.

Mr. Shaw expects to start a school garden in connection with the Berwick school this spring, and to carry on some experiments with fruit trees. He says : "On the South Mountain there are quantities of wild cherry trees which I intend to experiment with, to see if we cannot get good cultivated varieties to grow on that stock by budding. Mr. Eaton of Kentville gets all his cherry stock in that way, and he has the largest orchard in the country." This is an inviting field for the young student in the school gardens, just such work as our Dominion and Provincial Experimental Farms would like to see undertaken.

There is a good prospect that a technical school will be founded jointly by the chree Atlantic Provinces of Canada. In addition to this, Prof. Robertson is now in these provinces taking preliminary steps to establish in three central localities manual training schools provided for by the liberality of Sir W. C. McDonald of Montreal, the scheme of which was outlined in the November Review. These are forward movements in education. Interest young people in useful and congenial employments, and it is a training for good citizenship.

Congratulations to Principal Anderson and his staff of Prince of Wales College, Charlottetown, on the excellent and well equipped new school building which they have recently moved into. In his long and faithful services for education in Prince Edward Island, Dr. Anderson has won golden opinions abroad as well as at home, and we hope there are many years yet of efficient and happy work in store for him amid improved surroundings.

In the valuable physiographic notes on New Brunswick which Prof. W. F. Ganong is contributing to the Bulletin of the Natural History Society of that pro vince, there is much valuable material for teachers in his descriptions of lake and river basins, heights of mountains, the forestry problem, and other natural features. One contribution in Bulletin No. 18 is especially noteworthy. It proposes a system of names for certain hills and mountains in central and northern New Brunswick, which have up to the present time been unnamed or have been defined by inappropriate terms. The proposed names are suggestive and appropriate, designating chiefly early explorers, missionaries and governors.

## The Inspector and the School.

The necessity of a careful and frequent inspection of schools is acknowledged by every one interested in educational work. In the settlement of disputes, which too often arise in districts, the tact and personal influence of the inspector usually are sufficient to adjust all differences and make things run smoothly. He finds awaiting his arrival in nearly every district some knotty problem, from trustees or teachers, which he is called upon to solve, and which frequently calls for the exercise of judgment, large experience, and considerable legal knowledge. Too often he is called upon to pay special visits to districts or to settle by correspondence points of variance. This taxes his leisure moments, so that with the making out of reports and other clerical work his position is not a sinecure.

But the most important work of the inspector is that done in contact with the teacher and the school. Here his influence is paramount to that exerted in any other direction. The Westminster (Toronto) puts this relation of the inspector to the teacher and the school so aptly that we quote the article :
" It is quite impossible for a teacher to deceive an alert and competent inspector, whether the latter takes the classes into his own hands or contents himself with observing the teacher's methods. The signs by which he is guided in forming a judgment are numerous, and long experience in noting them has made the task of estimation one of something like intuition.
"The inspector who finds pupils slovenly in personal attire, rude in speech or behaviour, or even brazen in look and defiant in bearing, not unjustly concludes that for some reason the influence exerted by the teacher is not of the right sort. All these defects may be primarily due to a defective home environment, but they may be, and should be, persistently and effectively corrected at school. Irregular attendance of pupils and frequent changes of teachers may obstruct the work of reform, but the experienced inspector can generally tell, as the result of a single visit to a particular school, whether the teacher is making the necessary effort to secure improvement, and why he fails if he does not succeed.
"With equal certainty he can discern from the mental condition of the pupil the character of the ordinary intellectual discipline of the school-room. The teacher who aims merely at filling his pupils with ready-made, second-hand information prepared by experts in suitable doses and done up in school manuals, betrays at once to the inspector the absurdity of his ideas and the faultiness of his methods. The memorized definition of a conventionally arranged class of things will no more deceive him than will fatal facility in determining members of a group by superficial remarks. He knows at once when a form of words denotes any real significance in the pupil's mind, and when it is simply the result of rote teaching. Above all, he can promptly detect the absence of that culture which the
practice of original observation alone can produce, and for which no adequate sulstitution can be found.
"The wise teacher will feel grateful to the keen sighted inspector who has the frankness to point out defects and the good sense to suggest the proper remedies. We know by observation, as well as experience, and the observation of others is often quite as helpful as our own. It is hard for a teacher to see his own defects. Having gone for a time in a rut he needs to be lifted out of it by some friendly and influential hand, if he is to escape the necessity of travelling forever in his own footsteps. Work that will not stand keen criticism and friendly suggestion is in great need of improvement."

## Pedagngy as a University Study.

Acadia University is about establishing, or re-establishing, we may say, a chair in pedagogy. Dalhousie has had a lectureship in this subject for years, and the New Brunswick University has been for some time conconsidering the question. The increasing number of teachers seeking advancement in these institutions makes such a course exceedingly desirable. Universities had their origin largely in the desire to fit men to become teachers. For some centuries they lost sight of their first purpose. Now they are gradually coming back to their original design.

Dr. Trotter, president of Acadia, writes us as follows concerning the aim and scope of the proposed work at Acadia :
"With the opening of the second term of the college year, a course in pedagogy has been started at Acadia under the able instruction of Dr. A. W. Sawyer. The course for the present term is a provisional one, but it is expected that in June next the senate will incorporate this important department of instruction into the curriculum as a permanent provision.
"The lectures will be open to members of the junior and senior classes, and the full course, when established, will embrace an extended discussion of principles of education, and a wide study of the history of education. Dr. Sawyer's eminence in the department of psychology, and his pre-eminence as a teacher, will give exceptional value to his work in pedagogy.
"Candidates for the teaching profession, whether they are looking forward to the public school service or to teaching in other institutions, will appreciate the great advantages of a course such as this is to be. It is the hope of the authorities also that all students-young ladies, students for the ministry, and others-who are likely to be intrusted with the training of the young in the home or the church, will come to realize that pedagogy is for them, scarcely less than for teachers, a study of great value. A number of ministerial students are already registered for this work, together with a large class of prospective teachers."

I always like to see the Review. It helps one to aim higher.

## The Changing Position of Classics.

Prof. Sutton, in the School Review, traces the changes in the requirements for a B. A. degree from the time four hundred years ago, when the classics became the solum bonum of education, to the present, when a leading university like Harvaid demands for a B. A. no collegiate study of Latin or Greek ; and yet her B. A. never stood higher. Even in Oxford university there are now, besides the classics, six other avenues to the degree of B. A.
"As successful men in various professions began to achieve renown in the world of culture, even though they had not received the traditional scholastic training, it began to dawn upon the minds of the people that subjects, other than those found in the college courses, are valuable as means for mental discipline and and for securing that indefinable result known as culture." . . . "Times have vastly changed since the Middle Ages, and educational ideals also have changed to meet the new requirements of the changed civilization."

Candidates for the B. A. degree are now permitted without Latin to enter several of the leading universities. "Latin as well as Greek must become reconciled to its 'manifest destiny,' and must be content with holding a rank no more distinguished than that held by other studies that are, and of right ought to be, classified among the liberal arts."

Among those who believe that neither Latin nor Greek should be compulsory for the degree of B. A. we could name President Eliot and Prof. Hanus of Harvard University, President Hyde of Bowdoin College, President Jordan of Leland Stanford, Jr., University, President Schurman of Cornell University, and many other leading educationists.

## Nova Scotia School Report for 1899.

The Annual report of the Superintendent of schools for Nova Scotia has just been laid before the Legislature. First, we have seven pages of a "Summary of Statistics," then fifty-six pages of "Comments on the Statistics," including an interesting discussion on the alleged over-pressure in High Schools, the teaching of science, changes in text-books, agricultural education, etc. The statistical tables cover forty-four pages, and the subordinate reports one hundred and ten pages. At present, we have space for only a few notes.

It is satisfactory to find that the practice of granting "permissive licenses" to common school teachers has been practically discontinued. It will some day seem strange that it was ever deemed necessary to grant licenses to teach to persons unable to take a grade $D$
(fourth grade license). The Counties of Inverness and Cape Breton have suffered most from these low-grade temporary teachers, who place such a small value upon their own services as to make it impossible for properly licensed teachers to compete against them.

Only about one-third of the teachers of the province have yet availed themselves of the few months training given at the Normal school. When we consider that several years of training are required of every teacher in Germany, it would seem as if our schools must still be very far behind, or that, for teaching, a special training is not as much needed as in other professions. The value of scholarship to the teacher is recognized by requiring the untrained teacher to hold a higher grade than the trained teacher holding the same class of license, and also by the raising of the minimum percentage for any subject to untrained teachers to 33 instead of 25 .
Of the 2,494 teachers employcd, 1,C73-nearly one-half-hold only a D license. There are but 463 teachers -less than one-fifth-who have taught over ten years, so that teaching can scarcely yet be said to be a lifeprofession in Nova Scotia. There are about 100,000 pupils in the public schools. Of the 18,000 who enter the first grade, about one in four reaches the high school, and one in a hundred and seventy leaves from Grade XII.

The increase of four per cent in the sum voted for teachers' salaries is a sign of substantial progress; for unless the teachers are reasonably well paid the best men and women will not devote themselves to the work.

The annual cost per pupil is only $\$ 8.09$, or less than one-third the amount spent in the New England States. A country so penurious in its educational expenditures should not expect great results.

The Superintendent of Education claims that the teachers are generally improving, although this is not quite apparent when it is considered that the number of B male teachers has decreased more than the combined increase in the number of the B females, and of the A male and female teachers, and that the number of the D female teachers has increased by thirty.

The principal of the Normal School remarks that "in every class there is defective scholarship, defect so serious that it seems to suggest the great importance of looking for some more effective method of testing scholarship qualifications than is now adopted in Nova Scotia."

The new regulations now in force will, however, tend to improve the teaching slowly, but surely: (a) The minimum age for obtaining licenses has been raised. It should be still higher. (b) The abolition of permis
sives. (c) The minimum percentage required in the examination of any subject has been slightly raised, though the advantages arising from this are probably more than counterbalanced by the greater facilities for cram, which enables many students to obtain their grades of scholarship long before they are old enough to be licensed to teach. (d) The professional training obtained at the Normal School. (e) Larger grants for Grade A teachers.

In discussing "Attendance" the Superintendent makes an excellent suggestion which we hope to see carried out, viz.: that the names of all children of school age in the section be entered in the annual returns.

The Compulsory Attendance Act is generally of no effect except in Halifax. By an amendment asked for by the City School Board, every child between 6 and 14 years of age is required to attend school every day. If he is absent five days without proper excuse his parents are directly called to account.

The lowest rate of direct taxation is, in Halifax city, $\$ .10$; the highest in Guysboro, \$1.45. The average for the province is $\$ .55$. The difference is more apparent than real. Where property is assessed at its full value the rate will be low, when property is assessed below its value the rate will appear to be high even when the schools are poorly supported.

The suggestion to compel recalcitrant sections to support schools suitable to their needs and ability is a good one, but no arbitrary rate should be fixed. The school commissioners, by the advice of the Inspector, could determine the amount required.

Another valuable suggestion refers to school libraries. The school with a good library would be the intellectual centre of the section. It should therefore be allowed to assess itself to provide for standard worke of reference and literature, to be managed by the teacher as librarian and trustees as a board of directors.

Much attention is given to the course of study. It is claimed that for the average student it is not too difficult ; that if any over-pressure exists it is always the fault either of the parents, trustees or teachers.

## The Prayer of the Nation.

> God give us men! A time like this demands Strong minds, great hearts, true faith, and ready hands. Men whom the lust of office does not kill;
> Men whom the spoils of office cannot buy;
> Men who possess opinions and a will;
> Men who have honor, and who will not lie ;
> Men who can stand before a demagogue
> And scorn his treacherous flatteries without winking.
> Tall men, sun-crowned, who live above the fog

In public duty and in private thinking !
J. G. Holland

## Exercise in Spelling.

The head of a leading business college in the Maritime Provinces deplores the wretched spelling of the students of the public schools. In the following list of words which he gave to a class, mistakes were the rule rather than the exception, and several students misspelled nearly every one of them. And yet every word is a common one. Is it not time that teachers removed this reproach which has become too frequent. They labor to remove it, but there is evidently a lack of thoroughness in teaching spelling, as the Review has frequently pointed out. There should be practice and review of misspelled words, continued patiently and persistently day after day, week after week, until it is no longer possible for the pupils to make mistakes :

Seize, insolvency, chattels, maturity, mercantile, millinery, miscellaneous, negotiable, transferable, operator, promissory, proprietor, purchasable, receipt, recommend, redeemable, remittance, dependence, saleiable schedule, seizable, courtesy, business, abridge, acce ssble, truly, separate, apprentice, recede, artisan, auditor, auctioneer, caterer, superintendent, glazier, manual, machinist, achieve, knack, skilful, nicety, balance, entries, principles, abridge, salary, linen, cambric, annuity, attorney.

## To the Editor Educational Review:

Dear Sir,-As you have invited primary teachers to contribute to the "Busy Work" page, I beg to submit a device which I have tried and I think profitably. Although I am not a primary teacher exactly, yet, as I teach a miscellaneous school, I have primary work to do. Few children in the country schools can add numbers properly. They can add (as they call it) by counting up, but we know how unsatisfactory that method is. I have been teaching my primary children the various combinations of numbers in addition, and for desk work have supplied them with colored sticks with which they make up the various combinations of numbers by placing them in groups side by side. When they have made one combination with the sticks, they write it on their slates, then when they have made the next, they write that down, and so on. By using objects, they understand better what addition is and they also remember better. For example, I have them begin with the combination that produces two, which is of course one and one ; then the combinations that produce three-two and one, and one and two ; then four in like manner-three and one, one and three, and two and two ; and so on until all the possible combinations of number less than ten have been learned. Of course any objects may be used-beads, buttons, pebbles, etc. Bright colored ohjects, however, attract the children's fancy, I think. I wish to say, before I close, that the
"Busy Work" page is a feature of the Review, which I hope, has come to stay.
M. C.

## NATURE-STUDY - MARCH.

March came in like a lion this year with frost and snow, and wind piling huge drifts. It may go out like a lamb; so that although it looks like winter now, the bright warm days will soon be here, bringing the birds from their southern winter homes, and later the butterflies and moths from their cocoons. The fields and woods will soon be alive with insects, as well as birds, and the buds will follow the example of boys and girls and lay aside their winter wraps and burst into leaf and flower. Children should be led to watch for these indications of coming spring. The sun rising earlier and farther to the east each morning and setting later and farther up in the west each evening (on the 20th it rises due east and sets due west); its position at noon is higher, and the middle of the day is warmer. The buds on trees and shrubs will soon begin to swell. Their unfolding may be hastened by bringing some twigs into the schoolroom, putting them in water and placing them in windows exposed to the sun. In these favored positions they will burst into leaf or flower, and may be studied, and their development watched with more interest in the fields later on.

The willow catkins are collections of the simplest flowers. If gathered from one tree or shrub they may all be staminate, consisting of two little stamens (a) growing from the base of a little leaf ; or the flowers may be pistillate, consisting of a pistil (b) growing from a similar little leaf or bract. Try to get catkins that will show both staminate and pistillate flowers. (See Educational Review, Vol. XI, page 211). Obtain, also, some of the
 catkins of the poplar, alder, birch and hazel. The poplar, like the willow, has its staminate and pistillate flowers on the different trees, and are said to be diocious. The alder, birch and hazel have them on the same tree (monœecious). Horse chestnut branches have large, sticky buds ; lilacs have large and small buds. (It will be interesting for the children to find out what the larger buds contain in addition to the smaller ones as they unfold). The clusters of buds of the red maple with their brilliant colors as they open will be a source of delight and instruction to children. Nearly all our trees and shrubs unfold their flowers early. They are not showy, as a rule, but each has a beauty of its own. What more beautiful sight than a red maple tree in full bloom with its clusters of brilliant red flowers! But prepare children for this and other interesting sights by studying branches in the school-
room in March. Show that these flowers are developed early in order that pollen may be carried freely by the wind without being hindered by leaves. Tell of the nature and use of pollen in fertilization. Shake some of the willow or alder catkins when the flowers are mature and watch the clouds of pollen dust disperse in the air. Collect some of it and put it under a magnifying glass or microscope if you have one. Let the pupils make drawings of the twigs and branches, showing the position and forms of buds, a catkin discharging pollen, etc.

In late March or the beginning of April is a good time to look for cocoons on low bushes or stout, rough stalks growing under trees. Perhaps you may be fortunate enough to find the cocoon of the Emperor Moth, which is larger and more easily identified than others. Here is a picture of one less than the actual size, which may assist the children in their search. It is somewhat bag-shaped, and pointed at the upper end. The beautiful moth that will come from it in late spring or early summer will repay the trouble of searching for it. (See Review, Vol. I, page 5 , for a full description). If you wish cocoons to hatch well, keep them in a cool place until the weather has evidence of summer heat in it ;
 then bring them into a warm place and let the children see the wonderfully beautiful creature that will emerge from its case.

In the same way that children are prepared to study twigs, by putting them in water in a warm, sunny place, they should also be prepared to watch the growth of plants. Have boxes in readiness to plant seeds, that the study of growing plants may be made before these appear in the field. In this way by anticipating Nature children know what to look for, and become alert and expectant. Let them form the habit of recording their own observations: To teach the child to make a simple and accurate record of the appearance of the first robin ; the first Mayflower, dog-tooth violet, or other spring blossom ; the first sound of the frogs in the neighboring swamps or pools ; the first bird to build a nest and lay its eggs (can any of our readers tell which it is ?); the first of the hibernating animals to come forth from its winter sleep; the last snow storm; the last frost ; the breaking up of the ice in the nearest streams or lakes-these and many other data are useful to farmers and scientific workers; they are of far greater importance to the boys and girls who make
them, giving these an interest in their surroundings, and teaching habits of exact and thorough observation.

The following simple apparatus will show growth from the seed in the school-room. Children always watch such processes with great interest, and their powers of observation are aroused and developed:

Sew a piece of flannel tightly over the mouth of a basin. Pour on water until the basin is full. Set it in a deep dish, or soup plate, to catch the overflow, for water must be constantly added to take the place of that which evaporates. Sprinkle mustard seed on the surface of the flannel. In a few days the seeds will sprout and grow to real plants. The same process can be used with wheat or linseed, or any seed, though all are not equally successful.

For another lesson to keep constantly before the class for many weeks, that they may watch its slow development, is this: Take a clear glass bottle of medium size and partly fill it with water. In the bottle suspend an acorn by a piece of stout thread, allowing the acorn to be partly under the water. Sprouting will take place in the water and can be seen through the glass. A stem and the rudiments of leaves will grow up toward the neck of the bottle.

## The Heavens in March.

Are our readers noticing the western heavens these fine March evenings? Venus, in all her beauty and glory as evening star, leads the starry host, "sloping slowly to the west." Above her are the Pleiades, then the Hyades, then Orion, with Sirius, the Dog-Star, rounding the arch from the south. Mercury is, this evening (March 8th), well placed for observation, and will continue in about the same position for several evenings. Try to pick him out between Venus and the sunset point. Mars is morning star, now rising only a few minutes before sunrise, and cannot therefore be seen. Jupiter is morning star, rising about midnight, and is a fine object for early morning star-gazers. Saturn is also a morning star, rising nearly an hour and a half after Jupiter, its pale yellow light rendering him less conspicuous in the morning sky than his more brilliant neighbor.

For the Review.]

## School Gardens.

A school garden may be as useful in training children as a laboratory or a library. Properly carried on, the work of the garden gives opportunities for experimenting, observing and reasoning, besides awakening ideas of beauty.

Last year in Upper Canard, N. S., garden work was carried on in connection with the school work. A piece of greensward was ploughed in the preceding fall,
harrowed and made ready for planting in the spring. Thirty varieties of vegetables were grown. Each pupil planted a row and personally conducted an experiment. Each pupil also studied his or her plant from seed to maturity, and its enemies, chiefly weeds and insects.

One experiment determined which of several varieties of onions was best suited for that locality ; another, the effects of hardwood ashes on the growth of potatoes when applied (1) to the soil in contact with the seed, and (2) to the surface of the ground after the seed was covered. A marked difference was noticed in the time taken to appear above ground, in the health of the plants and their rate of growth.

Other experiments determined the proper depths for planting seeds, the best time for planting, the effects of rare or frequent cultivation, and the effect of growing leguminous plants along with other crops.

Pupils kept a record of the time of planting their seeds, the time taken to appear above ground, and the rate of growth afterwards. A record of the rainfall was kept, and the effect of heat and moisture on the growth of the plants was observed. The plants were studied from time to time, drawings made, and their exact size and development noted at certain periods from the time of planting. The cultivated plant was carefully compared with weeds studied and with wild flowers. New vegetables were introduced. Plants usually started in the hot house were tried by planting the seeds in the open ground. Tomatoes gave good results in this way. The fertility of soils taken from different depths was tested, and differences in plants growing in these soils were observed and accounted for.

Many of the insects studied under the head of Nature work came from the garden. Toads were brought by the papils and their habits observed. In one corner of the garden a tub was sunk, filled with water and used as an aquarium in which were grown polywogs and frogs.

In front of the garden a spruce hedge was planted, and sweet peas and morning glories were grown.

From one 'year's experience the teacher was convinced that a school. garden could be a valuable aid to education in rural schools, affording as it does an opportunity for experimenting, observing, and inductive reasoning, while at the same time developing the sense of the beautiful.

Percy J. Shaw.
Berwick, N. S.
The title "Doctor" is becoming as common and almost as ridiculously misapplied, as that of "Professor." In the twentieth century, the plain "Mr." will be esteemed the most honorable title.-Western School Journal.

## For the Review.]

## Outlines of a Course in Drawing.

## Grade I.

(a) Drawing as an aid to language.-Free illustrative sketching from copy, memory, and imagination.
Show pupils good outline pictures of simple objects, of scenes, of scenery. Teach them to tell what such pictures express. Make on blackboard in presence of pupils outline pictures of familiar objects, such as a kitten, a boy with a flag, a hill with house on top, a tree half way down, and a boy running after his hat. Let the pupils copy these pictures and make original ones.

Encourage all honest effort, and criticize mildly even the poorest. To improve the drawing, lead the pupil to re-examine the object more carefully, so that brain, eye and hand may work better together.
Occasionally use colored crayons and have the pupils use colored pencils.
(b) Drawing as an aid to nature lessons. - Let every nature lesson end, when possible, with an illustrative drawing of the object studied.
This will lead the pupils to observe and examine with greater care and render the impressions more lasting. Outline drawings of animals, trees, leaves and fruits, most interesting to children, are appropriate for this grade. Sometimes this work may be done in color with the brush, using diamond dyes.
(c) Formal drawing lessons.-A half-hour lesson once or twice a week.
When convenient let the pupils model in clay or putty some simple object, and afterwards make a picture of it.

For manual drill let the pupils draw circles and curves on the blackboard.
They should occasionally, in symmetrical exercises, use both hands at the same time, and sometimes the left instead of the right hand.
All the drawings should be large. Much injury is done to children and time is wasted in striving for minuteness of detail and accuracy of finish, before the eye and hand are sufficiently developed.

In small country sections, or in schools where the teacher has but one grade and not too many pupils, stick and tablet laying, also paper cutting and folding should be practised. A series of such exercises will develop the idea of symmetry and be the best preparation for original designing.

Good teachers will, at this stage, be sparing in the use of technical terms.

Young children should always draw from interesting objects. Type forms represent abstractions which should not be used until the pupil has reached them by his own generalizations.

## Grade II.

(a) As an aid to language. - Encourage and help the pupils to illustrate simple scenes and events by pencil sketches.
Excellent selections in literature suited to this grade are now attainable, such as fairy tales, etc. Pupils generally will take much pleasure in pictorial representations of them. Their attempts at first will be crude, but experience has shown
that the great majority of pupils will improve rapidly, that their conceptions will be made more vivid, and consequently that the constructive imagination so useful in the study of history and geography will receive proper development.
(b) As an aid to nature lessons.-As in Grade I.

More difficult objects and some detail ; simple grasses and flowers, using water colors. The leaves in the various stages of its growth. The cow or horse and the dog from memory.

Let the pupil be asked to observe these animals carefully wherever he can, and then make memory drawing of them in school. Point out mistakes and let the pupil correct them by renewed observation until the work is fairly good.

Trees-characteristic foliage of spruce, oak or beech, poplar or elm. Apple on branch with leaves.
(c) As an aid to mathematics. Teach the pupils to draw a straight line accurately from one point to another, using a ruler. Draw parallel lines.
Number work may be made more interesting by having the the pupils make pictures of a given number of birds, apples, etc., by making them divide a line or any regular surface into equal parts to illustrate the nature of fractions, halves, fourths and eighths.
(d) Formal drawing lessons.-Two half hours a week. Continue modelling and manual drill on blackboard, with ornamental curves.
Construct with colored paper an historic border. Represent it by a drawing. Vary the pattern.

## Grade III.

(a) As an aid to language.-As in Grade II. (a).

Excellent copies of masterpieces of art may now be obtained at so small a cost as to place them within the reach of the poorest school.

Before studying and discussing the pictures appropriate for this (or any other) grade, the pupils should see and examine as many as possible of the objects mainly represented, clouds, forests, mountains, rivers, lakes, ravines, animals, churches, etc.
(b) As an aid to nature lessons.-As in Grade II (b) but somewhat more difficult.

Cat, rabbit, hen, duck, herring, trout, the parts of a flower, a turnip and potato, leaves.
(c) As an aid to mathematics and geography.-Drawing squares and rectangles of given dimensions. Dividing them into square inches. Measuring distances in the classroom and representing them by lines one quarter of an inch to a foot.

Drawing a correct plan of the school-room and of the play-ground.

Division of lines and surfaces into thirds, sixths and twelfths.
(d) Formal drawing lessons.-More complex ornamental curves copied and original, on blackboard.

Borders formed by repetition of flower forms.
Grade IV.
(a) As an aid to language. Continued as in Grade III (a).
(b) As an aid to nature lessons.-Common plants, shrubs, trees, of each three or four, so as to be recognized by their characteristic branching and foliage. Fruits. A few of the larger bones of the human body. The frog and butterfly in the various stages of develnpment. The sparrow and swallow.
Natural colors to be used when convenient. As it will generally be impossible to obtain human bones, corresponding ones from other large animals may be used instend.
(c) As an aid to mathematics and geography.-Fifths and tenths illustrated. The use of the compass in drawing circles. Right angles, triangles and squares geometrically constructed. Map drawing. Plans to scale. Working drawings of a few simple objects.
(d) Formal drawing lessons - As in Grade III (d.)

Study of good pictures. Principles of repetition and alternation in exercises on korders and rosettes.
(To be continued.)
For the Review.]
English Literature in the Lower Grades.

## The Red Thread of Hovour.

I think that you must all know the poem called "The Charge of the Light Brigade," in which Tennyson makes famous some of the men whose courage and obedience carried them to death at the battle of Balaklava during the war in the Crimea. You remember that he says, "What though the soldier knew some one had blundered?"
" Their's not to make reply, Their's not to reason why, Their's but to do and die."
And this reminds us of the same poet's words when, writing of the Duke of Wellington, he says :
" Not once or twice in our rough island story The path of duty was the way to glory."
The poem that I want you study to-day tells of a deed not so well known as "The Charge of the Light Brigade," but, like it, a glorious example not only of bravery, but of devotion to duty.

It was when the great soldier, Sir Charles James Napier, was conquering Scinde, in 1843 , that this deed was done. Napier, who was very proud of his men, and very deeply beloved by them, told the story to Sir Francis Hastings Doyle, and he wrote the poem. It is too long to print here in full, but enough can be given to make the story plain :
"Eleven men of England
A breastwork charged in vain ;
Eleven men of England
Lay stripped and gashed and slain, -
Slain, -but of foes that guarded
Their rock-built fortress well,
Some twenty had been mastered
When the last soldier fell."

The charge had been made because of a mistake in the order, as at the battle of Balaklava.
"These missed the glen to which their steps were bent, Mistook a mandate, from afar half heard, And in that glorious error calmly went To death without a word."
Their enemies were brave soldiers and quick to recognize and to honour the courage of others ; so
"The robber-chief mused deeply Above those daring dead;
' Bring here,' at length he shouted,
'Bring quick the battle-thread. Let Eblis blast for ever Their souls if Allah will; But we must keep unbroken The old rules of the hill.' "
Then he tells how, long ago, far back in the history of their tribes,
"The mountain laws of honour Were framed for fearless men; Still, when a chief dies bravely, We bind with green one wristGreen for the brave, for heroes One crimson thread we twist. Say ye, Oh gallant Hillmen, For these, whose life has fled, Which is the fitting colour, The green one, or the red?"
"Our brethren, laid in honoured graves, may wear Their green reward," each noble savage said.
"To these, whom hawks and hungry wolves shall tear, Who dares deny the red?"
" Once more the chief gazed keenly Down on those daring dead; From his good sword their heart's blood Crept to that crimson thread. Once more he cried: 'The judgment, Good friends, is wise and true, But though the red be given, Have we not more to do?" "

- These were not stirred by anger, Nor yet by lust made bold; Renown they thought above them, Nor did they look for gold. To them their leader's signal Was as the voice of God; Unmoved and uncomplaining The path it showed they trod.
- As, without sound or struggle, The stars unhurrying march, Where Allah's finger guides them Through yonder purple arch, These Franks, sublimely silent, Without a quickened breath, Went, in the strength of duty, Straight to their goal of death.'
" ' Enough,' he shouted fiercely, Doomed though they be to hell, Bind fast the crimson trophy Round both wrists,--bind it well. Who knows but that great Allah May grudge such matchless men, With none so decked in heaven, To the fiend's flaming den?'
"Then all those gallant robbers Shouted a stern 'Amen!' They raised the slaughtered sergeant, They raised his mangled ten. And when we found their bodies Left bleaching in the wind, Around both wrists in glory That crimson thread was twined."
"Then Napier's knightly heart, touched to the core, Rang like an echo to that knightly deed; He bade its memory live for evermore, That those who run may read."

> -Sir F. H. Doyle. E. R.

## Approaches to Literature.

There are three approaches to literature :

1. Go over it with the single purpose of raising in the mind of the child the question, "Is this right? Is it correct?"
2. Go over it and have him point out to himself and you the things that are admirably said. Let him feel the difference between saying a thing and saying it well.
3. Forgetting grammatical aspect and beautiful setting, lead him back to ask, "Is this a true thing? Can I live it? If I live it, can I live better?" When you touch a child on the side of the beautiful, you have touched him for good.

When a child reads a piece of literature we are too impatient to have him give it back to us, and tell us what he has read.

Often the impression is as yet too fine and elusive to put into words. In an art gallery an impatient gazer asked a friend, who was studying a picture, "Well, what do you think of it?" Without moving his eyes, the art lover said, "I'll tell you when I get ready."

Any teacher who will drag from a child, before he is ready, his impressions of a piece of literature, does the pupil a violence.

When we give to a child the best in our language, we need not fear the result ; it will work itself out in high thinking and noble living. The child will grow into a living realization of the legend : ,

> "In the midst of the beautiful is the good, In the midst of the good is God, the Eternal One." -American Primary Teacher.

## Inspector Armstrong.



Mr. E. L. Armstrong, who has just been appointed Inspector of Schools for District No. 9 (Pictou), was born at Kempt, Hants Co., in 1863 . His ancestors were characterized by more than the average of intelligence and high moral tone. He received his early education in the common schools of his section. He remembers with special gratitude E. M. Rand, B. A., as an inspiring and thorough teacher who prepared him to take grade B at the early age of sixteen.

An experience of eight years as a teacher in the public schools enabled him to make the most of a course at the Normal School, Truro, in 1881. His good record there opened to him the principalship of the West End School, Pictou, in 1883. Illness, however, compelled his retirement in 1887. He was reappointed in 1891. In the interim he studied for a short time at Princeton Theological Seminary. Altogether he taught for about twenty-two years, the last eight and a half being in Pictou.

His whole life has been an excellent preparation for his present important position-a position which he is well-qualified by long experience as a teacher, by his normal school training, by sound judgment, good habits and high moral character, with credit to himself and great benefit to the cause of education in his district.

Such appointments are an encouragement to every young teacher who prepares himself thoroughly for his work and who throws his whole energies into it honestly.

## School Correspondence.

Some time ago reference was made in the Review to a letter that had been received by a girl in a Halifax school from one in a western state and the interesting correspondence that grew out of it, in which many had taken part. A few days ago a letter was received in St. John addressed as follows :

$$
\begin{aligned}
& \text { The Elder Girls, } \\
& \qquad \begin{array}{l}
\text { c o. The Head Teacher, } \\
\qquad \text { (Public) Girls' School, } \\
\text { St. John, New Brunswick, } \\
\text { Canada. }
\end{array}
\end{aligned}
$$

The letter was sent to the Girls' High School, when it was found to contain the following interesting contents:

## Sompting School, near Worthing, Sussex,

 February 15 th, 1900.
## Dear Colonial Friend,-

I expect you will be wondering who has written this letter from England. Well, I am a Fifth Standard girl. I live in a very quiet little village called Sompting. If you look at the map of England in the county of Sussex, you will find marked two towns, Brighton and Worthing. We live two and a half miles from Worthing and ten from Brighton. From our school playground we can see the South Downs. They are the nearest mountains to us but I suppose you would call them "molehills." I expect they are nothing to your "Rockies." We graze sheep on the Downs. We have read about you in lessons and story books, and lately we have heard how splendid loyal you Canadians have been to our Queen in sending troops and money to South Africa.

Bravo Canada!
Now we want to ask you heaps of questions and we hope you will be very kind and answer them, and we will try to answer any that you ask us. That improves both parties. How far do you have to go to school? Do you wear snowshoes ? Do you ever meet any nice "tame" wolves? or red Indians, or huntersand trappers? What do you learn at school? What time do you go to school and come home? Are your trees as tall that it takes two men and a boy to look to the top of one?

Do you ever go in canoes on the rapids? Do you learn drill at school or cookery?

I am eleven years old and I am very much interested in the geography of your country. Now my dear friend, I hope your mistress will allow you to write a very long letter to us, for we shall be watching for the postman every day and shall be so disappointed if no letter comes.

I am your English friend,

"How large a factor interest is in the success of a teacher is evident from the fact that nearly all the troubles of a novice in teaching are due to his inability to keep his class interested. Where interest abounds, no force or authority is needed to keep order, no urging is required to make the children study."-Dr. Taylor.

## Facts About Flags.

1. To "strike the flag" is to lower the national colors in token of submission.
2. Flags are used as the symbol of rank or command, the officers using them being called flag officers. Such flags are square to distinguish them from other banners.
3. A "flag of truce" is a white flag, displayed to an enemy to indicate a desire for parley or consultation.
4. The white flag is a sign of peace. After a battle, parties from both sides often go out to the field to rescue the wounded or bury the dead under the protection of the white flag.
5. The red flag is the sign of defiance or danger, and is often used by revolutionists.
6. The black flag is a sign of piracy.
7. The yellow flag shows a vessel to be in quarantine, or is a sign of a contagious disease.
8. A flag at half mast means mourning.
9. Dipping the flag is lowering it slightly and then hoisting it again to salute a vessel or fort.

## How a Library Was Started.

I entered a school as a new teacher. Thirty to thirty-five pupils were enrolled. The first week I made inquiry as to what books they had read; two or three of the older ones had read some few. I told enough of "His One Fault" (by Trowbridge) that the pupils became so much interested in it that they asked, "Where can we get that book; we want to read it?", I had a copy, which I donated as the first book for their library. It was read. The pupils expressed a wish to contribute towards a library fund. I appointed a treasurer to receive the money and a committee of pupils to solicit of their friends for the increase of their library. Many of the patrons gave money and others gave books. The first Friday of each month a collection was made by the pupils, giving whatever they wished, from a penny to a dime. As the term advanced a Christmas entertainment brought more money into the treasury. Fifteen dollars had been taken into the fund since I gave the first book. I then selected fifty books, which were purchased during that term, and every book had gone the rounds among the pupils and their friends at home. In the list ranged books for all the grades, from the primary grade to the highest. The pupils love to read from these books, and they also love to contribute to increase their library from year to year. The thirst for good literature in our school is certainly a feast worthy of every teacher's attention.-L. A. Boyakin in American Journal of Education.

## Selections and Reflections.

"We are trying to teach Mary algebra, sometimes without knowing much algebra, and generally without knowing much Mary."-C. H. Thurber.

The best teacher is he who by wise suggestion arouses the child's interest in his school studies and who retains that interest by associating pleasure with the overcoming of difficulties.
"I am discouraged; my pupils forget so easily." "Yes, because you do the work for them instead of getting them to do it for themselves." When the majority of pupils in a department quickly forget what they have learned it is always the teacher's fault.

The tendency towards more flexible courses of study for high schools is strikingly illustrated in the following programme approved by the principals of the Chicago high schools and probably about to be adopted. A course entitling the pupil to a diploma will consist of three thousand hours of successful study of any subjects selected from the following list :

Languages.-English, Latin, French, German, Spanish, Greek.

Mathematics.-Elementary algebra, plane geometry, higher algelara, solid geometry, trigonometry.

History.-Mythology, ancient history, medireval and modern history, English history, American history and civics.

Science.-Physical geography, physiology, biology (zoology and botany), physics and chemistry, geology and astronomy.

Commercial.-Commercial geography, commercial law, commercial arithmetic, book-keeping, stenography, typewriting, eronomics.

Miscellaneous.-Drawing, vocal music, physical culture, manual training, household science.

The importance attached to English language and literature is shown by the fact that half the time must be devoted to them. Principals will be required to arrange programmes and classes so that the brighter pupils may not be unduly hindered in their progress, nor others impelled to advance more rapidly than their health, application or ability will permit.
" In South Australia the University is preparing to train teachers in a department of education and offers to educate the teachers of the state free of cost. The principles and the history of education will be added to the curriculum of the university, and to those who have taken a degree in arts or science, have passed an examination in the department of education and have spent a specified time under adequate supervision in a recognized school, diplomas will be given which will entitle them to teach for life - as long as they are deemed efficient - in the state schools."-School Review.

In some respects it is a great advantage to be away from the old forms of civilization and thus to be untrammelled by the traditions of the past. Australia and New Zealand have been teaching the Mother country and the older colonies many valuable lessons in civics and government. The method of training teachers
referred to in the paragraph quoted above will banish many educational evils which could not be so well met in any other way.

The teacher who knows how to teach geography most effectively is the one who is least dependent on good and expensive wall maps. With a globe - even a cheap one, a blackboard map and a skilful teacher, the geography lesson will be the most interesting and instructive lesson of the day.

In the modern school there is increasing reliance on skilful teaching and personal influence. It is no longer sufficient that certain desired results be secured; they must be secured by means that develop and strengthen character. The school must aim to free its pupils from bondage to low and selfish motives, and to this end it must habitually appeal to motives that are high and worthy. It must make effective those natural rewards that attend human effort as a consequence and satis-faction.-Emerson E. White.

The increasing attention given to science in modern education is clearly shown in the Central High School of Cleveland. It has a business course with 200 students, a classical course with 500 students, and a science course with 1400 students who devote fully half their time to laboratory work.

## Recipe for a Happy Day.

## Take a little dash of cold water,

 A little leaven of prayer,A little bit of sunshine gold Dissolved in morning air.
Add to your meal some merriment, Add thought for kith and kin, And then, as a prime ingredient, A plenty of work thrown in.
Flavor it all with essence of love And a little dash of play;
Let a nice old book and a glance above
Complete the well-spent day. Complete the well-spent day. $\quad$ Selected.

There are said to be fifty-five thousand children in London who attend daily the Board schools, and whose heads are crammed with knowledge whilst their little stomachs are empty of food! Speaking once upon the question of education Lord Brougham said:-"I look forward to the time, when every poor man will read Bacon." "I look forward to the time," his companion interrupted, "when every poor man will eat bacon." Feed the body discreetly and the mind will thrive. Truth.
"Remember, boys," said a teacher, who, being still new at the business, knew not what else to say to make an impression, "that in the bright lexicon of youth there's no such word as 'fail.'" After a few moments, a boy from Boston raised his hand. "Well, what is it, Socrates ?" asked the teacher. "I was merely going to suggest," replied the youngster, as he cleaned his spectacles with his handkerchief, "that, if such is the case, it would be advisable to write to the publishers of that lexicon and call their attention to the omission."-Perrin's Monthly Stenographer.

## CURRENT EVENTS.

The last detachment of the second Canadian contingent for South Africa has sailed from Halifax, and the Strathcona Horse will follow in a few days. The first detachment of the second contingent arrived at Capetown the first week in March, and has been sent to the front. In the meantime, men of the first contingent have sealed with their blcod their pledge of loyalty to the empire, winning high praise from their commander-in-chief for their bravery in action; and one-eighth of them have fallen, killed or wounded on the field of battle. Several of the men who went from the Atlantic provinces are among the killed. Fighting like veterans, falling like heroes, our sorrow for their loss is alleviated by the knowledge that the sacrifice is not in vain.

The whole wide empire is rejoicing over the news from the seat of war. On the 15th of February, the relief of Kimberley was effected; on the 27 th came the announcement of the surrender of Cronje and his army, quickly followed by news of the relief of Ladysmith on the night of the 28th. Never before in British history has there been such rejoicing over news of battle ; and never was it possible for a British victory to be celebrated on three continents before the next sunset.

Lord Roberts had quietly gathered some 50,000 men at Modder river, when the order was given for the advance of a column led by Gen. French. The Canadians were with this column. On the 15 th, Gen. French reached and occupied Jacobsdal (Yak-obs-tal) a town in the Free State, not far from the border line. Leaving the Canadians and others behind, he pressed rapidly forward from Jacobsdal, turning the flank of the Boer army opposed to Lord Methuen, and reached Kimberley the same day. The delay that occurred in crossing a difficult drift (fording place) on the Modder river, gave Commandant Cronje (Cron-ie) time to retreat towards Bloemfontein (Bloom-fon-tine) the capital of the Orange Free State. Overtaken at Paardeberg (Pard-berg), Cronje made a gallant stand; but the British forces surrounded and closed in upon him, scattering the columns that were advancing to his aid, and at daylight on the 27 th, he was forced to surrender. With pride we read that the immediate cause of this surrender was a charge by the Canadian troops. It is thus announced in the official despatch from Lord Roberts :

At 3 a. m. to-day, a most dashing advance was made by the Canadian Regiment and some Engineers, supported by the First Gordon Highlanders and Second Shropshires, resulting in our gaining a point some six hundred yards nearer the enemy and within about eighty yards of his trenches, where our men entrenched themselves and maintained their positions till morning- a gallant deed worthy of our colonial comrades, and which, I am glad to say, was attended by comparatively slight loss.
This apparently elinched matters, for at daylight to-day a letter signed by Gen Cronje, in which he stated he surrendered unconditionally, was brought to our outposts under a flag of truce.
When this despatch reached London, it was read both in the House of Lords and in the House of Commons, the reference to the Canadians evoking loud and prolonged cheering.
"Englishmen," says a London daily paper, "were never so proud of their fellow subjects across the ocean, whose participation in this great struggle has made imperial unity a reality. The capitulation of Paardeberg will be remembered throughout Greater Britain as the turning point in the process by which the British Empire has been made one and indivisible."

The defeated Boer commander and his army of 4,000 men are now prisoners of war, and their loss must be a serious blow to the Boer cause. Cronje and chief officers will be sent to the Island of St. Helena.

The small British forces left to hold in check the Boer invaders of Cape Colony south of the Free State found their opponents weakened by the departure of many sent to Cronje's relief, and they have now reoccupied places lost earlier in the campaign.

The continued activity of Gen. Buller's forces along the line of the Tugela held many of the enemy who might otherwise have gone to oppose Lord Robert's advance. On the 27 th, after a week of hard fighting, which was almost one continuous battle, he approached and took Pieter's Hill, a strong position in the middle of the semi-circle of fortified camps that lay between his army and Ladysmith; and, on the evening of the last day of February, a portion of his forces, under Lord Dundonald, reached the city, and the long expected relief of Ladysmith was accomplished.

The emperor of Germany, the emperor of Austria and the King of Italy telegraphed congratulations to the Queen.

The siege of Kimberley began soon arter the outbreak of the war, and lasted one hundred and tweaty-three days. The town, which lies about 650 miles north of Cape Town, is the well-known centre of the great South African diamond fields; and it is said that the diamonds stored there at the time of the siege were worth many millions of dollars. It has a population of about 29,000 , and was defended by the North Lancashires, volunteers and engineers, about 2,500 in all, under Col. Kekewich.
The siege of Ladysmith began on the 2nd of November, and lasted nearly four months. It is the chief town in the northern portion of Natal, but was ill chosen for defence. Its relief will add Gen. White and about 10,000 men to the effective forces of the British army ; but these will require rest and care for a few weeks at least before again entering on active service.

Both the surrender of Gen. Cronje and the capture of Pieter's Hill which opened the way to Ladysmith, took place on February 27, the auniversary of the battle of Majuba Hill, in which in 1881 General Sir George Colley was killed and his little army cut to pieces by the Boers. Majuba is a flat-topped hill overlooking a mountain pass on the boundary between Natal and the Transvaal Republic. It was occupied by about 350 British, a sufficient force, Gen. Colley hoped, to hold it until reinforcements arrived; but they were defeated, and the official returns showed 292 of the 350 killed, wounded and missing. Remembering the events of Paardeberg and Pieter's Hill the Boers will probably no longer regard Majuba day as a national holiday.

At a place called Sunnyside, near Belmont, while guarding the line of communication between Cape Town
and Modder River, the Canadians had their first experience in actual warfare in South Africa. A part of the Australian contingent was associated with some of the Canadians in a little expedition which brought them into contact with a Boer outpost. The affair is thus commented upon by the Army and Navy Gazette
"The Sunnyside victory, small as it was, has a chance of being remembered in English history when many a greater battle is forgotten, for it was achieved by colonials, who have hurried across the ocean in defence of the national flag. For the first time on record the Australian and Canadian volunteers have stood shoulder to shoulder on the field of battle to vindicate an imperial principle. For the first time on record they have together won a victory and hoisted the Union Jack in a village, from which they have driven rebels in arms against the Queen. Of their own free will they elected to take part in the war, and how valuable their services are, every day brings forth fresh proof. At Sunnyside they showed the steadiness, bravery, coolness and judgment of the British soldier, and against an enemy, that they even beat at his own game. In Australia it may be readily imagined with what emotion the news of Sunnyside will be remembered, for it is the first time in her history that any of her sons have fought on a field of battle, the New South Wales contingent not having seen active service in the Soudan. With the Canadians the case is different, they having added fresh lustre to an honorable military tradition. They have fought side by side with British regulars on many a field, and Canadians have fought with distinction in every war, great and little, since Canada became a part of the British empire. Moreover her French Canadian population have the splendid memory of Chateauguay, where under Colonel deSalaberry, with 300 Voltigeurs, an army of Americans, thousands strong, was utterly defeated; her English population, the memory of Queenstown Heights, which were successfully stormed by the York volunteers against a greatly superior force. Sunnyside was, however, an achievement in which Canadians feel another kind of pride, because it consecrated their loyalty. They fought, not for their homes and country, but for the honour of the empire and the British flag."

Some one asked Lord Kitchener, a few weeks ago, if he were going to re-organize the British transport. "No," he replied, "I am going to organize it." It has been organized. The rapidity with which the retreating army of Gen. Cronje was overtaken and surrounded is one of the triumphs of the war.

An African traveller who has recently returned from the region of the Zambesi claims to have found King Solomon's mines, from which the gold of Ophir came. The present name of the place is Pura, which he thinks is a corruption of the old Hebrew name. There are extensive ruins of ancient buildings and workings ; and the supposition that this is the place from which the ships of Tyre brought the gold and silver, apes, peacocks and ivory, is not incredible. The spot is in Portuguese territory, not far from the borders of Rhodesia.

Under the scheme for the federation of Australia, the respective colonies will be entitled to the following representation in the federal parliament: New South Wales, 23 ; Victoria, 20 ; Queensland, 3 ; South Australia, 6 ; Tasmania, 5.

The famine in India is appalling. The Indian government is taking every possible means to meet the emergency, and announces that no man, woman, or child, need die from its effects, if only their wants can be made known in time. Its plan is to establish a system of relief works for the employment of laborers;
and already $4,000,000$ people are thus employed. The famine of three years ago affected, directly and indirectly, a population of $81,000,000$. The area at present affected is larger, but the population less dense ; and it is estimated that $61,000,000$ people will be more or less distressed, and many of them must perish before their wants can be relieved. The failure of the periodical rains is, as usual, the cause.

Public interest in trees and forests is increasing. Every town in Massachusetts is to have a tree warden ; and hereafter in that state, due attention will be given to wayside trees, as well as to trees in cities. The Ontario government has completed arrangements for a forest reserve of nearly 3,000 square miles, embracing the district in which Lake Temagami is situated. This tract contains a very large forest of white pine, which will be carefully protected.

Jamaica, in common with other West India islands is suffering from the failure of the sugar trade. The Imperial government has begun the expenditure of a considerable amount of money on public works in the island, chiefly military works, which will add to its strength as a naval station; and has also promised a subsidy for ten years to assist in extending the fruit trade.

A new treaty has been made between Great Britain and the United States in reference to the control of the proposed canal across Central America, known as the Nicaragua Canal. By a treaty made in 1850, it was agreed that this canal, when built, should be under the joint control of the two powers, and that neither would ever fortify it, or assume any control over the affairs of the state of Nicaragua or any part of Central America. The new treaty abrogates or puts an end to this agreement, and permits the United States to build and maintain the canal, on condition of its being unfortified and open to all the world, like the Suez canal.

Petroleum has been found in large quantities in Gaspe county, in the province of Quebec, and a strong company of English capitalists will probably soon begin the work of raising and refining the oil.

Winston Churchill, the newspaper correspondent, who lately escaped from prison in Preteria, is not one of those who can find nothing good to say of a foe. He writes:

I will once more place on record my appreciation of the kindness shown to me and other prisoners, and my admiration of the chivalrous and humane character of the Republican forces. I shall always retain a feeling of high respect for the
several classes of burghers I have met. several classes of burghers I have met.

The part which Canadians and other colonists are taking in the war in South Africa, finds hearty recognition in the mother country. It is proposed to erect in front of St. Paul's cathedral, in London, four masts, set in rich bronze sockets, to represent Canada, Australia, New Zealand and South Africa ; and upon them to hoist the standards of these colonies on all national occasions.

The flag of the Transvaal is a very simple affair It consists of one broad vertical bar of green next the flagpole, and three horizontal bars, respectively, red, white,
and blue, the red being at the top. Take, for instance, the simple red, white, and blue flag of Holland and sew a vertical bar of green on the flagstaff end of it. That is all. The Boers speak of their flag as the " viekleur," the four color, just as the French call their flag the "tricolor." The Orange Free State flag is a simple rectangle of vivid orange.

Of what are the colors of the flag emblematical ? Red was chosen because it is an emblem of courage and fortitude ; white, purity ; and blue, constancy, love, and faith.

Oceanica, the new White Star steamer, and the largest ship in existence, steamed from Belfast, Ireland, where she was built, to Liverpool. She sailed from Liverpool to New York on her maiden trip September 6. The length of the Oceanica is 704 feet, and her engines have 45,000 horse power. Her carrying capacity is 17,000 tons. She recently carried 1,444 passengers. Un'til the Oceanica was built the Great Eastern was the largest ship.

The war in South Africa has greatly increased the manufacture of khaki cloth, more than fifteen thousand persons now being engaged in making the material for the British soldiers. The word khaki is of Hindoo origin and means dust or clay-colored. The cloth is made entirely of cotton. It was probably used first by the English soldiers in India. It is very durable and is well adapted for use in hot climates, such as the British troops have been operating in for many years. As is well known, khaki cloth is also used to a large extent in the United States army in the Philippines, Cuba and Puerto Rico. A very distinct advantage of the use of this cloth in South Africa is its 'invisibleness,' and it is worth noting in this connection that, according to an English journal, the horses have been dyed khaki color, in order to render them less easily seen by the enemy.

Alfred Austin, the poet laureate, and Dr. Conan Doyle, the novelist, were the guests of the Authors' club recently in London. In response to a toast for his health Dr. Doyle said: "This war marks a turning point in the life of Great Britain. Some months ago I took the chair at a peace meeting, but I wish now to abjure that error. I have seen more positive virtue in this country during the last three months than I saw during the previous forty years of my life. Why should we punish Kruger? That man has solved a problem which every statesman has found insolvable. I would build a monument to President Kruger of the size of St. Paul's cathedral, putting him under it, and I would write across it, "To the memory of the man who federated the British empire.'"

Though there has been no further violencein connection with the Kentucky election dispute, the matter is still unsettled, each party claiming the right to govern in the name of the people. We who live under a limited monarchy cannot always realize the blessings of our stable government, until we contrast the condition of affairs under British rule with the uncertainty of authority, the consequent uncertainty of law and liberty, and the insecurity of life and property that
prevail under republican government, even in such countries as the United States and France, and more in the lesser republics of Central and South America and South Africa.

Late advices show that Lord Roberts is advancing from Paardeberg toward Bloemfontein, Gen. French with his cavalry harassing the front and flank of the opposing Boers. On the 9th inst., Gen. French who was ten miles in front of the main body reported no Boers in sight. It is believed that they are greatly demoralized and retreating northward since the affair at Poplar's Grove on the 7th, when it is thought both President Kruger and Steyn were with the forces and urged a determined stand against Lord Roberts. Had they done so the Boer force would undoubtedly have been captured, owing to the superb tactics of Lord Roberts. As it was, the enemy skilfully effected a retreat, fearing they would share the fate of Cronje.

Some anxiety is felt regarding Mafeking, against which the Boers are pressing the siege with unusual vigor.

Major Geo. W. Mersereau, Inspector of Schools in New Brunswick, is a soldier by instinct and inheritance, tracing his descent from a military ancestor, Gen. Joshua Mersereau, of the King's Guard in France. If Major Mersereau cannot go to South Africa himself he will be well represented by his son, Fred. Mersereau, who has been a member of the Northwest Mounted Police for the past two years, and who has joined the Sitrathcona Horse which sails from Halifax on the 15th. Another son is Capt. C. J. Mersereau, of the New Brunswick Militia, of the Senior Class in Acadia University.

Corporal Wm. Cox, a member of the South African Light Horse is a brother of Dr. Philip Cox, Principal of the Chatham Grammar School. Corporal Cox is in Lord Dundonald's detachment manceuvring in Natal and around Ladysmith. He has been in many engagements, including the disastrous battle of Colenso, and escaped unharmed. He in company with six others recently performed a daring and plucky action in successfully guiding a rope ferryboat across the Tugela river, exposed to the fire of Boer riflemen ; all escaped unharmed.

A correspondent sends the following anecdote to the Review. I have two nephews of the inquiring age. To-day they were looking at photographs of the ruins of Pompeii, and their aunt "explained." After they went home, the younger said, "Mamma, do you know about-volcanoes?" "What about them?" "Why, you know, the red hot edgings come down on the roofs of the houses and set fire to them." "It is red hot lava," said the elder boy. "Oh, yes; red hot laths. I forgot."

The teacher who is ignorant of drawing should begin to learn now. A knowledge of the art will be equal in possibilities to the acquisition of a third hand.

## BUSY WORK.

Under this head each month there will be found exercises that may be used for silent seat work, class drills, and review work. Primary teachers are invited to contribute to this column any devices or plans they have found effective in keeping children profitably employed.

Morning Recitation - for Primary Class.
I will be careful all the day
About the words these lips shall say.
These ears must never fail to hear
What's told me by my teacher dear.
These eyes upon my work must stay, And 'round the room they must not stray.
These feet must softly walk; and they Beneath my desk must quiet stay.
These hands must busy be, today,
But with their work, and not with play.
And here, in school, the whole day through, I'll do the best that I can do.
-Common School Education-

## Fingerings.

[This is an exercise for the child's hands. Let the hands to begin with, be wide open, the fingers extended; then let every action be done. The "falling, falling," is to go lower and lower, very gently.]

Shut them! Open! Shut them! Open! Give a little clap.
Open! Shut them! Open! Shut them! Lay them in your lap.
Creep them, creep them, creep them, creep them. Up to little chin;
Open wide the little mouthie, Pop one finger in !

Shut them! Open! Shut them! Open! On to shoulder fly;
Let them like a birdie flutter, Flutter to the sky.
Falling, falling, falling, falling,
Nearly to the ground;
Quickly raise, then, all the fingers, Twist them round and round.

- Laugh and Learn.


## How to Teach the Roman Numerals from I to XII.

For material, have a cardboard picture of a clock face without hands, and the hours plainly marked in Roman figures. Also a quantity of little slips of wood. A box of wooden toothpicks will do nicely.

First, make the numerals I to XII on the blackboard several times, and call especial attention to them. Then hold up your hand with the fingers extended, and let the children see that the fingers roughly represent I, II, III, IIII ; the little finger representing I, the next added to it forming II, the middle finger added to these forming III, the forefinger added to the other
three making IIII. Show them that the forefinger and thumb extended form the V. Impress upon the children the two ways of making four, and explain that the second one where $I$ is placed before $V$ means one one less than five ; also that I put after $V$ means one more than $V$; and in the same way explain VII and VIII. Show that IX is one less than ten; XI is one more than ten, etc.

Give each child three dozen toothpicks, and let them make the numerals for themselves. Call upon them to make a IX, a V, a III, a IV, a VI, etc.

Let the children in turn take the pictured clock face and a toothpick. They should hold one end of the toothpick at the centre, with the finger for a pivot, then with the other hand move the stick around to show III, V, X, etc., as the teacher calls for them. Do not use or refer to a minute hand, for the calculations are too difficult for the little ones.

## Spell and Pronounce.

Words frequently confused in pronunciation and upon which special drill is recommended: Through, thorough; thought, though; tough, trough ; together, to gather ; quit, quite, quiet; worm, warm ; how, now, know ; stop, stoop; form, from ; there, where, here ; of, off ; for ; saw ; was; drop, droop ; are, our ; loose, lose ; then, when ; that, what ; on, no ; felt, left.

## Memory Gems.

The world is ever as we take it, And life, dear child, is what we make it.
Say well is good, but $D_{0}$ well is better.
Better to be alone than in bad company.
Obey thy parents ; keep thy word justly; swear not.
-Shakespeare.
Difficulties strengthen the mind, as well as labor does the body.-Seneca.

Know how to listen, and you will profit even from those who talk badly.-Plutarch.

Keep a watch on your words, my darling, For words are wonderful things;
They are sweet, like the bees' fresh honey Like the bees, they have terrible stings.
They can bless like the glad warm sunshine And brighten a lonely life;
They can cut, in the strife of anger,
Like an open two-edged knife.

## Primary Reading.

In addition to and along with the study of the reading lessons in the text-book, the best primary schools are
now preparing and printing, or writing upon the blackboard, reading lessons that are based upon nature study, or stories told, or other school exercises. These lessons are composed by children and teacher working together, she writing each sentence as it is formed. It would be a good plan for the teacher to provide slips and have the best writers in the primary class, or in the next class above it, write out a series of such reading lessons. It would give a wonderful impetus to good writing in the early grades, for the children to know that their work was to serve as models.

## A Good Exercise.

Suppose a cube 3 inches on a side to be painted over its entire surface. Now let the block be cut into cubes 1 inch on a side. How many such cubes will there be?

How many will not be painted at all?
How many on one side only?
How many on two sides?
How many on three sides?
Where are the cubes that are painted on three sides ?

On two sides?
On one side?
With quite young children, it would be a profitable exercise to bring the cube before the class, paint it, cut it, and so answer these questions by ocular inspection.

But, with older pupils, it will be better to let the work be seen by the "mind's eye" alone. We think many pupils in the geometry class may find it not easy to answer some of the questions. Construct similar questions for 2 -inch and 4 -inch cubes.-Home and School Education.

## 'ROUND TABLE TALKS.

B. M.-(1) The average of ten results was 17.5 . That of the first three was 16.25 , and of the next four 16.5 ; the eighth was three less than the ninth, and four less than the tenth. What was the tenth?
(2) The gross receipts of a railway company in a certain town are apportioned thus: $40 \%$ to pay the working expenses, $54 \%$ to give the shareholders a dividend at the rate of $3 \frac{1}{2} \%$ on their shares, and the remainder, $\$ 425.25$, is reserved. What was the paid-up capital of the company?
(1) Sum of the ten results $=10 \times 17.5=175$

Sum of the first three $=3 \times 16.25=48.75$
Sum of the next four $=4 \times 16.5=66$
Therefore the sum of the last three $=175-114.75$ $=60.25$.
The tenth $=$ the eighth +4
The ninth $=$ the eighth +3
The eighth $=$ the eighth.

Therefore the last three $=3 \times$ the eighth $+7=60.25$
Therefore $3 \times$ the eighth $=53.25$
the eighth $=17.75$
the ninth $=20.75$
the tenth $=21.75$
(2) Since $6 \%$ of gross receipts $=\$ 42525$

Therefore the gross receipts $=\frac{100 \times 42525}{6}=\$ 708750$
Now $3 \frac{1}{2} \%$ of the capital $=\frac{54}{100}$ of $\$ 708750$
Therefore the paid-up capital $=\$ \frac{100 \times 54 \times 708750}{3 \frac{1}{2} \times 100}$
$=\$ 10935000$
J. B. J.-(1) How many minutes from 14.20 o'clock, June 24 th, 1896 , to 8.40 o'clock, Jan. 3rd, 1901 ?
(2) In 3 lb .2 oz .11 dwt .14 .4 gr . how many grams?
days. hrs. min.
(1) What is left of the

24 th of June........ $0 \quad 9 \quad 40$
Remaining part of June, $6 \quad 0 \quad 0$
Days in July. . . . . . . . . 31 0 0
Days in August ...... 3100
Days in September . . . . $30 \quad 0 \quad 0$
Days in October . . . . . . 3100
Days in November . . . $30 \quad 0 \quad 0$
Days in December. . . . . 3100
Days in 1897........... 36500
Days in 1898. . ....... 365 0 0
Days in 1899. ......... 36500
Days in 1900........... 36500
Days in Jan., 1901 . . . 2840
$165218 \quad 20=2379980$ minutes
The answer in the book is not correct.
(2) We have 18518.4 grains. But 15.432 grains are given as equal to one gram. Therefore
$18518.4 \div 15.432=1200$

- From the data given in Part III of Kennedy and O'Hearn's Arithmetic the correct answer is 1200 grams and not 1199.9728 as in the book answer.
(3) For Ex. 11, page 43, Kennedy and O'Hearn's Arithmetic, the correct answer is 10 ac. 65 sq. rds, 16 sq. yds., 4 sq. ft., 136 sq. in.

Subsortber. - On the map of South Africa we find the words " fontein" and "dorp" used several times, in such words as Elandsfontein, Bloemfontein, Magersfontein, etc. Klerksdorp, Ventersdorp, Krugersdorp, etc. In your next Review please give the meaning of these words ; also describe "guncotton."
"Fontein" means a fountain or spring (Bloemfontein, the fountain of flowers). "Dorp" is a village (Krugersdorp is of course named in honor of President Kruger.) "Gun cotton" is an explosive substance obtained by subjecting common cotton to the action of strong nitric acid.
F. B. H.-(1) A and B. run a mile. At the first heat A gives B a start of 20 yds. and beats him by 30 seconds. At the second heat A gives B a start of 32 seconds, and beats him by $9 \frac{5}{11}$ yds. Find the rate per hour at which A runs.
(2) Two trains, 92 feet long and 84 feet long, respectively, are moving with uniform velocity on parallel rails; when they move in opposite directions they are observed to pass each other in one second and a-half; but when they move in the same direction the faster train is observed to pass the other in six seconds; find the rate at which each train moves.

Suppose that A can run $x$ yards in a second, and that $B$ can run $y$ yards in a second. Then at the first heat A takes $\frac{1760}{x}$ seconds, and B takes $\frac{9740}{y}$ seconds; thus $\frac{1740}{y}=\frac{1760}{x}+30$. At the second heat $B$ runs 1760 $-9 \frac{5}{11}$ yards; thus $\frac{1760-9 \frac{5}{11}}{y}=\frac{1760}{x}+32$.

Therefore $x=\frac{88}{15}, y=\frac{58}{11}$. $\frac{88}{15}$ yards per second $=$ 12 miles per hour.
(2) Suppose the faster train moves through $x$ feet per second, and the other through $y$ feet per second. When the trains move in opposite directions they approach, or separate, at the rate of $x+y$ feet per second; thus $\frac{176}{x+y}=1 \frac{1}{2}$. When the trains move in the same direction they approach, or separate, at the rate of $x-y$ feet per second; thus $\frac{176}{x-y}=6$.
J. H. -(1) How many cubic yards of masonry in the walls of a cellar that is 24 ft . long and 18 ft . wide, measured on the outside, the walls being 7 ft .3 in . high and 1 ft .6 in . thick ?
(2) The walls of a foundation measured on the inside are 30 feet long and 25 feet wide. How many cubic yards in it if the walls are 7 ft . high and 2 ft . thick?
(1) Take the outside measurement of the two ends and we have $2 \times 18=36$. Take the inside measurement of the two sides and we have $2 \times 21=42 . \quad(42 \times 36) \mathrm{ft}$. $\times 1 \frac{1}{2} \mathrm{ft} . \times 7 \frac{1}{4} \mathrm{ft} .=848.25 \mathrm{cu} . \mathrm{ft} .=31.41 \mathrm{cu} . \mathrm{yds}$.
(2) Take the inside measurement of the two sides and we have $2 \times 30=60$. Take the outside measurement of the two ends and we have $2 \times 29=58 .(60+58) \mathrm{ft} . \times 2 \mathrm{ft}$. $\times 7 \mathrm{ft} .=1,652 \mathrm{cu} . \mathrm{ft} .=61.18 \mathrm{cu} . \mathrm{yds}$.

## Argus. - Do bears always hibernate in this country?

We suppose they do in the wild state; but it is a curious fact that though excellent winter quarters were provided for the young bears in Rockwood Park, St. John, the past winter, they refused to go into them, probably because the supply of food was abundant. Can any of our readers supply other instances of bears not hibernating in winter?

## Editor Educational Review:

Sir,-As the New Brunswick Readers will be the only ones used in New Brunswick after August, 1900, and as these readers so far as I am aware will not contain outlines of British history, as did the Royal Readers, and as Edith Thompson's England is much too difficult for beginners, there will be need of an elementary book in British history covering the work of the common school course up to and including Grade VIII. Believing also that much valuable time is lost at present in the common schools of New Brunswick by attempting to teach to beginners Canadian history from a book that is only suitable to high school work, I write to you hoping that you will use the columns of your valuable paper in agitating for something better than we have at present. I know you have done much during the past year to awaken a study of Canadian history by your publication of history leaflets. I think the Ontario "Public School History of England and Canada," by G. Mercer Adam and J. W. Robertson, B. A., LL. B., would supply the want most admirably. We still could have W. H. P. Clements' History of the Dominion of Canada as a high school text. I hope to see the matter discussed in the Review.
R. B. Masterton,

Dalhousie, N. B.
Prin. Sup. School.

## SCHOOL AND COLLEGE.

The school at Middleton, Annapolis County, N. S., is achieving great success under the principalship of O. P. Goucher, A. B. (Acadia). Middleton is a rising town at the junction of the Nova Scotia Central and Dominion Atlantic Railways. A few years ago, this place supported an inferior miscellaneous school. Now it sustains a graded school of three large departments taught respectively by Principal Goucher, Miss Lela B. Reagh and Miss Elizabeth A. Parker. Principal Goucher's Department is composed entirely of high school pupils of whom there are fifty-six registered, with an average daily attendance of nearly forty. Few sections can show such rapid educational development, much of which is due to Principal Goucher who is deservedly popular in this section.

A fourth department has been added to the flourishing school at North Head, Grand Manan, and Miss Jennie Ingalls has been appointed teacher.

The total enrolment of students at the Truro, N. S., Normal School, for the present term, is 225, the largest in its history.

Principal A. D. Brown, of Bridgetown, Annapolis County, N. S., has been filling his present position in the public schools of that progressive town most efficiently for the past sixteen years. His pupils, as a rule, take high rank at the provincial examinations-which fact has tended to materially enhance his reputation as a teacher. While Principal Brown's success is very largely due to his own energy and tact, he has been ably assisted by a public spirited and capable board of commissioners who aim to employ none but efficient
first-class teachers in the lower departments. The present staff of teachers, under Principal Brown, are Miss Lillian A. Milner, Miss Helen A. Vidito and Miss Margaret C. Spurr, all of whom are efficient first-class normal-trained teachers. Bridgetown is to be congratulated on the efficiency of its schools.

Among the signs of progress in country districts, says the St. Stephen Courier, may be noted organs for school use-as at Elmsville, Lower Bocabec and Bay Road. Good pictures are hung in many of the schools, and scrap books filled with useful information gathered by teachers and pupils are making their appearance.

The Teachers' Institute for Inspectoral District, No. 4, (Annapolis and Digby Counties) Nova Scotia, will meet at Middleton, Annapolis County, on the 11th and 12th days of April. The Teachers of Inspectoral Districts, Nos. 2 and 3 , will be allowed to attend this meeting under existing regulations on the same terms as the teachers of District No. 4. Districts Nos. 2 and 3, embrace the Counties of Lunenburg, Queens, Shelburne, and Yarmouth, which have no organized institute.

The school children and teachers of Truro, N, S., have subscribed $\$ 83$ to the Canadian Patriotic Fund, The Church School for Girls at Windsor, has sent in $\$ 30$, and numerous other schools of the Maritime Provinces have contributed varying amounts from one dollar up.

Mr. S. L. T. McKnight, who for some time successfully taught the Superior School at Port Elgin, N. B., has been appointed to a position in the department of railways at Ottawa.

Considerable interest is being manifested in the Perry Art Pictures in the schools of Albert County, says the Maple Leaf. The teachers find them a great source of interest and instruction.

Principal J. M. Longley, A. M. (Acadia) is one of the successful teachers of Nova Scotia. He has had much experience, both in common and in high school work. He has been principal of the County Academies at Annapolis, at Guysboro, and at Cigby. He was in charge of Guysboro Academy for eight years, and resigned from that position on account of his health. After one year's rest, Principal Longley took charge of the Digby Academy, from which position he resigned at the end of the year, much to the regret of the Board of School Commissioners of the town. For nearly two years, Principal Longley has had charge of the Advanced Department of the graded schools at Paradise, Annapolis County, his native place, and at the same time he has the oversight and management of a small farm which he owns and on which he resides. For many years past, the Paradise school has taken a high rank, and we have no doubt but that its high reputation will be materially enhanced under Principal Longley's regime. The Elementary Department of that school is being taught most successfully by Miss Edith Balcolm, Class B.

## RECENT BOOKS.

For years attention has been attracted to the schools of Cincinnati, chiefly on account of the progressive character of the education given in them and its adaption to public needs and improvement. The autobiography of Supt. John B. Peaslee, ${ }^{1}$ of that city, shows what can be accomplished for schools in the way of literary stimulation, in inspiring young children to read and love good books, in celebrating the birthdays of authors, in adorning schoolrooms with appropriate pictures, in the observance of Arbor Day and implanting in other ways a love of nature, in cultivating a higher moral tone, chiefly by inculcating habits of neatness, order and method in work, and in introducing many practical reforms in teaching. During the twelve years superintendency of Dr. Peaslee, the Cincinnati schools attained the highest reputation at home and abroad, which won for them the opinion of Dr. Harris, the United States Commissioner of Education, that Dr. Peaslee had accomplished the best thing done for schools of that country in fifty years. This is high praise. Every teacher will be benefitted by reading the book, which is stimulating and interesting from many points, chiefly in this,-that it shows what can be accomplished for the community, the home and the school by conrage, devotion and perseverance.

Two notable text-books on botany have recently appeared which are destined to exert a wide influence in the modern conception of that science. These are "Plant Relations" noticed in the December Review, and "Plant Structures," both by Prof. John M. Coulter, of Chicago University. Students of botany and lay readers will read these books with the greatest interest because they embrace the latest researches governing adaptation of structure in plants to habits and environment, those evolutionary processes by which our present forms came into existence, and the conditions under which such forms maintain their places. To begin a work on plants with the lower forms, gradually working up to the higher, has usually been considered a failure, but in this case the author assumes that "the lower groups are not merely necessary to fill any general view of the plant kingdom, but they are absolutely essential to an understanding of the structures of the highest group." (Plant Structures, p. 172). As one follows his work from the sea-weeds to the flowering plants, watching the evolution of new forms with added functions, told with fine powers of description, aided by abundant illustration, he realizes that the author is convinced that his plan is the proper one. Throughout the book the idea of function is always present, giving the real meaning to structure, and leading to a broad knowledge of classification. The clear summing of foregoing characters, for instance, in taking up a new class of plants, is one evidence of the skill with which the subject is treated. The clearness of the descriptions, with as few technical terms as possible, its beauty of illustration, and attractive pages, makes this, with " Plant Relations." almost an ideal work for the student of plants.

H,

[^1]A Modern Mercenary ${ }^{1}$ is a story of the "Prisoner of Zenda" type and a very good one. There is the usual handsome and gallant young Englishman in the service of a small foreign state, a certain John Rallywood in this case. The State of "Maasan" is an object of keen interest to both England and Germany, and conspiracies to dethrone the ruler and to give up the freedom of the little country create the necessary complexities of plot. Romantic interest is heightened by the beautiful wife of the arch conspirator, who fancies herself in love with Rallywood, and the daughter of the time serving chancellor, who is the real heroine. The plot is skilfully interwoven, and the story as a whole, well told. The rather mysterious introduction of the beroine is well managed, and the scene where Rallywood has to choose between his duty to Maasan, whose sworn soldier he is, and his duty to England and to his friends is so well worked out and so exciting that the following scenes fall rather flat.

Mr. Jacobs has chosen as the scenes of his short stories ${ }^{2}$ "the little cargo-boats, that sail the wet seas round." Whoever enjoys a good laugh is advised to read this book. Two of the tales, indeed, "An Intervention," and "The Lost Ship" have a touch of tragedy, but the others are pure fun throughout. The old theme of one digging a pit for another and falling into it himself is handled in a variety of ways, from the story of the boy who wanted to be a pirate, to that of the skipper and mate whose wives couldn't agree. Aside from humorous situations, admiration is demanded for the skill which tells each story without an unnecessary word.

We do not know whether or no "The Barrys " ${ }^{3}$ was meant when some one spoke of "An Irish story without a laugh in it," but that description applies not inaptly to Mr. Bullock's book. Frank Barry, a young journalist living in London, is engaged to pretty Marian Dent; he goes to Ireland to visit his Uncle Hugh; there he falls in love with Nan Butler-that is, enough to take some pains to ensure her sending an old sweetheart to the right about. "She was a dear girl, was Marian. She was not in the least like Nan. Nan was simple, Marian, complex. Nan was humorous, Marian a little sober. Nan was a plain country lass, a maid just as God had fashioned her, Marian was a girl of mind, of training in the ways of the world. He liked both, could almost love ..."" The honest old uncle disapproves of this shilly-shallying young man quite as much as the reader does, and holds up to him as a warning his own father. "Your father was clever-ay, cleverer than the lot of us together, but he had that weak jaw of yours, an' always a woman could wheedle him-wheedlin' and drink; wheedlin' and drink." Nan's father and mother favor Frank, in ignorance of his engagement, but he has no idea of marrying her, which Hugh thinks is lucky for Nan. "The woman I pity," he says, the night before Frank goes back to London, " is the woman that gets ye." In spite of our inevitable contempt for Frank all this first half of the book is delightful. The reader can enter into Frank's enjoyment of the wholesome life in the open air, and of the warm welcome of the kindly neighbors.

[^2]Nan's father is by no means to be despised, and Nan herself is altogether charming. There is a sad falling off in reality in the second part. Here we see Frank married to Marian, but uncomfortably conscious of her superiority, and especially of her ability to recognize weaknesses in his work. The Butler family have reverses and come to London, accompanied by Nan's still faithful lover, Ted Ross. Frank sees them and tells his wife lie after lie, quite unnecessarily as far as the impartial reader can see. There is a disclosure, and Marian leaves Frank, taking her child with her. Frank tries to solace himself with cards and drink and enters in his diary, "I am my father's son!" The child dies and husband and wife are reconciled. There is an unpleasant straining after effect in the last scenes, and it is hard to understand how any one capable of writing the Irish scenes could descend to the bathos of the final paragraph.

Houses of Glass ${ }^{1}$ is a curious book. The story is well handled and interesting to the end. The author's purpose is evidently a good one, conscientiously worked out, and there are fine passages here and there. On the other hand, there are grave offenses against taste, and in the lightness with which Marian Halford and Charles Langtry regard their youthful sin, something worse. A minor matter, but one which annoys the reader at the outset, is the very peculiar English of one of the principal characters. Could not the fact that William Halford had married beneath him be emphasized without making his wife say "Her are called Marian," or "His name are Charles Langtry, and him lives at Gowanstone ?" E. R.

The series of text-books on English Literature published by the Macmillans, and edited by distinguished men of letters, for colonial universities and high schools, has placed many of the masterpieces of English within the reach of a great number of students. The life of Dryden ${ }^{2}$ gives a proper estimate of his place in literature ; and his chief work, which has not been hitherto annotated except in the not easily accessible edition of Scott, supplies notes, historical allusions, and other matter which the busy student will appreciate.

Messrs Houghton, Mifflin and Co, Boston, are doing excellent work for teachers and students in the publication of their Art and Literature Series. ${ }^{3}$ The Art Series fills in an admirable way a very distinct need in our schools-the representation of the world's greatest pictures, with interpretative

[^3]text, giving biographical sketches of the painters, the stories of the paintings, historical references-in fact a complete equipment of information that lacks nothing in presenting to secure interest and instruction. The Literature series is no less admirable in its way, some of the world's masterpieces of literature being presented in a convenient form, at a low price, and very suitable for supplementary readiug.

A book on Spelling, when it has so much to recommend it as Jacob's Practical Speller, ${ }^{1}$ is an invaluable aid to the teacher. The work is graded, words being presented which the pupil is supposed to meet in his studies, conversation and literary exercises. A large amount of drill is suggested on those words alike in sound but unlike in spelling and meaning. A marked feature of the book is the carefully graded rules for the use of capital letters and punctuation marks.

## "The Transvaal from Within." ${ }^{2}$

Whoever wishes to have a clear understanding of England's case against the Boer oligarchy, and to be able to answer intelligently and fairly the many questions which arise about the causes of the present war, should read Mr. Fitzpatrick's book. The writer is a South African by birth, has lived in the Transvaal since 1884, and was secretary of the Reform Committee in Johannesburg at the time of the Jameson Raid. He calls his book a presentation of the case for the Outlander. It was written in August, 1896, in the hope of removing the very grave misunderstandings which existed concerning the occurrences of 1895-6 in the Transvaal, and the conditions which led up to them; but its publication was delayed for three years by the bond which the reformers were required to give on their release from prison, May 30th, 1896, "for the term of three years, neither directly nor ndirectly, to meddle in the internal or external politics of the South African Republic." In June, 1899, the book, as first written, was privately circulated, and in September it was published, with the addition of several chapters, treating of later events. In his preface, the author says: "The reader is not invited to believe that the case is presented in such form as it might have been presented by an impartial historian. It is the Transvaal from within, by one who feels all the injustice and indignity of the position."

We would then not unnaturally be prepared for a somewhat passionate and intemperate appeal for our sympathies, but the calm and reasonable statement of facts that meets us is in itself a strong argument for the justice of the cause. The facts themselves are so damning to the Boer government that no violence is called for in their presentation.

From the closely woven narrative dealing with matters of the keenest interest, it is difficult to select passages for quotation, and, while presenting a few extracts, we confidently refer our readers to the volume itself for a satisfactory consideration of the whole subject.
"It is not too much to say," writes Mr. Fitzpatrick, " that the vast majority of people in Europe and America are indebted to Dr. Jameson for any knowledge which they may have acquired of the Transvaal and its Uitlander problems. Their's is a disordered knowledge, and perhaps it is not un-

[^4]natural that they should in a manner share the illusion of the worthy sailor who, after attending divine service, assaulted the first Israelite he met because he had only just heard of the crucifixion. A number of worthy peuple are still disposed to excuse many things in the Transvaal because of the extreme provocation given by the Jameson Raid." The restrictions upon English education are considered to be " not unnatural when one remembers the violent attempt to swamp the Dutch." The excessive armaments are held to be "entirely justifiable, considering what has happened." The building of forts is "an ordinary precaution." The prohibiting of public meetings is "quite wrong, of course, but can you wonder at it?" Many of these worthy people will no doubt learn with pained surprise that all these things were among the causes which led to the reform movement of $1895-6$, and are not the consequences of that morement as they erroneously suppose. The Press Law and Public Meetings' Act had been passed; arms had been imported and ordered in tens of thousands; machine guns and quantities of ammunition also: forts were being built; the suppression of all private schools had been advocated by Dr. Mansvelt-all long, long before the Jameson Raid."

One of the Boer soldiers, raiding a farm in the northern part of Cape Colony, is reported to have said: "We don't mind Rhodes, but give us old Franchise ; that's the man we want." And this illustrates the attitude of the majority of Boers towards the extension of the franchise. This subject, complicated as it is by the many and peculiar changes in the laws, is clearly set forth by Mr. Fitzpatrick. He quotes from a speech made by Mr . Chamberlain in the House of Commons, July 28, 1899: "On May 10th, 1881, at a conference between representatives of her Majesty and representatives of the Transvaal, the president, Sir Hercules Robinson, asked this question: Before annexation had British subjects complete freedom of trade throughout the Transvaal? Were they on the same footing as burghers of the Transvaal?'
"Mr. Kruger replied: They were on the same footing as the burghers.
"Sir H. Robinson : I presume you will not object to that continuing. Mr. Kruger: No. There will be equal protection for everybody.
"Sir Evelyn Wood: And equal privileges?
" Mr. Kruger: We make no difference, so far as burgher rights are concerned. There may, perbaps, be some slight difference in the case of a young person who has just come into the country."

Now there is a distinct promise given by the man who was president of the Transvaal State that, so far as burgher rights were concerned, they made and would make no difference whatever between burghers and those who came in. The root of the difficulty which I have been describing lies in the fact that this promise has not been kept.
In 1876 was passed the first law on burgher and electoral rights, and this remained in force till 1882. "By it the possession of landed property, or else residence for one year, qualified the settler for full burgher privileges.". In 1882, 1890, 1891, 1892, 1893, successive laws and amendments were passed limiting electoral rights. Finally, in 1894 a law superseding all others left the matter in this position :
"The immigrant, after fourteen years' probation, during which he shall have given up his own country and have been politically emasculated, and having attained the age of at least forty years, would have the privilege of obtaining burgher rights, should be be willing and able to induce the majority of
a hostile clique to petition in writing on his behalf, and should he then escape the veto of the president and executive."
"In 1893 a petition signed by upwards of 13.000 aliens in favor of granting the extension of the franchise was received by the Raad with great laughter. But notwithstanding this discouragement, during the following year a monster petition was signed by 35,483 Uitlanders-men of an age and of sufficient education to qualify them for a vote in any country. The only response made to this appeal was a firmer riveting of the bonds."

Mr. Fitzpatrick speaks in warm terms of the few progressive (relatively speaking) members of the Valksraad who opposed the president on this measure, and reports fully in the appendix the speeches of those members of the committee who favored the extension of the franchise.

The attitude of the president throughout is illustrated by the following passages :
"When remonstrated with on this subject of the refusal of the franchise, the president, who was in his own house, stood up, and, leading his adviser by the arm, walked into the middle of the street and pointed to the Transvaal flag flying over the government buildings, saying: 'You see that flag ! If I grant the franchise I may as well pull it down.'
"When, before resorting to extreme measures to obtain what the Uitlanders deemed to be their bare rights, the final appeal or declaration was made on Boxing Day, 1895, in the form of the manifesto published by the chairman of the National Union, President Kruger, after an attentive consideration of the document as translated to him, remarked grimly : 'Their rights ! Yes, they'll get them-over my dead body." "

In dealing in committee with the petition spoken of above, the president said: "He had been told by these people that 'if you take us on the same van with you, we cannot overturn the van without hurting ourselves as well as you,' 'Ja,' that was true ; 'Maar,' the president continued, 'they could pull away the reins and drive the van along a different route.'"

How needful it was that the reins should be pulled away is plainly shown by the account of the chief points of Boer misgovernment. How ready the Outlanders were to throw in their lot entirely with the Republic may be seen by reading the text of the manifesto: "The three objects," it says, "which we set before ourselves are: (1) The maintenance of the independence of the Republic, (2) the securing of equal rights, and (3) the redress of grievances."

The deplorable story of the Jameson Raid is told in detail, and it is plain that the Johannesburg reformers were heavily sinned against in this matter ; but we can do no more than refer to it here.

Stern and unhesitating as is Mr. Fitzpatrick's exposure of injustice, bad faith and corruption among the Boers, he yet shows his appreciation of their better qualities. Unmistakable as is his loyalty to England, he does not count her blameless in her dealings with South Africa. His concluding words may be painful, but they remind us in these anxious days that there are worse evils than war, and stir us to that loyalty which, nobler than instinct, desires the highest good of its beloved country.
"Appeal," he says, "has been made to England. Only the blindest can fail to realize how much is at stake, materially and morally, or can fail to see what is the real issue, and how the mother country stands on trial before her children, who are the empire. Only those who do not count will refuse to face the responsibility in all seriousness, or will fail to receive in
the best spirit the timely reminder of past neglect. If the reproaching truth be a hard thing to hear, it is, for those whose every impulse jumps towards championing the great home land, a far, far harder thing to say. Unpleasant it may be, but not without good, that England's record in South Africa - of subjects abandoned and of rights ignored, of duty neglected and of pledge unkept, of lost prestige and slipping empire -should speak to quicken a memory and rouse the native sense of right, so that a nation's conscience will say, 'Be just before you are generous! Be just to all-even to your own !"
E. R.

## Literary and Educational Notes.

Mr. Raoul Renault, Quebec, will issue in April the first number of North American Notes and Queries, to be published monthly and to contain important historical and other interesting papers, notes and queries, topics of general interest, etc. The journal will be modelled after the well-known London Notes and Queries, and will be looked for with interest.
D. C. Heath \& Co., Boston, announce a work on School Sanitation and Decoration containing practical suggestions on the location and construction of school buildings, the principles of ventilating, heating and lighting, sanitary arrangements, school furniture, and other matters of importance including intereating and profitable chapters devoted to the schoolroom and its decoration.
D. C. Heath \& Co., Boston, have in press an important little work entitled Publishing a Book, containing practical hints to authors as to the preparation of manuscript, the correction of proof, and other matter valuable to the literary composer.

We have received from the publishers, The Central Press Agency, of Toronto, a copy of their Directory of Canadian Newspapers for 1900 . This is the first issue of such a directory by the Company referred to, and it is very creditable to their diligence and enterprise.

## MARCH MAGAZINES.

In the Atlantic Monthly Dean L. B. R. Briggs, of Harvard College, discusses wisely and pertinently The Transition from School to College, making many suggestions how boys should be better prepared morally for college, and how they can be guided better after entrance. ( $\$ 4$ a year, Houghton Mifflin \& Co., Boston)....The Outlook is published every Saturday, and tells the story of the week in clear, well-written paragraphs. Every fourth week it is in magazine form of double size and finely illustrated. Seven special subjects are treated in the March number, all of great interest, including Hamilton W. Mabie's illustrated article, Shakespeare's Country. (\$3 a year. The Outlook Co., New York)....The Ladies' Home Journal contains the beginning of Kipling's new stories, nine in number, the first piece of sustained work he has done since his illness last year. These stories are all about animals, and they are said to be in Mr. Kipling's best vein. (\$1 a year. Ladies' Home Journal, Phila.).... King Charles's ill-starred reliance on the Scots, after Naseby, and his imprisonment by parliament, are the topics considered by John Morley in his study of Oliver Cromwell in the Century. Talks with Napoleon, from O'Meara's newly discovered and intimate St. Helena diaries, are continued, the possibility of escape being one of the most interesting questions considered ...The Boybood of "The Conqueror" William, and a midnight flight for life on an unsaddled horse,

Old Egypt and its Newest Wonders, the Proposed Dam across the Nile at Assuan, The Royal Champion of England, How Pepper Helped to Discover America, and The Best One Hundred Books for a Young Folks Library are some of the contents of the first spring number of St. Nicholas for 1900 ... The current number of the Canadian Magazine is one of great interest as it is a military number, and reflects the greatest credit on the enterprising publishers in putting before its readers throughont Canada such an admirably conceived and well executed series of articles and illustrations. (Canadian Magazine, Toronto, $\$ 2.50$ a year. Educational. ReVIEW and Canadian Magazine only $\$ 2.50$ a year for both).... The Delineator, a magazine devoted solely to the interests of women, does much to give directness of aim to their work. In the March number there is a well illustrated article, of great interest to women, dealing with the leaders of Women's Colleges, and some of the co-educational institutions. \$1 a year. (Delineator Pub. Co., Toronto.

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## McGILL UNIVERSITY, Montreal.

THE CURRICULUM comprises courses in Arts, Applied Science, Medicine, Law, Veterinary Science Copies of the Calendar containing full information and full particulars of the Royal Victoria College (the new residential college for women students) may be obtained on application.
FOURTEEN EXHIBITIONS IN THE FIRST YEAR (value from $\$ 90$ to $\$ 200$ ) will be offered in competition at the opening of the Session, September, 1900. Copies of the Circular giving full particulars of subjects required, etc., can be obtained on application to (Addrass Mefill Collega, Montreal.)
W. VAUGHAN, REGISTRAR.

University of
New Brunswick.

THE next Academic year begins September 27th, 1900, when Fourteen County Scholarships will be vacant. These Scholarships (value $\$ 60$ each) will be awarded on the results of the Entrance Examination to be held July 3rd, at all the Grammar School centres. To candidates who hold a Provincial School License of the First Class an Asa Dow Scholarship (value $\$ 150$ ) will be offered in competition in September. The Departments of Civil and Electrical Engineering are now open to properly qualified students.

Copies of Calendar containing full information may be obtained from the undersigned.
Stephen M. Dixon, M. A, bursar of the university, Fredericton, N. B.

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