

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged.
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE CANADA
EDUCATIONAL MONTHLY
AND SCHOOL MAGAZINE.

FEBRUARY, 1895.

THE USES OF GRAMMAR.

By J. H. KNIGHT, PUBLIC SCHOOL INSPECTOR, LINDSAY.

THERE are three reasons why we should study Grammar. First, to assist us in Reading; Second, in Composition; Third, in Literature.

As these purposes are almost distinct, it is obvious that we have to regard things from a different point of view according to which of these purposes we are aiming at. It will be admitted, too, I think, that any classification of words, or other treatment of language which does not assist in one of these objects is not worth retaining.

READING.

I. In studying grammar for the purpose of assisting in reading, the following points are worth remembering.

(a) The word "a" is to be treated as a part of the following word. Its sound is the same as the first syllable of such words as "above," "among," "around," "aboard," "a man," "a fat cat," "a board," "a nice house."

Teachers would save themselves and their pupils a great deal of trouble if they would remember this.

(b) The word "an" is separated from the next word, and is unemphatic; as "an apple," "an ice house."

(c) The word "the" has two

sounds. Before a vowel sound the e is long, as in "thee," as "the elder son," "the old woman." In other cases the e is short, and "the" is pronounced as if it were part of the next word as, "the mouse," "the two kittens."

(d) Pronominal adjectives, my, thy, etc., are unemphatic, unless emphatic for obvious reasons; as, "He loves me for my *own true worth*." "Thou shalt *love thy neighbour*."

(e) Qualifying adjectives are generally emphatic, the emphasis being sometimes greater than on the noun, (1) sometimes less, (2) and in some cases it requires to be divided equally between the adjective and the noun. (3)

(1) "Neither run into *any* kind of danger."

(2) "I saw a *great* ox."

(3) "My *own true* worth."

(f) Personal pronouns, prepositions and conjunctions are usually unemphatic.

(g) When a sentence ends with a pronoun preceded by a preposition the emphasis is generally placed on some preceding word, as:

"Who was this that *went* from thee?"

"To-morrow he *weds* with me."

"Tell me what thou *discoverest* in it."

"Have *mercy* upon us."

"The *Lord* be with you."

Exceptions, "As we forgive *them* that trespass against *us*." "That flowed *underneath* it."

(h) "There" as an expletive is unemphatic, as "There was a *sound* of *revelry*." "There" as an adverb of place is emphatic, as, "And *there* lay the rider."

(i) The verb "to be" and most of the auxiliaries are unemphatic; as, "Thy *shores* are *empire*." "The *wrecks* are all thy *deed*," "nor doth remain a *shadow* of man's *ravage*." "*Britons* never shall be *slaves*." Exceptions, To *be*, or *not* to *be*." "The Word was *with* God, and the Word *was* God."

(j) Negatives are generally unemphatic, but there are many exceptions.

(k) The words that asks a question is usually emphatic, as, "What shall I more say?" "Where is the *promise* of His *coming*?" "You'll have that mouse?"

(l) The word "that" has four degrees of emphasis. The demonstrative pronoun has the strongest emphasis. "Bring me *that*." As a demonstrative adjective the emphasis is divided between the adjective and the noun. "Bring me *that* book." The relative pronoun takes the third degree of emphasis. "They that are whole need not a physician." The conjunction is unemphatic. "He said (that) I might go."

(m) Inverted passages require a slight pause at the inversion. "To the Lord our God belong — mercies and forgivenesses." "Here endeth — the first lesson."

COMPOSITION.

II. (a) Probably one of the greatest difficulties in Composition, both oral

and written, is in the selection of verbs. Whether our text-books help pupils or not is a question. If the past tense and participle happen to be alike there is little trouble, but if they are different to talk about strong and weak, or old and new conjugation does not help much. A pupil seldom has any trouble in distinguishing whether a word implies present or past time, but he does need to know whether the past tense and the participle are alike or different, and if different which is which. How to use them will cause little trouble.

(b) Another cause of trouble is in the choice of pronouns. This arises from the fact that the form of the noun is the same in the nominative and objective, and different in the pronoun. The difficulty with the pronoun is in composition, to tell which word to use. The difficulty with the noun is in Literature, to tell its relation to other words.

(c) The ear is generally a safe guide in the choice between "a" and "an." But it is not always safe, because we sometimes met with "a hotel," "a historical work," "an union," "an uniform examination."

(d) In making contractions people often forget that what is wrong in full is wrong in a contraction. "Don't" is right enough after I, we, you or they; but wrong after he, she or it.

It is a pity that we so often see "it's" for "'tis" as a contraction of "it is." 'Tis a pity some of our teachers do not make a note of this.

(e) The correct use of "shall" and "will" seems a hopeless task at present. One man writes a book and says that "shall" and "will" are used in the same sense in:

"We two will wed to morrow morn,
And you shall still be Lady Clare."

And the Editor of the High School Reader changes "shall" to "will" in:

"Rule, Britannia, rule the waves,

Britons never shall be slaves.”

(f) Punctuation. If this is faulty it may change the meaning, and so interfere with the reading. But punctuation is really a thing that belongs to Composition, and should be taught as a part of that subject. The most direct way is to require pupils to copy from the Readers, and see that they put in the stops correctly. They cannot do this habitually without learning punctuation.

LITERATURE

In order to understand what we read, it may sometimes be necessary to examine the grammatical structure of some of the sentences. We may be in doubt as to which noun is the subject, and which the object, as in the line.

“And all the air a solemn stillness holds.”

In the sentence, “Sufficient unto the day is the evil thereof.” The subject of “is” may be “sufficient,” or it may be “evil.” It makes quite a difference in the meaning. The Revised Version changes the meaning of Heb. 12, v. 17, by inserting a parenthesis, thus “When he would have inherited the blessing, he was rejected (for he found no place of repentance) though he sought it carefully with tears.”

The study of the parenthesis is important, and is too often neglected. There are three methods of marking the parenthesis: 1st, by a parenthesis mark before and another after the passage; 2nd, by a dash before and a dash after the passage; and 3rd, by a comma before and a comma after the passage. Sometimes one parenthesis includes another, in which case the inner one may be omitted and the outer one retained, but not *vice versa*. Thus, “God { who (at sundry times and in divers manners) spake (in time past) (unto

the fathers) by the prophets } hath (in these last days) spoken unto us by His Son.”

Expertness in detecting the parenthesis assists in Reading, and also in punctuating a Composition, but is most valuable in deciding the meaning of a sentence.

Just as in the case of verbs when the past tense and participle are different, in Composition we hardly know which to use, so in Literature, when they are alike, we are at a loss to tell whether a certain word modifies or makes an assertion. The difficulty in the one case is in the analysis, in the other in synthesis.

In teaching Writing we aim at three things, legibility, beauty, speed. Whatever we do that will not assist in one of these is a waste of time.

So in Grammar, we aim to assist pupils in Reading, in Composition and in Literature; and that which does not contribute to one of these had better be left undone.

There is but one way for the soul to escape from the ills of life; it is to escape from its pleasures, and to seek enjoyment higher up.—*Joubert*.

Not man with religion is something more, but man without religion is something less, than man.—*Phillips Brooks*.

A SARCASTIC TEACHER can never be a teacher in the true sense of that word. There is nothing that so hurts the child, so hampers his progress, so hinders his development, as sarcasm on the part of the one from whom, above all others, he has a right to expect sympathy. The proverbial “bull in a china shop” is not more out of place—and does infinitely less mischief—than the sarcastic man or woman in the schoolroom.—*Journal of Education*.

THE SPIRITUAL SIDE.

THERE are many who decry the influence of an enlarged scope of education, who say that the increase of free schools and colleges has not produced a perceptible increase in the general stock of knowledge or made mankind any better; that the real result has been to substitute illusive half knowledge for the unlettered simplicity that once prevailed, and awaken hopes of some easy way to wealth by means of a sort of conjuring with terms of which others are ignorant. There is no doubt that many a boy has been kept in school and made into a sort of intellectual machine of no value to himself or to the community; while certifying to the lack of judgment in the teacher the pessimistic public consider him as displaying the failure of the scheme for general education.

But there is something omitted in the calculation. Let it be conceded that the boy who is good for nothing but to use the spade or the hoe is set to read some extracts from Hamlet when he reaches the Fourth Reader, and that it is one of his tasks to learn something about Milton and Columbus, even of Raphaël or Phidias, we are to remember that man is a complex being. It is possible for a man whose lot is to handle the hoe and the spade to employ his mind meanwhile on subjects that give him content amid his toil. It is not that he has been taught too much; he has, on the contrary, been taught too little. The fault is that the school is an intellectual factory rather than a place of stimulation to spiritual excellence, a place for addressing the entire being.

Man is not a machine to be made to a model, but a sentient creature, a spiritual being that demands for his perfection the employment of spiritual

forces. The school must address the spiritual side of the child; for life is a mission to all. Something must hallow our work and give strength and stability to the mental structure. The school may thus rightly deal with high things; nor is it any excuse that the lads before the teacher are to tread the common paths of life. Work is the lot of all; it was the command to Adam that he was to care for the garden in which he was placed. How shall man's work be hallowed? That is the problem that must stand before the teacher, not to show how work can be avoided. The man who addressed a large school of boys and urged them to study hard or they would have to work for a living was all wrong. He might have justly told them they would all have to work, but by knowledge and by trained minds they could choose that kind which would be most appropriate, and that is about all.

In this busy on-rushing world what is it that sustains mankind? The main object put before our youth out of school is unfortunately money. Too often those who address schools speak of men who started in life with nothing and ended with a million. But if this were a great accomplishment it is in the reach of but few; labor all must, whether much or little be reached. In the battle of life it is spiritual upholding that men need; no matter in what path the boy's steps may wander, how long and severe, or how short the hours he may labor; how few the things he may own or how abundant his possessions he will need to feel that life, his life, is a mission.

This is not so stated to demand that religious forms have a place in the school. When it is seen how poorly attended the churches are it

will be apparent that religious forms have a place in the school. When it is seen how poorly attended the churches are it will be apparent that religious forms fail to satisfy the heart of man. It is the spiritual nature of the child that must be addressed, and it is in this that the schools fail; they aim at figures, but that is but the means to the high end of cultivating the spirit. The teacher who looks at a class become perfect in the multiplication table and finds in himself a glow of satisfaction should be startled. He is not there for that. The "little flower in the crannied wall" is there for a spiritual purpose, and so the teacher is in the school for something more than to teach addition.

If then the boy goes to the plough from his Fourth Reader that has

given his imagination some glimpses of another world in an extract from the Nibelungen days let it not be counted as a loss of time; let the opportunity be welcomed and seized to impress his spiritual nature; give wings to his spirit and cause his heart to beat rhythmically to high aspirations. It is possible to impregnate him with an idea which, like the music imprisoned in the strings of an instrument and set free by the touch of the artist, may be expanded by influences of the lilies of the field and the stars in the heavens and dominate his entire life.—*School Journal*.

The average man . . . ought to interest us, for he presents the type to which we almost all belong.—*Phillips Brooks*.

FINDING OUT AND BEING TOLD.

BY PROFESSOR L. C. MIALL.

TEACHERS who understand their business often quote some such rule as this:—"Never tell the child what he can find out for himself." There is no rule more difficult to keep. The bad teacher breaks it always; his lessons are framed on a contrary rule. The good teacher breaks it now and then, from lack of time, or from thoughtlessness, or even of set purpose. After all the rule is but a rule, and the teacher is a free man. He will not bind himself by rules. Nevertheless, the better the teacher the more scrupulously will he keep this one. Experience and patient study of methods will make it possible for him to observe the rule where a less attentive teacher would infallibly break it.

Taken as a literal rule, hard and

unfitting, it is impossible and unnatural. All rules are so, where the minds of a number of human beings are concerned. The best of teachers will tell a class some fact in natural history, when he might have taken them into the fields to observe it for themselves. The fact is wanted there and then; to observe it directly would cost half a day; to omit all mention of it would be to omit a necessary qualification of an important principle which is being worked out. If we are to make our natural science absolutely for ourselves, we must be prepared to spend some centuries upon it.

The literal rule is not only impracticable; it is also unnatural. Weary of piling up dead facts and applying dead formulæ, the impatient

thinker is, I admit, at times inclined to revolt. — "Let us have no facts or formulæ brought in from without: let us work, no matter how slowly, for ourselves; let us cast off the guiding mind altogether." A too dogmatic enunciation of the facts of development of the human mind may urge a theorist in the same direction. We may be told of necessary laws of evolution of the faculties, a necessary progression from the concrete to the abstract and from the simple to the concrete, until we begin to imagine that the mind of the child would do perfectly well if only the teacher could be persuaded not to interfere at all. Herbert Spencer has put the case as well as possible:—"If it be true that the mind, like the body, has a predetermined course of evolution, if it unfolds spontaneously, if its successive desires for this or that kind of information arise when these are severally required for its nutrition, if there thus exists in itself a prompter to the right species of activity at the right time, why interfere in any way? Why not leave children wholly to the discipline of nature? Why not remain quite passive and let them get knowledge as they best can? Why not be consistent throughout? This is an awkward looking question. Plausibly implying, as it does, that a system of complete *laissez-faire* is the logical outcome of the doctrines set forth, it seems to furnish a disproof of them by *reductio ad absurdum*. In truth, however, they do not, when rightly understood, commit us to any such untenable position. A glance at the physical analogies will clearly show this. It is a general law of life that, the more complex the organism to be produced, the longer the period during which it is dependent on a parent organism for food and protection. The difference between the minute, rapidly formed, and self-moving spore of a *conferva* and the

slowly developed seed of a tree, with its multiplied envelopes and large stock of nutriment laid by to nourish the germ during its first stages of growth, illustrates this law in its application to the vegetable world. Among animals we may trace it in a series of contrasts from the monad, whose spontaneously-divided halves are as self-sufficing the moment after their separation as was the original whole, up to man, whose offspring not only passes through a protracted gestation, and subsequently long depends on the breast for sustenance, but after that must have its food artificially administered—must, when it has learned to feed itself, continue to have bread, clothing, and shelter provided, and does not acquire the power of complete self-support till a time varying from fifteen to twenty years after its birth. Now this law applies to the mind as to the body. For mental pabulum also, every higher creature, and especially man, is at first dependent on adult aid. Lacking the ability to move about, the babe is almost as powerless to get materials on which to exercise its perceptions as it is to get supplies for its stomach. Unable to prepare its own food, it is in like manner unable to reduce many kinds of knowledge to a fit form for assimilation. The language through which all higher truths are to be gained is wholly derives from those surrounding it. And we see in such an example as the Wild Boy of Aveyron the arrest of development that results when no help is received from parents and nurses. Thus, in providing from day to day the right kind of facts, prepared in the right manner, and giving them in due abundance at appropriate intervals, there is as much scope for active ministrations to a child's mind as to its body. In either case, it is the chief function of parents to see that the conditions requisite to growth

are maintained. And as, in supplying aliment and clothing and shelter, they may fulfil this function without at all interfering with the spontaneous development of the limbs and viscera, either in their order or mode, so they may supply sounds for imitation, objects for examination, books for reading, problems for solution, and, if they use neither direct nor indirect coercion, may do this without in any way disturbing the normal process of mental evolution, or, rather, may greatly facilitate that process. Hence the admission of the doctrines enunciated does not, as some might argue, involve the abandonment of teaching, but leaves ample room for an active and elaborate course of culture."

We are, I believe, to mind the rule, but not mechanically or formally; it is like a rule of health. The child's body, for example, is to be kept warm and well fed, but we are not on that account to refrain from sponging it with cold water, nor are we to give it food whenever it begins to grow hungry.

We shall draw from our rule such practical maxims as these: Not to encumber with help; not to keep the child's mind passive, while the teacher's mind is working busily; not to use mechanical ways of teaching.

When the children have been cutting out paper, or putting sticks together, the teacher will not say: "That side is too long or too short." He will point out that there is something wrong, and encourage the child to discover what it is. When a model is to be drawn, he will not begin by prescribing the size of the drawing, but will inquire, together with the child, whether the first attempt is convenient in point of size.

Learning by doing follows the same rule. The child begins confidently, not seeing any difficulty; then makes a mistake, or is stopped by want of skill. The teacher helps the child to

discover the mistake, and to get over the difficulty, but does not warn against possible blunders, unless there is risk of serious disaster.

In the object lesson the children will be asked to point out the facts of structure, and, if untrained, they will very likely omit all the most important. The teacher will not instantly remedy the defect, but will bring it home by-and-by. Perhaps the skin and the stalk and the pips of the apple have been left out. Questions about the living apple will discover these omissions, and make it clear how impossible it is for the apple to exist without things which have been forgotten.

We shall not be formal or proceed always by one road, lest we deaden the child's interest, on which all the rest depends. A long enumeration of facts, a long exercise in inference or interpretation, a long practical exercise, all these are wearisome to a young child. A good lesson will have something of each, but not very much. A knowing teacher will venture now and then to digress and give an unexpected turn to the lesson in order to revive the interest. We begin with the shape of a leaf of duckweed, and by-and-by, to our surprise, we are experimenting on the surface-tension of water. But the good teacher will come back to his duckweed in the end, and will never have really left it.

The hand of the teacher will guide the lesson throughout, little as the class may be aware of it. It is he who gently presses a vital question and discourages a trivial one. But, if the children are both able and willing to take even a step or two for themselves, the teacher will gladly give them the chance. There are educational theorists who would leave the guidance, too, in the hands of the children. For my own part, I do not accept their system, but wait until I

come to know the wise and capable men and women who have been produced by it. I cannot understand a gospel of Nature which leaves children to bring themselves up.

"Finding out" must not be interpreted so loosely as to include looking up words in a dictionary, or other tasks of the same kind. It is only when the finding out gives exercise to the higher faculties that it becomes precious. If I were teaching a language I would tell the class the words which they did not know, and try to tell them something about each word which would make it stick in their memories. I have looked up thousands of words in six or seven languages, and am so far from feeling any satisfaction in my labours that I would spare myself and others as much of this dull mechanical business as could possibly be contrived.

Looking up words in a dictionary is no more profitable than consulting an index of any other sort; when we have it to do, let us go through it cheerfully, but the less of it the better. We need never be anxious to find drudging work for our pupils; they will get enough of that in any serious occupation, and the teacher should take all pains to keep it down.

The good teacher will observe his own progress as well as the progress of the children. The further he goes in the right path the more possible will he find it to mind the rule, "Never to tell the child what he can find out for himself." And the rule, not kept slavishly or literally, will at length become the main guide of his teaching. He will think of it more constantly, and respect it more sincerely, than any other.—*The Journal of Education.*

HOW TO IMPROVE OUR SUNDAY SCHOOL.

BY REV. J. MONRO GIBSON, D D.,

THE subject is one which to many seems poor and very commonplace. Yet there is no question more urgent, none more deserving the best thought our best men can give to it, none that has more need to be lifted out of the commonplace and put into the first rank. All Christians have read the 21st chapter of St. John's Gospel, and none can be ignorant of the fact that the first charge of the risen Lord to His Premier Apostle was, "Feed My Lambs." But how few feel the force of this, or recognise that the Church's very best are called as a first duty to see to the training of the young people for the service of Christ.

The Sunday-school movement hav-

ing begun as an effort to reach neglected children, the idea survives to this day that only neglected children need to be thought of, as if when Christ said, "Feed My lambs," He meant only waifs and strays; and as at first the main purpose was to teach reading and writing, the idea still survives that anyone can do all that is required—as if Christ would have laid the charge on Peter if any young disciple could have done it quite as well! It is true that larger ideas now prevail among those who are interested in the work, and there is much to encourage us in the marvellous extension of the Sunday-school movement—much to fill us with enthusiasm and with hope in the stupen-

dous statistics which run teachers into myriads and scholars into millions; but we are apt to forget that parallel with this development there has been the discontinuance of old methods, such as the catechising by the minister as he visited the homes of the people; and though the work done under these old methods was not tabulated and made up into statistical returns to be collected by some Secretary of a World's Convention, and issued in an imposing report, it is just possible that more may have been accomplished, both in securing and supplementing parental instruction, than is now achieved by the methods which have superseded them.

We cannot return to the old methods; but we can and ought to see to it that the new ones be efficient—to make sure, not only of the quantity but of the quality of our work. We ought not to rest content with numbers on the roll and on the staff, without the evidence that our teachers do teach, and that our scholars do learn. We ought not to be satisfied unless we see a fair percentage of the immense numbers under our charge becoming true and faithful disciples of the Lord Jesus, pillars of the Church of to-day, and corner-stones of the Church of to-morrow. How sadly we come short in the efficiency of our work is only too obvious. Many of the young people who have passed through our hands are so poorly grounded that they fall an easy prey to infidelity in its very shallowest forms; and it is well known that only a very small percentage of the vast numbers in our schools become strong and useful Christians. No doubt there are many shining examples—enough to satisfy the enthusiasm which is happily expended in so good a cause; but the many become few when put alongside of the multitudes who slip through our hands, and pass on to swell the ranks

of the ignorant, the indifferent, the hostile, the vicious, and even the criminal classes. Seeing that these things are so, what question can be more important than how to improve our Sunday-schools?

But is not parental instruction the great thing? Is not the home of far greater importance than the school? Unquestionably; but nothing can relieve the Church of her duty, and it is the duty of the Church we are now considering. We may be reminded that "an ounce of parent is worth a pound of parson," and there is some truth in it, as in all these catch-word proverbs. But what if the parson wake up a hundred parents to their duty, or double their efficiency in the doing of it? What if the parson can say, "Lord, they pound hath gained ten pounds of parent?" And then, if the proverb be true, every ounce of the ten pounds gained should be worth the original pound. That would be more than 100 fold. It would be, to speak quite accurately, 160 fold. But it is not the parson only we are thinking of: it is the whole church. And while an earnest minister can do much in the way of awakening parents to their duty, a Church thoroughly in earnest can do a very great deal more. And anyone who will think carefully on the subject will see that there is no way in which the church can more efficiently inspire and direct parents than by having an efficient staff of earnest and qualified teachers constantly engaged in the work.

A great deal of nonsense has been talked about the Sunday-school superseding parental instruction. As if the only possible time for parental instruction was between 3 and 4 on a Sunday afternoon! As if it would do a child positive harm to have it at any other time! Are there not twelve hours in a day? and are there not seven days in a week? If parents

are really in earnest in the training of their children for Christ and His Kingdom, they will not allow the Sunday-school or anything else to supersede them; if they are not in earnest about it, they will not do their duty in any case.

The most earnest parents are those who are most anxious to get all the help they can in the training of their children. While it is true that no stranger—no, not even the most intimate friend—can take the place of a father or mother, there is an immense advantage in having a friend, even a stranger, to come in as a helper, that “in the mouth of two or three witnesses every word may be established.” There are a thousand things which a parent can do better than anyone else, but there are some things—and these of the highest importance—in which one outside the family has a great advantage. There are few who fully realize the unspeakable value to the child of an earnest, sympathetic teacher in things spiritual and eternal.

But it is not so much the influence of particular teachers I am thinking of, as the general influence on the minds and hearts of parents, of activity and earnestness on the part of the Church in the teaching and training of its young people. It must not be imagined that every parent is an efficient teacher of his own children. Very many need guidance, help, encouragement, stimulus; and where would they be more likely to get what they need than from an institution in which, week by week, the best minds of the Church were devoted to doing the very best they could for the little ones? But, here again, to accomplish anything, the Sunday-school must be efficient; so again we come to the urgency of the question how to improve our Sunday-schools.

I have been dwelling on the urgency of the question, because it is only by realizing its urgency that there is any

hope of its getting an answer. Not only so, but as soon as the Church at large is thoroughly awake to its urgency, we shall have the answer. For we have in the church now, intellect and heart enough to furnish as many first class teachers as we need, if only we could bring it into requisition. We do not forget that only consecrated ability is available; but there is enough of that which is truly consecrated, if only the Church would call for it. Christ calls for it, as we have seen, from Heaven; but it is a far-away voice to most. It needs to become vocal and resonant in the atmosphere of the Church. As things are, instead of taking up the call of Christ and repeating and echoing it, the church practically contradicts it. He has said, Make it the first thing; she says, make it the last thing. He calls on the foremost; she says, Let it go a-begging to anyone who will condescend to take it up. We need an awakened public opinion—an aroused sentiment throughout the church. We want the summons, “Feed My lambs,” and the plea, “Whoso shall receive one such little child in My name receiveth Me,” made so resonant that every *Peter* shall hear it; that those who have special talents will feel that there is no higher use to which they can be put; and not only so, but that the work is so important that it is worth while, not merely to use in it the best talents the best of us have, but to give time and thought and hard work to training for it, so as to secure the very highest possible efficiency.

We must magnify the office of a teacher. The first thing needed is to let it be an office at all. It was a distinct office in the early Church. The teacher was not merged in the pastor, and, wherever the office is mentioned, it evidently ranks high. Is there any reason why the teacher of youth should not be as carefully sought

out, and as solemnly set apart to his office, as any other dignitary of the Church? Is there any reason why the teacher should be of small account compared with the deacon? If an Apostle has said, "It is not meet for us to leave the Word of God and serve tables," why should we be so careful in the choice and ordination of those who are to serve tables, and make nothing whatever in the way of official recognition of those who are called to minister the Word, simply because the ministry is not to ordinary people, but to those who are the first objects of the Shepherd's care?

We do not want the Church to make less of its preaching or its episcopal functions, but we do want it to make far more of its teaching. We want far more of the mind of Christ, who, when asked, "Who is the greatest in the Kingdom of heaven?" took a little child and set him in the midst of them, who preferred the small scale to the large, who did not grudge His time or strength even for a class of one, and who, to give all possible encouragement in this greatest of all works for him, said, "Who-so shall receive one such little child in My name receiveth Me."

Suppose now that the Church could be aroused to the acknowledgement of the paramount importance of this work, if the office of a teacher were thus magnified, and the rendering of this service regarded as the summit of high and holy ambition, what would be the consequence? First, we should certainly have the very best talents the Church can command devoted to it. As a result to this, the best methods would be adopted. There would be as definite a curriculum as in the best schools in the land. Classification would not be according to size, or age, or chance, but according to attainment; and there would be honor in promotion from a lower to a higher class. There would be a careful testing of

results, and a standard of graduation which it would be the ambition of our young people to attain at as early an age as possible.

Next, such persons would not tolerate the Babel of twenty classes in one room. And they would not have to do it long. They would have an influence in the councils of the Church which scarcely any body of teachers has now. It would be impossible for the deacons to put their claims last in the Financial Budget. No Building Committee would venture to ignore them. Instead of a lecture hall which the Sunday School is graciously permitted to use, there would be a Sunday School hall, which could be utilized for lectures and social gatherings when not needed for its primary purpose. There would be an abundance of separate class-rooms; and all necessary arrangements would be made to ensure that no teacher should disturb another in his work.

When these reforms were accomplished it would be found that the classes might in some cases be considerably larger than is customary at present—a change which, so long as it did not interfere with the personal intercourse of the teacher with his scholars, especially at the critical age for decision, would bring with it many advantages. First, fewer teachers would be required, and so higher efficiency could be insisted on; and then each class could be organized, and the young trained by similar methods to those which have been found so efficient in Christian Endeavor Societies. The number of premier teachers of the Peter type would be reduced, but the number actually engaged would be as great as before, for the natural leaders of the larger classes would be drawn out, and become pupil-teachers, not only giving efficient help, but receiving the best of training, having afterwards classes of their own. Further there would be full scope for

the development of enthusiasm and *esprit de corps*; the teacher would not be always stooping down and murmuring in a low voice; he could be on his feet, alive and alert. With a black-board at his side, with maps when needed, he would have the opportunity of kindling up when his subject admitted of it, and putting his whole soul into his work; and the scholars, having their own room and their separate organization, would take pride in their class, and in the furnishing of their room with whatever would make it more attractive and better equipped. Each separate class would be a family, while, meeting together as they would for opening and closing exercises, there would still be unity, in the school.

Such as these would be the results that would follow the devotion to this work of the very best talent the Church possesses. And does anyone suppose that if efficient work like this were done by the Church, the parents would remain as apathetic as some are now, and as helpless as others are? They would be roused, they would be inspired, they would be guided, they would be encouraged; home training would receive an immense impulse; and the great majority of our young people would be well grounded in the truth, and ready, not only to hold their own, but to carry the war into the enemy's country. Oh! it breaks one's heart to think of the multitudes of young men and young women now drifted far away and lost to the cause of Christ who might have been won if the Church had only been faithful to this, her first and highest duty.

There has been happily of late years a great awakening as to the duty of the Church to evangelize the people. But how hard it is to reach those who have already drifted off; how hard it is to get any chance at them. But we do get at the young people—yes, at the most of them. The bulk of the

people are not in our churches. But the great bulk of the people of the next generation are in our Sunday Schools. We have them. We have them under our influence for years, and that at the most impressionable period of their whole life. What a splendid opportunity. If only the Church would rise to it; if only the Church would put heart and soul and strength and mind into it; if only the Church at large would make it her first charge, and with all the power of prayer and pains and patience would give herself to the winning of these young hearts and the training of these young lives for Christ, we should begin to see from afar the dawning of the day when the whole round world would be "bound with gold chains about the feet of God."—*The Canada Presbyterian.*

NOTHING BUT THE BEST, the very best that the teacher can do, should be allowed to remain upon the board. Anything else becomes an example of wrong or bad form, and is liable to be either remembered or copied by the class.—*American Teacher.*

The powers and affection which are training in your family, your business and your church are to find their eternal occupation along the streets of gold—*Phillips Brooks.*

A true style is like a suit of the finest chain armor, so strong that the thought can go into battle with it, but so flexible that it can hold the pencil in its steel fingers for the most delicate painting.—*Phillips Brooks.*

As you will hold no truth for which you cannot give a reason, so let yourself be possessed of no dollar whose history you do not dare to tell.—*Phillips Brooks.*

EARLY REMINISCENCES OF QUEEN'S UNIVERSITY, KINGSTON.

BY THE REV. PROFESSOR MOWAT, D.D., KINGSTON.

QUEEN'S University commenced its work in 1842. Why, it may be asked, was it necessary that such an institution should be started? The Scotch settlers in Canada and others of Scotch extraction felt a true and hereditary interest in the matter of education. After the revolution of 1678 the General Assembly of the Church of Scotland never relaxed their efforts till they had established a school in every parish, a high school in every town, and a university in every centre of population. This brought Scotland to the foremost position in educational matters, and the long roll of her sons who have risen to eminence in every region of the globe is the result of this zeal. The educational advantages of the fatherland were greatly missed in Canada especially as regards the higher learning. In 1828 a Royal Charter was obtained for King's College, Toronto, but the provisions of that charter in favour of the Church of England created such dissatisfaction that its authors hesitated for nearly fourteen years to act upon it, till at last the Presbyterians and Methodists resolved to establish universities of their own. In 1839 the Presbyterians of Kingston held a meeting in St. Andrew's Church, at which it was resolved to collect subscriptions for the proposed University. At this meeting Mr. John A. Macdonald, afterwards Sir John, took a prominent part. In 1840 Queen's and Victoria Universities were incorporated by provincial charters, the former being then called the University of Kingston. The following year the promoters of Queen's University petitioned Her Majesty that she should grant them a royal charter

in connection with her own name, which request was graciously complied with. Such were the circumstances which led to the foundation of Queen's University. The progress of the University may be marked by its changes of abode. A clapboard frame dwelling house on the North side of Colborne Street was—*gentis incunabula nostræ*—its cradle. In the fall of 1842 the University removed to the two story stone building on Princess Street, opposite St. Andrew's Church, but this was found to be too small, and in 1844 the stone dwelling house on the corner of William and Barrie Streets was rented, the two adjoining ones being added in 1847, one for classrooms and the other for a student's boarding house. In these buildings much good work was done, but they were temporary, and, since Victoria, Trinity and Toronto Universities had sightly edifices, it was the more necessary that Queen's should have a permanent abode. A suitable home was found in Summerhill, the substantial mansion of the Rev. Archdeacon Stuart, now occupied as residences by the principal and two professors, which, with six and a half acres of ground, was purchased at the very reasonable price of \$24,000. without interest. To meet this expense the professors were required to go to the country for subscriptions, and they met with a hearty response. To this newly acquired property the University removed in 1854, and remained there till 1869, when it made its fourth move to the building erected for the Medical Faculty in 1859 and occupied by them for ten years. The Medical Faculty was established in 1854, but some time afterwards received a charter

for themselves, constituting them a distinct body, though still affiliated to Queen's, with the title of the Royal College of Physicians and Surgeons. Between 1869 and 1880 they twice changed their quarters, but in the latter year settled down once more in the building which Queen's erected for them in 1859, and in 1892 they resolved to hold in abeyance their charter as a separate college, and to resume their original relation to Queen's as her Medical Faculty.

The fifth and last removal of Queen's took place in 1880. In 1878 the growing number of students and the confined space of the buildings led Dr. Grant to inaugurate a scheme to raise \$150,000 for the purpose of increasing the accommodation, enlarging the staff, and establishing an endowment fund. The movement was warmly endorsed. The proposition that the building should be erected by the citizens of Kingston has resulted in the present handsome and commodious structure. The result was due to the indefatigable toil of Principal Grant. "*Si monumentum queris circumspecte.*" The building stands a record of the Principal's popularity and the generosity of the people of Kingston. Both deserve praise, for without a gallant following a skilful general is helpless. In looking along the vista of the successive forms through which our local habitation has passed in its development from a frame house within a half acre lot to the present stately edifice with its beautiful site and surrounded by a campus of twenty acres, we have much reason for thankfulness and encouragement. The advance in the style and accommodations has only kept pace with the enlargement of the staff of teachers and the roll of students. In the first session there were only two professors; and there were never more than seven in Arts and Divinity together till 1878

when Dr. Grant became Principal. From that year the staff has steadily increased until it now numbers fifty-two teachers classified as follows, five of them belonging to more than one faculty: In Arts, 14 professors, 1 assistant and 2 tutors, 17 in all. In Practical Science 5 professors, 1 assistant, 5 lecturers, 1 demonstrator, 1 instructor, 13 in all. In Divinity, 3 professors, 2 lecturers, 5 in all. In Medicine, 13 professors and 4 other teachers, 17 in all. In Law, 6 lecturers.

Besides these 52 University teachers there are, in the School of Mining, which is contiguous to the University though not connected with it, 4 professors and 4 lecturers, and, in the School of Agriculture, 2 lecturers.

The increase in the number of students is as remarkable as that in the teaching staff. In the first session there were 10 students in Arts and Divinity, 110 in 1878 and 374 in 1893. In the first session of the Medical Faculty there were 23 students, 60 in 1878 and 107 in 1893. The total number registered in all the Faculties last session was 474. This session there is so far (Oct. 29th) an increased attendance in all the Faculties, and the prospect is that the total number to be registered will exceed 500. There have been 1,405 graduates since the opening of the University. Of these there have been exclusive of the honorary graduates (LL.D. and D.D.), 657 in Arts (B.A., M.A., B.Sc., Ph.D., D.Sc.), 691 in Medicine (M.D.), 11 in Law (LL.B.) and 19 in Divinity (B.D.). Of the 243 ministers who have studied wholly or partially at Queen's, upwards of two-thirds have taken degrees in Arts. Of the first 22 students, those of 1842-3, the following eight are still living: Rev. George Bell, LL.D., Registrar of Queen's; Rev. Thomas Wardrope, D.D., of Guelph; Rev. Angus McColl, of Chatham; Rev. Robert Wallace, of

Toronto; Rev. Wm. S. Ball, of Toronto; Rev. Prof. Mowat, D.D., of Queen's; Judge Ross, of Ottawa; O. S. Strange, M.D., of Kingston.

Of the nine professors of Queen's, who held chairs during the first fourteen years of its history, Dr. Williamson alone survives. He is in his 89th year, but his intellect is as bright as ever, and his sight and hearing are unimpaired. He meets his Astronomical class once a week, visits the Observatory daily, often twice a day, and on clear nights spends hours there watching the heavenly bodies. His eight colleagues who have deceased were all able men and successful teachers. Prof. Campbell, whose department in Queen's was Classics, on his return to Scotland, was minister of the Parish of Caputh for a few years, then was appointed professor of Greek in King's College, Aberdeen, and after a short time became principal of the University. He had a wonderful memory and might well be called a walking encyclopæda. He spoke and wrote French with perfect ease and occasionally preached in that language. In the last generation, when the

modern languages were not so generally cultivated as they are now, and Latin was the favorite medium of communication between the learned of different European countries, he was one of those to whom the General Assembly of the Church of Scotland entrusted its Latin correspondence with the continental churches. Another of Dr. Williamson's former colleagues was Dr. George, who was Professor of Logic and Philosophy. He was no ordinary man. Both his lectures and his conversation were distinguished by original thought and poetic genius.

In comparing the early with the present condition of Queen's University, we cannot fail to remark the great progress it has made. Every year a step in advance is taken. This year a new faculty, that of Practical Science, has gone into operation. When we reflect how in the past Queen's has expanded its branches and struck deeply its roots amid clouds sunshine and storm, we see the best reason for believing that it gives presage of a loftier and more vigorous maturity in years to come.—*Canada Presbyterian*.

PROFESSIONAL TRAINING OF TEACHERS.

F. B. SINCLAIR, M.A., NORMAL SCHOOL, OTTAWA.

THE creation and preservation of any school for the training of teachers must always rest upon a practical belief in the importance of and pedagogical necessity for training. The advocates of such schools stoutly affirm that there is a science of education, that its principles can and should be discovered and applied by every teacher, and further, that the educational interests of a country are so important that it is a duty of the

State to see to it that those who undertake the education of her children should have laid a preparation broad and deep in professional training.

All do not agree with this view, and notwithstanding all that has been said and written on the subject, the problem of *professional training* is still, in my opinion, "facile princeps," the most important educational question of the hour. Upon its proper solution the educational destiny of a

country must depend. The question will not be downed, and, although the number of those who affirm the principle is constantly increasing, its advocates must be prepared on all occasions to give reasons for the faith that is within them. The principle, broadly stated, is this:—Every teacher, from the Kindergarten Assistant to the College President, no matter how ignorant or how scholarly, successful or unsuccessful, can become a better teacher than he or she now is by a more extended study, investigation and application of the fundamental principles of education.

The issue is definite, and the line of cleavage clearly established between those who agree with this statement and those who differ from it.

If the statement be entirely false, every teachers' training school should be abolished and all books on education burned. The idea of teaching ever becoming a profession should be at once abandoned. All educational journals, teachers' associations and other institutions, which have for their main object the raising of the teaching standard of the country, should cease to be. All safe-guards to the teaching profession should be at once and forever removed, and everyone who possesses the minimum quantum of knowledge for instruction and who wants to make a little money at teaching school should at once be let loose upon a class, provided no one else can be found to do the work at a lower price. I think you will agree with me that it would be difficult to devise a scheme which would more quickly and efficiently stop the clock of progress. And yet there are many, and among them not a few teachers, who have never deemed the question worthy of a single hour's serious consideration. This is in a measure, perhaps, due to the peculiar light in which the statement has at times been presented. The cause of

professional training has suffered not a little from the bluster and braggadocio of would-be friends with scant knowledge and no experience, who, having crammed up a few professional books, have succeeded in passing an examination where all the candidates, owing to a charity (falsely so-called) were allowed to receive certificates to teach. A student may easily take such a course without assimilating anything of real value, and without receiving that culture which always brings with it the grace of humility. Such an one is sometimes heard complaining that scholarship and experience count for nothing, and loudly demanding that any who do not possess a sheepskin similar to his should at once be compelled to step down and out, in order to give him place. It is scarcely to be wondered at that men of profound scholarship, liberal culture, and successful experience should turn away from such exhibitions with disgust, feeling that even the word "pedagogy" has been disgraced.

There is, however, another and perhaps more general reason why with some the subject receives but little attention.

To admit the necessity for study is to admit our own ignorance, and that in itself requires self-denial. Then, too, improvement always costs effort. Most people find it easier to rest or sleep than to go to a teachers' convention, and when they do go they find that it requires less effort to sit still and criticise than to take part. It is easier to read a novel than a book on education, and besides, books on education and educational journals cost more money. It is easier and vastly more pleasant to most people to forget all about school except when inside the school-room door than it is to prepare lessons carefully and spend time and money and effort in improving themselves. It is easier and

cheaper, too, to teach on an extended third-class certificate than to get a second, and then attend a Normal School, and easier still to rest with only a permit than to do either.

In short, if the plan will only work, the better way, from a purely selfish standpoint, is simply to ignore the question and treat it with silent contempt.

The success or failure of such a course will depend entirely upon the answer which *public sentiment* gives to the question at issue.

When in Europe I remember seeing the harvesting of two fields of grain side by side. In the one a man with a self-binder was cutting at the rate of twelve acres per day. In the other a motley group of men and women were laboriously working away with the old-fashioned hand sickles, and unitedly making less progress than the one man with the binder. The difference between the best-known modern methods of teaching and those applied in schools which still linger in the dark shades of pure empiricisms is quite as great as that between the sickle and the binder.

If the statement which I ask you to consider is entirely true it follows that the teacher who does not endeavor to advance along the lines indicated must fail to secure the best possible results, and, in the opinion of many of those who believe the statement, it will be held that in the maladministration of so high a trust he has been guilty of negligence almost criminal.

Not long since I heard a parent remark that he considered it so important that his child should be trained by the very best methods, that if he had the power he would never place him under the charge of a teacher who was not willing to answer the following questions in the affirmative under oath: 1st. Have you made a thorough study of the science and

art of education? 2nd. Do you attend constantly to endeavor to improve your methods of teaching? 3rd. Will you promise during each year to read at least one professional work on education and one educational journal? He held that if such a test were employed in the appointment to all positions in schools and colleges there would result an educational house-cleaning which would do away with a large amount of dust and cobwebs.

There is abundant evidence to prove that the breezes of public opinion are setting uniformly and steadily and with increasing force in the direction of thorough professional training. Germany, which may be said to have led the world in this department, and which has had higher pedagogical seminaries for more than a century, has recently materially increased such training all along the line. Professor Rein, the head of the Department of Education in Jena University, Germany, boldly declares, "Instruction is of worth only as it educates, and the teacher is the school, hence the great need for all-sided professional training." In 1881 France concluded to take a leaf out of the German book, and by improved education to atone for disaster on the battle-field. One of the four important laws passed at that time was that "No teacher, male or female, shall be allowed to teach in a public or private school who has not passed the State Examination." It is a matter of history that the educational advancement of France since then has been phenomenal, until to-day she stands in the very forefront among the literary nations of the world.

Scientific Pedagogy has recently been introduced into the Normal Schools of Italy. England has appointed a Royal Commission of Educational Enquiry "to devise ways and means of educational reform."

Looking nearer home we find that in the United States in 1891 there were 131 schools for the training of teachers, all wholly or partially supported by public funds, and their number is constantly increasing. Perhaps the most noteworthy feature of the question is that a new pedagogical regime is being instituted in the universities. It has been urged that the universities should originate the material for culture and the lower schools should be canals for its distribution. In consonance with such a theory, and with the realization of the great importance of the question to which I have called your attention, the best universities in the land are endowing chairs of pedagogy and establishing laboratories for educational research. Harvard, Cambridge, Leland Stanford, Columbia, Indiana, New York, and other Universities have done this during the past few years, and now, in addition to the schools of pedagogy, our own Provincial University at Toronto is establishing an undergraduate and postgraduate course in education, leading up to a doctor's degree.

Everywhere we find college men participating very heartily in educational association work and in summer schools. The University and High School Department of the Ontario Educational Association meeting in Toronto last Easter was in attendance and interest far in advance of any previous meeting held in this province. Many of the best educational addresses at the recent N.E.A. convention at Asbury Park were delivered by college men, and it is not an uncommon thing to hear a University President discussing Primary School methods.

Clark University, which does only post graduate work, has education as a sub-department of its course. Under the leadership of the gifted president, Dr. Stanley Hall, child-

study is becoming a household word in American educational circles, and a department has been formed in connection with the N. E. A. Association, and in open convention a unanimous resolution passed, which says, "We entertain the hope that the psychology founded on child-study, which has been brought so prominently before the meetings of this Association, will in time prove an inspiration and a guide in the work of educational reform."

As an example of this kind of study let me call your attention to a little pamphlet just published, entitled "Education by Plays and Games." The author has made a careful study extending over a number of years and involving much scientific observation and research. He describes and in a measure classifies more than four hundred different games, pointing out the merits and demerits of each. He gives a suggestive analysis of the subject, and points out many interesting and valuable facts. He says:—"Children are imitative rather than inventive in their games. Nearly every noble game of to-day has been played in some form for centuries. In Grasberger's collection of old games one sees the antiquity of many of the familiar plays of our childhood."

Apart from the efforts of Kindergartners little has been done in this country towards the improvement of old or the invention of new games for children, except the many efforts in the highly colored dice boards and "pig in the sty" puzzles for commercial interests. Children to-day are playing the games that children played centuries ago, and games that have deteriorated rather than improved."

I leave it to you to determine the value of such work (when properly conducted) first to the teacher and second to the science of education.

My object in all that I have said is simply to endeavor to impress upon

you the necessity, at the very outset, for each, after thorough investigation, to decide for himself whether there can be a science of education; whether a knowledge of it will make him a better teacher, and whether such an advance is worthy of the highest endeavor?

I do not believe that any student can get the best for himself out of the work here or elsewhere, unless he is thoroughly persuaded in his heart of hearts that it is possible for him by training to become a better teacher than he now is, and that in thus in-

creasing his power he is engaged in the highest and holiest of duties to himself and to his country. Faith in this great fundamental principle is an absolute condition and pre-requisite of any regenerating influence for the teacher. Unless I have such faith or am willing to receive it, no Normal School can bring me any message. Without it I have nothing in myself to respond to any appeal to better things, and, what is infinitely worse, I have nothing within myself to inspire to that self-activity without which there can be no real progress.

DEPARTMENTAL TEACHING.

BY DR. W. A. MOWRY.

AMONG the multitude of new movements now being tried everywhere is the plan of "Departmental Teaching." It is surprising how many new things, new studies, new methods, "shortening and enriching," devices, helps, aids,—all sorts of new fangled notions are recommended by committees of ten, "captains of hundreds," and editor's galore.

All this is helpful and hopeful. Good will certainly grow out of it. The truth shall triumph and

"The truth shall make you free."

But the great danger is that too many experiments will be tried, and when they have failed the "last state is worse than the first." The true position is that, before putting into practice in the schools any new scheme, the subject should be thoroughly examined and all the conditions considered, so that it shall cease to be an experiment and will surely succeed.

It were well if all would constantly bear in mind that adult teaching should be scientific, but that elemen-

tary teaching should generally be more or less unscientific. It should never be unphilosophical, but always in accordance with all known laws of the mind. *Juvenes* and adults reason, analyze, and learn, naturally and readily, laws and relations. Children, on the other hand, pick up knowledge here and there, reaching out in every direction from that which has already become known to that which is as yet unknown. It is more difficult for them to classify and analyze. That period has not yet come. Why force it. *Science* is classified knowledge, considered in its relations, the one to the other, with special regard to cause and effect.

All knowledge is one. Col. Parker is right in his doctrine of "Concentration," when he says that all nature, all the sciences, all sources of knowledge, all education, all means, all ends, all material, are "focused" upon the recipient mind of the child.

All elementary knowledge should be conveyed to the child, or originated in his mind, by philosophical methods, but in the main, the child gains knowledge piecemeal, from the step by

step process, and waits to classify it at some future time. It comes not to him as *science*. A great truth is bound up in the saying that "we should teach—not arithmetic, or geography, or reading, but—we should teach *the child*". The true correlation of studies in elementary education means vastly more than in secondary or higher education. It is not expected that we can dispense with the reading lesson, the spelling lesson, the drawing hour or the science talk—each will have its place, but truly, the drawing must not be confined to *its* period, or the number work to the bare space of its allotted hour. So of all the rest. They are correlated, and the one dove-tails into and helps the other.

It may be, doubtless is, that in the eighth and ninth grades of large schools, the arithmetic in several rooms, may better be taught by one teacher and the geography or history by another, but in the lower grades, especially in the primary schools, the moral power of the one teacher and guide and friend is more mighty and of more force and strength and value, than all the "Departmental Instruction" in Christendom. Every great teacher has been remembered more by his personality than by the particular way in which he taught geography, mathematics, or Latin and Greek. It was Dr. Arnold's character that made his administration at Rugby famous. It is the personality, the kind word, the daily care and love for her children that will ever prove the most important and the most valuable work of the successful primary school teacher. Three teachers specially moulded my life in my boyhood—one when I was six, one when I was thirteen, and the third when I was sixteen or over—yet I can hardly remember any details of how or what they taught. I do, however, most distinctly remember their personal influence over me. The first two

were women, the third a man. The particular thing that I recall about him is that he made a kite and used to fly it with the boys, and one noon-time when the strong wind broke the string and left the kite half a mile or more from the schoolhouse he sent me after it, and did not make me late, because I had not been late that term and I was then on school duties.

It is without doubt true that by departmental teaching the several studies will be taught more scientifically than if the entire curriculum is taught by the one teacher of the room. The question then recurs whether the gain is commensurate with the loss of personal power and general development. Nor should it be forgotten that certain evils will inevitably ensue. One of these is that there can be in the nature of the case no proper adjustment of the relative amount of time and work given to each individual study. The teacher of geography will be likely to require more time for that study than the pupil can properly give to it, and the same with regard to the teacher of number work, or language work, or drawing or any other specialty. With one teacher for a room, she knows what is required in each study and can adjust the lessons to proper length.

The great difficulty in the graded system of city schools is *machine work*, dead routine, cog-wheels and spindles run at a fixed and uniform speed. A railroad locomotive and a train of cars may be wrecked and the result is only loss of so many dollars worth of property. If, however, a single life is put out, how can the loss be estimated. The soul is of more value than a machine. The school is valuable only for its influence upon individual minds, not for its skilful presentation of facts to large classes. Not classes, but individuals should be the motto of every superior teacher.—*Primary Education.*

NOTES FOR TEACHERS.

FRANCES MARY BUSS.—She began to teach when a mere girl; and was only twenty-one when, in conjunction with her mother, she started, with six pupils, the school to which thousands now are proud to owe allegiance. Few of the visitors to the North London Collegiate School are aware of its small beginnings, nor of the especial sense in which she was its founder as well as its headmistress.

Of late years her time has been absorbed in details of superintendence, but some of us can remember vividly her power and skill as a teacher. Her history lessons especially stand out in remembrance; her strong personality pervaded them, and to this day one hears her old pupils recall these lessons and quote striking phrases which she had used, and which linger in their memories still.

With success and honour came fresh opportunities for usefulness; and thanks to her marvellous gift of getting through twice as much work as other people, she found time to give the benefit of her sanction or experience to the various schemes for the benefit of women and girls about which she was daily consulted.

I cannot help commenting on two marked characteristics—which perhaps could only be known to those in daily contact with her. One was that jealousy and selfishness were impossible to her nature, and her power of living in the lives of others. The success or distinction of friend or colleague was one of her greatest pleasures. No one could share such pleasures as Miss Buss did, and the loss of her ever ready sympathy in joy or sorrow is one of the realities that we cannot face yet.

The other was her intense love of

little children; no matter who they were—her own great-nephews, the little ones in the kindergarten, or her “grand children,” as she loved to call the children of her old pupils. She always had some treasured story to relate of them. “Would not that make a pretty incident in a book?” she would say. And how little children loved her we had varied opportunities of judging, even if we only followed her into the kindergarten.

The best evidence of her work for the world is that it will go on, even though her active brain and busy hand are still. She has left as a legacy to those whom she helped and for whom she worked the strong desire to work as she did for others, not narrowed by any one sphere of labour, but sharing in and forwarding the multifarious interests of the lives of women of the present day. But it is *herself* that we shall miss; the strong, affectionate personality in whom the true life of the school was centred; the friend even more than the Headmistress. Strangers will find it difficult to understand the deep personal grief of her staff; but others will know that however imperfectly expressed here, words cannot readily be found in these early days of loss, and therefore they will forgive the element of personal grief. The relations between us were not merely those customary between headmistress and colleagues. We were proud of her; we revered her; and we loved her; and the old year has taken something out of our lives which cannot be replaced—the stimulus and help of the daily life of her whose work is now crowned with the “Well done, good and faithful servant” of the Master for Whose sake it was all done.—*Grace Toplis, in Educational Review.*

PUBLIC OPINION.

CAN PHYSIOLOGY BE TAUGHT IN SCHOOLS?—No doubt if we could give every child a sufficient knowledge of his physiology to save him from the snares of the patent medicine vendor and from various other dangers, it would be well; only *can we*? The fundamental problems of this science can scarcely be approached in a scientific spirit until we have a sound and rather broad foundation of physics and chemistry. For instance, how can we explain digestion until the action of a ferment, or starch, the difference between crystalloids and colloids is understood? How can we even explain the necessity for digestion? Then, again, to understand muscular action, it is absolutely necessary that we should understand the relationship of chemical change to energy. . . . The large amount of physiological teaching done in our schools, I fear, is done in vain. We can, of course, give a child certain ideas about its internal geography, replace the mystery of its interior by a blue stomach, and a red heart and pink lungs, but I do not see the value of this even as knowledge. We can load his memory with empty gabble about flesh-forming foods, heat-forming foods, corpuscles, and phagocytes, but such lessons are mere exercises in credulity, and, so far from saving a child from quacks, give him just the conceit of knowledge that makes him an easy victim to a plausible fallacy.—*H. A. Wells in the Educational Times.*

THE COMING SCHOOL BOARD IN AMERICA.—It is becoming plainer that no essential progress can be made without School Boards capable of comprehending the points to be made. There are School Boards that

are a stench in the nostrils of the community. Let the author of the "Evolution of Dodd" give his mind to the evolution of the School Board. What might not be said, and what secrets unfolded! Every teacher "could a tale unfold" if he would! But he dares not do it yet.

The School Board is selected by popular vote, usually; the member intends to make popularity out of it if possible. In the country this is done by screwing the teacher down in wages. In the city he magnifies his office so as to get into a higher one. It is a very common thing to hear a man recommended for alderman on the ground that he served for nothing six years on a School Board.

The worst kind of members are those who put in teachers not known to be worthy (to put it negatively) for political purposes. The case of Utica is one in point. There were buildings, and desks and books and teachers; and this went on for years. Finally, a man was elected who proposed that the object aimed at should be the best kind of teaching; he stood up and declared, "Our schools have become hiding-places for weak people." The meeting closed, but certain members knew that the judgment day had arrived; they sought the superintendent and said: "The devil has broken loose."

Teachers know that most schools contain one or more persons of the most moderate ability, to put it gently, kept there simply to please some political power. The great field for the coming School Board will be the clearing out of these. But who shall select the coming School Board? Votes cannot do it.—*School Journal, New York.*

GEOGRAPHY.

MOTION OF THE EARTH'S POLE.—

One of the most interesting questions in celestial mechanics was discussed at the recent meeting of the National Academy of Sciences at New Haven. It was the subject of a paper by Dr. S. C. Chandler, on the motion of the pole, which has been a special matter of investigation by the professor for several years. The observation thus far made, it is claimed, prove a latitude variation of 60 feet; that is, each parallel, instead of marking a fixed line on the earth's surface, indicates a line which shifts to this extent. From Lake of the Woods to Vancouver Island the forty-ninth parallel has been established as the boundary line between the United States and British America for a distance of more than 1,200 miles. Similarly the north line of New York, Vermont and part of New Hampshire is the forty-fifth parallel for more than 250 miles. The shifting of these two boundary lines, consequently, brings alternately under the jurisdiction of the United States and Canada two strips of land 50 feet wide and 1,200 and 250 miles in length. Together they contain 11,000 acres, or enough land for one hundred good sized farms. This land was all on the Canadian side in April and May, 1890, and in May, 1891, and all on the United States side in November, 1890, and again in December, 1891.

The relative positions of the earth's pole of figure and pole of rotation, it appears, have been changing with respect to each other continually, and the course has, since 1890, been in an entwined oval spiral. This Dr. Chandler has platted, and has constructed a system of epicycles which he believes the two poles maintain with respect to each other. To put the algebraic expression in words is to

say that there are two terms, one of which is an annual term, and is an elongated ellipse with a major axis of three-tenths of a second and a minor axis of eight hundredths of a second, and the other term is a circle with a period of 428 days. These two motions superimposed give a curve of which Dr. Chandler has made a diagram. The first three or four turns of the curve closely accord with the observations. In fact, as Dr. Chandler puts it, "theory gives latitude variations with greater accuracy than they can be determined by any individual series of observations." The curve has been continued according to the mathematic formula to the middle of 1895. This movement of the pole is not to be confounded with the movements of precession and rotation which have long been known and carefully studied.

What is meant by the North Pole needs a little definition, for there are three north poles to the earth. One of these is the magnetic pole, where the compass needle points directly down. This was discovered and sailed over in 1831, and is situated in latitude 70, north of Hudson's Bay. Another is the geodetic pole, or pole of figure. On account of the flattening of the earth at the two frigid zones there are two points, one in each, which mark the ends of the shortest diameter of the globe, and these are the geodetic poles at the two ends of the axis of figure. The third is the astronomical pole, or pole of rotation. It has until recently been supposed to coincide with the pole of figure; but now it is known to be shifting, and the facts which Dr. Chandler has accumulated on this point afford about all the data of which we are thus far possessed.—*Scientific American.*

FROST AT MIDNIGHT.

BY SAMUEL T. COLERIDGE.

The frost performs its secret ministry,
 Unhelped by any wind. The owl's
 cry
 Came loud—and hark, again ! loud as
 before,
 The inmates of my cottage, all at rest,
 Have left me to that solitude, which
 suits
 Abstruser musings : save that at my
 side
 My cradled infant slumbers peacefully.
 'Tis calm indeed ! so calm, that it dis-
 turbs
 And vexes meditation with its strange
 And extreme silentness. Sea, hill,
 and wood,
 This populous village ! Sea, and hill
 and wood,
 With all the numberless goings on of
 life
 Inaudible as dreams ! the thin blue
 flame
 Lies on my low burnt fire, and quivers
 not :
 Only that film, which fluttered on the
 grate,
 Still flutters there, the sole unquiet
 thing.
 Methinks, its motion in this hush of
 nature
 Gives it dim sympathies with me who
 live,
 Making it a companionable form,
 To which the living spirit in our frame
 That loves not to behold a lifeless
 thing,
 Transfuses its own pleasures, its own
 will.
 Dear babe, that sleepest cradled by
 my side,
 Whose gentle breathings, heard in this
 deep calm,
 Fill up the interspersed vacancies
 Aud momentary pauses of the thought,
 My babe so beautiful ! it thrills my
 heart

With tender gladness, thus to look at
 thee,
 And think that thou shalt learn far
 other lore
 And in far other scenes ! For I was
 reared
 In the great city, pent 'mid cloisters
 dim,
 And saw nought lovely but the sky
 and stars.
 But thou, my babe ! shalt wander like
 a breeze
 By lakes and sandy shores, beneath
 the crags
 Of ancient mountain, and beneath
 the clouds,
 Which image in their bulk both lakes
 and shores
 And mountain crags : so shalt thou
 see and hear
 The lovely shapes and sounds intel-
 ligible
 Of that eternal language, which thy
 God
 Utters, who from eternity doth teach
 Himself in all, and all things in himself.
 Great universal Teacher ! he shall
 mold
 Thy spirit, and by giving make it ask.
 Therefore all seasons shall be sweet
 to thee,
 Whether the summer clothe the
 general earth
 With greenness, or the redbreast sit
 and sing
 Betwixt the tufts of snow on the bare
 branch
 Of mossy apple-tree, while the nigh
 thatch
 Smokes in the sun-thaw ; whether the
 eve-drops fall
 Heard only in the trances of blast,
 Or if the secret ministry of the frost
 Shall hang them up in silent icicles,
 Quietly shining to the quiet moon.

EDITORIAL NOTES.

QUEEN'S UNIVERSITY.

The following circular, which was sent us by the Registrar of Queen's University, since our last issue with request for publication, gives the view which the Senate of that University takes of the expedient of dividing the matriculation examination into *two* parts. We gave lately our opinion of the tending of the plan on our schools, and the action of pupils at our schools since, and the opinion of masters corroborate the view we took.

Ill prepared and immature candidates fancy that they are specially provided for, while those who require three trials on an average to pass the whole of the examinations rejoice at the clear evidence this plan affords of the humanity and wisdom of the framers of it.

"Your Committee recommends the adoption of the scheme of Matriculation proposed by the University of Toronto, and expresses pleasure at the step which has been taken in the direction of raising the standard for Matriculation by increasing the percentage of marks for passing from 25 to 33 per cent upon each subject. But while sympathising with this desire to raise the standard, your Committee regrets to see that the Scheme tends to increase the quantity of work required for admission rather than to improve its quality.

"Your Committee is of opinion that it would be advisable to set papers of a more elementary character than has been the practice in the past, and to exact 40 or 50 per cent as the standard for pass. This, we believe, would compel pupils to remain a year longer at the High Schools, and would tend to foster a higher ideal of exact scholarship amongst those seeking admission to the Universities."

MISS BUSS.

A great woman, and a great educator, died in London last Christmas Eve. Miss Frances M. Buss, the Headmistress of the North London Collegiate School for Girls, has, like her friend and fellow-worker, Miss Clough, passed over to the majority. Miss Emily Davies, who was one of the founders of Girton, and Miss Beale, of the Ladies' College, Cheltenham, are now the only two remaining, of the four leaders of the great movement which began in England, thirty years ago, for the higher education of women.

We have referred elsewhere to the character and work of Miss Buss, but we cannot refrain from speaking here of her great influence and noble life. A teacher and Principal for nearly fifty years, she was always the lover, friend and counsellor of her pupils, and her staff of teachers. She has left behind her the noblest of all monuments, younger lives in which her own life will be lived over again.

A memorial service of the simplest yet most impressive character, was held on the last day of the year, at Holy Trinity Church, London, which was crowded in every part. The choir of the North London Collegiate School rendered the musical part of the service.—"Lord now lettest thou thy servant depart in peace," "The Saints of God, their conflicts passed," and "Now the labourer's task is o'er." Canon Browne in his address spoke of the great aims of Miss Buss' life, the wonderful fulfilment of these aims, and the love and honour which had rewarded, in her own life-time, a woman who had developed the power and charm of

woman's intellect and the best of woman's nature.

This service being concluded, the funeral procession took its way by road to the little country churchyard in Essex where the interment was to take place, and, at a later hour, some six hundred mourners, among whom were the pupils, went by special train. The two parties met at foot of the cemetery hill, and the officiating clergy approaching to meet them, the procession was formed to the grave, the choir of girls preceding the hearse, and singing as they went up the hill "How bright these glorious spirits shine."

Canon Browne, who delivered the concluding address at the grave, referred to the remarkable simplicity and strength of Miss Buss' character, and her great power of assimilating new ideas. Her name, he said, would live, and the women not only of this country but of every other, owed her a debt of gratitude for the noble work she had accomplished. He touched upon her deep religious character and said it was a great blessing to anyone, to see as she had, her life's work crowned with success ere she departed.

The following statement we take from the *Evangelical Churchman* of this city. The statistics are striking and very gratifying. No small controversy has arisen over them. The dispute is what has caused such a change? Some say, it is simply the effect of the information given in the schools, and that morals and religion have had no part in producing the satisfactory result; others affirm that the chief factor which produces the result is the moral and religious influence in the schools. And for confirmation they confidently appeal to the statistics of countries, notably to France, where this factor was carefully eliminated. The statistics sustain the appeal. It seems to us late

in the day to raise such a controversy. Every one, even of limited experience, knows, that a man may, in the ordinary sense of the term be a good scholar, but a very poor and weak member of society, nay, even a disgrace to society. The facts of daily life, of human history, prove conclusively that, in order to have strong helpful men and women, we must have in our education the ethical and religious element. Should a man, without these, be called educated?

"The progress of education involves the decrease of crime. This will eminently be so if the education is not wholly secular, but has a moral and religious basis. The primary education of England largely has this all-important basis, and the annual report of the Education Department and the Prisoners' Commissioners of Great Britain shows that education has brought about a satisfactory decrease in criminal statistics.

"In the twenty years from 1870, when the Education Act was passed, the school population has increased from 1,693,000 to 4,804,000, or from one in every thirteen of the population to one in five. The criminal record for the same year is as follows: In 1870 the names of 1 in 280 were on the police books as known or suspected thieves, a total of 81,000, while in 1890 there were 1 in 513, or a total of 52,000. In the former year there were 12,000 schools and 113 prisons, whereas in the latter year there were 29,000 schools and only 59 prisons. In 1871 the average daily number of prisoners in gaols was 30,100, but in 1890 it had fallen to 19,600; during that period the population had increased 12½ per cent., but the criminals had decreased 35 per cent.

"The number of persons committed to prison under the age of sixteen were in 1870 no less than 8,900, but

in 1890 it was 3,800. The average annual cost of a child's education in the British elementary schools in 1890 was £2 os. 6d. To maintain a prisoner for a year in gaol it cost £24 3s. 11d., and to maintain a convict £39 16s. 3d. In 1870 the state spent £941,878 for prosecuting and maintaining prisoners, exclusive of police; but in 1890 the expenditure was only £552,945. Between 1882 and 1890 eight convict prisons, containing accommodation for upwards of 6,000 persons, have been assigned to other purposes.

"In London itself one prison has given place to a block of workingmen's dwellings, another has been pulled down to form a playground for children, another—the famous Millbank—will find a worthy successor in an art gallery, and on the site of Clerkenwell House of Detention one of the finest of the London board schools now stands.

"This progress is a subject for heart-

felt thanksgiving to God, and an encouragement to continue in similar educational efforts. The low average of crime in Canada is, under God, to be ascribed, among other things, to our excellent educational system. But parents must remember that intellectual training alone will not cause their children to grow up to be good citizens. Moral and religious training must be given in conjunction therewith, and for the giving of this they are primarily responsible. They cannot shift this responsibility to the day-school teachers, the Sunday-school teachers, or the clergy. These can all help. But in Canada at least, where home is the normal kind of life, the home must be the first and chief religious training school."

Those who are quite satisfied, sit still and do nothing; those who are not quite satisfied, are the sole benefactors of the world.—*W. S. Landor.*

SCHOOL WORK.

SCIENCE DEPARTMENT.

EDITOR, J. B. TURNER, B.A., COLLEGIATE INSTITUTE, HAMILTON.

I

SYSTEMATIC SCIENCE TEACHING.

Since preparing the article on "Science in the Public Schools" which appeared in the last number of the MONTHLY, the writer has had the opportunity of examining a book called "Systematic Science Teaching" which is calculated to give valuable assistance in the direction of our former article. The author of the book is Mr. Edward Gardiner Howe, and it is one of the International Education

Series, edited by Dr. Wm. T. Harris, published by Appletons.

The book contains a preface by the editor and also one by the author, both of which will repay careful reading. The editor in his preface points out some of the advantages to be derived from the study of Science, both on account of the value of such knowledge in after life and the value of such study as a mental training. It would appear almost unnecessary to say anything about the former of these—a subject which has been so fully and convincingly treated by numerous writers, notably Herbert Spencer and Huxley—but there are always some who still require to be convinced and for their benefit many of the good

things that can be said on this point are well and shortly put by the editor.

On the second point—the value of Science training as a mental discipline—this preface contains some useful suggestions the value of which can only be appreciated when taken as a whole. Consequently it will be better to leave this part to be read in its entirety by those who are really desirous of informing themselves in this matter. The examples which are given in it of the value of a Science training are so much to the point that the wonder is that this subject has taken so long to secure a place in the programme of studies of our schools.

The author's preface contains a statement of the more direct advantages that are derived from Science study and closes with some valuable hints to school authorities with regard to their responsibility in connection with this branch of school work.

To attempt to give a full review of the work would require too great an amount of space for this issue so that we shall content ourselves with saying just a few words with regard to the plan of the book, reserving for some future occasion any criticisms of the value of the plan and the way in which it is carried out in its details.

The book is intended to constitute a complete course in Science, extending over the whole period of the pupil's school life, covering as it does a period of nine years. The work for each year is called a grade and each grade is divided into steps, each one of which deals with some particular branch of Science, the first step, for instance, being composed of some very elementary work in the subject of Botany. This is continued throughout the nine grades so that by the time a student has gone through all these grades he has been familiarized to some extent with every department of Science. Whether we agree with the

author's plan or not we must admit that he has made an earnest attempt to give a systematic course in a department which has been too long allowed to take its chances in the conflict of studies, and we would recommend it to the attention of those who select the books on methods for our Model and Normal Schools and the School of Pedagogy.

II

CHEMISTRY.

The following are review questions on the first eight chapters in the High School chemistry.

1. Give three examples each of physical and chemical changes, and state clearly why each one is considered as belonging to the class to which you assign it.

2. What forms and conditions of matter are favorable to the action of chemical affinity? Describe experiments in support of your statements.

3. Define a chemical compound and distinguish clearly between it and a mechanical mixture.

4. (a) Describe experiments to show the part that is taken by air in the burning of a substance. (b) Why is combustion more vigorous in pure oxygen than in air.

5. By what experiments would you demonstrate the indestructibility of matter.

6. Describe three methods of preparing oxygen from its compounds and also explain how it may be obtained in a *free* condition from the air.

7. Define an oxide. Arrange the oxides in three classes giving reasons for such an arrangement.

8. Describe an experiment by which a large quantity of nitrogen can be extracted from the air. Draw the necessary apparatus and state clearly the use of each part.

9. How can the experiment asked for in question eight be modified so as to obtain the composition of the air by (1) volume (2) weight?

10. What substances besides nitrogen and oxygen are present in the air? Describe experiments by which you would demonstrate the presence of each of these substances.

11. Describe an endiometric method of analyzing the air by volume.

12. If the proportions by volume of oxygen and nitrogen in the air are oxygen 20.92% nitrogen 79.08%, calculate the percentage by weight of these in the air.

13. Describe experiments by which the composition of water can be determined both analytically and synthetically.

14. Hydrogen is a good reducing agent. Explain the meaning of this statement and describe an experiment to prove it. How can the experiment be used to determine the composition by weight of water.

15. If two volumes of hydrogen unite with one volume of oxygen to form water, and eight grains of oxygen unite with one grain of hydrogen to form water, what are the relative weights of oxygen and hydrogen?

QUESTIONS ON CÆSAR.

BOOK V. CHAPTERS 17-21.

By H. I. STRANG, B.A.

I. Translate chapter 19 into good idiomatic English.

NOTE.—Divide the first Latin sentence into at least three English ones, ending the first two at *relictis* and *compellebat*, and supplying suitable connective words or phrases.

1. Parse *quibus liberius*, *semitis*, *quantum*.

2. Construction of *millibus*, *locis metu*.

3. *Ut demonstravimus*. When is *ut* followed by the indicative?

4. Derive *contentionis*, *silvestribus semitis*, *agmine*.

5. Give the corresponding singular forms of *locis silvestribus iis regionibus*, *nostrorum equitum*.

6. Give the third singular future indicative of *deposita*, *relictis*, *cognoverat*, *pateretur*, *noceretur*, *poterant*.

7. Give two English derivatives from each of the following: *Ager*, *magnus*, *vagor*, *efficio*, *noceo*, *patior*.

II. Translate idiomatically.

(a) *Sed eo impetu milites ierunt, cum, capite solo ex aqua exstarent ut hostes ripas dimitterent.*

(b) *Equites subsidio confisi cum post se legiones viderent praecipites hostes egerunt, neque sui colligendi facultatem dederunt.*

(c) *Petunt ut Mandubracium in civitatem mittat qui praesit imperium que obtineat.*

1. Classify the subjunctives in these three passages.

2. Point out and explain the peculiarity in *sui colligendi*.

3. *Confisi*. What are such verbs called? Name and conjugate any others you know of.

4. Account for the difference in the inflection of *princeps* and *praiceps*. Give the genitive of *biceps*, *particeps*, *municeps*, *anceps*.

5. Conjugate the compounds of *ago* with *cum* and *re*, and of *do* with *circum* and *trans*.

6. *Petunt*, *ierunt*. Give the third plural of the other tenses of the indicative mood of these verbs.

III Render into idiomatic Latin.

1. On his return to the continent Cæsar was informed by the lieutenant

that the young man whom Cæsar before setting out for Britain had sent into that state to rule over it, had been seized and put to death by the chiefs.

2. We learned from him that these chiefs abandoning all hope of resisting the Roman army had sent ambassadors to Cæsar to beg for peace and to promise to give hostages and do whatever he ordered.

3. Learning from deserters that the river could be crossed by fording a few miles from that place he sent the quæstor with two cohorts and all the cavalry to cross by night and fall upon the rear of the Britons before they could learn what had taken place.

ENGLISH GRAMMAR.

EXERCISES AND NOTES.

For Primary and Junior Leaving Classes.

" This life, which seems so fair,
Is *like* a bubble blown up in the air
By sporting children's breath,
Who chase it everywhere
And strive who can most *motion* it
bequeath.
And though it sometimes seems of its
own might,
Like to an eye of gold to be fixed
there,
And *firm* to have in that empty height,
That only is because it is so light.
But in that pomp it doth not *long*
appear ;
For when 'tis most admired, in a
thought,
Because it last was nought, it turns to
nought."

Drummond.

1. Classify the italicised words and give their relation.

2. Write out in full the clauses to which *strive*, *bequeath*, and *turns* respectively belong, and give the kind and relation of each.

3. Account for the form of *seem*.

4. Classify the following phrases and give the relation of each: "of its own might," "to be fixed there," "in a thought."

5. Comment on any peculiarity in the use of *bequeath*, *firm*, *to hover*, *only*.

6. Point out an example each of predicate nominative, indirect object, verb of incomplete predication, strong verb.

9. Distinguish the restrictive, descriptive and co-ordinating use of relative clauses, and say to which class the relative clauses in the 1st. and 4th. lines belong.

Additional Passages for Primary and Junior Leaving.

(a) "Some succor yet they could afford :

And such as storms allow,
The cask, the coop, the
floated cord,

Delayed not to bestow.

But he (they knew) nor ship
nor shore,

Whate'er they gave, would
ever visit more.

Nor, cruel as it seemed,
could he

'Their haste himself condemn,
Aware that flight, in such a

sea,

Alone could rescue them ;

Yet better felt it still to die
Deserted, and his friends so
nigh."

Cowper "The Castaway."

(b) "Firmly as he believed that a time of trial was inevitable, he believed no less firmly that it might be passed at public schools sooner than under other circumstances, and in proportion as he disliked the assumption of a false manliness in boys, was his desire to cultivate in them true manliness, as the only step to

something higher, and to dwell on earnest principle and moral thoughtfulness, as the great and distinguishing mark between good and evil. Hence his wish that as much as possible should be done by the boys, and nothing for them; hence arose his practice of treating them as gentlemen and reasonable beings, of making them respect themselves by the mere respect he showed them.

H. S. Reader, p. 352.

For Public School Leaving

“Star that bringest *home* the bee,
And sett'st the weary laborer free!
If any star shed peace, 'tis Thou
That send'st it from *above*,
Appearing when Heaven's breath
and brow.
Are sweet as *hers* we love.”

Campbell.

1. Write out in full all the clauses that are not fully expressed in the passage; classify each and give its relation.

2. Parse the italicised words.

3. Account for the form of *bringest* and *shed*.

4. Distinguish clearly inflection and derivation, pointing out an example of each.

5. Distinguish between adjectives used attributively and used predicatively, and say with reasons in which class you would place *free*.

Additional Passages for Public School Leaving.

(a) “The more we live, more brief appears

Our life's succeeding stages:
A day to childhood seems a year,
And years like passing ages.
The glad some current of our youth,
Ere passion yet disorders,
Steals lingering like a river smooth

Along its grassy borders.
But as the care-worn cheek grows wan,
And sorrows shafts fly thicker,
Ye stars that measure life to man,
Why seem your courses quicker?

Campbell.

(b) “In times when the whole habitable earth is in a state of change and fluctuation, when deserts are starting up with civilized empires around you, and when men, no longer slaves to the prejudices of particular countries, much less to the abuses of particular governments, enlist themselves, like the citizens of an enlightened world, into whatever communities their civil liberties may be best protected in, it can never be for the advantage of this country to prove that the strict unextended letter of her laws is no security to its inhabitants.”

Erskine.

EXAMINATION PAPERS IN LITERATURE.

BY MISS H. CHARLES, B.A., Collegiate Institute, Goderich.

Form II. “The Bard.”

1. Describe the bard.
2. Describe the scene when he appeared.
3. “The Bard” consists of 3 distinct parts. Give in a few words the theme of each part.
4. Quote the lines about Richard II.
5. “Dear lost companions of my *tuneful art*,
Dear, as the light that visits these sad eyes,
Dear, as the ruddy drops that warm my heart,
Ye died amidst *your dying country's cries*

No more I weep. *They do not sleep,*
 On *youder cliffs, a grisly band,*
 I see them sit; *they linger yet,*
 Avengers of *their native land;*
 With me in *dreadful harmony*
 they join,
 And weave with *bloody hands*
 the *tissue of thy line.*"

(a) Write explanatory notes on the italicised expressions.

(b) Scan the last three lines and name the metre.

Form III. "The Holy Grail."

1. (a) What was King Arthur's "Table Round?"

(b) What was the vow its members took?

(c) What effect had it on the world of its time?

2. Describe Lancelot's experience in the quest.

3. Describe the city of Camelot.

4. "And some among you held,
 that if the king
 Had seen the sight he would
 have sworn the vow."

Give the king's answer to that opinion.

5. The king says:

"Blessed are Bors, Lancelot and Percivale."

Why was the experience of these three different from that of the other knights?

Form IV. "Richard II."

1. Give the conversation between Northumberland, Ross, and Willoughby, so as to show the arguments that led them to join Bolingbrooke. Show who takes the leading part in the conversation.

2. Describe the character of the Duchess of Gloster.

3. Quote, or give the substance of, Yark's speech beginning "O, my liege, pardon me if you please," and show plainly York's arguments.

ANSWERS TO CORRESPONDENTS.

"Subscriber" asks the following:

(1) How do you deal in analysis with a direct quotation following a transitive verb? Thus in the case of —He said "I may go," is the whole sentence complex? If so, must "I may go" be taken both as the object of said, and also as a principal clause?

(2) Parse the infinitives in "They saw her depart," and "I forced him to go," (H. S. Grammar p. 348). Has *depart* the value of an adjective modifying *her*?

(3) Are not the infinitives at the bottom of the page mentioned in (2) parsed incorrectly? viz.: "She was seen to depart," etc.

Believing that there is room for more than one opinion in regard to these points, and that we teachers might do more to help one another, I again invite contributions of notes, questions, examination papers, criticisms, suggestions, etc., for this department. For myself the longer I teach English Grammar the less disposed I feel to adhere *rigidly* to methods or forms of analysis and parsing; the more difficult I find it to frame definitions which will suit all cases, and the more ready I am to accept any reasonable explanation of the structure of a sentence, or the function of a word, phrase, or clause.

1. I have been in the habit of regarding a direct quotation, whether following a transitive verb or not, as virtually a distinct sentence, and dealing with it accordingly in analysis. At the same time, accepting the common meaning of *Sentence* and *complex*, I do not see that any objection can fairly be taken to the treatment proposed by "Subscriber."

2. I would parse *depart* as an infinitive having *her* for its subject, and forming part of the object of *saw*. It does not seem to me to have the

value of an adjective modifying *her*. Note the difference in force and function in the use of *open* in "I saw the door *open* (adj.) and the papers lying on the floor," and "I saw the door *open* (infinitive) and two boys come out." Mason, however, says in regard to a similar sentences (Note p. 154): "The verb in the infinitive is attributive with respect to its subject, as we see from the passive construction." I would deal with "to go" in the same way as with "to depart." At the same time I think it may be viewed (as stated in the H. S. Gr.) as having an adverbial force, as in "I forced him *to the wall*," "I forced him *thither*."

3. In the case of the three infinitives at the bottom of the page (H. S. Gr. 348) I must confess that I have never been able to form a decided opinion. I am inclined to follow the text book in classing "to be off" as adverbial, or, if one chooses, "a retained object after a passive verb." The other two, at the risk of being

charged with inconsistency (see answer p. 2), I would class as predicative adjuncts of the subject, or subjective compliments.

The difficulty seems to arise from the freedom with which we change active forms to passive in English, using not merely direct objects, as in Latin, but also indirect objects, and parts of direct ones—thus: "They sent (taught, coaxed, expected, prevailed on, forbade, provoked, induced, ordered, saw, believed, etc.) him to do this," may all take the same form in the passive, "He was sent (taught etc.) to do this." To me it seems that an infinitive after a transitive verb in the active voice may have at least four different uses, viz.: (1) purely adverbial, (2) direct object, (3) indirect adverbial object, and (4) part of a phrase which forms the direct object. The difficulty lies in determining just which of these functions it performs in any given case, and probably no two teachers would agree in all cases.

JUNIOR LEAVING ALGEBRA.

BY PROF. N. F. DUPUIS, QUEEN'S COLLEGE, KINGSTON.

(Continued from last issue.)

1. (a). Solve the equation $\frac{2x-3}{2x+1} + \frac{3x-7}{3x+5} = 2$

Here, $\frac{2x+1-4}{2x+1} + \frac{3x+5-12}{3x+5} = 2$

$\therefore \frac{4}{2x+1} + \frac{12}{3x+5} = 0$. Whence $x = \frac{8}{5}$.

(b). Solve the equation $\frac{1}{x-2} + \frac{1}{x-3} + \frac{1}{x-4} = 0$.

Clearing of denominators we obtain: $3x^2 - 18x + 26 = 0$

Whence $x = 3 + \frac{1}{3}\sqrt{3}$.

2. (a). Solve the simultaneous set : $\frac{2}{x} + \frac{3}{y} = 17$; $\frac{5}{x} + \frac{2}{y} = 12$.

Take $\frac{1}{x}$ and $\frac{1}{y}$ as variables for solution, and eliminate by addition and subtraction. This gives $\frac{11}{x} = 2$, and $\frac{11}{y} = 61$. Whence $x = 5\frac{1}{2}$, $y = \frac{11}{61}$.

(b). If $6x^2 - 17xy + 12y^2 = 0$, find the value of the ratio $x : y$.

Divide through by y^2 , and take x/y as the variable for solution. This gives $6(x/y)^2 - 17(x/y) + 12 = 0$, Whence $x/y = \frac{1}{12}(17 \pm \sqrt{289 - 288}) = \frac{3}{2}$ or $\frac{4}{3}$.

3. (a). A railway train runs a certain distance at a certain rate ; had the rate been increased by 5 miles an hour the distance could have been made in $\frac{4}{5}$ of the time, but had the rate been diminished by 5 miles an hour the time would have been increase by $2\frac{1}{2}$ hours. Find the distance and the rate.

Let r be the rate per hour and d be the distance, both in miles.

Then $\frac{d}{r}$ = the time. But $\frac{d}{r+5} = \frac{4}{5} \frac{d}{r}$; whence $r + 5 = 5/4 r$, or $r = 20$.

Also, $\frac{d}{r-5} = \frac{d}{r} + 2\frac{1}{2}$; whence $d/60 = 2\frac{1}{2}$, or $d = 150$.

(b). A and B together do a piece of work in a certain time. If they each did one half of the work separately, A would have to work one day less and B two days more than before. Find the time it would take both to do the work.

Let A and B together do it in t days, or $1/t$ per day.

Then A would do it in $2(t-1)$ days, or $\frac{1}{2t-2}$ per day.

And B " " " $2(t+2)$ days, or $\frac{1}{2t+4}$ per day.

$\therefore \frac{1}{2t-2} + \frac{1}{2t+4} = \frac{1}{t}$ Whence $t = 4$ days.

And A does $1/6$ per day, and B does $1/12$ per day.

4. If $ax + by + cz = 0$ and $bx + cy + az = 0$, show that $x : y : z = ab - c^2 : bc - a^2 : ca - b^2$.

Divide each equation through by z .

Then $a \cdot x/z + b \cdot y/z + c = 0$ $b \cdot x/z + c \cdot y/z + a = 0$

Taking x/z and y/z as variables of solution, and eliminating y/z , gives $(ac - b^2)x/z + c^2 - ab = 0$.

$\therefore \frac{x}{ab - c^2} = \frac{z}{ac - b^2} = \frac{y}{bc - a^2}$ by symmetry.

$\therefore x : y : z = ab - c^2 : bc - a^2 : ca - b^2$.

5. (a). If m and n are the roots of $ax^2 + 2bx + c = 0$, find the values of $m+n$, mn , $m^3 - n^3$ in terms of a , b , and c .

Since $(x-m)(x-n) = x^2 - (m+n)x + mn$ and has m and n as roots it follows that for the given equation, $m+n = -\frac{2b}{a}$ and $mn = \frac{c}{a}$

Thence $m^3 + n^3 = (m + n)^3 - 3mn(m + n) = (-\frac{2b}{a})^3 - 3^c/a(-\frac{2b}{a}) = \frac{6abc - 8b^3}{a^3}$

(b). Form the equation whose roots are greater by 2 than the roots of the equation $x^2 - 11x - 17 = 0$.

This is readily done with a little knowledge of the general theory of equations. But, without that, it is easily done as follows.

Let m, n , be the roots of this equation.

Then $m + 2, n + 2$ are the roots of the new equation.

$\therefore x^2 - (m + 2 + n + 2)x + (m + 2)(n + 2) = 0$

or $x^2 - (m + n + 4)x + mn + 2(m + n) + 4 = c$ is the new equation.

But $m + n = +11$ and $mn = -17$.

Whence, by substitution, $x^2 - 15x + 9 = 0$ is the required equation.

(c). Find the square root of $10 + 2\sqrt{21}$.

This may be done by inspection. But systematically, as follows—

Assume $\sqrt{10 + 2\sqrt{21}} = \sqrt{x} + \sqrt{y}$.

Squaring $x + y + 2\sqrt{xy} = 10 + 2\sqrt{21}$.

By a theorem in algebra, the rational parts of this equation must be equal to one another, and so also must the irrational.

$\therefore x + y = 10$, and $4xy = 84$. Whence $x - y = \sqrt{10^2 - 84} = 4$.

$\therefore x = 7, y = 3$ and the root required is $\sqrt{7} + \sqrt{3}$.

6. Fully explain the meaning of $x^0, x^5, x^{1/3}$.

The meaning that attaches to these symbols must be deduced from the primary convention in regard to exponents, and cannot be the result of any new convention.

Now it has been agreed that a^n should stand for and represent $1.a.a.a...$ a taken n times as a factor on unity.

Then $a^m = 1.a.a.a...$ a m times as a factor.

But $\frac{a^m}{a^n} = \frac{1.a.a.a... \text{ to } m \text{ a s}}{1.a.a.a... \text{ to } n \text{ a s}} = 1.a.a...(m - n)as$

But $1.a.a.a. \text{ to } (m - n)as$ is denoted by a^{m-n} by our convention.

$\therefore a^{m-n} = \frac{a^m}{a^n}$ Make $n = m$, then $a^0 = 1$.

Make $m = 0$ then $a^{-n} = \frac{1}{a^n}$; $\therefore x^{-5} = \frac{1}{x^5}$

Also, $x^{1/3} + 1/3 + 1/3 = x = x^{1/3} \cdot x^{1/3} \cdot x^{1/3}$.

$\therefore x^{1/3}$ signifies that x is to be divided into 3 identically equal factors, and that one of these factors is to be taken. But this is a definition of the cube root of x .

7. (a). Factor $a^4 + 4b^4$

$$\begin{aligned} a^4 + 4b^4 &= a^4 + 4a^2b^2 + 4b^4 - 4a^2b^2 \\ &= (a^2 + 2b^2)^2 - (2ab)^2 = (a^2 + 2ab + 2b^2)(a^2 - 2ab + 2b^2) \\ &= (a^2 + 2ab + b^2 - i^2b^2)(a^2 - 2ab + b^2 - i^2b^2) \\ &= (a + b + ib)(a + b - ib)(a - b + ib)(a - b - ib); \text{ where } i = \sqrt{-1}. \end{aligned}$$

Or as follows—

$$\begin{aligned} a^4 + 4b^4 &= a^4 - 4i^2b^4 = (a^2 - 2ib^2)(a^2 + 2ib^2) \\ &= [a^2 - (1 + i)^2b^2] [a^2 - (1 - i)^2b^2] \\ &= [a + b(1 + i)] [a - b(1 + i)] [a + b(1 - i)] [a - b(1 - i)]. \end{aligned}$$

Factor $a^3 + b^3 + c^3 - 3abc$.

The factors of this are known, or should be known to every algebraist, as it constitutes an important fundamental form.

To factor it, however, we may do so as follows :—

The expression is homogeneous and symmetrical, so that if it has a linear factor it must be $a + b + c$. For a write $-(b + c)$, and the expression vanishes.

$\therefore a + b + c$ is a linear factor.

The quadratic co-factor must be homogeneous and symmetrical, and must be of the form $a^2 + b^2 + c^2 + (ab + bc + ca) m$, and

$(a + b + c)(a^2 + b^2 + c^2 + [bc + ca + ab] m)$ must be identical with $a^3 + b^3 + c^3 - 3abc$.

Comparing a term as a^2b , not found in the second expression, its coefficient from the first expression is $1 + m$ and is zero $\therefore m = -1$, and the quadratic factor is

$$a^2 + b^2 + c^2 - bc - ca - ab.$$

Factor $(1 + y)^2 - 2x^2(1 + y^2) + x^4(1 - y^2)^2$.

The substitutions $x = 1$ and $x = -1$ cause this to vanish, and therefore $x^2 - 1$ is a factor. By division we find the other factor to be

$$x^2(1 - y)^2 - (1 + y)^2;$$

which being the difference of two squares is readily factored.

b. If $s = \frac{1}{2}(a + b + c)$, show that

$$(s - b)(s - c) + (s - c)(s - a) + (s - a)(s - b) = s^2 - \frac{a^2 + b^2 + c^2}{2}$$

$$(s - b)(s - c) = s^2 - s(b + c) + bc.$$

$\therefore (s - c)(s - a) = s^2 - s(c + a) + ca$, by symmetry,

and $(s - a)(s - b) = s^2 - s(a + b) + ab$.

$$\therefore (s - b)(s - c) + (s - c)(s - a) + (s - a)(s - b) = 3s^2 - s.4s + \Sigma ab. = \Sigma ab - s^2.$$

But $4s^2 = (a + b + c)^2 = \Sigma a^2 + 2 \Sigma ab$.

$\therefore \Sigma ab = 2s^2 - \frac{1}{2} \Sigma a^2$.

Whence, $\Sigma ab - s^2 = s^2 - \frac{1}{2} \Sigma a^2$, which establishes the required relation.

8. a. Find the square root of $x^4 + 4x^3y + 10x^2y^2 + 12xy^3 + 9y^4$.

(Note. By a typographical error the fourth term was printed " $12xy$ "). x^2 and $3y^2$ are two terms of the root.

Assume $x^2 + axy + 3y^2$ to be the root. The term containing x^3y is $2ax^2y$.

$\therefore 2a = 4$ and $a = 2$, and the root is $\pm(x^2 + 2xy + 3y^2)$.

(b). If $x^2 + px + q$, and $x^2 + mx + n$ have a common factor, to find the relation that exists among p, q, m, n .

There are many ways of doing this, the following is about the simplest :

The H. C. F. of the expression is binomial of one dimension in x . Operating on coefficients alone.

$$\begin{array}{r} \text{A} \quad 1 + p + g \\ \text{B} \quad 1 + m + n \\ \text{A - B} \quad \frac{(p-n) + (g-n)}{(p-n) + (g-n)} \end{array} \quad \begin{array}{r} \text{B} \quad 1 + m + n \\ g\text{B} \quad g + gm + gn \\ n\text{A} \quad n + np + ng \\ g\text{B} - n\text{A} \quad \frac{(g-n) + (gm-np)}{(g-n) + (gm-np)} \end{array}$$

$$\div p - m \quad 1 + \frac{g-n}{p-m} \quad \div g - n \quad 1 + \frac{gm-np}{g-n}$$

$$\therefore \frac{g-n}{p-m} = \frac{gm-np}{g-n};$$

or $(p-m)(gm-np) = (g-n)^2$ is the necessary relation. Or, as $(p-m)x + (g-n)$ and $(g-n)x + (gm-np)$ can differ only by a monomial factor, we must have $p-m : g-n = g-n : gm-np$. . . etc.

9 (a). Solve $x^2 - 7xy + 11y^2 = 179$ }
 $2x - y = 1$ }

$y = 2x - 1$, and substituting this value of y in the first equation gives $31x^2 - 37x = 168$.

Whence $x = 3$ or $-1\frac{2}{3}$; $y = 5$ or $-4\frac{1}{3}$.

(b). Solve $\frac{x-b}{x-a} - \frac{x-a}{x-b} = \frac{2(a-b)}{x-a-b}$.

$$\frac{x-a+a-b}{x-a} - \frac{x-b+b-a}{x-b} = \frac{a-b}{x-a} + \frac{a-b}{x-b} = \frac{2(a-b)}{x-a-b}$$

$$\therefore \frac{2x-a-b}{(x-a)(x-b)} = \frac{2}{x-(a+b)}$$

Whence by clearing of denominators,

$$2x^2 - 3(a+b)x + (a+b)^2 = 2x^2 - 2(a+b)x + 2ab.$$

$$\therefore x = \infty, \text{ and } x = \frac{a^2 + b^2}{a+b}.$$

10. (a). Simplify $\frac{a^3}{(a-b)(a-c)} + \frac{b^3}{(b-c)(b-a)} + \frac{c^3}{(c-a)(c-b)}$.

Arrange the denominators in cyclic order, and put in the factor which makes each $(a-b)(b-c)(c-a)$.

The numerator becomes $a^3(c-b) + b^3(a-c) + c^3(b-a)$.

This factors into $(a-b)(b-c)(c-a)(a+b+c)$.

. . . The simplified expression is $a + b + c$.

(b). The area of a rectangle is to that of the square on its diagonal as 60 : 169. Find the ratio of the sides of the rectangle.

Let x, y be the sides of the rectangle. Area of the rectangle = xy , and the area of the square on its diagonal is $x^2 + y^2$.

$$\therefore xy : x^2 + y^2 = 60 : 169, \text{ to find } \frac{x}{y}$$

Divide the first couplet by y^2 . Then $\frac{x}{y}, 169 = [(\frac{x}{y})^2 + 1]60$; and taking $\frac{x}{y}$ as variable, and solving we get, $\frac{x}{y} = \frac{5}{12}$ or $\frac{12}{5}$.

CONTEMPORARY LITERATURE.

The *Littell's Living Age*, of January 19, contains "Recent Science from" the *Nineteenth Century* and "Walter Pater," by Edmund Gosse from the *Contemporary*. A couple of short stories and a good selection of verse also appear.

Macmillan's Magazine contains the most attractive serial that we have begun for some time. It is called the "Hérons," but the name of the author is not mentioned, which is to be regretted. Among other interesting articles might be noted "Cromwell and the House of Lords" by C. H. Frith.

The favourite *St. Nicholas* promises exceedingly well for '95. There is an adventurous boy's story about the "Re-discovery of Aladdin's Lamp" and one of the life of College girls which will fascinate the older girl readers. The short stories and articles are all that could be desired while the "Boy of the First Empire" increases in interest.

In the January number of the *Cosmopolitan* Clark Russell begins one of his charming sea-stories named "A Three-Stranded Yarn." Howell's three part story is brought to a gently sad crisis. Ouida contributes "Paolo and Francesca" in the series of *Great Passions of History*. The poetry of the number is by John Allan, John B. Tabb, Bliss Carman, and Laura S. Porter.

The *Missionary Review of the World* is largely devoted to China, there being articles on Foreign Missions and Sociology in China, on "A Chinese Philosopher" and on the causes and results of the China-Japanese war. The Rev. E. R. Young has a paper on Rev. James

Ewan, Missionary to the North-West Indians.

The *Ladies' Home Journal* is fully keeping up to, if not surpassing, its past standard, in 1895. Dr. Parkhurst's articles are looked forward to eagerly by its many readers. John Kendrick Bangs has in January a further instalment of his "Paradise Club," while the serial is growing in interest. There is an article on illustrating which is of great use to young art aspirants.

The January number of the *Century* is a notable one with continuations of Crawford's "Casa Braccio" and Mrs. Burton Harrison's "An Errant Wooing," each in the best style of its author. There is also an instalment of the comprehensive and interesting life of Napoleon. Two short stories of unusual interest deserve to be mentioned, "Wanted, A Situation" by Harriet Allen, and a "Lady of New York," by Robert Stewart. The poetry of the number is by Florence Earle Coates, William Prescott Foster, Helen Gray Cone, Edith Wharton, and others.

The Great World's Farm. By Selina Gaye. (London and New York: MacMillan & Co., through the Copp, Clark Co., Toronto.)

The title of this book is taken from a sentence in Henry Drummond's *Tropical Africa*, and here we have an interesting, fresh and comprehensive account of "Nature's Crops" and how they are grown. It is comprised in twenty-two chapters, on "Soil, Climate, Seed, Leaves, etc.," but no brief notice can at all do justice to the real value and even fascination of the work, which might well find a place in any library.

The Pitt Press Shakespeare. Twelfth Night. Cambridge: The University Press. The editor of this very satisfactory text book is Mr. A. W. Verity, who is already known as a good editor. His Introduction and Notes are plain, practical and scholarly, and the glossary etc., just what one would wish. The text has been carefully expurgated for school use.

We have received from Messrs. Copp, Clark & Co. three new books of *Arithmetical Problems*: (1) "Progressive Problems in Arithmetic," by J. White, Edmonton, Ont. (2) "Cuthbert's Exercises in Arithmetic, Part I." (3) Cuthbert's Exercises in Arithmetic, Part II."

These books each contain hundreds of good Arithmetical problems, and will be of much assistance to teachers. Part I. above mentioned is for first, second and third book classes and the other two books are both for Entrance and Public School Leaving Classes. We heartily commend them.

The Canada Publishing Company has just issued a new and enlarged edition of Mr. J. F. Jeffers' primer on the *History of Canada*. This is one of the best brief histories of Canada, and we are glad that a new edition has been published bringing it up to date.

Our Animal Friends, the journal of the American Society for the "Prevention of Cruelty to Animals," (New York) has now reached its twenty-first volume, and we are indebted to the President, Mr. John P. Haines, for a handsome copy of the bound volume for last year, containing many good articles.

College Requirements in English is a useful little volume, containing the curriculums and matriculation examination papers in English of

Yale, Harvard, Wellesley, Vassar, and other American Colleges. (Edited by Rev. A. W. Eaton. Boston: Ginn & Co.)

We have also received from Messrs. Ginn & Co., Boston. *A Scientific German Reader* (Prof. Dippold) and *Outlines of the History of Classical Philology* (Prof. Gudeman).

The latest issue of the Guild Text Books (London: A. & C. Black) (Edinburgh: R. & R. Clark) is on *The Religions of the World*, and is written by Principal Grant, D.D., of Queen's University. None of the series is more interesting or more needed. The narrow limits of a brief text-book made the severest condensation necessary, but what is of prime importance is here, and the material is so judiciously chosen and so clearly set forth that the result is more satisfactory than in many larger books. Above all, the understanding and sympathising spirit of the writer keeps the reader to the right point of view in considering these religions—Mohammedanism, Confucianism, Hinduism, Buddhism.

We have received the following books from Messrs. MacMillan & Co., London, through the Copp, Clark Co., Toronto: *Latin Phrase Book, Meissner*. This is a delightful book for those learning Latin. It has now reached its Sixth German Edition and is here translated into English by Mr. Auden of Fettes College, Edinburgh. (It has also been translated into French and Italian). The arrangement is admirable, the completeness of the work remarkable, and it is with pleasure that we commend it to our readers.

The two new numbers of *MacMillan's Elementary Classics* are *Xenophon, Selections Illustrating*

Greek Life (Edited by C. H. Keene, M.A.), and *Sallust. Jugarthine War* (Edited by E. P. Coleridge, B.A.). Like all the other numbers of the series they are in every way excellent text books.

Physiology for Beginners. By Prof. M. Foster and Prof. Shore, of Cambridge University. This is intended as an Introduction to the well-known text book on "Elementary Physiology" by Prof. Huxley and is well adapted for that purpose. It is illustrated and there is much information supplied which is too often omitted as superfluous by the authors of such books, to the great confusion of the beginner. The explanations are clearly given and the ground is thoroughly covered. An Index is added.

MacMillan's New Literary Readers. Book IV., Book V. It is a pleasure to see such books as these. The lessons given are from Kingsley, Dickens, Tennyson and other writers, they are not too long and are well chosen, the difficult words being explained. Who ever edited these books knew what boys and girls like and what will do them most good.

Ruy Blas, one of Victor Hugo's most celebrated dramas, edited by Samuel Garner, Ph.D., is the latest number of D. C. Heath & Co.'s *Modern Language Series*. Besides the copious explanatory, historical and geographical notes necessary for the reading of this difficult work, the editor has added in his introduction a sketch of Spanish history of the period referred to, a critical examination of sources and characters, and a valuable chapter on Alexandrine versification. For critical study by advanced students this edition is all that could be desired. The excellence of the printing deserves also special mention.

COLONEL PARKER'S TALKS ON PEDAGOGICS.—The part I like best is not that which deals specially with *concentration*, but the chapter on school government and normal training. I think many of his remarks are most successive and stimulating. His attacks on corporal punishment and bribes in school prizes, etc., are excellent. I think he is very happy in describing the essential qualifications of a good teacher. He frequently puts the pith of what I suppose all advanced teachers accept, but which is not acted upon as a general rule, or universally accepted. For example: "A teacher who is a genuine student will receive far more from his pupils than he gives." I think he describes admirably the political importance of the common school. I consider he has given all good teachers most valuable help by the earnest way in which he has persisted that "all true educative work is interesting; no one can long study anything that is good without loving it."

I disagree with him altogether that there is no need of formal lessons in morals below the university; although I perfectly agree that "all teaching should be intrinsically moral." His belief in freedom to choose is admirable, and the way in which he traces the unthinking citizen from the badly-governed school boy is most suggestive.—*E. P. Hughes, Cambridge, Eng.*

'Tis death to me, to be at enmity;
I hate it, and desire all good men's love.

He hath a heart as sound as a bell
and his tongue is the clapper; for
what his heart thinks his tongue speaks.

Man, proud man!
Drest in a little brief authority
Plays such fantastic tricks before high
heaven,
As make the angels weep.