

# Ontario Normal College Monthly.

HAMILTON, ONTARIO, NOVEMBER, 1900.

## Ontario Normal College Monthly

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THE O. N. C. Literary Society has again seen fit in its wisdom to decree the publication of a magazine under its auspices. The editors, in bringing forward the first number of another year, bespeak the ready sympathy and earnest co-operation of every student and graduate who has the interests of his college at heart. It is only in this way that we, who labor under peculiar disadvantages, not incident to journalistic work in the universities, can hope to make a path for ourselves in the already well-trodden field of college journalism. Let every student, and every graduate into whose hands this opening number may fall, feel himself responsible not only to support the MONTHLY financially, but to contribute as far as possible to each and every department, and then the task of the editors, which at best is no sinecure, will prove a much lighter and a more pleasant one, and they will be able to offer this year to their readers a magazine that will compare worthily with past efforts, and prove itself in some degree useful in promoting a spirit of unity and fellow-feeling among the students and alumni of the Ontario Normal College.

HITHERTO the MONTHLY, true to its origin in the weekly "Jottings," read before the Literary Society, has been almost solely a reflection of the life and thought of the body of teachers-in-training who have assembled here year after year. It has not aspired to extend its circulation beyond the students in actual attendance, though no one will deny that, within this somewhat limited sphere, it has discharged its function most creditably. This year the editors propose to make an effort, in a small way at least, to prepare such a journal as will appeal to the educationists of our province in general, and more especially to the graduates of our own college, who, we feel sure, still cherish fond memories of the few months spent under the guardianship of our principal and vice-principal. Each issue will contain a number of short articles, contributed by members of the teaching profession who are in actual touch with the pedagogical problems which are before the minds of our educationists to-day, as well as by teachers-in-training who are just beginning to have these questions open up before them, and who bring to the discussion all the enthusiasm of youthful ardor and undaunted earnestness. That we are not over-sanguine in laying down this bold programme for the year's work, we appeal to our fellow-students and to the graduates to prove by a hearty response to our call for substantial aid in the way of subscriptions and contributions. The

results of our canvass thus far have been very encouraging, and we feel sure that, if the matter were only vigorously taken up and carried forward, a considerable increase in the constituency of readers of the MONTHLY might be made, and an opportunity thereby afforded the staff of enlarging and extending the scope of the magazine. In this way the organ of the O. N. C. Literary Society might become a positive force in moulding the educational thought of Ontario, and in shaping the development for all time of what is at once one of the profoundest of sciences, and the noblest of arts.

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WITH a view of meeting the needs of our graduates, whom we would encourage to co-operate with us this year, we are inaugurating in this issue a new department under the heading, "Personals." This column is to be devoted solely to the recording of brief newsy items regarding the ex-students, their successes and promotions, and any other like matters of general interest. There is no reason why the MONTHLY should not contain in this way a valuable alumni register, which in itself would be worth the subscription price of the magazine to the lonely graduate, out in the battle of life, and thirsting for some news of how his former classmates are faring in the same conflict.

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It might be a matter of interest to our readers to know something of the relative sizes of the classes of recent years. Since the establishment of the Ontario Normal College in its present commodious quarters in Hamilton three classes have graduated. Of these the first two were so strong

numerically that the capacity of the new building was taxed to the utmost to accommodate the throng of would-be teachers. Last year, however, as also this one, no difficulty has been experienced on that score, inasmuch as the classes have been considerably smaller, as the following table shows :

	MEN.	WOMEN.	TOTAL.
'97-'98.....	95	113	208
'98-'99.....	96	88	174
'99-'00.....	59	92	151
'00-'01.....	78	66	144

For the first time in four years the men are in the majority, a fact which is nowhere more plainly manifest than in the social events of the college. The present class is composed as follows:

	MEN.	WOMEN.	TOTAL.
Toronto graduates..	29	7	36
Queen's " ..	5	1	6
McMaster " ..	3	0	3
Manitoba " ..	1	0	1
Total No. " ..	38	8	46
Senior Leaving....	40	58	98

The specialists in the various departments are thus divided :

	MEN.	WOMEN.	TOTAL.
Classics.....	8	0	8
Science.....	8	0	8
Moderns.....	7	4	11
Mathematics....	6	0	6
Eng. and History.	1	1	2
Total.....	30	5	35

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Now that the feeling of trepidation with which we approached what we feared was to be *the* ordeal of our lives has in some degree worn off, we might profitably turn our consideration to the question of how best to make use of the year we shall spend here in training for the active duties of our profession. A timely suggestion on this point was made by Mrs. Knox Black in her opening lecture, viz., that this year of preparation might become to us an opportunity for

general culture and the expansion of our mental horizon. The majority of us have for some years been bound down to the requirements of the school or college curriculum, perhaps in some specialist department, and we have not felt free to gratify our mental longings, if indeed we had any in the direction of any of the other lines of human thought and investigation. Now is our opportunity to lay the foundation for a broader circle of interests, a wider range of sympathies, that will embrace every department of human aspiration and endeavor towards the highest. The student of literature should kindle in himself an enthusiasm for the glorious possibilities of science, the devotee of science should cultivate an appreciation for the subtle charms of literature.

It is such a breadth of culture as this, joined to the necessary qualities of heart, that gives to the teacher that inspiring personality which is worth more to him than whole encyclopedias of lifeless facts and theoretical methods. Let us then take advantage of this the last opportunity which most of us shall have to devote a year solely to self-education. An excellent library is open to our perusal, and we daily come in contact with men of attainment in the several branches of human knowledge. Surely an attentive and receptive mind may gather much that will aid in the production of that broad and generous culture which is so necessary to the true teacher and the fully rounded man.

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THE hearty interest which our vice-president and other members of the staff of lecturers take in the fortunes

of our football team shou'd be shared by each and every student. All who can should be on hand to cheer the players on to victory in the three remaining matches. The issue is as yet doubtful, but with loyal support our boys have still a chance of landing the championship.

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COULD not the matter of the organization of a Y. M. C. A. be taken up and carried through successfully as it was two years ago? Surely there are some men in the class of 'co-'or who have had experience in Christian work, and who would be willing to make a few sacrifices to promote the spiritual growth and welfare of our students.

### *Theory and Methods of Teaching.*

THE MALADY OF THOUGHT VS. THE MALADY OF METHOD.

MODIFYING an expression of J. S. Mill, it may be said that all teachers should be "afflicted with the Malady of Thought." The trained teacher is an indispensable factor in the highest civilization. Such a civilization is conditioned on national virtue and intelligence, national virtue and intelligence on national education, and national education on thoroughly trained and accomplished *teachers*. For these "will open to the light all the recesses of ignorance and tear up by the roots the weeds of vice." The teacher must be a scholar and a thinker. This simple fact we seem to be losing sight of, amid our interminable discussions about educational matters (renovated curricula and the like) which are, perhaps, of less importance. A mischievous notion seems too prevalent that teacher and pupil are learners, both moving on the same plane; that the *minimum* of knowledge prescribed for the pupil determines the *maximum*

of knowledge for the teacher. The teacher must be always a learner; filled indeed with the love of learning, if he is to make his pupils learners and lovers of learning. But in extent and accuracy of scholarship, and in power of connected thinking, he must of course be far in advance of his classes. If, for instance, he knows only the four fundamental rules of arithmetic, it would be a perversion of language to say that he can teach these well. The reason is plain. To know a subject is to know the relations of its parts, and to know it in at least some of its correlations. If a teacher has not a fair comprehension of such relations, of and in a subject, his ideas are not knowledge in any true sense of the word. He does not know the subject and what he does not know he cannot teach. It is impossible for him to help the learner think relations which his own mind has never made. How few teachers know, for example, the real relations of the fundamental operations in arithmetic. How few see that all the common processes, addition, subtraction, multiplication, division, fractions, are implicitly present in the first number conceptions; and that therefore, in the direct teaching of these rules, we are simply leading the pupils to a conscious recognition of ideas that have long been freely used.

This suggests another fact: For effective teaching, clear presentation of the subject matter is essential. This, again, implies analysis into related parts as well as perception of wider relations, and the grouping of all the parts into an enlarged and more definite whole. Such presentation, it may be remarked, secures interest, which is only another name for normal mental activity. All this is equivalent to saying that the teacher must have a logical habit of mind; the power to think—the power of discriminating and identifying, which is developed by the acquisition of ample and accurate scholarship. Speaking generally, the

mind without scholarship is an untrained mind, the untrained mind cannot be logical, and an illogical mind cannot teach.

Again, if the teacher is but little in advance of his pupils, he can neither command their respect nor possess that self-respect which is no unimportant element of his power. With ripe scholarship, with a thorough mastery of a subject in itself and in its relation to larger wholes, with a clearness and precision of expression corresponding to his clearness and precision of thought, the teacher fills his pupils with admiration and respect, sets before them a high ideal, and arouses a laudable ambition to realize that ideal in the possession of like attainments for themselves. All his work is marked by the ease and dignity of conscious strength.

On the other hand, slender scholarship makes the feeble teacher. The feeble teacher moves with hesitating step and slow. Consciousness of weakness is revealed in all he does. Instead of sunlight views he has but twilight glimpses of the truth, because he is forever dwelling in the shadows of the unknown. He is further weakened by the feeling that he is subject to the sharpest scrutiny; his pupils are not scholars or logicians, but they have keen eyes and are quick to see that he is groping in a maze without a clue. The whole matter may be put in a nutshell: faculty, mental power, is organized only by the clear presentation of organized knowledge; the teacher, the co-organizer, must therefore have that organized power which comes only from the possession of thorough scholarship.

This logical habit of mind is a prime necessity. Disconnected thinking on the part of the teacher cannot lead to connected thinking and the development of power in the pupil. There is, to be sure, an ideal element, the element of thought—even in simple perception, the initial stage of mind development. But perception is not knowledge in the higher sense; it

rather implies the raw materials to be elaborated into knowledge. A higher energy of thought must work upon the facts, presented in sense-perception, or they remain but little more than disconnected sense-impressions. The teacher without this relating habit of mind, which is concerned in all true knowledge, is apt to present to his pupils a jumble of facts, unorganized and unorganizable, which produces not orderly thinking, but confusion worse confounded. This disconnected teaching is the prevalent vice of the school-room. There are too many Dr. Blimbers as teachers, and too many pupils with knowledge like Paul Dombey's. When poor Paul "had spelt out number two he found he had no idea of number one, fragments whereof afterwards obtruded themselves into number three, which slid into number four, which grafted itself on to number two. So that whether twenty Romuluses made a Remus, or hic, haec, hoc was Troy weight, or a verb always agreed with an ancient Briton, or three times four was Taurus a Bull," were open questions with him. It seems to be thought in many quarters that attention to methods will atone for inattention to scholarship. At least there is a mischievous tendency to exalt method at the expense of scholarship. The malady of method is upon us. Without doubt, method in the true sense of the word is invaluable; but method even in its most perfect form, can never be a substitute for scholarship. In fact, true method cannot be grounded upon illiteracy; it needs scholarship and the trained intelligence which comes from it, to master, if not empirical, at least rational method. A man of meager learning may be a good educator; but only because he has a stimulating power which wakes up mind and sets it on a course of self-education; he is an educator in spite of his poor scholarship and empirical method. But, given equality in natural endowments, the man who has scholarship with it

methods will infinitely surpass the man who has methods without scholarship.

Professor Laurie is not so far wrong in the following statement, and many of us probably had a similar experience: "When the typical Scotch school-master held a diploma from Glasgow, or Edinburgh, or Aberdeen, the type of intellectual life as a prevalent fact, was higher in Scotland than in any other country in Europe; and decadence in its intellectual superiority set in when a university graduate was displaced by men who had received their training in schools of secondary education."

The professional training of teachers who have but little scholarship and power of thought results, and must result, in purely empirical method. The teacher in training is set to observe "model" teaching with a view to imitation and reproduction. Its dogma is: OBSERVE and IMITATE. Or, he is treated to authoritative statements concerning rules of method and formulas and principles of education. The essence of the training is HEAR and OBEY. This method of rule and routine, combined with observation and a little practice teaching, gives no accurate knowledge of the mental activities which it is the purpose of the teacher to strengthen and direct. It is a method which strongly tends to make the vocation (or avocation) of the teacher a "sorry trade rather than the noblest of professions." It is responsible for most of the existing defects in national education. "Methods," as already said, which are not based upon a knowledge of the mental processes are purely mechanical; they are not auxiliary to the act of learning and to the maturity of the physical functions. The mechanic-teacher is saturated with the idea that he is to "teach" a subject, and he follows with numb rigidity certain ways and plans and "devices" and methods which he has been told to follow in "imparting" knowledge. For him

the mind exists for the subject, not the subject for the mind. He knows little about the adult mind, less about the child-mind; he knows little about the subjects of the school courses, less about their psychology; he knows little of the nature of interest and less of its origin and function; he knows little of his own shortcomings and less of a possible remedy; but he knows—"methods"; that is enough for him. He is an outcome of the present MALADY OF METHOD. The empiric in education is more to be dreaded than the quack in medicine.

Scholarship and power of thought—these are the basis of the teacher's art; the essential requisites for the mastery of rational method through the philosophy of education. These two co-equal factors, united with some of the divine enthusiasm for humanity which filled the heart and life of the Divine Man, will produce the artist teacher; who, knowing the material he has to work upon, and familiar with the marvellous processes by which it grows and develops into the noblest thing on earth, subordinates ways and devices and methods to mind and its development; who has and is learning, culture, sympathy, enthusiasm, character, magnetic personality: whose love of learning and stimulating power create in his pupil a kindred spirit—a taste for various sorts of knowledge, and an impulse of self-improvement which will outlast the life of the schoolroom. This is the teacher described by Prof. Tyndall; in the true teacher, he says, "a power of character must underlie and enforce the work of the intellect. There are men who can so arouse and energize their pupils, so call forth their strength and the pleasure of its exercise as to make the hardest work agreeable. Without this power it is questionable whether a teacher can really enjoy his vocation; with it I do not know a higher, nobler, more blessed calling." Let us endeavor to extend the malady of thought and arrest the malady of method; or rather to sub-

stitute for the malady of mechanical method grounded on illiteracy, the malady of philosophical method grounded on scholarship and power of thought.

J. A. McLELLAN.

### *Educational Beginnings.*

IN these days of well equipped schools and modern methods, a short account of the early history of our educational system, with a few particulars as to the nature of the schools and the method of conducting them, may not be without interest to the readers of the MONTHLY.

The first school in Upper Canada (as far as I can learn) was opened by Dr. J. Stuart at Cataragui in 1785. From time to time other schools were established in some of the more important centres of population, but even at the close of the century they numbered less than a dozen. It was not until 1798, indeed, that the government made any provision in the matter of education. At that time, by the sanction of the king, the "chief civil officers," in Upper Canada recommended that "500,000 acres of land be set apart for the establishment of a grammar school in each district and a central university for the whole province." To take charge of the proposed college, the late Dr. Strachan, then a schoolmaster at Kettle, Scotland, was selected, but on his arrival at Kingston, December 31st, 1799, he found that the project of a college had been abandoned. In the course of a few years, however, several grammar schools were founded; one of which at York (Toronto) was opened on June 1st, 1807. It consisted of a plain wooden building about fifty feet long by forty feet wide. At that time the sanction of the Governor was necessary for the appointment of teachers, and we learn that Governor Gore selected Dr. Stewart as first head master of the York Grammar School.

In 1816 a praiseworthy effort was made to provide for the establishment and maintenance of common schools, and in 1824 to provide for general reading books in the schools. These early efforts met with little success, which was largely due to the inefficiency of the schoolmasters and the carelessness of the trustees. In spite of these difficulties we learn that in 1822 there were about 340 common schools in the province with from 12,000 to 14,000 pupils who were taught reading, writing, the elements of arithmetic and the first principles of religion.

Before mentioning any of the great changes in educational matters which were made toward the middle of the century, it might not be out of place to give an outline of the work in a grammar school, and for the purpose I have selected part of a course of study as given by Dr. Strachan in 1829, as follows :

FIRST YEAR—BOYS 7 TO 9.

1st., Latin—Eton Grammar, Vocabulary, Corderius, *Selectæ Profanis*.

2nd., English—Mavor's Spelling Book, Enfield's Lessons, Walker's Lessons, Blair's Class Book, English Grammar, Writing, Arithmetic (chiefly mental).

SECOND YEAR—BOYS 9 TO 11.

1st., Latin—Grammar, Volpy's *Delectas*, New Testament, Daly's *Exercices*, *Exempla Minora*, Entropius, Phædrus, Cornelius Nepos.

2nd., English—Grammar and Reading as before, Writing and Arithmetic (mental and mixed), Geography, Civil and Natural History, Elocution.

3rd., to commence French.

THIRD YEAR—BOYS 11 TO 13.

1st., Latin—Grammar, Bailey's *Exercices*, Cornelius Nepos, Caesar, Ovid's *Metamorphoses*, Nonsense Verses, Psalms into Latin Verse, *Exempla Moralia*, Versions of rendering English into Latin

2nd., Greek—To commence about the middle of the third year, Eton Grammar, or Nelson's edition of Moore's Grammar, Greek Vocabulary, New Testament Greek Exercises.

3rd., Arithmetic, and to commence Algebra.

4th, French.

This curriculum extended through a much longer course than is here

given, but this will suffice to give some idea of the course of study. Dr. Strachan also gives his method of teaching arithmetic, which is as follows :

"I divide my pupils into separate classes according to their progress. Each class has one or more sums to produce every day neatly wrought upon their slates. The work is carefully examined, after which I command every figure to be blotted out, and the sums to be wrought under my eye. The one whom I happen to pitch upon first gives with an audible voice the rules and reasons for every step, and as he proceeds, the rest silently work along with him figure for figure, but ready to correct him if he blunder, that they may get his place. As soon as this one is finished, the work is again blotted out, and another called upon to work the question as before, while the rest proceed along with him in silence, and so on around the whole class. Such a plan is very laborious, but it will be found successful, and he that is anxious to spare labor ought not to be a public teacher."

From 1830 to 1840 and even later, might be termed the dark ages of our public education, not because there were no able men to take up the cause, but rather that their labors were fruitless. Foremost among these was Dr. Ryerson, who though prevented from being a member of the Legislature, being a minister, did much in advancing better measures. By his writing and his skill in detecting the weak points of an adversary's argument, he was able to furnish his friends in the House of Assembly with facts and arguments which were irresistible. They passed school bills time and again only to have them rejected by the Legislative Council. But a change came in 1841, and education henceforward received more real attention.

As a means to higher education Universities were established. For the benefit of teachers, district Model

Schools were opened in 1843. In the following year Dr. Ryerson was appointed Superintendent of schools in Ontario. He almost immediately went over to Europe and remained away over a year familiarizing himself with the systems of education there. On his return he published his report on a scheme of "Public Instruction for Upper Canada." This report was largely the basis of his School Bill in 1846. This was the beginning of our present system which is familiar to all. At that time there were many prejudices to overcome so that progress was slow, but there has been steady advancement ever since until we now have a system of which we may well be proud.

A good account of the common school education of about 1840 is given by Mr. Haight in "Canada of Fifty Years Ago," from which is drawn this account of the school house at that time. "The school house was close at hand, and its aspect is deeply graven in my memory. It was a small square structure with low ceiling. In the centre of the room was a box stove, around which long wooden benches without backs were ranged. Next the wall were the desks, raised a little from the floor. In the summer time the pupils were all of tender years, the older ones being kept at home to help with the work. I was one of a lot of little urchins ranged daily in hard wooden seats with our feet dangling in the air for seven or eight hours a day. In such a plight we were expected to be very good children, to make no noise, and to learn our lessons. It was a marvel that so many years had to elapse before parents and teachers could be brought to see that keeping children in such a position for so many hours was an act of great cruelty. The terror of the rod was the only thing that could keep us still and that often failed. Sometimes tired and weary we fell asleep and tumbled off the bench to be awakened by the fall of the rod. In the winter time the small

school was filled to overflowing with the larger boys and girls. This did not improve our condition, for we were more closely packed together and were either shivering with the cold or being roasted with a red-hot stove."

R. W. HEDLEY.

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### Dreams.

Alone I sit before the blazing hearth ;  
 The wind without blows fierce in bitter  
 breaths,  
 But all within is peace and quietness,  
 And gazing in bright coals' fervent depths,  
 I dream long dreams of summer, seem to  
 float  
 On down a lilled stream's perpetual flow,  
 With languid fingers drooping sleepily  
 To kiss their sisters in the depths below ;  
 Gazing I lie, and watch the moon that sleeps  
 So exquisitely peaceful in the nether deeps.  
 JEAN JARDINE.

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### Cramming.

A short time ago our Vice-Principal suggested as a good topic for discussion the subject of "cramming." I should like to start the discussion by giving a few pros and cons, in the hope that some one else will take it up and if possible bring it to a logical conclusion. The first step is to be sure we all have the same idea of the meaning of the word. The dictionary tells us that to cram is "to stuff, to fill to superfluity," and that a crammer is "one who prepares students for examination by *cramming* them with the required knowledge,"—just as French geese are prepared for *pate de fois gras* by being crammed with fattening food. Well, say the epicures, the product of this system may not be a model of all a self-respecting goose that expects to live a normal life ought to be, but he fulfils his particular part in the world as no normally developed goose could,—he is a specialized product. Just so the defendants of the cramming system say the product of their system may not be such an all-round normal man as he might be, but



he fulfils his special part as he could not otherwise do without an enormous outlay of time and energy; in plain words, he passes examinations with a minimum of time and trouble.

However, I believe it is the custom to hear the plaintiff before the defendant, so let us examine the accusations brought against the system. Every student will remember the numerous objections that were raised in class. "Cramming overdevelops memory," said one. Can we have too much of such a good thing? Well, perhaps, if it is developed at the expense of reason and imagination, and surely no one can deny that it is. What reasoning power is there in remembering by number the enunciations of the forty-eight propositions of the first book of Euclid, that subject which are supposed above all others to exercise the reason? What imagination is exercised in cramming the dates of History and the poems of Literature, which are supposed to be our imagination-studies? And yet we cannot expect that everything in school-life will develop all sides of the mind; and we might as well forbid football because it did not exercise the memory, or Geography because it made little call upon the reason. This is a strong argument only against its exclusive use, not against its occasional employment.

Next, a strong objection was raised on the ground that cramming necessitated the placing of the acquisition of knowledge above the training of power. Undoubtedly the tendency of the crammer is to think less of drawing out the latent powers of the mind, and more of getting stored there neat little packages of facts, all ready for use. This is deplorable, and should if possible be avoided, and yet,—is not knowledge power? Organized and assimilated knowledge surely is, and as for the "mass of unassimilated facts" that some were so afraid of loading upon the poor overworked memory,—I know not how it is with others, but I have always found that memory has

no fancy for carrying such a burden, it has a happy faculty of dropping it very quietly and unostentatiously during the week or so after the examinations are safely past.

We have already spoken of the first and perhaps the best argument in favor of cramming, namely, its utility in time of need. Then, say the supporters of the system, this severe taxing of the mind trains it as nothing else would. The man who can endure a good cram is the man who can concentrate all his powers of attention on one thing for some time, and that is the man who can do something in the world.

Then comes the claim that to some degree it organizes knowledge and brings to great prominence in the mind the important points in the subject. Presumably the student has studied the subject more or less carefully during the school year. At the last comes the grand review—he sees facts group around certain centres and fall under certain laws, and instead of a mob of unrelated facts he has an organized whole, with the more important given their due prominence. Even supposing, as sometimes happens, that the student has left most of his study to be done by the cramming process, he *may* get a more vivid and more unified knowledge of his subject by an intensely earnest study of it for a short time than by a desultory dabbling at it during a much longer period.

These are all the pros and cons I have been able to gather. I leave to the unbiassed reader to decide on the merits and demerits of the system. In my humble opinion, it is a poor system to depend upon, but an excellent one to fall back upon—a poor staff, but a good crutch.

Don't forget the Literary Society Concert on the Evening of Thursday, November 22nd. Among the artists who will contribute to the programme are Mrs. Knox-Black and Mr. W. J. A. Carnahan of Toronto, baritone soloist.

### *Science in Education.*

THE fact must be patent to all, that when the history of education of the nineteenth century is read, the most striking characteristic will be the sudden rise, and almost abnormal development of science study in the schools of nearly all civilized nations. It is only during the last quarter of the century that any marked effort has been put forth to bring science study within the reach of all. Up till then, most educators seemed well content to follow with comparatively little change the methods and also the subjects of tuition in vogue ever since the Renaissance. Up till about that time practically the same methods were used in many of the trades, and in agriculture, as had been practiced for a century before. When, however, physical science began to extend its influence to the arts and trades, and even to the domain of the laborer, the changed condition of social and industrial life necessitated a change also in the educational mechanism; simply because the mental development secured by mediæval studies, was not sufficient for modern requirements. It is not necessary for us here to trace the rapid steps by which this change has been effected. Suffice it to say that despite the opposition of a host of friends of the old school, the utilitarian advantages of technical knowledge has raised science study to a place of paramount importance in the system of education of all intelligent and progressive nations.

It is hard for us to read with unbiassed minds the history of modern times. Apparently we need like the artist to stand back at arm's length, to observe the *general effect* of intricate details. It is hard to make a just estimate of the effect of *any* movement, when our point of view lies close to where the movement is being enacted, And so it is difficult for us, living near the inception of modern science as a school study, to estimate its

effect on modern progress and culture. That the benefits accruing to the public at large are manifold cannot be denied. But not only has this later education brought material blessings to mankind: in blessing others, itself has been blessed. The teaching done formerly by rule of thumb, is now pursued with much greater economy of energy, according to the correct principles of the science of education and psychology. Nevertheless, while we glory in modern achievements, it might be well to look whether or not there be defects occasioned by this rapid development. It would seem that the biological law holds good in the educational world, Elaboration always proceeds upon and is sustained by Disintegration." This is the subject to which your attention is directed, namely: the drawbacks sustained and the advantages derived from such a prominence of scientific study.

In almost all of our schools and colleges where instruction in science has been provided for, provision is also made for the study of Latin, Greek and Modern language and literature. But it does not take a very careful scrutiny to see that these occupy only a subordinate position. While in most country schools, and in primary city schools the literary side is still in the pre-eminence, it is yearly becoming less so. In the colleges and universities, on the other hand, the already great preponderance of science subjects is yearly increasing, and the limits extending; so that the student of science, in order to do himself justice at the inevitable final examination, must attend to the exactions of his science curriculum, and leave literary pursuits to those whose attention is perhaps less worthily occupied. Thus there arises a very unfortunate tendency to undervalue the benefits which the older, literary education is still able to bestow.

Everyone must admit that a training in science and scientific methods fails to supply those humanizing in-

fluences, those moral stimuli, and that taste and culture which is afforded by intimate association with the good and great of the literary world. Even the most matter-of-fact may see that these matters can not be overlooked with impunity. There come times in the experience of everyone, whatever his calling, when pure, wholesome literature will be a source of inestimable comfort, if only in his youth he has had the germ of literary taste developed beyond its embryonic condition. Many of us can well remember how when wearied with the intricacies of science theory, or the tedium of its practice, we turned for comfort and refreshment to Wordsworth, or Tennyson, or Dickens.

In addition to this subjective benefit, the pleasure derived from acquaintance with literary work, there are others, more objective, which may appeal to us quite as strongly, being of a more utilitarian nature. Men trained in science to the exclusion in a great measure of 'the gentler arts' are seldom the most agreeable members of society. They are somewhat angular in their development, and are seldom enjoyable companions or conversationists; for the simple reason that they do not care to enter into a conversation unless it savors quite perceptibly of the fruits of some branch of scientific research.

*(Continued in next issue.)*

The Normal Students were right royally entertained at McNab Street Presbyterian Church, on Friday evening, November 2nd. Rev. Dr. Fletcher welcomed the students collectively and individually; the ladies of the church received them and helped them to get acquainted. The rooms displayed a scene of gay sociability. There was an orchestra, a splendid programme of elocution and music, and tastefully served refreshments. Everyone was obliged to enjoy himself. The students have reason to believe that Hamilton people are most hospitable.

### *Personals.*

[Readers will confer a favor by forwarding from time to time any information that may come to hand regarding the graduates of the O. N. C.]

They too did burn the midnight oil ; they bore  
the strain of studious toil ;  
They pondered long o'er books from which  
the tired brain would oft recoil ;  
They knew the path which now we tread,—  
For them, alike, 'twas one of dreads.  
They dreamed of naught but books and plans,  
They thought of naught but "those Ex-  
ams."—  
Because of all that fame is shed on the grad-  
uates.

R. W. Allin, B. A., is now Modern Language Master in Rothesay College, N. B.

W. W. Charters, B. A., was for a time principal of Caroline St. P. S., and is now Model School principal in Hamilton.

W. J. Dowkes is principal of Wellingland P. S.

W. C. Dowsley, M. A., is Classical Master in Athens H. S.

Miss A. E. Ashwell, B. A., teaches Moderns in Kincardine H. S.

P. E. Graham, B. A., and R. N. Merritt, B. A., are occupied in training the High School pupils of Norwood.

H. W. Gundy, B. A., after spending a year as Classical Master in Deseronto H. S., is now on the staff of Jarvis St. Collegiate, Toronto.

Miss E. Bowes, B. A., is teaching in Warton H. S.

"Nick" Hinch, B. A., teaches in Kingston, C. I., and incidentally plays football.

Miss M. H. A. Fife, B. A., is on the staff of the Collegiate in Peterboro.

J. W. Marshall, B. A., is meeting with marked success in his work in the Classical department of Ridgetown, C. I.

W. M. Martin, B. A., President of the 'Lit.' during the first term, '98-'99, looks after the Classical department in Harriston H. S.

G. W. Mason, the other incumbent of that honorable office, after having distinguished himself as dominie in Brechin, is now principal of Heathcote P. S.

Miss F. E. Kirkwood, B. A., has charge of the work in Classics in Essex H. S.

W. F. Tamblyn, M. A., Ph. D., Editor-in-Chief of the MONTHLY, was for a time as principal of the work in Classics in Whitby C. I. He is now Professor of Latin in the University of Colorado.

A. M. Overholt, M. A., Associate Editor of the MONTHLY, after serving for a time as principal of Port Robinson P. S., has passed to the position of Mathematical master in Woodstock College.

Miss M. I. Northway, B. A., holds a fellowship in Bryn Mawr and is pursuing post-graduate work in Physics.

J. H. Black, M. A., Editor-in-Chief of the MONTHLY, '99-'00, has followed still farther in Dr. Tamblyn's footsteps, and is now Classical master in Whitby C. I.

E. Carter, B. A., and J. T. Wren, B. A., are filling positions on the staff of Lucan H. S. They are booming football in that vicinity.

Miss N. Cleary, B. A., has been appointed to a vacancy on the staff of Windsor C. I.

H. F. Cook, B. A., is Assistant Inspector of Public Schools in Norfolk County.

E. S. Coons teaches at his home in Morrisburg.

Miss H. E. Downy, B. A., teaches Moderns to the pupils of Gravenhurst H. S.

S. J. Courtice, B. A., is Professor of Mathematics and Physics in Albert College, Belleville.

Miss E. W. Gould, B. A., is on the staff of Waterford H. S.

A. W. Dunkley is teaching in Dutton H. S.

A. T. Hawley, M. A., is Classical lecturer in Wesley College, Winnipeg.

E. G. Powell, B. A., is in charge of the Mathematics and Physics in Bishop Ridley College, St. Catharines.

E. J. Reid, B. A., is an instructor in Woodstock College.

Miss T. Wooster, B. A., is Mathematical "master" in St. Margaret's College, Toronto.

G. E. Will, B. A., has charge of the work in Classics at Orangeville.

W. J. Glanfield, B. A., teaches Science in Quebec C. I.

Miss E. G. Harrison is engaged on the staff of Glencoe H. S.

E. T. White, B. A., is Mathematical master in Streetsville H. S.

Miss C. P. Grenfell, B. A., and Miss M. E. Grenfell, B. A., went to British Columbia where they stood first and second at the B. C. Normal Examination. They both hold positions in Victoria.

### "At Home."

"The lights are out, and gone are all the guests  
That thronging came with merriment and jests—"

The College Literary Society held a reception to themselves and, incidentally, to the professors, their wives and the officers of the Collegiate Lyceum, on the evening of October 26th. It was the last opportunity afforded the students to form opinions of each other as individuals,—*discrimination*. They all seemed to enjoy making most of the occasion, and the members of the committee are to be congratulated on their ability as entertainers.

When all cards had been filled to their utmost capacity, an interesting programme was opened by Mr. Keith, the President. Dr. McLellan, who was to have taken the chair, was unable to be present. The musical numbers, a piano solo by Miss Harkness, a duet by Misses Good and Wallace, a solo by Mr. Newcombe, were much apprec-

iated. Miss Craig delighted everyone with an interesting recitation and the popular Men's Chorus Club excelled themselves. Promenading, interspersed with refreshments, was much indulged in, and evidently thoroughly enjoyed. Quite properly so, for indeed all things were propitious; the rain threatened but refrained, the teachers serenely beamed upon everyone, and nobody had to teach for two whole days. It is hoped that of this part of our college work "still there's more to follow."

NOTES OF THE FRAY.

What became of Macdonald's third promenade?

Ask B-ch-n to tell you his experience of dark halls.

Will the gentleman who thinks he knows Miss D-r-ton, kindly give heed to his discriminatory powers?

*The Literary Society.*

On the first Friday in the term, Oct. 5th, the Literary Society was organized, the following officers being elected:

- Hon. (J. A. McLellan, M. A., LL. D.
- Presidents, (R. A. Thompson, B. A.
- Patron—Dr. Woolverton.
- President—A. W. Keith, B. A.
- 1st Vice-President—Miss M. L. Bollert, B. A.
- 2nd Vice-President—Miss E. C. Weaver, B.A.
- Rec. Secretary—J. J. Bailey.
- Cor. Secretary—Miss I. A. Powell.
- Treasurer—P. C. Dobson, B. A.
- Curator—Miss E. L. Keddie.
- Councillors—Miss I. S. Butterworth, B.A.,
- Miss A. St. O. Cole, B.A., Miss C. L. Good,
- H. H. Smith, B.A., W. H. Thompson, B.A.,
- E. E. Wood, B.A.

Many and laughable were the complications arising from the fact that for the most part the members of the society were strangers to one another. But notwithstanding this drawback the two hours spent in the election resulted not only in an enjoyable time, but also in the choice of an efficient executive under whose management the affairs of the society will receive able handling.

FRIDAY, OCTOBER 12TH.

After the business of the afternoon, viz., the appointment of the editorial staff of the MONTHLY, had been disposed of, with the result elsewhere indicated in this issue, the president delivered his inaugural address and the society proceeded to the enjoyment of the programme which had been provided. Mr. Hogarth gave an interesting talk on the "Tendencies of the Present Age," while Mr. Wood and Mr. Miller discussed various aspects of the social problem suggested by "The Man with the Hoe." This weighty matter was interspersed with selections from the Men's Chorus and Mr. Philips.

Owing to the intervention of Thanksgiving festivities, and then, in the following week, of that memorable "At Home," it was three weeks before the society again met in its regular session on

FRIDAY, NOV. 2ND.

At the meeting on November 2nd, it was decided that party government is detrimental to the best interests of our country. Probably there will soon be a change in our national politics. The debaters on the affirmative side, who were successful in convincing the judges, were Mr. Black and Mr. Langford; the supporters of the negative, Mr. Dolan, B.A., and Mr. Gunn, B.A. The ladies received much (too much) applause for their chorus. The other numbers on the programme were a recitation by Miss Ball and a solo by Mr. Newcombe.

*Athletics.*

THE first organization about the college to come into being and activity was the Men's Athletic Association. A meeting was called soon after the opening of the term and officers and committees appointed as follows:

- Hon. Presidents— { Hon. R. Harcourt.
- { Principal Thompson.
- Vice-President—Mr. Balfour (C. I.)
- Secretary—Mr. Morris (C. I.)

Treasurer—L. R. Whitely.  
Asst. Treas.—Mr. Parkhill.  
General Committee—Messrs. Watson, Keith  
and Hore.

SPECIAL COMMITTEES.

Association Football—Messrs. H. H. Smith,  
L. P. Whitely, and Hore. Rugby Football  
—Messrs. Elmslie, Fletcher and Ramsay.  
Tennis—Messrs. S. C. Webster, T. M. Gal-  
braith and G. A. Clark. Cycling—Messrs.  
J. E. Galbraith, J. D. Ferguson and Monta-  
gue. Basket Ball—Messrs. H. H. Smith, E.  
A. Dickinson and Balfour.

A little tennis has been played, but  
the chief interest centres around Ass-  
ociation Football. Basket-ball is being  
held in reserve for the winter months.

A district football league has been  
organized and a series of matches  
instituted, into which four teams, viz.,  
those of Hamilton city, Kilbride,  
Waterdown and O. N. C. have entered.  
The winner of the series is to be ac-  
cording possession for one year of a  
silver cup donated by the Hamilton  
Spectator. Thus far the contest has  
been a remarkably close one, no one  
team showing marked superiority over  
the others, as the following particulars  
will testify :

O. N. C. VS. KILBRIDE (AT KILBRIDE )

On Saturday, October 20th, our  
"featherweights" journeyed to Kil-  
bride to do battle with their "stalwarts"  
on the football field. The scene of  
conflict was one that would delight  
the heart of a geologist and cause a  
palæontologist to go into ecstasy at  
the prospect. There was in short  
sufficient material on the ground to  
construct a Chinese wall for the touch  
line. It was so late when the game was  
called that the time had to be short-  
ened twenty minutes in order to finish  
before dark. Our boys seemed to keep  
the ball in the region of their oppo-  
nents' goal, but were weak in scoring.  
Near the end of the first half Bradt  
tallied a point for Kilbride. This was  
the only goal scored. The following  
are the players:

Kilbride—Taylor; Carbert, Ram-  
shaw; Irwin, McNiven, Boynton;  
Gastle, Springer, Raspberry, Feather-  
ston, Bradt.

O. N. C.—Matheson; Watson, Fer-  
gusson; Thompson, Downey, McEwan;  
Phillips, Gilchrist, Bailey, Whitely,  
Hore.

O. N. C. VS. WATERDOWN (AT WATER-  
DOWN.)

This second game took place on the  
Saturday following. During the in-  
tervening week our boys settled down  
to good hard practice and the result of  
this training was seen in the improved  
article of football which the college  
"put up" in this game. It was a  
hotly contested match from start to  
finish, but our forwards excelled in  
scoring ability and so carried off the  
honors of the day. A goodly number  
of supporters journeyed by carriage  
and cycle to Waterdown, and regard-  
less of the laws of voice production  
cheered our boys on to victory. In  
the first half the college scored two  
goals; when play was again resumed  
their opponents notched a point, but  
soon after our boys tallied another,  
leaving the score at the finish 3-1.  
Our team was the same as that which  
played at Kilbride, except that Lewis  
replaced Matheson in goal. Water-  
down was represented as follows: W.  
Burns; Stock, J. Burns; Higginson,  
English, Cordner; Gilmour, Crusoe,  
Organ, Johnson, Robertson.

KILBRIDE VS. O. N. C.

This was the first home game for  
our team. It took place on the Y. M.  
C. A. grounds on Saturday, Nov. 3rd.  
It proved most interesting and excit-  
ing, as the teams were quite evenly  
matched, what our boys lacked in  
weight being made up by superior skill  
in handling the ball and in combina-  
tion play. The game, however, lacked  
the brilliant features which marked  
the Waterdown match. The visitors'  
defence was sure and heavy and proved  
a serious handicap to our light for-  
wards. The college team was also  
weakened by the enforced retirement  
of several of the best players owing to  
injuries received at Waterdown. Kil-  
bride scored the first goal, the college

the next two, and then just before half-time the visitors evened the score. No scoring was done in the earlier part of the second half, but at last the visitors succeeded in adding another point to their credit. Our boys then "warmed up", and shortly before the whistle blew again evened the score, and it stood 3-3. Both teams now struggled hard to snatch a victory, but in vain. The game ended in a draw. The students, including quite a number of the ladies, as well as many from the collegiate, turned out to cheer for the O. N. C. Our team as reorganized was made up of the following: Lewis; Watson, Thackery; Thompson, Downey, McEwen; Hore, Bailey, Whitely, Phillips, McDonald.

The O. N. C. team has still three games to contest—

- Nov. 10th, vs. Hamilton.
- Nov. 17th, vs. Hamilton (return match).
- Nov. 24th, vs. Waterdown.

At the time of writing (Nov. 6th) the standing of the teams of the league is as follows:

	WON.	LOST.	DRAW.	PTS.
Hamilton.....	2	1	0	4
Kilbride.....	1	1	1	3
O. N. C.....	1	1	1	3
Waterdown.....	1	2	0	2

### Women's Athletic Association.

A full meeting of the girls was held on Oct. 12th to re-organize the O. N. C. W. A. A. In a very short time officers were elected and the society in smooth working order, in spite of a slight temporary depression caused by Mr. Thompson's announcement that the demands of caste make the Women's Association a separate organization.

A little tennis has been indulged in, but the general opinion seems to be that teaching in the suburban schools affords sufficient physical and mental recreation. However it is hoped that when the novelty has worn off, basketball teams will be organized that will rival the glories of other years. The

officers elected for the fall term are as follows :

- Hon. President—Mrs. J. T. Crawford.
- President—Miss E. M. Neilson, B.A.
- Vice-President—Miss E. M. McKay.
- Secretary-Treasurer—Miss E. C. Urquhart.
- Committee—Miss Taylor, Miss Buell, Miss Hall.

E. M. M.

### Y. W. C. A.

On the afternoon of October 15th Miss Little, B.A., of Toronto, addressed the ladies of the Normal College on the advisability of forming a Y. W. C. A. in connection with the college. The students unanimously decided to form an association and organized the same afternoon. It was afterwards decided to invite the pupils of the Collegiate Institute to become members, so a re-organization meeting was held on the 31st, at which the following officers were elected :

- Hon. President—Mrs. Davidson.
- President—Miss Bowman.
- Vice-President—Miss Broughton.
- Recording Secretary—Miss Norton.
- Corresponding Secretary—Miss Breckon.
- Treasurer and Curator—Miss Waters.
- Councillors—Misses Taylor, Johnston, Wise and Youngson.
- Gazette Correspondent—Miss Guest.
- Convener Membership Com.—Miss Thompson.
- Convener Missionary Com.—Miss Bollert.
- Convener Musical Com.—Miss Patterson.

Meetings are to be held each Wednesday at 4.05 p.m. in Room 16. Much interest in the work has been evinced. The students are earnest and enthusiastic and intend to have splendid meetings.

### Just Among Ourselves.

Oh! Br—n, where do all those letters come from?

D-w-n-y, about 12.20 a.m., locality not stated—I think every student should be provided with a map of the city.

What *maid* Th—k—y so ungallantly state that a teacher must always be a *gentleman*?

Dr. McL-l-n, investigating the cause of that mysterious shout, "Hurrah for Laurier!" mentally ejaculates: "Let me c-l-u-t-c-h thee!"

The library of the British museum occupies fourteen acres. "Yes," remarks our punster, "but three of them are only *commen-tators*!"

Here are some pointers for our very clever people who are trying to teach in the Public School:

In promulgating your esoteric cogitations or articulating your superficial sentimentalities, and amicable, philosophical or psychological observations, beware of platitudinous ponderosity. Let your conversational communications possess a clarified conciseness, a compact comprehensibility, coalescent consistency and a concatenated cogency. Let your extemporaneous descantings and unpremeditated expatiations have intelligibility and veracious vivacity without rhodomontade or thrasonical bombast. Sedulously avoid all polysyllabic profundity pompously, psittaceous vacuity, ventriloquial verbosity and vaniloquent vapidity. Shun double *ententes*, prurient jacosity, pestiferous profanity, obscurant or apparent.

In other words, talk plainly, briefly, naturally, sensibly, truthfully. Say what you mean, mean what you say, and *don't use big words*.

### *Answers Heard in the Classes.*

Teacher—What is Syntax?

Pupil—A tax on whiskey.

Teacher-in-training—Now we have found that air contains oxygen, hydrogen and aqueous vapor; what else?

Observant pupil—Small insects.

Teacher, laboring hard to explain the difference between loose and periodic sentences,—Now this is a loose sentence, what do you call that other?

Little Mary (triumphantly)—Tight. (Teacher collapses.)

It was a grammar lesson, and the teacher wrote on the blackboard, by way of example, the sentence: "The Americans own Canada." Instantly there arose a chorus of jealous young patriots' voices: "No they don't, and never will; that's not true!" And the teacher must perforce change his example.

### *New Books Received.*

"How to Extract Gold from Sea Water, with Special Applications to the Art of Collecting," by Hon. Daniel Webster, S. T. D.

"Psychology Reapplied," (illustrated with numerous plates and woodcuts) by Prof. Johann Elz Painter, Ph. D. (Leipzig), B. Crit. (O. N. C.)

"The College Literary Society as she ought to be run," by August Walpole Keith, formerly Fellow of University College Literary and Scientific Society.

"The Mysteries of the Electro-tioner's Art," by Sir Robert James Sprott, M. D., surgeon and official *Masseur* to the O. N. C. football team.

"An Effort to Combat the Growing Prevalence of a Frivolous Attitude towards the Sacred Passion of Love," by Herrick Wordsworth Kerfoot, author of "Janet Woodbridge, a Tale of True Love," and other stories.

The new schools of New York in the form of an H are models in point of lighting and ventilation.

It was a jolly band of students that marched forth with banner and bunting on the evening of November 6th, to join in the welcome to our gallant soldier boys. The college yell (or yells) swelled forth amid the din, and the citizens of Hamilton realized as never before that there is an institution in their midst called The Ontario Normal College, which is very much alive.



**December Examinations, 1899.**

**SCIENCE OF EDUCATION.**

1. (a) State and illustrate some of the principal rules of method deduced from the Analytic and the Synthetic activity.

(b) Shew how a succession of sensations may become a CONSCIOUS series, and how this may become a number Series.

(c) Give the substance of Preyer's Second Chapter.

2. (a) Number is put into things rather than got out of them.

(b) In counting we drop the qualitative and attend only to the quantitative.

(c) Discuss the Psychology of the Fraction.

*NOTE—Only one question to be taken.*

**HISTORY OF EDUCATION.**

1. (a) Give and criticize Quick's Views on the DEFECTS OF THE RENAISSANCE and its tendencies.

(b) Give explicitly Ascham's Latin Method; how far is it psychological?

(c) State definitely Mulcaster's principles of education. How do you rank him as an Educational Reformer?

2. Give a full analysis of Spencer's first Essay. Write in full upon one of the chief divisions of your analysis.

*NOTE.—Candidates are to take only one of the two main questions.*

**EDUCATIONAL PSYCHOLOGY.**

1. Discuss with various illustrations.

(a) Attention is kept fixed only as it is kept moving.

(b) The Goal of Attention. (c) Apperception and Retention.

2. Explain giving definite illustrations:—

(a) The Physical functions mature in a certain order.

(b) The relation between Perception and Conception.

(c) From the Sensuous to the Ideal.

3. Give and comment upon the main points—

(a) Of Preyer's First Chapter.

(b) Discuss the law of Unity as applied to

(1) Poetry, (2) Oratory.

(c) The different kinds of Prose.

(d) Consider what is Discipline?

*NOTE—Only one question to be taken.*

**METHODS IN MODERNS.**

1. State the benefits which should arise from a thorough training in Modern Languages. To what extent can this be realized in a High School course?

2. In teaching a lesson in Sight Translation in German to a Form 3 class, show how you

would carry out the principal of proceeding from the Known to the Unknown.

3. Teach a lesson on the Reflexive Verb in French to a Form 3 class which have met with some of the forms casually in their reading. Illustrate your method by questions and answers.

4. (For Specialists) Have you any different object in view in teaching a lesson in translation to Forms 3 and 4? If so, how will it effect your method of teaching.

**METHODS IN MATHEMATICS.**

1. What is the special object sought in the teaching of Geometry? Show what steps you would take, in pursuit of this object, in dealing with the Axioms of Geometry.

2. Give illustrations of the use you would make of each of the following educational maxims, in the teaching of elementary Geometry:—

(a) From the concrete to the abstract.

(b) From the whole to the part.

(c) Learn to do by doing.

3. "The angles at the base of an isosceles triangle are equal, and if the equal sides be produced the angles on the other side of the base shall be equal." Euc. I, 5.

What are the causes of the difficulties in this proposition and by what steps would you prepare the pupil to overcome them?

4. Show how you would introduce to the pupil the indirect method of demonstration, your object being to prove the theorem—"If the angles at the base of a triangle are unequal, the opposite sides are unequal."

**METHODS IN BOTANY.**

1. In outlining a course in botany for the work of the first year in the High School, what importance, relatively, would you attach to—

(a) Mental training. (b) Acquisition of Knowledge? State the reasons for your answer and give a detailed account of the particular training you would expect the study of Botany to furnish your pupils.

2. You are assigned a lesson on the flower to be taught to a class that has never studied this part of a plant.

(a) Outline briefly the plan of your lesson naming the particular flower you intend using.

(b) Teach the lesson exemplifying your views on the following points particularly:

1. The relation of teacher and pupil.

2. Observation work by the pupils.

3. Introduction and use of Technical Terms.

## METHODS IN PHYSICS.

1. Compare elementary Physics, as a teaching subject, with elementary Chemistry.
2. Outline a lesson on the kinds of Energy, and show how to introduce the units of Energy, Work and Power.
3. Show by question and answer how to teach a lesson, on finding specific gravity of a piece of wood. (Use balance, not graduated tube).

## METHODS IN GRAMMAR.

1. Develop to a Form 2 class the grammatical values and relationships of the subordinate clauses and underlined words in the above extract.
2. "Grammar," through the nature of its presented materials, tends especially to develop scientific spirit." Explain, and show what general method you would pursue to attain such a development.
3. Outline your first lesson on the Infinitive.

## METHODS IN LITERATURE.

1. What are the results desired from the study and teaching of Literature?
2. The Ideal and the Real are not contradictory but rather complementary. Examine the truth of this with special reference to Literature; state the limits and uses of each.
3. "Earth has not anything to show more fair: etc." (Wordsworth's Sonnet.)
  - (a) Give such an analysis of the above as will indicate the line you would follow in teaching it to a Form 3 class. (A mere list of headings is not sufficient.)
  - (b) Frame a list of six questions which would, in your opinion, best serve to open up the meaning of the sonnet. (Explanations of these questions may be added if desired.)

## METHODS IN LATIN.

1. Indicate briefly the psychological value of the study of Latin, as supplementary to the study of English.
 

Ille appellatus respondit: Si velit secum colloqui, licere; sperare, a multitudine impetrari posse, quod ad militum salutem pertineat; ipsi vero nihil nocitum iri, inque eam rem se suam fidem interponere. Ille cum Cotta saucio communicat, si videatur, pugna ut excedat et cum Ambiorige una colloquantur: sperare, ab eo de sua ac militum salute impetrari posse. Cotta se ad armatum hostem iturum negat atque in eo perseverat.
2. You have gone over the above extract with a Form 3 class as sight work, and have assigned it for home preparation. When you meet the class, a boy tells you that he could not make "head or tail" of the first sentence. Describe particularly the mode of procedure.

3. Translate the extract into English.
4. Briefly outline a lesson for a Form 3 class on the chief features of "indirect narrative", basing your work on the above extract.
5. (For Specialists only).
 

How would you proceed to clear up for a Senior Leaving Class the Syntactical difficulties in the following sentences:—

  - (a) *Cæsar expectabat si hostes flumen transiret.*
  - (b) *Mortem tibi denuntiavit nisi paruisset.*
  - (c) *Denos vobis sestertius misi, si forte pecunia opus fuisset.*
  - (d) *Si in hoc erravi, quis mihi irascatur?*

## METHODS IN SCIENCE.

1. Discuss the place of the text-book in Science teaching.
2. Outline your method of dealing with the STRUCTURE and FORM of the root before a class in third form Botany.
3. One of your pupils has returned from a Botanical trip with following among other specimens.
 

*Caltha palustris, Ranunculus abortivus, Anemone nemorosa, Hepatica acutiloba, Thalictrum anemonoides and Actea alba.*

Shew how you would proceed with a lesson in classification in so far as these specimens are concerned.

If among the remaining specimens there is one of the Genus *strictum*, how would you use it to impress an important point in your lesson on classification?
4. In answer to one of your questions a member of your class says that hydrogen will explode when a lighted splinter is brought to the mouth of a tube containing it. Shew, in detail, how you would proceed to correct his error.

## DRAWING.

- By Freehand Drawing, represent:—
1. An apple with stem upwards.
  2. A natural object of each of the following shapes:—
 

Prolate, Spheroid, Oblate, Spheroid, and Ovoid.
  3. A cup and saucer, the handle of the cup turned partly towards you.
  4. A common gallon coal-oil can.

## METHODS IN HISTORY.

1. Discuss concisely the study of History as to (a) its educational value.
  - (b) When and how it should be begun in school.
2. Give in outline, to Second Form High School class, a lesson on one of the following subjects, showing clearly what you consider the most important points to be emphasized.
  - (a) The Spanish Armada.
  - (b) The Administration of the younger Pitt, (1783-1800).
  - (c) The Reform Bill of 1832.

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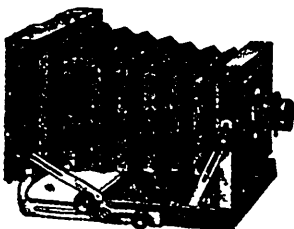
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