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TORONTO, MAY,$\quad$, $\delta q \circ$
Vol. IV.
No. $a$.

## * Editorial Notes.

Either the examiners of the University of London are drawing the lines pretty taut, or the candidates of the year were of unusually poor quality. At the recent Matriculation Examination only 413 candidates passed out of 1,175 , and the Honors division contains but nineteen names.

Though we have not thought it necessary to give quite so large a portion of our space as usual to special Arbor-Day matter, we hope that the day will be observed with increasing enthusiasm in all parts of the Province. The wise and judicious teacher will not only seize the occasion for improving and beautifying the school and its surroundings, but will recognize the importance of cultivating the tastes for neatness, order and the beautiful in nature, as an educational factor of no small importance. The work begun in thi, direction on Arbor Day should be assiduously followed up throughout the season.

The following from a circular issued by the Secretary of the North York Teachers' Association suggests a new feature, which may be made, we should suppose, both interesting and useful in Institute work:-
"The teachers are requested to send to the Secretary, on or before May 2, 1890 , any questions in Arithmetic to which they have a good solution, or which present difficulty to them. These questions are to be suitable for Public school work. The Executive will make a selection from the problems sent, get them printed, and forward a copy of them to each teacher, who is desired to come prepared to give as neat a solution as possible."

Sir Henry Roscoe, M.P., has introduced, in the British Parliament, a Bill whose object is to remove any doubt as to the legality of the provision of technical and manual instruction in Public elementary schools. The proposed Bill declares that the managers of any Public elementary school may provide technical or manual instruction for the scholars, either on the school premises, or in any other place approved by the inspector; and attendance at such instruction is to be deemed to be attendance at the Public elementary school. If this Bill is permitted to pass, which is perhaps doubtful, manual training will have at once a recognized place, and large encouragement, in the English Public school system.

A NEW and important departure is to be made in England, in the matter of temperance teaching in the schools. The Committee of the

United Kingdom Band of Hope Union has had £, 10,000 placed at its disposal for the prosecution of the work. The sum is to be expended during the next five years, and will be devoted mainly to providing for the delivery of illustrated lectures of day schools, on the physiological results of the use of stimulants. With this view seven lecturers have been engaged, the plan of the lectures being so arranged as to assist the ordinary work of the school. The scheme also embraces the distribution of certificates for the best reports of the lectures, prizes in a national competitive examination, and the distribution of suitable literature.

The Educational Journal begs leave to unite with the many personal friends of Mr . John Millar, B.A., in congratulation upon his appointment to the responsible position of Deputy Minister of Education, made vacant by the death of the lamented Dr. Marling. Mr. Millar has long been known as one of the ablest and most successful teachers in the Province. Under his principalship the St. Thomas Collegiate Institute has won a deservedly high reputation. So far as we are aware, the appointment has given wide-spread satisfaction, and we are sure it will be a matter of gratification to the teachers of Ontario that one of their number, possessed of high educational and personal qualifications, should have been chosen for this important position. We cordially wish Mr. Millar a long and useful term of service in his inportant office.

The moral judgment of the pupil may be educated, by his being called on, on proper occasions, to pronounce upon the conduct of his fellow-pupils. Some of the American colleges and schools have introduced with good results the principle of giving the students a voice in school government. The judicious teacher can often introduce such methods with good effect in the school. If the boys and girls can be brought to feel that the appeal to them is made in good faith, that they are responsible for pronouncing a just judgment, whether in awarding a prize or pronouncing a penalty, the keen ness and honesty of their verdicts will often astonish the skeptical. And the best of it is that in such cases each pupil is taking a lesson in practical morality, in the necessity and value of truth and righteousness, without knowing it. If you have never tried the experiment of asking your pupils to give their ideas on a question of right and wrong, try it, and you will, we think, be pleased with the result. An indirect effect of no small value will be the idea thus suggested
that the school discipline is based on mora principles, not on arbitrary power and caprice.

Some comment has been caused by the fact that the signal success which attended the lady students at the opening of the London University to women, has not been maintained in the subsequent years. Last year there was a marked falling off from the first high achievements, but the number of passes byladies fell little below the general average. But this year, out of 175 ladies who were candidates at the recent Matriculation Examination, the names of forty-seven only appear on the list, as compared with eighty last year out of a slightly smaller number of candidates. The explanation is, we think, two-fold. The fact that the total number of candidates of both sexes who took honors this year is extremely small-only nintteen, last year there were forty-seven-points to an examination of exceptional severity in one or more departments. Then, again, the lady candidates who would present themselves at the first throwing open of the examination to ladies, would naturally be a picked class, the result of a process of natural selection.

The current saying that " misery loves company" is not complimentary to human nature, and we do not believe that it will be any consolation to underpaid Canadian teachers to learn that no less than 1,517 certificated teach is in charge of elementary schools in England are receiving less than $£ .50$ a-year, and that if the certificated assistant teachers be taken into account, there are no less than 4,667 certificated teachers who are rewarded with starvation salaries of less than $£ 50$ a-year. Such is the statement quoted from Mr. Heller, by the London Schoo!master, and based upon last year's Report of the Education Department. Mr. Heller further points out that there are 18,071 certificated teachers at work in the country for salaries of less than $£ 75$ a year, or 28,127 at salaries of less than $\mathcal{f}$ roo a year. With respect to the higher salaries, only 1,901 , out of a total of 44,565 certificated teachers are receiving salaries of $£ 200$ and upwards. Evidently a great work has yet to be done in all English-speaking countries before the profession of teaching can be brought up to the level of other professions in the matter of emolument. But until this is done it will not have attained ițs true position, nor will it be possible to retain in its ranks men and women of such culture and ability as should be everywhere required in those who have the moulding of the nations so largely in their hands.

## Special Papers.

## ARBOR DAY WITH THE CHILDREN.*

I have reduced to writing what I now read, that being printed, you may at greater leisure read it over, and make its suggestions a part of you thoughtful Arbor Day meditation hereafter.
All of us, whether young or old, are blessed by God with many teachers. Lessons of almost infinite purport are spread out before us to be read, if haply we have eyes to see. Voices of most profound significance are filling the vast orb of nature, to be heard, if haply we have ears to hear. By seeking we may find, if we have hearts to understand

Tongues in trees, books in the running brooks
Sermons in stones, and good in everything.'
First our own mother-tongue confronts us at the very cradle, accompanying the loving glance of her, the remembered tones of whose lullaby grow dearer as the years go by. This mother-tongue continues with us every hour as we emerge from infancy to youth, and from youth to manhood or womanhood. We hear it at home and abroad, on the play-ground and in the street. Everywhere, and at all times, it meets us, and by hidden processes enters into all our affections-into every movement of our inner spirit, giving prompt and proper utterance to what otherwise would be silent and alone. Who can rightly measure its power? How long would be the struggle of each one either to grope into any expression which might be intelligible to others, or to receive the thoughts of others without such bond of communication! What a lingering procedure it would be to gain or to retain the thousand concepts which now, through it, confront us at the very threshold of our mental activity? So much doth the soul, through the ear, drink in from our common mother-speech.

But there are other equally common elements which challenge us through the same sense-organ, touching not so much the understanding as the deeper neart-life of our being. The plaintive minor of the myriad autumn insects, rising as an audible mist from dewy meadows and lanes; the murmuring hum of bees in the hedges and amidst the linden bloom; the playful whispering of the forest leaves as they woo the winged winds; the brook "making sweet music with the enamelled stones;" the joyous song of the mated birds; the rush and roar of the mountain torrent and storm, and heaven's thunderous bass as it rolls echoing from the sombrous clouds; all this, and thousands more, challenging us all the seasons through, affect the soul, drawing it into endless fields of investigation or into infinite realms of imaginative meditation.

If, then, through daily use by conversation and study, we familiarize ourselves more and more with our vernacular, and thus commune with the thoughts of men, so also should we more and more familiarize ourselves with the voices of nature speaking to us from every side throughout our lives, and thus commune with the rational, living soul of the Universe.

But the world of Nature, which corresponds throughout to the world of Spirit, which is its source, is not appreherded by the spirit of man through the ear only. She has a language addressed to the eye as well. She finds an utterance not only in sound, but also through forms and colors of endless variety and gradation, the mysterious power of which no one can fully fathom. Just imagine for a moment a voiceless and blank earth, a mere barren emptiness stretching out before us, the silence as of death brooding over the world. How, in such chaos, could we come into any sympathy with it? How could it touch us, and, while penetrating, thrill the human spirit?
But add the hum of insects; the song of birds; the utterance of the many-tongued waters and winds; the voice of Jehovah breaking the cedars, and making them skip like a calf, and dividing the flames of fire, as it thundereth upon the waters and shaketh the wilderness-and what a change! How near it comes to our soul! How it reaches into our hearts, and takes hold of the deepest sympathies of our spirit! Now add to this the varying forms of grace and beauty; the grass and moss;

* First Arbor Day address delivered by Dr. E. E. Higbee, State Superintenden
April 5 , 1885.
the flowering shrubs and clambering vines; the waving forests ; the painted clouds; the azure of heaven's vault ; the rosy-fingered dawn; the crimson mist of the setting sun and dewy twilight ; and mark how our whole being is drawn out, and all our affections aroused into an anthem of rapturous thanksgiving.

Now that we may rightly appreciate all this, and recognize and feel its power, it is necessary that we take every opportunity to enter the woods and fields, and study nature in her own retreats; to catch with erect ear the first throbbing of spring, when the fœetid wild turnips and liverworts bloom, or the shad-berry and the dogwood begin to whiten the bronzed hillsides, or all the winding woodvalleys are purpling with the Judas trees; to watch with keenest eye the new life thrilling through the awakened grass and softened moss, and gilded willow-tops; to come by an intelligent insight and sympathizing love into close intercourse with such blessed companions of our life, and receive with susceptible spirit the thousand lessons around us, whose proper conning fills the mind with profitable lore, and the heart with ever-increasing delight.

Every child should come to know the flower that frighted Proserpina lets fall from Dis's wagon.

## "daffodils

That come before the swallow dares, and take The winds of March with beauty; violets dim But sweeter than the lids of Juno's eyes, Or Cytherea's breath.'
Every child should be familiar with our shadowy hills; should know our trees, their names, and forms and uses,-

- The sayling pine ; the cedar proud and tall

The vine-propt elme; the poplar never dry;
The builder oake, sole king of forests all ;
The aspine good for staves; the cypressef unerall;
should know the shrubbery through which the pheasants whir, and in which the thrushes hide, and which, through sunny summer, strew the mossy path thick with gold and prophyry; should feel a hallowed kinship with earth as she reaches out from the womb of silent darkness heavenward into light and life.

In the vegetable world, the lower forms have but little individuality. They affect us in their general and massive character alone. The blade of grass or stem of moss catches not the soul's glance, but the lawn or meadow, or mossy banks of brooks, and quiet ferny nooks where the red partridgeberries nestle and the arbutus hides her smiles Yet the impression is strong and definite, and makes itself felt at once in arousing our sympathy. In public parks and private yards, how softly the sunlight sleeps on the shaven lawn; and how the grounds surrounding a school-building, if sodded and rightly trimmed, tell at once of that delicate taste and sense of beauty which should, and which does, culture the attention and heart of childhood.
Shrubbery, in the scale of the vegetable world, rises higher, and gains in its ascent much greater individuality, and thus comes nearer the sympathies of mankind. The lilac, with its fragrant clusters shading the nursery window, blooms on in the soul, when, exiles from home, our gray hairs and trembling nerves show how near we are to the crumble and dust of the grave. How many tender memories, slumberless still, at once arouse, until tears dim our vision, when we linger again where "the juicy hawthorn grows, adown the glade!" The sweet-brier, by the woodbine porch, grows sweeter still as it recalls the sainted mother who watched its growth, and whose face is now more precious even than in childhood.
But the very acme of the vegetable world, its height of exaltation, where it almost sets itself free from the motionless clods beneath it, and moves into the sunlit air, and rejoices in its freedom, is the Tree. Here the greatest individuality in this realm is reached. The wide massive forests, it is true, have their varied language; but the single tree in itself comes near to us, having its name and history standing out almost as a personal companion of our life. Instinctively we impersonate when speaking of it. It seems to be a hamadryad. It plays with the breeze, and woos the birds to its green retreats. It breasts the storm and fings its arms defiant in the face of the winds. When the mountains and hills break into singing, the trees of the field clap their hands. (Isaiah Iv. 12.)

It is not simply its shapely form, its cooling shade, or its use for this or that; but its whole
interior life, its seeming effort to break away from the fixedness of earth, to associate itself with the air, and light, and life which are above, to change with the changing seasons as though it had a heart to feel and sympathize with all around it. It is this that draws it so near to man's heart, that fixes it so humanely in all his affections and associations, that gives to it a sort of brotherhood, a tenderness more easily felt than defined. What landmarks they are, when in reverie we recall scenes which are dear to memory! How, when in after years we revisit home or scenes of our school-day life and find them gone, we mourn as though we missed the greeting of old familiar friends! They live as we live.

They have their exists and their entrances,
And one tree in its time plays many parts,
Its acts being seven ages. At first the seed
Rooting its darksome way beneath the sod;
And then the slender stem, with growing strength
Pushing above the earth its shining face;
And then the branchful sapling, sweetly sighing
With winds, and rocking little birds asleep
That softly nestle in its whispering leaves;
Then larger still, with fast increasing branches,
Affording shade to beasts and weary men,
And gathering moss upon its rugged bark;
Then, towering aloft, it plays its part,
Monarch of all the woods, sending its roots
Far down, and with its long, outspreading arms,
Battling with furious storms. The sixth age shifts Into the lean and sapless skeleton;
Struck by the angry bolts of heaven, it stands
Above the rising generation,
All desolate, the strength of manhood fled
From its shrunk shanks; and its big manly voice.
Gone with the thousand leaves which made it, pipes
And whistles in its sound. Last scene of all
That ends this strange eventful history,
It tott'ring falls, and sleeps in mere oblivion ;
Sans leaves, sans limbs, sans bark, sans everything.
But we must check our too long essay. Such thoughts as these we have deemed befitting Arbor Day, especially as relating to the young. While we would by no means neglect on such an occasion to call attention to the great economic use of forests, the perils attending their wanton destruction, the necessity of prompt and watchful care lest through the rapid march of civilization we bring upon ourselves the very evils we seek to avoid, and consume what earth so freely gives us without any thought that she may be so impoverished at last as to seek alms of us (for the growth of forests requires years, but their destruction scarcely a day), while we would not neglect reflections such as these, and would keep up from year to year a spirited and concerted action against our dangers by planting along road-sides, in parks and yards, and around every school building, trees and shrubs, and vines, and flowers ; yet we would, with special emphasis, call the children to a wholesome converse with Nature herself; would withdraw them from the restraints of books and recitation tasks, and woo them to her shady haunts, her valleys and hills, to deepen in their souls a sense of her life and a delight in her beauty, and some clear and sympathetic feeling of perpetual companionship; we would take them to the deep ravines, though themselves scarcely so tall as the brambly goatsbeard growing there; and they should scale the scarry heights and gaze delighted on the billowy green below; they should know each jutting rock, and moss-lipped spring, and foamy torrent; they should ramble over the rolling hills, or look upon the reddening flush of clover fields, or watch the ripples running over the wind-touched wheat ; they should mark each willowy creek, following it until through laurel bloom and fragrant birch, but a brook, it leaps laughing from the shadows of the mountain; they should scan each winding valley until narrowing to a wavering path it vanishes in the distant misty hills; they should hear the sparrows' silvery song thrilling the briery hedge, and see the bobolinks, with quivering wings, send down showers of rapturous melody upon the dew-bent grass; they should learn to love Nature with such tender reverence as never to abuse her or profane her ; and, inspired by such love, they should seek her help in making home, or school, or village, or city, a comforting delight, a culturing power, a presence of beauty through life.-Pennsy/vania School Journal.

Hope is like the sun, which, as we journey toward it, casts the shadow of our burden behind us Samuel Smiles.

## * Çorrespondence.

## ANNOTATED ENGLISH TEXTS.

## To the Editor of the Educational Journal

SIR :-I gladly comply with your invitation to give the reasons which have forced upon me the conviction that "with ready-made notes and comments in the hands of the pupils no teacher can do the best work" in teaching English Literature. In stating these reasons I shall confine myself to the teaching of poetry, as that has been prescribed for University Matriculation and Second-Class examination work for 1890-91. I assume that as prose texts are now prescribed solely for the purpose of getting subjects out of them for essay writing at the examination, and as the examiner is expressly prohibited from basing on them any questions of any kind whatever, no teacher will think of making an elaborate analysis of them as part of his school work. All that is needed is to see that they are read carefully and frequently by the pupils, and as they are inherently interesting that may safely be regarded as reading for recreation, and be left, as such, to the pupil's private convenience. Annotated editions of the prose texts are, therefore, out of the question. For the sake of brevity I will state my views on the subject of annotated poetical texts in a series of dogmatic propositions, making no attempt to controvert the views of others. The selections for 1890-91 are Longfellow's "Evangeline" and a number of his minor poems, making an aggregate of about 3,000 lines. The propositions are

1. The chief end in view in the study of poetry should be æsthetic culture-the development in the pupil of the faculty by which he discerns the beautiful, and through which beauty arouses in him pleasurable emotions. In other words, the aim in teaching poetry should be to cultivate the taste. do not stop to argue this point, for I feel quite sure that it will be generally, if not universally, conceded. Nor will I stop to argue the question, whether poetry of certain kinds is well adapted for this pur pose, because on that point also there seems to be something like unanimity among teachers
2. The chief object being kept in view, a second one should be to instil into the pupil a love of liter ature. This will be impossible apart from appreciation of it, and since appreciation is as inseparably blended with culture, as culture is with enjoy ment, there is little need to insist on this at any length.
3. The teacher should also aim at so dealing with poetical texts as to furnish his pupils with a method of studying poetry for themselves. If he fails to do this his teaching must be pronounced extremely defective from an educational point of view
4. For æsthetic culture the teacher can do little in a positive way, He cannot teach a pupil to ap preciate the beautiful, though he may be able to skil fully and suggestively draw his attention to beauties that might otherwise have passed unnoticed. Only the author, through his works, can do positive teaching and force appreciation. If the poetry has been judiciously selected he will do that, and if there is no beauty in the selections the time might better be devoted to something else. No matter what other excellences the poetry may have, this cannot be dispensed with. The thought wrapped up in the verse may be ennobling, the morality may be sound, the language may be vigorous, and, yet, if there is no beauty in the poetry, there can be no æsthetic culture. The æsthetic faculty grows by what it feeds on, and its appropriate food is the beautiful in art. 5. Nor can the teacher by positive instruction instil a love of the beautiful in literature ; that, too, is the author's function. If the selections have been wisely made, and if they are wisely used, there need be no fear of the result. But if there be no beauty there, or if unwise efforts are made to cram the pupil with ready-made opinions instead of letting him form his own, the tendency will be to produce a feeling of disgust, instead of a feeling of love. In all matters of taste, each must be a law unto himself. The pupil has as good a right to his likes and dislikes in literature as the teacher has as good a right as he himself has to his likes and dislikes of certain kinds of bodily food. A person prefers a chromo to the finest painting, and it is desirable to educate him into a better æsthetic condition. Positive instruction will do little for him. The best way to treat him is to bring him for a
time into close contact with what is superior, and let the beautiful in the artist's work impart the education and inspire the love of itself. And so it is with the beautiful in literature. If the pupil is ever to love Longfellow's poetry with a genuine and enduring love, Longfellow himself must teach him to do so.
5. The teacher can furnish the pupil with a method of studying Longfellow's poetry, and this method will serve not merely for subsequent and more extensive reading of his works, but for all the pupil's subsequent reading of poetry in general, and of prose that has in it some of those artistic qualities which make poetry attractive. It is useless to go into minute details here, but a few general features of the method may be specified :
(a) The pupil's first acquaintance with the prescribed work should be made without any interference whatever. Let the author have a chance. Self-repression is the first law of good teaching in every subject on the programme, but this is preeminently true where the questions that must arise are mainly questions of taste. Set the pupil at reading the poem in hand without a word or a hint of preliminary explanation of any kind whatsoever, and require him to read it over by himself until he has had a chance to become familiar with it. By a few well-directed questions the teacher can and should ascertain whether the reading is being effectively done, and this need not take up much of the time of the class in school. Longfellow's poetry is simple and attractive enough to be treated as reading for recreation, and there is no need to have any of it read in class unless it is deemed desirable to make use of it for elocutionary purposes.
(b) The pupil should be directed to read each poem as a whole. Every selection for next year can be read through at one sitting, except, perhaps,
"Evangeline," and that should be read as continuously as possible. The largest view that can be taken of any work of art-a poem, a statue, a building, a painting, a musical composition-is for æsthetic purposes, the most valuable view if the work is artistically constructed ; if it is not so constructed it should not have been chosen. "Evangeline" is a beautiful work of art, not merely in its exquisite details of rhythm, tone-color, scenic description, and analysis of human feeling, but also in its entirety. We enjoy the details at every reading, but only that familiarity, which is the result of frequent perusal from beginning to end, can give us a clear and abiding impression of that which is after all most beautiful and most attractive about it.
(c) The pupil will find difficulties in the poem, and will no doubt misunderstand parts of it. Encourage him to make known his difficulties, and endeavor, by questioning him on the parts most likely to prove stumbling-blocks, to ascertain where he has formed erroneous opinions. Do not thrust information on him that is not needed, and, above all, do not thrust any information on him before giving him a chance to find out whether he needs it or not. Difficulties that present themselves on a first reading will vanish on subsequent readings. The residuum can be explained away by the teacher when the proper time comes, and even if he cannot clear all remaining difficulties away, what matter? They are not likely to affect the pupil's standing at any examination he may have to pass, and so long as they do not affect his enjoyment of the poem they may be passed over without any great amount of uneasiness. I am not putting in any plea for slovenly work. All I want is to make clear that the important thing is to appreciate and enjoy the poem, not to make it a means of conveying information. The teacher may not know precisely what the "angelus" is, or the "plain-song." All the better for both himself and his pupils if he does; but if he does not know and cannot find out by means of books of reference at his command, he can get along very well with such meanings as the context of "Evangeline" suggests. He may not know or be able to find out where the Ozark mountains are. I never did know, or if I ever did I have forgotten, and though I am now reading "Evangeline" with a class I shall not take the trouble to find out. The general impression of extensive travel over this continent is not heightened perceptibly by going into minute geographical details, and this general impression is all that the poet needs to produce for artistic purposes. No linguistic difficulties occur in Longfellow's poems that cannot be overcome by a good English dictionary like the "Concise Imperial," the "Imperial"
(d) The pupil should be required to compare one work of art with another-a method of study peculiarly effective with Longfellow. Poems that lend themselves to instructive comparison or contrast with those selected are to be found in abundance among his writings, and, therefore, the whole of his poems should be in the pupil's hands. They cannot be so if annotated editions are to be used. Routledge's complete edition of Longfellow can be had in convenient size and fair type for thirty-five cents retail, in paper covers, and seventy cents retail, in cloth. Any annotated edition of the selected poems will cost more than the former of these sums if not so much as the latter. With a complete edition the teacher can advise the pupils to read such poems as "The Courtship of Miles Standish" and "Hiawatha," for the purpose of comparing them with "Evangeline"; he can ask them to read the "Legend of Rabbi Ben Levi," with a view to comparison with " King Robert of Sicily"; he can direct their attention to several other obituary poems when he bas "Auf Wiederseten" under consideration, and so on. Without going beyond Longfellow the pupil can be made familiar with the comparative method of artistic study, and to make him familiar with it is to do more for him than can be done by any acquaintance however thorough with formal categories or canons drawn up to be memorized, or with critical opinions which have not necessarily any more value than his own. The comparisons may be made to include other artists besides Longfellow, and for this purpose the teacher should read, not opinions about Longfellow or other poets, but the works of Wordsworth, Tennyson, Whittier, Lowell and other poets of this century, between whom and Longfellow points of contact are most likely to be discovered. Side reading is of less importance in the training of a teacher of literature than wide reading.

I do not expect that the views thus briefly and imperfectly expressed will be generally adopted and acted on. I cannot even say that I desire their immediate and universal acceptance. It has taken me a long time to reach my present standpoint in these matters, and it would be unreasonable in me to expect others to see eye to eye with me on short notice. That the tide of opinion is rising against annotated texts, however, is quite certain, and that before long they will disappear from our schools is almost equally so. I am quite sure that in many of our best High Schools this year they will not be used even if produced, and I hope the number of schools requiring pupils to get the whole of Longfellow's pnems will increase so rapidly as to warn both publishers and editors out of the field.

In conclusion let me express the hope that if any one feels disposed to criticise my opinions he will first take the trouble to understand them. I have tried to make my position as plain and intelligible as a brief statement will permit. I am quite willing to defend that position against all comers, but I dislike the idea of renewed explanation. It may be that the course of treatment I recommend would be open to objections which have not suggested themselves to me; if so, I shall be glad to have them pointed out. Yours,

Wm. Houston.
Toronto, Jan 14, 'go.

## ENGLISH ws CANADIAN HISTORY.

CAN any good answer be given to the question so frequently asked, "Why is there so much importance attached, in Canada, to the study of English History ?" England is a country with which we are rather loosely connected, with a tendency to a greater degree of separation.

Why should the Department in all its examinations give so much attention to the historical knowledge of that country and so little to our own? While we concede that it is well to have a knowledge of English History, yet we think it is not necessary to commence at the beginning and follow each reign, and be able to account for each individual's claim to the throne from Boadicia to Victoria. Would it not be sufficient, from a Canadian standpoint, to deal with the Roman Conquest, -the Coming of the Saxons-Danes and Normans, and the evolution of law and order during this period; pass briefly on, touching on the Magna Charta, Establishment of the Parliamentary System, etc., till we come to the Reformation; deal with that subject carefully, also with the Stuart Period, and the leading points from that on? Of
what interest to us are the great wars between England and France-the loss or accession of territory during those troublous times? This outline, we think, would answer at any rate for Entrance Examination, and with some slight additions for heavier examinations. If the History of Canada is not sufficiently extensive to give the pupils enough to study, the extra time may well be devoted to other subjects on our lengthy programme of studies.

Teachers recognize the difficulty in preparing pupils for Entrance Examination on the subject of History-especially when we have to make use of a book so unsuitable as is the present Public a book so unsuitable as is the present Public
School History, composed as it is of Johnsonese expressions, and vague ideas. The well-known axiom of "not how much, but how well" must necessary be set at naught.
W. F. Moore.

April 18, 1890 .
Cookstown.

## Elocułtiondry Depdrfment

## ELOCUTIONARY STUDIES.

the face against the pane.
Fourth Reader, p. 74.
In this poem the reader is a spectator, but he must realize the entire scene, the events, the mortal agony of the young girl, Mabel, watching with intensest fear, in her anxiety for the safety of her lover, the beacon light which warns her of the coming storm. Supernatural visions and sounds fill her mind with weird-like emotions. Hence the conception must be characteristic, and the reading in harmony with it-solemn, wild, supernatural, yet pervaded and controlled by an expression of the enderest passion.
V. I,--Begins with emotions of fear and wildness. L. I is read with the tremor of anguish, passing into terror to the end of the ninth line. Read "screech" softly and tremulously, and "moan," "moan," in low and prolonged chant-like tones, imitative of the sound of the breaking waves and the sighing of the wind before the bursting of the storm. The simile of the "old crone" must be a wild but mournful impersonation in manner and tone, not in mockery, but solemn, and the voice prolonged on " woe " Read "wringing" with poise on the word, and imitative but not violent action. Read the last five lines in soft tremulous and pitying tones.
V. 2. -Read this verse with pleasant and cheering expression; it is probably spoken by a friend or relative of Mabel. In the last four lines resume the expression which ends the first stanza.
V. 3.-The prevailing expression of this stanza is one of fear and awe excited by presentiments of evil, the terrors of the storm and a feeling of supernatural influences. In lines 1 , 2, the voice swells with tremulous force on "fire," "thunder" and "rolls," the last word to be delivered with reverberating effect. Lines 4,5 , lower $P$. and solemn; chant "tolls" with tremulous poise like a funeral knell. Lines $6-9$ express awe excited by supernatural influences; read lines 6 and 8 solemnly, moved by the feeling that spirits are swaying the bell. L. 9, read "tearing" with expulsive force and imitative gesture of the arm. Lines 10,11 , read like a solemn chant, low P., and poising with tremulous swell on "tolls," "souls" and "sea." All this passage must be marked by a feeling of awe, expressed in soft, swelling, but suppressed tones; the reader is speaking under the influence of superstitious belief and fear. Lines $12 \cdot 17$, the expression now changes to tenderness and pity for the "sailors on the sea" and for their wives and sweethearts. This passage should be read with effusive and tremulous force. Read "God pity them" as inflected in low P., with poise on "God;" the tremor on the word will prevent the improper sound, "Gawd"; em. pity; repeat the sentence in lower P., and softer tone ; em. "wherever," "wives," "" sweethearts," with tremor. Read the last two lines with tender effusive force; em. "Mabel" with falling inflection on "pane."
V. 4.-Read this verse with animated but alarmed expression and expulsive force. Poise on "bonm," imitative of the sound, and similarly read "rolls and rolls." L. 5 , look forward and upward with arm and hand extended towards the rocket; em.
"rocket" and pause. Read lines 7 and 8 similarly, the expression is one of fear in sympathy with Mabel, who sees in these signals the warnings of danger and of the final catastrophe.
V. 5.-Lines I, 2 , read softly but with the tremor of alarm ; em. "pale" and "lips," and "white" with less emphasis, but with fear as anticipating the approaching tragedy. Read the questions, lines 3-7, in L.P; lest she should hear what the spectator asks. Pity and terror must mark this reading. Lines 4 , 5 , give illustrative action with prone and extended hands, picturing the catastrophe. From "tossing" to "air" is a parenthetical clause and should be read lower and faster. Connect "That" with lines 6,7 , with increased force. Read "down" with deep tremor and prone hands outstretched, and "out of sight" slower, and em. "sight"; 1. 7, read in deeper P . and with expression of terror. Lines 8-II, read with effusive but earnest force, and give "more" and "pane" rising inflection; both lines are expressive of utter hopelessness.
V. 6.-This stanza presents pictures in striking contrast. The first four lines, descriptive of the bright morning reflected on the golden spire, must be read in warm, lively and expulsive tones; but 1. 5 presents the solemn procession, the funeral march; the voice sinks in $P$. and becomes slow and solemn and effusive. Read "with something, etc." suppressed and with fear ; em. "bodies, stark, white," but with suppressed force.
V. 7.-Expression calmer, as one of counsel and resignation. L 3 , em. "child" with tender expression but marked by awe, for the spectator knows Mabel is dead. Lines 7, 8 , read in solemn monotone. In the last three lines the tone becomes loftier and warmer, with swelling emphasis on "saintly" and "beyond." This expressionincreases in force on the last line with its sublime utterance of faith, that Mabel now sees the Heavenly Beacon Light-Christ the Redeemer.

## 彞 Quesfion Dracuer. 橉

[A Reader:-We cannot go back to old fyles of examination papers to find what the questions were and answer them. Questions for this column must be clear and definite. A good way of teaching Com position can be found in many copies of the JourNal. Almost every issue has, in fact, something on the point. So you will find problems similar to that proposed solved often in Mathematical column. There is one in this issue.]

Please state in next issue of Ed. Journal which Drawing book or books will be required at the next Entrance Examination, and oblige a subscriber.U.P.
[See Question Drawer, April Ist.]
Before what time must candidates for First Class Certificate (Grade C) signify their intention to the Department?-Enquirer.
[Notice must be sent to the Inspector within whose Inspectoral Division the candidate intends to write, not later than May 24th.]

Name " the three great branches of the British family,' referred to on page 289 , Fourth Reader, lines 3 and 8, on lesson "Canada and United States "?-M.M.
[The people of Great Britain, Canada and the United States.]

A person at last Annual School Meeting acted as Chairman and Secretary-occupied two positions at one and the same time, and got elected trustee; also another trustee was elected to fill another vacancy during that meeting.
I. Is the first a legal trustee, and also the second ? 2. Is there any limit of school population beyond which trustees of a rural section can be forced to get an assistant? What must the school population of resident children of school age be?
3. Can a teacher vote for trustee in any case? Subscriber.
[ I. We suppose so. It is not usual to appoint the same person to act both as Chairman and as Secretary, and is certainly very awkward and undesirable, but we do not see that it invalidates the action of the school meeting. 2. We are aware of no such limit, though we think there should be one. The Inspector has a good deal of authority in such matters, and his recommendation would probably prevail. 3. Certainly, if a qualified voter in the district]

What is the address of the publishers of (iardenier's Cabinet of Máps and Charts?-W.M.K.
[We do not know. Can any reader give the information?]
I. Will those who take Botany and Zoology at the First Class Examination in July, i890, have to take Latin also?
2. If I hold a First Class (C) Non-Professional Certificate, and attend the Normal school, will that entitle me to a First-Class Professional ?
3. To whom do you apply to enter the Normal school?
[i. No. 2. Yes, on passing the Departmental Examination. 3. Write to the Secretary of the Education Department for a blank form of application.]

What sets in Book-keeping are supposed to be worked out and sent in for the next Third-Class Examination?-A Subscriber.
[See Question Drawer in last and previous numbers.]
I. Where can I get "Mental Arithmetic, Part II.," by J. A. McLellan, and at what price?
2. Can a teacher having a Professional Third Class and Non-Professional Second Class Certificate teach longer than three years betore going to the Normal school?
3. Is it lawful for the trustees to appoint a teacher without having a school meeting to hear the opinion of section ?-J.S.B.
[Apply to any of the educational booksellers advertising in our columns. 2. The Certificate may be extended by the Education Department, on certain conditions, one of which is the petition of a Board of Trustees. 3. Certainly. It is the duty of the trustees to make the appointment, and theirs is the responsibility.]

1. On page 92 of British History we find William of Orange compelled to draw his advisers from the ruling party in Parliament, and not from the Whigs and Tories, as he wished. Which was the ruling party, and why compelled? Who could compel him ?
2. Have Third Class well advanced in Reduction, except dealing with $30 \frac{1}{4}, 5 \frac{1}{2}$, etc., etc. Will I proceed to give fractions now or only that part of fractions?
3. What is the curriculum of studies for a Second, of July next? Also the books necessary to work myself upon Chemistry, Literature, and each of the branches?-M.H.S.
[1. We have not a copy of the School History at hand, but the reference is, we presume, to the state of affairs in A.D. 1699, when in the newly-elected Commons the "Country Party" gained the ascendancy over both Whigs and Tories. The Commons had now become the supreme authority, and although the system of Responsible Government was not yet fully developed, the King found himself compelled to choose a ministry which had the confidence of the Commons, else he could obtain neither money supplies nor necessary legislation. 2. We should say,finish Reduction. It is very easy to teach an intelligent child how to manage the one-half and one-quarter. Perhaps experience proves the contrary; if so, we should be glad to have a professional opinion. 3. Ask nearest H.S: master or Inspector, or write to Department.]
I. What Literature lessons should a class study during their first year in the Fourth Reader?
4. Should a Fourth Class study every lesson in the Fourth Reader previous to passing the Entrance?
5. What qualifications are necessary in order to become a juror in Ontario, also to have a vote ?
6. What were the principal differences between the English and French criminal laws at the time he Constitutional Act was passed ?
7. Why is the word "spun" used in line 32, page 300 , Fourth Reader? One would naturally suppose that it should be "spin."
8. Is there any book published on Elementary Astronomy ; if so, where could it be got and what would it cost?-U.S.L.S.
[I and 2. Perhaps some teacher of experience will kindly give the advice asked. 3. Manhood with a certain term of residence, now gives a citizen the Provincial franchise. We are not aware that any other qualification is required for a juror. 4. The chief difference was that the French had no such thing as trial by jury. Justice was administered among the French by Courts and officers, composed of the aristocracy, and according to the laws of France and the Custom of Paris, a body of unwritten laws established by long usage, but modified in Some cases to suit the circumstances of the country. 5. The past tense is used because the mermaid mother is represented as rejoicing at being again with the sights and sounds with which she used to be familiar before she married the merman and went to live in the sea-caves. The "wheel where she spun" (used to spin) was one of these. 6. Many of them, at various prices. Write to a bookseller for a list ]

## Edrucałiondl Meełings.

OXFORD TEACHERS' INSTITUTE.
The twenty-fourth session of the Oxford Teachers' Institute was held at Woodstock on the 9th and roth ult., Mr. Hogarth, President, in the chair. The Secretary announced that he had sent copies of the resolutions passed at the last session with regard to Third-Class Certificates and the literature selections for Entrance Examinations, to the different Institutes and to the Education Department, but had received a reply from only one Institute, the members of which disagreed with the resolutions of the Oxford teachers.

The first topic discussed was "What do Our Pupils Read?" Miss Laidlaw in introducing the subject said that the majority of the books read come from the Sunday-school library. The others belong to the house or are brought there by the members of the family. Hence arises the necessity for more care in the formation of Sunday-school libraries, and for parents to look after the books brought to the house. In the Third Class most of the books read are Sunday-school ones, but there ate . even such as "Peck's Bad Boy," "Jessie James" and detective stories. In the lowest 4 thbook grade most of the pupils' lists contain one or more good biographies or books of travel. In the two higher classes, the Entrance Class and the one below, it becomes very evident that boys read better books than girls read. In a list of two dozen books read by girls, there was often not one book of history, travel, adventure or biographynothing but "Pansy," E. P. Roe's and similar novels - while every boy's list contains from one to a dozen books of history, natural history, travel or science. It is evident that girls need to be ecouraged to read "boys' books" if only to widen their horizon. The stronger imagination of women does not need so much exercise on works of fiction. Women's nerves would be stronger if exercised more on the facts of nature and history and less on the fictions of novelists.
In the course of the discussion,which followed, Mr. Or's White and Mr. McDiarmid spoke of the teacher's responsibility in the matter. He can excite a his reference best reading, by his teaching and questioning in teaching, as well as by personal questioning. Mr. Kerr advocated more magazine reading for the young people- such a paper as
he Youth's Companion he Youth's Companion, being of a proper nature.

## WEDNESDAY AFTERNOON

Mr. H. F. McDiarmid dealt with the subject of "School-room Culture." Judging from the analy sis before us this was an able and suggestive paper. We should be glad if Mr. McDiarmid would favor us with the whole or a fuller analysis. Failing that, we may use the one before us in a future number, not having space in this issue.

In reply to a question Mr. McDiarmid said he thought oral examinations should take the place of part of the written examinations.

The next thing on the programme was "First lesson in Case," by Mr. W. A. Ferguson, which was taugh to a number of pupils from the Public schools. A very spirited discussion followed.

Inspector Carlyle then followed with a practical lesson on "The Sentence, the Statement, the Clause and the Phrase," in which he showed the best means of developing the idea of each in the minds of the pupils, and pointed out some errors and misleading statements made by some teachers and in many text-books with regard to these.

In the evening a grand reception was given, when there was a very large attendance, including quite a number of citizens.

## THURSDAY MORNING.

The following officers were elected :- President, H. F. McDiarmid ; Vice-President, J. M. Cole ; Sec.-Treas., A. D. Griffin ; Management Committee: Miss Laidlaw, Mr. W. H. Huston, Mr. Fletcher, Miss Poole, Mr. A. Beatti ${ }^{2}$. Mr. Lennox and Mr. T. H. Ross were chosen to represent the Oxford Institute at the Dominion Association in Toronto.

Mr. Hogarth then read an able paper on the question of "Teachers' Salaries." Some of the points made were the following: The averdge salary of the teachers of the Province is $\$ 340$. The teacher does as good work as the members of any other profession. Why is he not as well paid? One reason is that while lawyers have pretty good control of their fees, teachers must take what they can get. The payment of teachers is regulated by the law of supply and demand. The supply in the teaching profession is much too great, and incompetent teachers offer at starvation wages to teach the Public schools, forcing the competent ones, in many cases, to leave the profession. Too many of the school boards care less to have good teachers and good schools than to make the outlay as small as possible. If one section has a teacher who receives $\$ 500$ and the Board sees that a near section pays its teacher but $\$ 300$, the one with five hundred is not retained. Another reason is that in some instances there is seen a lack of professional honor, one teacher underbidding another in office. The teacher should impress upon the people the true value of the teacher's work in the lives of his pupils. To increase the salaries we must prevent competition. This can be done by raising minimum age of teachers, and by prolonging the Model school term, thus shutting out those that intend to use the teaching profession as a stepping-stone to some other. One method of helping the salaries in different counties would be to form County Unions, thus fixing for ourselves the minimum salary of the teachers in the county. Half the school money might be raised by a county grant which could be equally divided amongst the school sections, so that the teachers in the poorer sections need not suffer. The Government grant might be divided according to the qualifications of the teachers in the section.

Mr. Creasey, Mr. Garvin, Inspector Carlyle and several other teachers spoke on the subject, Mr. Creasey, especially, being of opinion that the teacher has a great deal to do with his own salary. Before the Institute adjourned the following motions were passed:
Moved by Mr. Hogarth, seconded by Mr. Garvin, (1) That in the opinion of this convention no person should be allowed to enter the teaching profession under the age of twenty years. (2) That the Model school term should be lengthened to one year. (3) That Third Class certificates be Confined to the counties in which they are granted, unless endorsed by the inspector of another county. (4) That a copy of this resolution be sent to the Educational Department, and to the other Associations of the Province.

Moved by L. A. Copeland and seconded by W. Forrest that our delegates to the Provincial Association be instructed by the Convention to bring this question of raising the standard for our
profession before the said Association, and endeavor to press upon the said Association the necessity of the whole Province moving together along this line.

## THURSDAY AFTERNOON.

Mr. Griffin spent a short time on the subject of Decimals, crowded out of the morning programme. In his experience not one pupil in a hundred uses decimals practically ; they convert them into vulgar fractions. Questions of interest, and all other sorts are worked in the same way. In his opinion the text-books are much to blame for this. A better way to use decimals is to teach them to pupils when adding is first taught. They should learn to read the decimals as tenths, hundredths, etc.

Mr. Garvin followed on the Phonic method of word recognition, showing his method of teaching. He had two boys in the second part of the first book that had received a ten or fifteen-minute lesson every day for six or seven weeks (four months ago), whom he tested on some words suggested by members of the Institute. After teaching the simple sounds, any two, his method is to teach all the syllables that can be formed from these. After they have been drilled on the syllables, they learn to recognize and sound the largest words easily. The words suggested were: invalid, further, through and Constantinople. Mr. Garvin said he would promise to teach a class in six weeks by this method to read better than any teacher in the room could teach in two years by the "look and say method."
Mr. Sprague, Secretary of the Y.M.C.A., then spoke of the necessity of exercise in the school roam-work not being exercise-and illustrated the wand exercise and the thrust by a class of six girls, who went through the motions very easily and gracefully. He then showed what use might be made of modern dumb bells, even in the school room, but warned the teachers to send the pupils into the playground in preference to giving them the same time in school exercises. Fifteen min utes in the open air is worth an hour in the gymnasium.

One of the most interesting addresses of the present session was Mr. O. White's, on Friday afternoon exercises. His school now receives a yearly grant of ten dollars from the trustees for the purchase of magazines, and part of Friday afternoon is spent in silent reading of them by the pupils. Another half-hour is generally spent by the teacher in reading aloud some good book (Ivanhoe has been read in this way), and a short time in discus sing what is read. He has a full fledged Literary Society and a newspaper in the school, the composition exercises being used for the latter, astonishing improvement resulting. His address was an inspiration to many others.

## EXERCISE IN PRONUNCIATION.

The pronunciation match is having quite a run. We have referred to it several times, and have given lists of words, indicating their pronunciation. We now give a list, without indicating their pronunciation. This will call for as much thought'and skill " to the square inch" as any exercise that has yet been tried. It will be worth several pronunciation matches, in its way.

Teachers will be surprised to learn how little their pupils know about the meaning of pronunciation marks in the dictionary.
Place the words upon the board before the school opens and keep them covered till ready for the exercise. Then allow twenty or thirty minutes for the pupils to write the pronunciations. Exchange these papers and let the pronunciations be read as written. This will settle many questions of ability on the part of the pupils, and will acquaint the teacher with sundry weaknesses.

| tenet | turbine | almond | indissoluble |
| :--- | :--- | :--- | :--- |
| tribunal | resource | exhale | sesame |
| dado | vagery | exhaust | docile |
| ordeal | construe | interest | photograph |
| troth | excise | soprano | telegraphy |
| elegiac | drama | valet | recitation |
| sumac | nape | courtesy | communists |
| lever | turquois | pyrites | onyx |
| humor | suite | lyceum | Italian |
| ere | vicar | caret | decorouss |
| contents | cuneiform | used | sardanapalüs |
| research | amateur | era | museum |
|  |  |  |  |
|  |  |  |  |

## Examindtion Papers.

## WENTWORTH PUBLIC SCHOOLS -

 APRIL, 1890.ENTRANCE TO THIRD CLASS.

## ARITHMETIC.

1. Express in words 20020020, and in figures, seventy-seven thousand and seven.
2. Simplify $947+863-279+4876-270+6890+$ $16-+32$.
3 Multiply 520080 by 5004 .
3. I bought three cows; for two of them I gave $\$ 28$ each ; and for the other $\$ 35$. I gave in payment seventeen sheep at $\$ 3.75$ each, and the rest in money. How much money did I pay?
4. Make out the following bill : 25 yards of cotton at 9 cents a yard; 36 yards of print at 15 cents; 4 dozen of buttons at 10 cents a dozen ; 5 spools of thread at 4 cents: 14 yards tweed at $\$ 1.25$ per yard; 12 yards gingham at II cents, and 4 yards braid at 2 cents.
5. If a man buys 80 cows at $\$ 30$ each, and sells them at $\$ 42$ each, how much does he gain?
6. What number divided by 87 will give the same quotient as 3926745 divided by 783 ?
7. If 12 inches make one foot, how many feet are there in 29738614500 inches?
8. James paid 18 cents for a slate, 14 cents for a book, 22 cents for a knife, and $\$ 1.25$ for a hat. He gave a $\$ 4$ bill to pay for them all. What change should he get back?
9. If a train run 350 miles in 14 hours, how far will it go from 9 a.m to 4 p.m.?
Perfect work required in $1,2,3$ and 7 , or no marks. No. 5 worth 20 marks ; all others 10 each. Ioo marks a full paper.

## GEOGRAPHY.

I. Tell some things we learn from the study of Geography. Name four principal directions. Draw a plan of your schoolroom and mark these directions on it.
2. Tell what you know of the employment of the people of Wentworth, the city of Hamilton and town of Dundas included.
3. What are the chief products of the farms of Wentworth? Name some articles that are made in the factories of Hamilton and Dundas.
4. Name the railroads that run through or touch upon Wentworth, and tell in what direction they run, with two or more of the principal'stations.
5. Draw a map of Wentworth and mark the position of the following: Hamilton, Dundas, Waterdown, Freelton, Greensville, Rockton, Stony Creek, Binbrook, Mount Hope, Ancaster.

## GRAMMAR AND COMPOSITION.

i. Make two sentences of the following words : goes, my, town, eggs, sells, Frank, to, he.
2. Write the names of six things you can buy in a store; and before each a word that tells what kind the thing is.
3. Write the names of six things in this room, and before the name of the thing the owner's name.
4. Place words after the following to tell what they do: Horses-, birds-, girls-, flowers-,
5. Write a letter telling what game you like best to play.
12 marks each; 50 to be considered a full paper.

## LITERATURE

I. Write out neatly one stanza from each of the following, pieces: "Somebody's Mother," "The Children's Hour," "Abide with Me."
2. "And tell me what makes thee sing with voice so loud and free." Write out the miller's reply to the above. What is the meaning of
"doffed his cap," "quoth he"? Where is the "river" Dee? Who was "King Hal"?
3. What does the "Black Bear" live upon? How does he spend the winter? What is he useful for?
4. Where are "Whales" found? How are they caught, and for what purpose?
5. Where is the "Lion" found? What does he live upon? Of what use is he to man?
6. What plant does the "sugar cane" look like ? How is sugar made from the "sugar cane"? From what else do we get sugar?
7. Where does the "cotton" plant grow? What part of the plant is the cotton obtained from? What is sometimes made from old cotton clothes?
8. Of what use are the roots of plants? The leaves? The flowers?

## ENTRANCE TO FOURTH Class. <br> ARITHMETIC.

I. I CAN earn $\$ 2$ per day, and I spend $\$ 1.121 / 2$ per day; in five weeks 1 did not work four days. How much money have I saved? ( 6 days in week.)
2. I planted 40 rows of potatoes; each row contained 300 hills, and 6 hills yielded one peck. Find the value of the crop at 40 c . per bushel.
3. Sold 12 dozen eggs for $\$ 2.16$, and gained five cents per dozen. What was the cost of 13 dozen? 4. A has $\$ 347$; B has $\$ 29$ more than $A ; C$ has $\$ 48$ less than $A$ and $B$ together ; D has $\$ 87$ more than the other three. How much money have they amongst them ?
5. (a) How many lbs. of sugar in 4 tons, 16 cwt ., and 96 oz . ? (b) How many gallons in 8 quarts and 40 pints? (c) reduce 8 sq . rods and 2592 sq . inches to sq. yards.
6. I had $\$ 347.25$; paid $\$ 871 / 2$ for a horse ; $\$ 373 / 4$ for a cow ; $\$ 163 / 8$ for two sheep; and $\$ 451 / 4$ for each of four steers. How much have I left?
7. A dealer bought 228 turkeys at the rate of seven for $\$ 4.55$, and sold them so as to gain $\$ 31.92$. For how much per dozen did he sell them?
8. A grocer gained $\$ 7.90$ by selling fifty-four lbs. of tea at the rate of twenty-seven lbs. for $\$ 18.09$. Find the cost of twenty-five lbs.
9. How many sq. feet in two fields, one containing if acres 3 roods, and the other 18 acres 1 rood?
10. Find the amount of the following bill : $71 / 4$ tons of coal at 32 c . per cwt. 510 lbs . of oats at $37^{1 / 2} \mathrm{c}$. per bush. $271 / 3 \mathrm{lbs}$. of cheese at 12 c . per lb. 17 I-5 yards of cloth at $\$ \mathrm{I} .35$ per yard.

## GEOGRAPHY.

I. Name five important industries and the districts in which they are carried on, mentioning the special benefit each district derives from its own industry.
2. Name the different kinds of municipalities in Ontario, fully explaining how and by whom the affairs of a township are managed.
3. Draw an outline map of the Dominion, locating ten cities, five rivers, two mountain ranges and three important islands.
4. Explain briefly the causes of:-(1) Day and night; (2) The seasons; (3) Rain and snow.
5. What is the shape of the earth? Give your reasons for believing it is not a flat surface.
6. Name the principal land and water divisions on the globe, mentioning the greatest mountain range in each land division.
7. Tell all you know about the different facilities we have for transportation and communication in the Dominion, illustrating your answer by naming those that we can use between Hamilton and Toronto.

## GRAMMAR AND COMPOSITION.

I. A Boy walking along the road with a dead rabbit slung over his shoulder meets another boy carrying a basket with a number of parcels in it. They stop and talk for about fifteen minutes.

Write what you think they were talking about, and give in your own words an account of their conversation.
2. Write a synopsis of one of the following les; sons: "The Poor Match Girl," "Jack in the Pulpit," or "Canadian Trees."
3. Analyze :-On the mountains of Lebanon, a few of the cedars famous in sacred and profane history yet remain.
4. "Emperor," cried he, " we've got you Ratisbon." "Tommy," said Ned, "are you going to school to-day?" "I am not going, and Jimmie says he is not going either." Write down the pronouns, and name the noun for which each pronoun is used.
5. He goes on Sunday to the church, And sits among his boys;
He hears the parson pray and preach, He hears his daughters voice Singing in the village choir. And it makes his heart rejoice.
(1) Write down the nouns.
(2) Write down the action words.
(3) Write down the relation words.
6. Correct the following :
(1) I know them two done it.
(2) He ain't got it:
(3) Him and I will carry it.
(4) Harry is taller than any other boy in the room.
(5) Mother and Jack went to Dundas to-day.
7. Re-write the following, supplying the necessary capitals and punctuation : the king went away more puzzled than ever the fatal day arrived still damon had not come and pythias was brought forward and mounted the scaffold my prayers are heard he cried i shall be permitted to die for my friend but mark my words damon is faithful and true you will yet have reason to know that he has done his utmost to be here.

## LITERATURE.

1. What is the meaning of: "Girds to his books"? "Flirts with a danger"? "No frown ever ploughs the smooth pride of his looks"? Write down the lines that describe Bill's face, eyes and step. "This be the law for Great Cæsar and Bill." Write this law.
2. Tell the different reasons the Farmer had for hanging the Fox. How did the Fox answer these reasons?
3. What are volcanoes? How do they differ from other mountains? Tell any event connected with a volcano.
4. Give the meaning of: Bonny Bird, Adown the Glen, The waves lashed the shore, The horsemen hard behind us ride, That fatal shore, Sore dismayed, Stretched for aid, The water wraith was shrieking, Scowl of heaven, Too strong for human hand.
5. Tell the story of (1) The May Queen ; (2) The Golden Touch ; or (3) John Gilpin, in your own
words. words.

Note.-Only one story to be told.

## HISTORY.

Tell what you know about the following :
I. The Founding of Upper Canada.
2. The War of 1812-14.
3. The Clergy Reserves.
4. The Capture of Quebec.
5. The United Empire Loyalists.
6. The Rebellion, 1837.
7. The Act of Union, 1841.

Fair land of river, lake and stream, Of forests green through all the year, Of valleys that Arcadian seem,

Of homes that love and plenty cheer ;
No other land could be more dear,
'Neath all the over-arching skies.
And doubly blest is he who here
Contented lives-contented dies.

## Primady Deppattrment.

## A POST-OFFICE PLAN.

" No two people look at an object in exactly the same light." The truth of this aphorism lies on the surface. The interested glance that an engineer or an architect bestows on a railway bridge as the train dashes over it, will be very different from that of an artist who, instead, finds his interest in the quiet stream below and the graceful willows on its bank. He sees this structure in a mechanical way, but observes with far greater pleasure a little rustic foot-bridge farther down the stream. The artist looks on the commonest objects from an artistic standpoint. A teacher views the same from the teacher's standpoint. The eye travels and following it comes the thought-How would this interest certain scholars in the lesson of the following day; that would attract others and perbaps incite them to better work and, perhaps, aid in developing just that faculty to which the strongest efforts are at present directed.

An earnest teacher, going about with open eyes, will never be at a loss for illustrations and means for interesting her scholars. At least my experience and that of others lead me to say so.

Now, I would like to tell you of a Geography plan that seems to have a never-failing interest for the little folks in my class.
Among the different branches of Primary Geography direction holds a prominent place.
In graded schools, the pupils on leaving the First Book should be acquainted in a thoroughly intelligent manner with all the points of the compass.
We had just about exhausted our methods for application of the points, and the drill seemed to be losing interest slightly, when a new plan came into action. I need not enumerate the various plans we used, as they have been mentioned in these columns quite recently.

But children love variety, and no matter how delightful a new plan is, in course of time it loses its freshness. The paint will uear off the gayest ball.
One afternoon, when the time for Geography came round, I felt, as the lesson began, a little lack of interest in the class. Glancing at my desk I saw a note just brought in. The address and postage 'stamp gave me a thought. How would some postoffice work succeed? A thought as to programme and Ichanged my Geography into a Language lesson, and postponed the former until the following day.

That evening I prepared a number of envelopes with address and stamp, varying my mail matter by adding several blue and yellow envelopes of a business appearance. I had also some papers carefully done up in wrappers and a parcel or two.

Picture the astonishment and interest that afternoon when I announced that I had several letters to post and would like to chouse some scholars to mail them for me. Of course everyone was anxious to be asked to do this, and their faces actually glowed with interest.

Then I explained the nature of the letters and "service," and we established a post-office on each side of the room, stationing also at each place a post-master to supervise.

Of course it was considered a great honor to be chosen as post-master, and the office was generally given to the most attentive and painstaking.

I then sent the letters in the different directionsnorth, south, east and west-by the scholars, who, considering the distance, did not require bags or trains. To reverse the process, I received letters, papers and parcels from the different post-offices. The lesson aimed at employing all, as a great many messengers were employed, and the others were always on the alert to see that the letter was safely and rightly delivered.

At times we varied the plan by placing an empty chalk box on different sides of the room and dropping in them the letters, papers, etc. These useful receptacles were supposed to be the town boxes situated in different directions.

This little work-play from actual life was of real interest to my pupils, and I believe I manifested as much interest as they did.
We thoroughly enjoyed the lesson, and the appearance on my desk of the "mail-box" was at
once the signal for a look of intense yet very quiet delight, spreading over the faces of my children.

A great amount of incidental information fluttered around this lesson-information both useful and necessary, and appreciated by most bright children. Postage rates for letters, papers and parcels. Difference in cost of sealed and unsealed papers and parcels; how, and where to address a letter, etc.
It led the way to Language lessons and yielded good food for the imagination as we followed a letter on its travels north or south to a much-loved grandmother, cousin or aunt.
On one occasion I said, "Harry is going to bring me a letter from the post-office in the West. What do you think is in it?" Many and marvellous were the answers-good news, bad news, accidents, invitations for the holidays, pic-nics, and a score of others, amusing and interesting, yet all affording good exercise in language.
I cannot begin to give you a thorough description of this Geography lesson or enumerate all the good things it brought in its train. Just let me recommend its use, not as the best plan you could employ, but as one that has been found to be both useful and interesting.

## INTELLIGENT WORKING

## arnold alcott.

"Educate the children to be executive beings." Thus says one of the foremost and brainiest of our educational thinkers and workers of to-day.
My young friend in the profession, do you comprehend this? Perhaps not very clearly.

It is only as experience teaches, little by little, that we are able to read between the lines and carry out this trite saying, in the work of nurturing most carefully and tenderly that elastic plant which has so much capability stored in its pith-the child.

Now, how should we begin to train a child, that is, what definite principles should be firmly established in our own minds, serving as beacon-lights to warn us from acting as fancy or caprice may suggest? Permit me to preface by saying that we are not of that class who believe that the infant-mind is like a piece of white paper which may be imprinted at pleasure. Oh, no; many a one is unfortunately surcharged with a corrupt heredity. Therefore, the greater need of all the stimulus and aid which a true earnest Christian influence can give.
As our foundation principle we would say, study the temperament; get at the heart, and then pro ceed to inspire.
Our child-plant is best regarded as endogenous. It grows most naturally, and, therefore, most beautifully, if not forced, but encouraged and warmed by the sunshine of hearty friendship and genuine sympathy.
Childhood is necessarily a period of nervo-sanguine excitement and investigation. When a boy is healthy and is physically strong, there is something wrong morally, if he be not of a keen inquiring disposition, enjoying fun and wanting to know the why and the wherefore, the up and the down, the outside and the inside of that by which he is environed.

This activity is constantly seen in children before the years for attending school have been reached. And this instinctive spirit of inquiry and research should be fostered in the school-life. But, ah, how often is it repressed?

We have seen that activity is one of the chief charms of childhood. Now this inquisitiveness, if one may so term it, is the means of teaching the child very truly and intelligently many philosophical maxims. A child knows by experience that if it touches the fire it will be burnt. It knows this surely. Perhaps we may gather from the foregoing that we should have an independent, active, seeking to know, or causing to learn, by means of things or objects-percepts.

That is, get the child to do for itself; for, by doing, we know ; and, by knowing, we remember.

We are more impressed by what we see than by what we hear. Our imaginations at best, it seems to me, may be likened to looking through the different lenses in an ophthalmoscope. We must see with our own eyes, not through those of other people, in order to fully grasp to the best of our mental endowment.

Therefore, having each little bundle of humanity bubbling with so much possibility, let us get each and all doing active thinking for self.

A definition is much more effective, if worked out
manually, than if repeated orally, or even if written Or, let me put it forcibly. It was said that a definition from the ends of the fingers is better than one from the end of the tongue.

This is what we mean by active co-operation.
Suppose we are teaching the different zones. We do not believe in talking about its being very hot in one region so many degrees wide, ard cold in another, and temperate in another, and so on, giving a mere abstraction and nothing more. But we intend, after having duly introduced this subject, that our pupils shall not give verbal definitions of this part of the Geography, but rather that they shall, by means of colored crayons, draw the zones, and also,that we shall combine our Natural History lessons and have scrap pictures of the different animals pasted on these picture-maps, and also that we have neatly printed the names of the different fruits, grains, etc., peculiar to the regions.

Again, realistic teaching of the definitions leads me to save scenery pictures, and so we have cards with pictures of lakes, of bays and mountains, etc., pasted thereon.
Then, as much that we learn in life is learned incidentally, and as the most pleasant remembrances of our school-life are linked with those teachers who taught us much in an incidental manner, as it were, we may apply this in our primary classes, in teaching a fact which properly belongs to Geography, by means of a reading lesson. Our supplementary reading, which we obtain from such magazines as, Little Men and Women, The Primary Monthly, Philosopher Will, and from scraps collected from various other sources, contains information about countries and people.

Curiosity leads us to talk about these places, and also to discuss the ethnology of the inhabitants. Then we leave our pupils to find out the answers to a few of their own most interesting questions at home. The latter idea, as you will perceive, is in harmony with that of the acute publisher who leaves a serial story just at the point where we are most concentrating our attention, concluding with the well-known words-"To be contined in our next."

## 潾 Dints and Delps. 㴓

## HISTORY.

by j. t. bradshaw, prin., goodwood puble school
It is generally conceded that history should be taught and studied topically. For assigning lessons and making the study systematic I find outlines similar to the following very useful.

## THE NORMAN CONQUEST.

## I. Time. 1066-1071.

II. Normans.

Danes or Norsemen had settled on the banks of the river Seine. "The heathen pirates had become feudal Christians."

## III. Cause

I. Remote. Marriage of Emma of Normandy to (I) Ethelred II and (2) Cnut. Under Edward the Confessor the Normans had great influence in England
2. Immediate. William claimed the crown of England on the ground of Edward the Confessor's promise and Harold's oath.

## IV. Events.

I. Battle of Stamford Bridge 1066 (Influencing)
2. Landing of Duke William at Pevensey 1066.
3. Battle of Senlac 1066.
4. William Crowned December, 1066
5. Revolt of the English in the North, aided by the Danes.
6. William bribes the Danes to withdraw and lays waste Northumberland. Ten thousand human beings said to have perished.
7. Last struggle of the English, under Hereward, in the marshes of Ely 107 I .
V. Results.
I. The Feudal System of government.
2. The Church brought closer to Rome.
3. Normans and English blend into a stronger nation.
VI. Topics for Written Recitation.
I. The Feudal System ( $a$ ) of the Continent (b) as modified by William.
2. The Battle of Hastings.
3. Character of William.
4. Conditions of the Laboring Classes.

# The Educational Journal. 

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## J. E. WELLS, M.A

Editor.
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We direct special attention to the announcement of the merits of the "Concise Imperial Dictionary." It is our intention to handle this Dictionary in connection with the Journal, and we offer it in the best binding, and the Educational journal for one year, both for $\$ 5.50$, plus 14 cents for postage. Subscribers one year, send the balance, and have the book at once. This gives the party the Journal for $\$ 1.00$.

TEACHERS' CONVENTIONS.
West Middlesex, at Strathroy, May 8th and 9th.
South Hastings, , May sth and gth.
Durham, -, May 'th and 9th.
North Essex, -Carleton, at Bell's Coryeh and gth.
Carleton. at Bell's Corners. May 8th and gth.
East Bruce, May, May 15 th and 16 th .
West Bruce, May 15 , May and 16 nd and 23 rd
North York, at Newmarket, May 22nd and 23 rd.
Lanark, -, May 22nd and 23 rd.
Stormont, -, May 22nd and 23rd.
West Huron, at Exeter, May 22nd and 23rd.
South Grey, at Durham, May 22nd and 23 rdi .
Carelton, -, May 22nd and z3rd.
Dundas, - , May $29 t h$ and joth.
South Simeoe, at Alliston, May 29th and zoth
Ontario, at Port Perry, May 22nd and 23rd.

## Ediłoridls. 絭

## TORONTO, MAY 1, 1890.

THE TEACHING OF LITERATURE.

MR. HOUSTON'S article in this number will be read with interest not only by teachers of English Literature but by all classes of teachers. If in his enthusiasm for his system he has nearly lost sight of his subject, we can readily forgive him, for he has really dilated upon a more important theme. He has scarcely shown very convincingly why "with ready-made notes and comments in the hands of the pupils no teacher can do the best work in teaching English Literature," but he has given us quite an elaborate thesis on the ends that should be had in view in the study of poetry, and the methods which he deems most useful in reaching these ends. For this the readers of the Journal will join with us in thanks. For our own part, we are the more ready to excuse any defects in the article considered as a logical argument in support of the proposition with which it sets out, from the fact that we agree very heartily with many of the views it puts forth.

It is of prime necessity in the teaching of literature that the teacher should set out with right conceptions of the chief ends to be kept in view, and of the relative importance of these ends. We are strongly disposed to demur at Mr. Houston's first two dicta on these points. We should at least reverse the order. Mr. Houston, as appears from the whole tenor of his article, is treating the subject from the viewpoint of the High-School master and pupil. Surely it is vastly more useful as well as practicable to aim, in the first instance, at awakening in the boys and girls of the High schools a love of literature, for its own sake, than at making it a means of æsthetic culture. By æsthetic culture, in the connection in which it is used, we understand, of course, the power of discerning and deriving pleasure from the beautiful in literature. It may be said, indeed, that it is impossible to distinguish practically between the two, either as ends to be sought by the teacher, or as results reached by the pupil. Mr. Houston admits as much when be goes on to say that "appreciation is as inseparably blended with culture as culture is with enjoyment." Certain it is that the only road either to the cultivation of taste as a faculty, or the enjoyment of the pleasurable emotion which taste so cultivated brings to its possessor, is through the power of appreciation. We make bold to say, therefore, that if the teacher aims at securing appreciation, or the intelligent reading which is its essential condition, he will be doing all that is either possible or necessary, at this stage of his pupil's progress, for the cultivation of taste. For this reason we prefer the answer given, if we mistake not; by Mr. Houston himself a short time since, in a newspaper article, to the question, "What is the chief desideratum in teaching literature?" viz: "To create a love of literature." What is beyond, if it be aught more than a metaphysical distinction, belongs to a more advanced stage of teaching.
All will readily agree with Mr. Houston that the teacher can do nothing by positive instruction to cause the pupil either to appreciate or to love the beautiful in literature. This is to admit the substance of what we have just been saying in effect, viz. : that what the teacher can do and should aim to do is to cause the pupil to understand the literature he reads. But while striving for this directly he is accomplishing the other indirectly, for, with the normally constituted mind, to understand good literature is to appreciate it, and to appreciate it is to love it.
Premising these few observations we pass to the all-important question of Method. We sincerely hope, for the sake of the teaching profession and of the boys and girls at High school and College, that Mr. Houston's method is not so new-we do not say original, for originality does not necessarily imply newness-as he supposes. At any rate it is so simple, natural and reasonable that we aresure that many of our readers will imagine, like ourselves, that, in schoolboy phrase, they "knew it all the time," and that it is, in the main, the very plan they would have recommended. Be that as it may, the four
leading rules it involves are, to our mind, excellent, and worth being conned by every teacher of Literature, whether English, Continental or classical. For mutual benefit we venture to formulate them, in brief, in our own words-a very useful exercise which we hope Mr. Houston does not, as we observe Professor Alexander does, condemn and discourage.
(a) Let the pupil first read the prescribed work without help.
(b) Let him read it as a whole, and not piecemeal.
(c) Find out his difficulties and give him just the help and only the help he needs.
(d) Let him compare the work as far as prac ticable with others, that his power of apprecia tion may be strengthened by the study of similarities and contrasts.

This last rule, we may observe in passing, should be placed in a different category from the others. It simply means, after all, let the pupil read other poems and works, as well as the one in hand. This is indispensable if æsthetic culture is to be made the first end in literature teaching. How far it is practicable in High school work, the High school master knows best, but we know enough about such work to be able to give a pretty shrewd guess. We venture to say that this is the point at which even the best High school pupil, will for obvious reasons, fail to do much unassisted, and will stand in special need of the teacher's assistance. We are heretical enough to add that it is one of the points at which the judicious annotator can render very valuable assistance.

Now if there is a literature teacher among our readers who does not aim at having his pupils first read the article or poem to be studied without interference, and it as a whole, and then at finding out his difficulties and giving him necessary but not superfluous help, we commend him most heartily to the study of this method as given by Mr. Houston, We volunteer this advice on the pedagogical principle of giving help where needed. All the rest of our readers will be sure to read the article without waiting for advice.

A word in closing about the annotated texts. Mr. Houston himself admits that the pupil will find difficulties in even so simple a poem as Longfellow's "Evangeline," and he must not forget that his principles, if sound, must stand the test of application to the reading of much more difficult poems. Now we should like to ask, in the name of all that is mysterious in the most advanced science of Pedagogy, what difference it can make whether he gets the help needed from a printed note or from the lips of a teacher. The annotator is himself usually a teacher. Not only so, he is usually a skilful and successful teacher, otherwise his notes would hardly find a market. Is not the student who is anxious to make the most of his time and opportunities at perfect liberty to get the help he needs in the most convenient form available? Is the information any the worse for being printed in an a pendix to his book, or in a companion volume, instead of in the "Imperial"
or the "Century," which, by the way, are no perhaps within the reach of one High school pupil in ten? Does the new pupil, by placing himself for the time being in the hands of a certain teacher, place himself under any obligation to seek help at the hands of that teacher alone? Why should the teacher care to have a monopoly of the work ? There are, of course, lazy pupils, and there is such a thing as notes which seek to do for the pupil what he should do for himself. But the skilful teacher knows how to counteract such tendencies. And, on the other hand, just in proportion, we feel assured, as the teacher has correct conceptions of his highest work in developing a love of literature, through intelligent appreciation in the mind of his pupil, just in that proportion will he be glad to have that pupil come to class possessed of all available information needful to intelligent reading, and prepared to give the opinions of others as .well as his own, with regard to the meaning of difficult passages, and the merits or demerits of special features.

## THE LATE DEPUTY MINISTER OF

 EDUCATION.JUST after our last number was made up for press, came the sad news of the death of Mr. Alexander Marling, M A., LL.B., the Deputy Minister of Education. Mr. Marling was born at Ebley, Gloucestershire, England, on April 11, 1832. His death occurred on the anniversary of his birth, so that he was just fifty eight years of age. He came to Canada in 1842, and was educated at Upper Canada College and the University of Toronto. He becane a clerk in the Education office in 1854 . For many years he held the responsible position of Secretary of the Education Department. Only a few months before his death he was appointed to the position of Deputy Minister of Education, made vacant by the acceptance by Dr. Hodgins of another position in the Department.
Of the manner in which Dr. Marling performed the duties of his office it would not be easy to speak too highly. During the last few years we have not infrequently found it necessary to visit him in his office in quest of information relating to Educational matters, and we can bear witness very heartily and sincerely to the uniform kindness and courtesy with which he replied to all inquiries, and sought out any information required, as well as to the fullness and accuracy of his knowledge in matters pertaining to his office. His bearing in all cases was that of the Christian gentleman, rather than the salaried office-holder. Similar testimony, and in these days this is no small praise, will be borne, we believe, by all who had to do with the deceased in his official capacity.

Outside of his professional work Dr. Marling was not only cultivated and courteous in the family and social circle, but an earnest worker in various ways for the good of the community. As a stedfast adherent of the Episcopal Church he took a warm and unceasing interest in the religious and philanthropic work of that Church. As was to be expected, he was specially inter-
ested in its educational enterprises, and was known as one of the most devoted friends of Bishop Strachan school. In his unexpected death the cause of public education has sustained a serious loss.

Our readers will, we are sure, read with pleasure and profit the eloquent Arbor-Day Address, by the late Dr. Higbee, which we repub. lish in this number. The late Dr. E. E. Higbee, who was for many years Superintendent of Public Instruction for the State of Pennsylvania, seems to have been a man of the highest type as well as one of the foremost educators in the United States. The last issue of the Pennsylvania School Journal, preceding that from which this admirable address is taken, was a double one, embracing both February and March, and was entirely devoted to the memory of Dr. Higbee. Probably no such tribute was ever before paid to the memory of an American educator. The great range and variety of the articles which filled that number, from teachers of all grades, show that the deceased must have been possessed of rare qualities of heart, as well as of intellect. There are evidences of both characteristics in the article before us.

With a view to interesting the young in Humane work, the Toronto Humane Society has decided to offer $\$ 100$ in prizes to the school children of the city for compositions on the following subjects:-(1) The duty of kindness to animals. (2) Why birds and their nests should be protected. All children under sixteen years of age are invited to write on these subjects, and send in their efforts to the Society's office, ro3 Bay Street, before the end of June. The compositions should be plainly written on one side of the paper, and should not be longer than two pages of foolscap. It is suggested that the compositions be written in the presence of a teacher, or other competent overseer. The Society could hardly have adopted a better plan for drawing the attention of children to this important matter. We hope the number of competitors will be very large.

## 畨 Literary Połes.

Civil service reform has a champion in Mr. Oliver T. Morton, who, in a paper called "Some Popular Objections to Civil Service Reform," which appears in the Atlantic for April, is not afraid to say that the spoils system " is at war with equality, freedom, justice and a wise economy, and is already a doomed thing fighting extinction." Mr. James' "Tragic Muse" is drawing to a conclusion. The picture of the recalcitrant lover, who is not willing to sacrifice his worldly prospects to the dramatic art to which he professes to be a devotee, is a powerful piece of character-drawing. Dr. Holmes, in "Over the Teacups," talks about modern alerism, and says that the additions which have been made by it "to the territory of literature consist largely in swampy, malarious, ill smelling patches of soil, which had previously been left to reptiles and vermin." After talling afoul of a romance which has been lately quoted by a
brother author as "a work of austere morality," he says, "Leave the descriptions of the drains and cess-pools to the hygienic specialist, and the details of the laundry to the washerwoman." Mr. Aldrich has a poem on "The Poet's Corner," and Mrs. Deland's serial leaves the hero face to face with another problem. There are many other good things in the number.

The North American Revieze for April contains another instalment of the highly important discussion of the Tariff, which Mr. Gladstone and Mr. Blaine opened so brilliantly in the January issue, furnished by the Hon. William C. P. Breckinridge, Representative in Congress from Kentucky, who was a member of the Committee on Ways and Means which prepared the Mills Tariff Bill. Bishop Whipple, of Minnesota, writes an exceedingly interesting sketch of "My Life among the Indians." The Rev. Lyman Abbott, D.D., Mr. Beecher's successor in the pastorate of Plymouth church, contributes a reply to Col . Ingersoll's two papers in answer to the question, "Why Am I an Agnostic?" Mr. Oswald Ottendorfer writes of "Socialism in Germany," with special reference to the result of the recent elections. Master-Workman Powderly's "Plea for Eight Hours " has an especial timeliness. ExGovernor Lowry, of Mississippi, in a short article discusses "The Needs of the South." Mr. O. B Bunce furnishes the literary feature of the num-ber-" English and American Book Markets,"wherein he apparently proves beyond dispute that the notion that there are more readers of books in the United States than in England is without any substantial basis. The weightiest article in the number is contributed by an Englishman, Francis Galton, F.R.S., whose studies of heredity and allied subjects are well known.

On the ground of helpfulness to teachers and school officers, The Popular Science Monthly might well be classed with educational journals. President Jordan, of the University of Indiana, opens the April number with a strong and breezy article, showing up the make-believe character of what is offered in many pretentious schools to satisfy the modern demand forscienceteaching. The storm which Grant Allen brought upon his head by his "Plain Words on the Woman Question," has not yet blown over. Another lady, Miss Alice B. Tweedy, replies to him in the April Monthly, and answers the question "Is Education opposed to Motherhood?" with a decided negative. An account of "Sloyd: Its Aim, Method and Results," including a glimpse at the Sloyd school in Boston, with pictures of models, and of pupils at work, is contributed by F. B. Arngrimsson. Prof. C. H. Toy, of Havard University, has a thoughtful essay on "Ethics and Religion," In an article entitled "On the Natural Inequality of Men," Prof. Huxley deals with Rousseau's idea of the equality of men in the state of nature, with applications to the recent controversy on the land question. An illustrated article, under the title, "Darwin on the Fuegians and Patagonians," gives some observations on these strange people, made by the great naturalist during the voyage of the Beagle. Several other articles of interest complete the number.

Canadians! raise aloft your country's flag, Nor low to earth, nor lifeless, see it drag, Up! till each sign, in gentle winds unread, Meets breezes strong, and every fold is spread. Its place is high-above the feeble gust, That dims its color with a servile dust. Among the storms there see it proudly move, The emblem of your country and your loveWhere all its noble length becomes unfurled By winds that shake the proudest of the world.

## Tedchers's लipiscellany.

## SCHOOL-BOY HONOR.

Mr. Harris kept a boys' school; or, as he always called it, "a school for young gentlemen." He assumed that they were such, and treated them accordingly. His confidence in them caused the boys to feel that it would be a meanness, on their part, to abuse it.
There was one boy in the school named Sam Wilson, who, partly from lack of home training, and partly from having been under kind Mr. Harris' good influence a shorter time than the rest, was more inclined to take ungenerous advanvantage of his teacher or schoolmates, if by so doing he could escape any unpleasant consequence to himself.
One day, during the noon-hour, the boys had been using, with no little skill, the fascinating weapon which every boy knows how to make out of a forked stick and a stout piece of India-rubber with a leather sling attached. They had been practising high shots at a tin ventilator on the top of a tall building opposite the school-house, and had had much sport, and had done no harm.
Just before the bell rang for the afternoon session, Sam Wilson sent a stone crashing through a window in the top story of the tall building whether he did it by accident, or with design, no one knew ; but all the boys knew Sam did it, as he was the only one who shot at that instant.
"Hi!" exclaimed Sam ducking his head, and starting on the run for the school-room, ahead of all the others.
. There was an unwritten law in the school that, when a boy broke any glass, he was to pay for it.
Sam may or may not have known this; but when, half an hour later, the owner of the building came to the door, and called Mr. Harris out, Sam was the most studious-looking boy in the school, and did not raise his eyes from his book, even when the teacher returned and addressed the boys.
"Young gentlemen." said Mr. Harris; "Mr. Haskell, the owner of the building opposite, has complained to me that some one of my scholars has broken one of his windows. I told him that I thought there was some mistake, probably, but that I would ask you, and that if any one of you did break it, he would, of course, have it repaired. If any one here did break it he will please rise."

No one moved; and Mr. Harris, with a smile of gentle pride, resumed his seat, saying :
"I thought not!"
He did not see the indignant looks which were centered on Sam Wilson.

Soon there was a good deal of telegraphing among the boys; and at last Jack Porter, who was a sort of leader among them, raised his hand.
"Well, Porter?" asked Mr. Harris.
"May I speak to one or two of the boys, sir?"
"Yes, if you do not disturb the school."
Jack, who was in the same class with Sam Wilson, went round among his classmates, and each one, in answer to a few whispered words, drew something from his pocket, and gave it to Jack.

Having collected from the different boys enough money, in small change, to cover the expense of resetting the broken glass in Mr. Haskell's window, this self-appointed spokesman for the class walked up to the teacher's desk, and waited for Mr. Harris to look up, which he soon did, with a mild-
"What is it, Porter?"
"Well, sir," began Jack, in a tone loud enough to be heard in any part of the schoolroom, " one of our scholars did break that window of Mr. Haskell's ; and, as he belongs to our class and is not man enough to own up the class wish to pay for the glass."

Jack put the money on the desk, and added :
"We know who did it, because we all saw it done."
Mr. Harris looked grieved, as he said:
"I am sorry to think that any one of my scholars should even tacitly deny the offence, or seek to shirk the responsibility of his own act."
"But," he added a moment later, as his face brightened, and he turned toward the school, "I am gratified that he is an exception. I do not know who he is, and I do not ask you to tell me. I leave his punishment to the class."

The punishment, which Mr Harris so wisely left to the class, was much more severe than any he could have inflicted.

The class easily obtained the co-operation of the whole school, and Wilson soon realized that he had destroyed something more than a pane of glass. He knew of no glazier who could reset his popularity.
He had been fairly popular among his schoolfellows; and if one or two little occurrences had made the boys think he had shown sometimes a rather ungenerous spirit, they could not forget how well he played base-ball.
They could not find it in their generous boyish hearts to think ill of any one who caught so well, batted so heavily, stole bases so successfully, and made so splendid a throw to second when he was behind the bat. His was always the first name called by the winner of the "choosing up," as they call that peculiar manipulation of the bat which allows "no fingers or diggings," but must culminate in a grip sufficient to swing the bat thrice around the head. When "the nine" played another "nine,"Sam was considered indispensable.
After the episode of the broken window, however, all his good ball-playing qualities did not prevent the boys from teaching him the lesson they meant he should learn and thoroughly understand.

It was hard to see all the boys look askance at him, to have his greetings returned by a cold nod of recognition only; but hardest of all was when the boys started a game of ball, and Sam stood and saw all the ball-players of the school chosen in the order of their skill, until the eighteenth boy was chosen, and even little Willy Howard, who really could not play ball at all, but was plainly chosen to fill up a side.

The tears came into Sam's eyes, as he stood thus ignored by all the boys; and he slowly walked away, feeling more hurt than he could have felt at any other punishment. He began to see he was being "cut" by everybody, and made up his mind that night that he would appeal to the generosity of his playmates before he asked his father to take him away from the school, where it would be misery for him to stay if his unpopularity lasted.
The next day the boys were all grouped about the school yard, talking among themselves, when Sam, sauntering up to one knot of talkers, found that all talk was stopped as he joined them. No one looked at him; but the group separated, and its members, dropping away one by one, left him standing alone.
He approached another group. The same thing occurred. He was shunned as though he carried contagion. At last, he walked up to a group where Jack Porter was holding an interesting crowd of listeners around him, and said
" Jack Porter, can I speak with you?"
Jack silently stood his ground, while his group of listeners drew away at Sam's approach.
Assuming the assent signified by silence, Sam began:
"What have I done to make the fellows treat me as if I had a case of small-pox? I'm willing to pay back what they put out for old Haskell's window, if that's what it is. I think it's mean to treat a fellow so for a little thing like that."
Jack, who was disgusted that Wilson did not know that his own act, rather than the paying of the few pennies each boy had given, was the cause of the cut he had received, asked :
"Is it any meaner than it is to lie? Is it any meaner than it is to sneak out of anything, as you did? What do you suppose the fellows care for a few paltry pennies? We cut you," he continued, "because we don't care to associate with any fellow who is mean enough to do as you did"

Jack really pitied Sam, but he turned on his heel and left him, thinking that he would let the lesson be well learned; still he had it in his mind to appeal to the boys in Sam's behalf, and suggest that they put him on probation.
The next day, Sam, thoroughly unhappy, came to school late, that he might not meet the boys on the playground and suffer another snubbing. He had determined to ask his father to take him away from the school if this day was as bad as the day before.
At noon he kept by himself, not attempting to intrude on any of the groups of boys who were dotted about the yard, and he looked more lonely than Robinson Crusoe ever could have been, even on his loneliest day. Sam could easily have cried, he felt so lonely and hurt.

He was thinking of the change a comparatively little thing had made in his happiness, when he was surprised to see Jack Porter at the head of a crowd of boys coming toward him.
"Sam," said Jack, stopping a step or two in advance of the rest, "the fellows have decided to let up on you, provided you agree to be square after this. We think it is pretty hard punishment to cut you for a first offence, and we are willing to let you be one of us again. 'There's my hand, Sam. Bygones are bygones!"
Sam was so much overcome by the generous way in which the whole affair was dismissed that he saw the blurred image of two hands instead of one, as Jack set the example which the rest all foilowed.
The bell rang and the boys all trooped into the schoolhouse merrily, and Sam's heart was lighter than it had been for two whole days

He did not ask his father to take him away from school; he stayed to play many a good game of ball after that, and he never forgot, even in after years, the lesson the boys taught him. He thought much about that broken window and his damaged reputation among the boys. Happily, both were now repaired, but he saw that each had been caused by falling short in his aim, and resolved that in future he would be careful never to aim too low.-Winni. peg School Times.

## flathernałiçs. 粦

All communications intended for this department should be sent before the zoth of each month to C. Clarkson, B.A., Seaforth, Ont.

## CORRESPONDENCE.

A.B.C., Mountain, neglected the rule to send the problem as well as the reference.
Mr. E. T. Seaton, Tiverton, sent solutions to problems $2,3,4,5,6,7,8,9$, 10. All correct except No. 2. Here is his solution of No. 3 :There are 5 choices with one lady in each carriage ; $5 \times 5$ with one lady and one gentleman; and the 5 carriages admit of $1,2,3,4,5$ arrangements ; $\therefore$ $25 \times 120=3000$ arrangements on the whole.
No. 4. $8^{\frac{3}{4}}=\left(2^{3}\right)^{\frac{3}{4}}=2^{\frac{9}{4}} ; 4^{\frac{3}{2}}=\left(2^{2}\right)^{\frac{3}{2}}=2^{3} ; 16^{\frac{9}{4}}=2^{3}$ $\therefore\left(8^{\frac{3}{4}}+4^{\frac{3}{4}}\right) 16^{-\frac{3}{4}}=\left(2^{\frac{9}{4}}+2^{3}\right) \div 2^{3}=2^{-\frac{3}{4}}+1$
No. 7. Dividend $=9^{n} \cdot 3^{n} \cdot 3^{2}-3 \cdot 9^{n}=$
$3^{n} \cdot 9^{n}\left(3^{2}-1\right)=8 \cdot 3^{n} \cdot 9^{n}$.
Divisor $=9.3^{\mathrm{n}} ; \therefore \mathrm{Q}=8,9^{\mathrm{n}-\mathrm{r}}=8.3^{2 \mathrm{un}-2}$.
Mr. N. S. McEachern, Owen Sound, solved 3, 4, 8, $9,10,1 \mathrm{II}$.
W.A.M.B., Little Current, solved three problems.
Mr. E. Kesner, Hall Valley, Colorado, solved $4,5,6,7,8,9,10,11$, and sent the following problem
No. $11 \frac{1}{2}$. Five persons, $A, B, C, D, E$, are traveling to the right around a circular island, 239 miles in circumference, $A$ at the rate of 6 miles per hour, $\mathrm{B}_{1 \mathrm{I}}, \mathrm{C}_{15}, \mathrm{D}_{20}$ and E 27 miles per hour. $B$ is in advance of $A 82$ miles; $C$ is in advance of A 52 miles; $D$ is in advance of $A$ I 34 miles, and $E$ is in advance of A 20 miles. In how many hours will the travellers first be all together?
Mr. E. Kesner, Hall Valley, Colorado, attempted No. 3 and solved correctly Professor Orchard's enigma
Mr. R. H. Leighton sent five problems in Trigonometry and five in Algebra which we may perhaps use.

Mr. J. D. Dickson, B. A., Brockville Coll. Inst., sent a useful contribution which will appear in the June number. We are glad to receive such letters from competent mathematicians; may their number never grow less.

SIR,--We waste force in the ordinary proof of Euclid IV., 12 and 13.

Why use the cyclic property once, and not continue its use? In Mr. Reynolds' figure, p. 22, join FH, FK
r. Angles of pentagon are supplementary to the equal angles at $F$, therefore are equal.
2. (Euclid III, 27, 28) $\angle \mathrm{FHB}=\angle \mathrm{FHA}$; and so all angles of pentagon are bisected by $\mathrm{FH}, \& \mathrm{c}$., $\mathrm{HA}=\mathrm{HB}$;
and from triangles ${ }^{\circ} \mathrm{HBF}, \mathrm{FBK}$,
$\therefore \angle \mathrm{FHB}=\angle \mathrm{FKB}, \therefore \mathrm{HB}=\mathrm{BK}$, and so for rest, $\therefore H K=2 \dot{H} B=2 H A=H G$,
therefore the pentagon is equilateral.
Yours, etc., T. W. Openshaw.
-Educational Times.

PROBLEMS, WITH SOLUTIONS BY THE EDITOR. ARITHMETIC.
12. OUT of a heap of lotus flowers, a third part, a fifth and a sixth were offered respectively to the gods, Siva, Vishnu and the Sun ; and a quarter was presented to Bhavani. The remaining six were given to the venerable Preceptor. Tell quickly, boy, the whole number of lotuses.
Solution. $-\frac{1}{3}+\frac{1}{5}+\frac{1}{8}+\frac{1}{4}=\frac{1}{2}+\frac{9}{20}=\frac{19}{2} \frac{1}{0}$. Ans., 120. 13. A farmer's rent was $£ 50$, and his expenditure (of which $\frac{1}{8}$ went to pay taxes) was such that he could only pay $£ 30$ of his rent Next year the rent was lowered $20 \%$, the taxes were reduced $50 \%$, and the farm products increased one-third in value ; and now after paying his rent and arrears he had $£ 5$ over. Find his expenditure. (Cambridge Tripos )

Solution.-Expenditure $+£ 30=$ income of ist year.

2nd year's rent $+£ 20$ arrears $+£ 5$ surplus $=40+$ $20+5=65=2$ nd year's income.
Difference $=£ 35 ; \therefore\left(\frac{1}{18}+\frac{5}{18}+\frac{1}{18}\right)$ Exp. $+10=$ 25, or $\frac{1}{12}$ Exp. $=5 ;$ Expenditure $=£ 60$.
14. If 5 men and 6 boys do as much as 7 men and 2 boys, and 40 men and 15 boys together earn $\$ 114$ per day, find the wages of a man for one day.
SOLUTION.-Work of 5 men and 6 boys = work of 7 men and 2 boys;
$\therefore$ work of 4 boys $=$ work of 2 men ; or I man $=$ 2 boys.
work of 40 men and 15 bpys $=$ work of 95 boys.
Thus 95 boys earn \$1I4 a day, i.e., 5 boys earn $\$ 6$.
$\therefore 5$ men earn $\$ 12$, and a man earns $\$ 2.40$ a day.
15. Two measures from a vessel $A$ and one measure from $B$ produce a mixture of 56 wine and 79 water ; but two measures from $B$ and one from $A$ produce 58 wine and 77 water. Find the proportion of wine and water in each vessel.
Solution.-
2 from $A+1$ from $B$ give 56 wine +79 water in 135 gals.
1 from $\mathrm{A}+2$ from B give 58 wine +77 water in 135 gals.
$\therefore 3$ from $A+3$ from $B$ give 114 wine +156 water in 270 gals.
or 1 from $A+I$ from $B$ give 38 wine +52 water in 90 gals.
$\therefore$ I from A gives 18 wine +27 water in 45 gals.
Therefore I from B gives 20 wine +25 water in 45 gals.

Therefore A contains wine and water as $18: 27=$ 2:3.
Therefore B contains wine and water as $20: 25=$ 4.5.
16. Show that the numbers 220 and 284 are such that the sum of the aliquot parts of each is equal to the other number. (Cambridge Tripos.)

SOLUTION. $220=4 \times 5 \times 11 ; 284=4 \times 7 \mathrm{I}$.
$\therefore$ divisors of $220=1,2,4,5,10,11,20,22,44$, 55 , I IO $=284$;
and divisors of $284=1,2,4,71,142$, of which the sum $=220$.
17. The difference between the two sides of a rectangular field is 33 yards, and the area is one acre. Find the length of the diagonal.

Solution.-Area $=160$ sq. rods ; 33 yds. $=$ 6 rods.
$\therefore$ length $\times$ breadth $=160=2 \times 80=4 \times 40=5 \times 32$ $=8 \times 20=16 \times 10$.
Now these are all the integral factors of 160 and the last pair alone differ by the required number $6, \therefore$ the sides are 16 and $10, \therefore$ diagonal $=$ $\left.\sqrt{\left(16^{2}\right.}+10^{2}\right)=18,8679623$ rods.
I8 Two cubical boxes placed one upon the other are II inches high, and contain together 407 cubic inches. Find how much each box holds.

SOLUTION. $-9^{3}=729$, so that the largest box cannot be as large as 9 in. on the side. Also 407 is an odd number, so that one of the boxes must contain an odd number of cubic inches, and the other an even number; for the cube of an odd or even number is odd or even respectively, and the sum of two odd numbers would be even. Trying the next lower odd number we have $7^{3}=343$, and $407-343=64=4^{3}$; thus the sides 7 and 4 and the contents 343 and 64 satisfy the conditions.
I9. A parcel appears to weigh 49 lbs. in one scale of a false balance and 64 lbs . in the other. Find the true weight.

Solution.-The longer the arm of the scale in which the parcel is placed the less the weight it will balance in the shorter arm. It is therefore a case of inverse proportion,
longer arm: shorter arm $=$ true weight : 49; and shorter " : longer $\therefore$ true weight $\times$ shorter $=49 \times$ longer .64 . and " $" \quad \times$ longer $=64 \times$ shorter. Multiplying these equations
$\left(\right.$ true weight) ${ }^{2} \times$ longer $\times$ shorter $=49 \times 64 \times$ longer $\times$ shorter
$\therefore(\text { true weight })^{2}=49 \times 64$
true weight $=7 \times 8=56 \mathrm{lbs}$.
20. The cost of manufacturing a certain article depends partly on the cost of labor and partly on the cost of the raw material. Wages rise 25 per cent., but a reduction of one-sixth in the cost of material enables the manufacturer to produce 16 of the articles for what 15 cost him before the change. How much does the raw material for $\$ 100$ worth of the manufactured article now cost him? (Jun. Matric., Toronto.)

Solution.-
At first, cost $=$ wages + material.
Afterwards $\frac{1 \frac{5}{6}}{6} \cos t=\frac{5}{4}$ wages $+\frac{5}{8}$ material
or $\frac{3}{4} \operatorname{cost}=$ wages $+\frac{4}{3}$ material. Subtract from first equation,
and $\frac{1}{4} \operatorname{cost}=\frac{1}{3}$ material : cost $=\frac{4}{3}$ material.
Now 2nd cost is $\frac{1}{1} \frac{1}{6}$ of Ist cost ; thus \$Ioo cost at altered rates takes the same material as $1 \frac{10}{15} \times 100$ at ist cost, which $=\frac{4}{3}$ material,
$\therefore$ material $=\frac{1}{16} \times 100 \times \frac{3}{4}=\$ 80$.
2I. The expense of constructing a railroad is $\$ 2,000,000$, two-fifths of which was borrowed on mortgage at 5 per cent., and the remaining threefifths was held in shares. What must be the average weekly receipts so as to pay the shareholders 4 per cent., the expenses of working the road being 55 per cent. of the gross receipts? (Junior Matric., Toronto.)
SOLUTION. - Mortgage $=\$ 800,000$; stock $=$ \$1,200,000.

> Int. on mortgage $=\frac{1}{20} ;=\$ 40,000$ Int
" " stock $=\frac{1}{25} ;=\$ 48,000 \quad \therefore$ Registered

## income $=\$ 88,000$

$.45 \%$ of receipts $=\$ 88,000$ in 52 wks.
$\therefore$ weekly receipts $=\$ 88,000 \times 100 \div(45 \times 52)=$ \$3,760.69.
22. $A$ and $B$ run a race which lasts 6 minutes. At the end of the 4 th min. $A$ is ${ }^{4} \frac{1}{4} \overline{0}$ of the course ahead; at the end of the 5 th $B$ increases his pace by 20 yds. a minute and wins by 2 yards Find the length of the course.

Solution.-
A gains in $4^{\prime}$ the $4^{\frac{1}{4}} 0$ of the course.

or $18 \mathrm{yds}=\frac{{ }^{\frac{8}{780}}}{}$ course $; 3 \mathrm{yds}={ }^{1760}$ course
$\therefore$ course $=3$ miles.
23. A and $B$ race to a post and back again. In returning $A$ meets $B 90$ yds. from the post and reaches the starting point 3 minutes before him. Had he then returned he would have met $B$ at a distance from the starting place equal to $\frac{1}{b}$ of the distance between the posts. Find A's time in winning the race. (Cambridge Tripos.)

Solution.-Suppose A had met B the second time, he would then have traversed the distance between the posts $2 \frac{1}{5}$ times, and $B I^{5}$ times, therefore their rates are as 13:in. In other words, B loses 2 yds for every in that he goes; but when $A$ met him he had lost 180 yards; hence he had gone $90 \times 11=990$ yds., and he was 90 yds. from the turning post, $\therefore$ the distance between the posts $=-$ $990+90=1080 y d s . ;$ and, therefore, A ran altogether 2160 yds. But $A$ gains 2 yds for every 13 that he goes, $\therefore$ on the whole race he gained $1_{2}^{2}$ of 2160 yds., and B took 3 min . to run this, hence B's rate per min. $=\frac{2}{13}$ of 720 yds . But A's rate is $=13 \mathrm{~B}$ 's rate; $\therefore$ A's rate per min. $=\frac{13}{11}$ of $\frac{2}{13}$ of 720 yds. $=$ ${ }_{2} 1 \mathrm{of} 72 \mathrm{O}$ yds. per min. Therefore A required $2160 \div\left(\frac{2}{11}\right.$ of 720$)=3 \div \frac{2}{11}=3 \times \frac{11}{2}=16 \frac{1}{2} \mathrm{~min}$. to double the course.
24. In a race between two boats, a spectator, walking at the rate of 5 miles an hour, is $\frac{1}{8}$ of a mile ahead of the first boat at starting ; when it passes him he observes that the interval between the boats, which was 30 yards at starting, is reduced to 20 . At $1 \frac{1}{4}$ miles from the starting-point, the first boat is overtaken by the second. Find the distance traversed by the spectator after the first boat passed him until the end of the race.

Solution.-
First, A loses 30 yds. in rowing $2,200 \mathrm{yds}$. $\therefore$ A $\quad 10 \quad " \quad " \quad \| \quad 2200=733 \frac{1}{3} \mathrm{yds}$. Spect. has gone $733 \frac{1}{3}-220=513 \frac{1}{3}$ yds. before he is passed by A.
S. goes 5 miles per hour $=440$ yds. per min.
S. goes $513 \frac{1}{3}$ yds. in $5135^{3} \div 140=3 \frac{1}{2} \mathrm{~min}$.
$\therefore$ A goes $733 \frac{1}{3}$ yds in $3 \frac{1}{2}$ min., or $\frac{44_{2}^{200}}{2}$ yds. per min.

A goes $\mathrm{I}_{4} \frac{1}{2}$ miles in $2200 \div 4400=10 \frac{1}{2} \mathrm{~min}$.
Hence S. goes 7 min .@ $\mathrm{x}_{3} 3^{2}$ yds. per min. $=$ 1026告 yds.
25. A merchant, travelling from St Petersburg to Moscow, had provided himself with notes on the Bank of Russia, amounting in all to 540 roubles. The paper at first bore the value marked on it ; but south of Torjok, a town on the road, and in Moscow itself, a premium of $20 \%$ was allowed on each note. On reaching Moscow, he received 432 roubles for the notes that remained. He spent there 237 roubles and had just enough left to pay his expenses back, supposing them the same as before. How many roubles did he spend between St. Petersburg and Moscow? (St. John's College, Cambridge.)
Solution - He had 432-237 $=195$ roubles left which just paid his expenses either way. [N.B.This is a good example of a problem with a quantity of unnecessary data. Supposing Moscow a misprint for Torjok we have a good example of the arithmetical equation. The objection that this is only disguised algebra is superficial. There is an unknown quantity in every problem. If we ask the price of 3 stamps at Ic. each, we may put $x=$ price and express the problem algebraically, conversely we may express it arithmetically. To express the same thing in two languages is not to disguise one language in the other. Any problem that leads to a simple equation in algebra may be solved by the arithmetical equation, and a few that would yield quadratic equations may be solved by arithmetical methods. Algebraic equations are only generalized arithmetical equations after all.]
Solution.-He spent a certain sum to Torjok, $\therefore 540-$ sum $=$ value of remd. $=\frac{6}{5}(540-$ sum $)$ in roubles. So between Torjok and Moscow he spent $\frac{6}{5}(540-$ sum $)-432=216-\frac{6}{3}$ sum
$.216-\frac{6}{5}$ sum + sum $=195=$ total expenses.
$\frac{1}{5}$ sum $=216-195=21 ; \therefore$ sum $=105$ roubles; and thus expenses from T. to $\mathrm{M} .=195-105=90$ roubles, if that were required.
26. From a quantity of gold, silver and copper, weighing altogether 20300 oz., two alloys are formed, the first in the proportion of 11 gold to 1 copper, the other 37 silver to 3 copper ; and there were 288 oz . of copper left. The first alloy is coined at the rate of $£ 3,17 \mathrm{~s} .10 \frac{1}{2} \mathrm{~d}$. per oz., and the second at 5 s .6 d . per oz., and the whole sum coined is $£, 5,546,145$. 6d. Find the number of ounces of each metal.

SOLITION. $-20300-288=20012=$ weight coined; $£ 3,17 \mathrm{~s} .10 \frac{1}{2} \mathrm{~d} .=£_{182}^{88} ; 5 \mathrm{~s} .6 \mathrm{~d} .=£ \frac{11}{4} ; £ 5,546$, 14 s. $6 \mathrm{~d} .=£ 5,546 \frac{9}{4} 0 . \quad$ Ist alloy $=\frac{12}{12}$ gold ; 2nd alloy $=$ 20012-12 gold
$\therefore \frac{620}{30} \times \frac{12}{12}$ gold $+\frac{11}{4}(20012-12$ gold $)=5546 \frac{29}{4}$
i.e., $\frac{12}{12}$ gold $\left(\frac{823}{180}-\frac{1}{4} 4\right)=5546 \frac{2}{40}-11 \times 20012$
or $3^{11}$ gold $\times 579=221869-220132=1737$
$\therefore \frac{1}{11}$ gold $=1$; gold $=11$ oz.
oz. ${ }^{\prime \prime}{ }^{\prime}$,
and gold + silver $=18511 ; \quad \therefore$ copper $=20012-$ $1851 \mathrm{I}=1789 \mathrm{oz}$.
27. A rectangular solid is hammered out until its length is increased $10 \%$, and its width $15 \%$. By how much per cent. has its thickness been diminished? (Jun. Matric., Toronto.)

Solidity $=$ length $\times$ width $\times$ thickness
$\begin{aligned} &=11 \\ &=10 \\ & \text { length } \times \frac{23}{2} \\ & \text { width } \times x\end{aligned}$, where $x$ is the new thickness.
$\therefore x=(l . \times w . \times$ th. $) \div\left(\frac{1}{1} 1 \times \frac{33}{6} w.\right)=200$ thickness $\div 253$

Thus a thickness of 253 decreases to 200, i.e., 53 on 253 , or $20242 \%$.

Whatso'er you find to do,
Do it, boys, with all your might ;
Never be a little true,
Or a little in the right.
Triffes even
Lead to Heaven,
Trifles make the life of man ;
So in all things,
Great and small things, Be as thorough as you can.

## School-Room Methods.

## QUESTIONS AND ANSWERS.

I. Where was the Battle of Sedan fought?
II. Explain that piece in the Fourth Reader, " Riding Together," by Wm Morris. What were these men doing? Where were they going and whom did they meet?
[I. At Sedan, in the department of Ardennes, in France, near the border line of Belgium. II. So far as we are aware the poem is a purely imaginative description of an incident evidently located in Palestine during one of the Crusades. The men were riding together in a troop of seventy, going easrward to meet the pagan foe.]

## Please explain:

I. "Where the sea beasts, ranged all round, Feed in the ooze of thcir pasture ground."
II. "The hoarse wind blows colder."
III. "Red gold throne in the heart of the sea."
IV. "She will start from her slumber When guests shake the door."
the door.
V. What guests? How can you reconcile the cold winds with the "white-walled town"?
VI. "Those angel faces smile, which I have loved long since but lost awhile."
VII. "I loved the garish day."-Nezvman.
VIII. Where is Breda?
IX. Explain: La Allah illa Allah.
[I. Their "pasture ground" would be the bottom of the sea, the "ooze" the soft mud or slime which covers it. II. We do not see how any explanation can make the meaning clearer. III. A rock of that color is represented as a throne. IV. Any that may happen to visit her. V. We can see no discrepancy. Why not cold winds in a white-walled town? VI. He anticipates seeing, when this life is over, the faces of his loved ones who had died long before as "angel ones who had died long before as "angel dazes." ving sunlight," to trust in his own strength and wisdom. Now he walks in darkness, and trusts God to guide him. VIII. In Holland, at the confluence of the rivers, Merk and Aa. IX. "Allah is God." Resembling and probably suggested by the Hebrew expression translated, "The Lord, he is Jehovah, or the God." We cannot afford space to give the pronunciation of a long list of words, which may be found in any good dictionary.]
Please give explanation of the following lines in "The Bell of Atri":
I. "Fame is the fragrance of heroic deeds,

Of flowers of chivalry, and not of weeds!"
and of the lines:
II. "Before I knew the woes of want,

And the walk that costs a meal."
in the "Song of the Shirt"; and of the line :
III. "Ring out a slowly dying cause,"
in "Ring Out Wild Bells."
[I. This proverb is highly metaphorical, but the meaning is that a good name, an honorable repute, can be gained only by meritorious conduct, not by wealth, rank or position. II. "Before I knew the suffering that is caused by destitution, or what it was to be unable to take an hour's walk without losing the meal that must be earned by that hour's work." III. We do not know that it is quite certain what the specific reference is in "a slowly dying cause," but some phase of the "feud of rich and poor," or of the struggle for political and social reform of which those days were full is meant. In that earlier period of his life Tennyson was much more in sympathy with liberalism and democracy than in his later days.]
[ADOLPHUS. - There are some passable lines in your verses, but there are many defects. Such words as 'tzuas and the one are rather weak for last and rhyming words in lines of verse. You need to study the laws of metre and of rhythm, and the best course of study will be a few years of careful reading of the best poets. If after that you still feel like writing poetry send us another sample.]

## LAWS OF QUESTIONING.

I. Questions should be clear, concise, definite and adapted to the capacity of the pupil. They should be in simple, pure, straightforward English, of few words, and should at once direct the attention of the learner to the special point concerning which he is to speak.
2. A question that is heard but not understood should not be repeated in the same language It should be simplified. The question should be stated to the entire class, and the name of the pupil who is to answer it should not be spoken until all have had an opportunity to prepare an answer
3. Questions should be in the language of the teacher, not in the language of the book. If the questions of the book are asked, and the answers of the book are accepted, the pupil may easily substitute memory for understanding in the preparation of his lesson
4. As a series, questions should be logical ; they should omit nothing; they should develop every point in its proper place ; they should constantly lead to the ultimate fact to be brought out in the lessson. Each question of a perfect series is based upon the preceding answer. Unfavorable answers must be turned to good account The pupil should not be reproved for giving an answer which is justified by the question asked.
5. Questions should not allow a choice of "answers. Instead of, "Is it red or green?" ask, "What color is it?"
6. Questions should not suggest the answer by contrast ; as, "How many of you think the hum-ming-bird is a very, very large bird ?" The answer should not be indicated by inflection, emphasis, tone of voice, expression of face, motion of lips, or in any other way.
7. As a rule, questions should not be such as are sufficiently answered by "Yes" or "No." Mere assent or dissent does not require much intellectual effort, and saying "Yes" or "No" is inadequate as a means of cultivating language. Putting an old question in a new form leads the child to look at an old truth from a new standpoint, and to feel a new interest in it. This favours thoroughness and breadth of knowledge. The teacher should avoid stereotyped forms of questioning.
8. A question should not introduce ideas which have been carelessly omitted, or anticipate ideas which have not yet been taught. Questions which tell too much, or which admit guessing at the answers, are weak educational instruments.
9. The question should not generalize for the class ; as, "What have you learned of all these?" before "Of how many of these is this true?"
Io. A question should be interrogative in its form ; as, "What kind of a tree is this?" instead of "This is what kind of a tree?"
As the chief value of educational questioning is to stimulate mental activity, and to give the pupil a habit of thinking and investigating for himself, each question should require a distinct intellectual effort, and each answer should be the thoughtful result of the pupil's own work.
Skill in receiving and in disposing of answers is an important part of good questioning.
If there be no answer, the teacher is usually to blame. He has miscalculated the power of the class.

If the answer be a random guess, or wilfully wrong the teacher is certainly to blame. The discipline of the class is bad.
If the answer is partly right and partly wrong, the teacher should unravel the difficulty by asking questions which will simplify the matter, and then return to the origional question, and obtain the correct answer.
Always give the pupil credit for any element of correctness which his answer may contain.
If possible, lead him to see wherein it is incorrect, and why it is wrong.
Do not resort to ridicule to show that an answer is absurd. A child will not try to answer if he feels that he may be laughed at for his pains.-Mrs. N. L. Knox in School Supplement.

He who keeps his faith, he only can not be discrowned, Little were a change of station, loss of life or crown, But the wreck were past retrieving if the man fell down.
-Lowell.

DR. HUNTER'S LETTER ON THE CURE OF CONSUMPTION.

## NO. I.

To people who are sick the only question of importance is how they may the most surely and most quickly regain their health. Of the pathology of disease, the laws of health or the theories of physicians they can know little except what they are told, and much of what they are told is not reliable.
In regard to lung diseases they have "ceen taught to dose the stomach with "cod-liver oil," "malt extract" and "cough mixture," and although every case so treated dies, they yet submit to it because they know not what else to do.
The only test of truth with regard to any medical treatment is the good it accomplishes. The treatment of lung diseases by the stomach has always failed and no theorizing can justify its continuance. Medicines given by the stomach will not cure catarrh nor throat diseases nor bronchitis, which are the mildest complaints of the breathing organs, and it is, therefore, folly to suppose they could succeed in consumption, which is the worst.

These affections are as purely local as a sore eye, and must be treated by the application of remedies to the Jiseased part or no cure will result. No physician living would consent to treat inflammation or ulceration of the womb by giving mediCines by the stomach, but on the contrary would insist on local treatment as necessary for its cure. Any other course would be quackery, and it is just as gross quackery to pretend to treat inflammation and ulceration of the air passages and lungs through the stomach. Sir Alexander Crichton has well said, "That consumption cannot be cured by medicines which act through the stomach the whole history of our art proves to us."

The cure of lung diseases can only be effected by breathing medicines into the lungs. They are thus carried through every tube and air cell, and produce a direct action on the very seat of the disease. If this does not cure nothing will. Medicines in a gaseous state are much more powerful than in any other form.
Since my introduction of this treatment, all hospitals for the special treatment of throat and lung diseases in England and throughout Europe have adopted it as essential to the proper treatment of these diseases. Dr. Maddox says: "We confidently assert that consumption is curable by inhalation." Prof. Hyde Saller says "It has all the advantages of local treat ment, its concentration and rapidity of results," and Sir Morell Mackenzie, who became famous throughout the world by his treatment of the late Emperor of Ger many, says: "Inhalations as prescribed at this hospital are of five kinds." Can you believe they would be so used by one of the foremost physicians living if they were not necessary to successful treatment ?
I have seen so many wonderful recover ies by this treatment in all forms and stages of consumptive disease that I do not hesitate to claim that it promptly arrests consumption in the earlier stages, effectually cures catarrh, bronchitis and asthma, affords ground for hope even under the most discouraging circumstances.

Patients can be treated at home. Those unable to come to the office for examination are sent a list of questions to be answered, on the return of which Dr. Hunter gives his opinion of the case and explains the treatment.

Note-A little book explaining their mode of cure can be obtained free by applying at 7I Bay Street.

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