

# Ontario Normal College Monthly.

HAMILTON, ONTARIO, FEBRUARY, 1900.

## Ontario Normal College Monthly

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To the inquiry, "What's the matter with the class of 1900?" we would gladly return the time-worn response, but a strict regard for the truth forbids. We realize much reason for the ever increasing uneasiness of some of our lecturers. There is a felt want. What is it? Life and interest. (Perhaps things are not as they seem, but we can only judge from outside and visible signs). What is the cause of this listless, indifferent spirit, and more important problem still, what is the cure? In the Literary Society this spirit has shown itself from the first, more especially in the business sessions. Where last year there was war to the knife, this year there has been peaceful indifference, despite the solicitation of President and critic. However, since the last meeting of the Society we have been encouraged by the splendid promise of reviving animation.

Has the spirit of Spring in the air, recalling past and painful associations, concentrated all attention on our studies, that we have not time or interest to support College enterprises? If this be true, we might expect to see an interested attention to lectures, a spirit of earnest inquiry and a greater readiness to discuss

subjects submitted for consideration. But a feeling of diffidence, a marked unwillingness to stand and deliver is spreading even from east to west in the Amphitheatre. Is this indifference, or something else, or both? If we would, each and all, make an effort to arouse an enthusiastic interest in class, societies and all College enterprises, it would break the dull routine into which we must settle, and make our work here more pleasant and profitable for all concerned. Any bright ideas, as to what might be done to overcome this indifference and work up some enthusiasm, would be gladly received in the columns of our journal or elsewhere.

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In a former issue we expressed our general views regarding final examination papers on methods in the different subjects. At that time it was our intention to again consider the subject along about the same lines, but to enter more into details, and point out cases in which certain papers, in whole or in part, violate fundamental pedagogical principles. That, for the present, this intention is not carried out is due neither to lack of confidence of being able to vindicate, in every particular, the position there taken, nor to lack of material from which to give detailed and convincing examples of serious defects in these papers, but because we feel that there is another field in which we can do work more immediately effective. Last year the final examinations

were over by the last of May, while the results were not published until about July 20th. Why this delay? Why keep the candidate on the rack for seven weeks? Why seriously interfere with his chances of getting a situation by withholding from him the knowledge of whether he is to have a certificate or not? The examinations of the Normal Schools are held much later than are those of the Normal College, yet the results of both are published about the same time. From this we have proof positive that there is needless delay somewhere in publishing the reports of the College examinations. This delay must rest either with the examiners or with the Educational Department in neglecting to summon the Educational Council to consider the examiners' report. If the examiners have been at fault, surely arrangements can be made by which they will not require half the summer to read our papers. If the fault lies with the Department, they ought to be willing to put forth a little extra exertion in a matter of such great importance to every one of us. Let us carefully embody our grievances in a petition signed by every member of the class, and forward this to the authorities by a delegation who will personally second our efforts.

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What should be the character of the O. N. C. conversazione, is the question which is before the general committee for settlement, and it will demand careful consideration. There may be two views taken of the proposed conversat. The one is, that it should be a return made by the students to their friends in the city, who have entertained them during

their stay here. In this case, it would seem only proper for us to bear the expenses of such an affair ourselves, sending out tickets, free of charge, to those we wish invited, and providing a programme such as all our guests could enjoy. Although our funds would not be increased by the adoption of such a plan, it could, at least, be carried out without incurring a deficit.

The other view may be, that the conversat is mainly for the purpose of aiding the finances of the Society. This was, evidently, the intention of those who were in charge last year, when one was held jointly by the College and Collegiate. Every student, on the payment of fifty cents, obtained a ticket for himself and had the privilege of sending the names of five persons to the invitation committee, after which, each of these, if satisfactory, could secure a ticket for one dollar. The natural result followed. The conversat became the social event of the season, a full-dress affair, attended by a large crowd, in which dancing formed the chief part of the programme, and a small proportion only of the O. N. C. students were present. Financially, it was a success, about \$150 being divided between the College and Collegiate Societies. But, as a College function, it appears to us to have been a failure. Is ours to be a brilliant or a rather quiet affair? Is it to be carried on for the benefit of those who can have, certainly, no deep interest in the College, or, on the other hand, for those who have shown, by various acts of kindness to the individual students, that our presence here is something to them? This question will have to be decided from several standpoints. It might not be possible to secure permission for two conversats in one term, our treasury may need replenishing and the Collegiate may take a different view of the situation from that outlined above.

## A NOTE ON KIPLING.

In this age of lavish literary output no writer has so caught the fancy of the reading world as Rudyard Kipling has done; but this interesting fact alone is not proof that his work is of permanent literary value. If we wish to make a just estimate of the absolute and abiding place of a living writer, we are confronted with insuperable difficulties. To begin with, we are too near to view him dispassionately; time alone can fashion the moulds for true criticism of a new literary form, and make a final judg-



RUDYARD KIPLING.

ment possible. The likes and dislikes of individuals pass too often among contemporaries for criticism, and unthinking people are moved as much by the fad of the moment as by the abiding classic. Of Rudyard Kipling we can speak but provisionally; what we say, favorable or adverse, must of necessity bear the mark of uncertainty. Recognizing the truth of all this, however, one feels safe in saying that Kipling has that strange power and insight—something of that divine insanity called genius; that he has

given to the world some work which will live when much of the merely pretty, the pseudo-aesthetic, the sentimental and the farcical in modern book-making shall have crumbled into dust, unread and unregretted.

What strikes one first in Kipling's work is his universal knowledge and wide sympathy. He may not know an engine as accurately as the foreman of an engine-house does, but he knows it in a way that makes it a living thing, and we overlook the inaccuracies about bolts and screws. After all, truths are greater than facts. His sympathy has gone out to all workers, toilers on land and sea; and the man who refused to be lionized in scented drawing-rooms, took off his hat to the weather-stained seamen who manned the pilot boat in New York harbor, and who on recognizing Rudyard Kipling waved their oil-skins and shouted—

"By sport of winter weather  
We're walty, strained and scarred,  
From the kentledge on the kelson  
To the slings upon the yard,  
The ocean's had her will of us  
To carry all away."

This love of humanity blossomed early. It is significant that the child Kipling, trudging over a ploughed field on the Dekkan plain with his hand in that of a native husbandman, called back to his mother in Hindustani, at that time as familiar to him as English, "Good-bye, mother; this is my brother!" And has not the native of India come nearer to us in the bonds of brotherhood, because Kipling has broken down the barriers of race and class, and drawn aside the curtains that so closely veiled the lives of Indians and Anglo-Indians in that great empire of the East? The words of real genius are ever a revelation. The types, the materials, are always at hand but the artist alone sees and immortalizes them. Even when the pyramids were a-building India held treasures untold; ages passed; no one fully explored the

vast and teeming storehouse until the English youth discovered it to the world. Sweltering heat, fever-laden air, the stench of miasma, did not seem an atmosphere to breed contributions to literature. Superstitious natives, intriguing English officials, plain, common-place British soldiers, seemed poor material indeed out of which to weave tales to fascinate half the world. Yet that is what Kipling has done. He has shown us ruins of ancient cities and monkeys sitting in circles in the king's ancient council chamber, cholera-smitten camps, great star-lit heavens, hot moist orchids that make mouths at you, wolves with hearts of men, Indian princes and exiled British soldiers; and he has sketched both places and people with Shakespearian fidelity. He has a child's capacity for wonder. A world that was growing *passé* to dull ennuied eyes, became by the magic of his touch rejuvenated, and when much that was prosaic passed through his soul it shone resplendent with the light of old Romance.

In himself Kipling possesses the qualities that make for greatness. He has humility. He has reverence—reverence for religion, notwithstanding much that is seemingly irreverent. Deep down is a well of sympathy with the religious faith of his fathers, none the less pure and sincere because the soulless imitation of it is laid bare with withering scorn. He reverences heroism, self-sacrifice and a seeking after God wherever he has found it. He reverences woman. Why this talk of Kipling's low ideal of womanhood? He certainly has not spared the lash in castigation of certain society women who amuse themselves "playing tennis with the seventh commandment." Long may his righteous indignation continue, and heroically may he stand foursquare against all such immorality! But in Kipling's work there are glimpses of sweeter women than Mrs. Hanksbee and the Dainty Iniquity;

he has shown us women who are fitted to rank as the true life-comrades of brave strong-hearted men, women whose ambition is far other than that of "holding a salon together with their eyelashes."

Kipling has paid dearly for his popularity. He has been placed in a false position by fulsome laudation on the part of non-discriminating admirers—people who would fain make us believe that his power is without limit. He himself has uttered a protest against this sort of thing in a letter prefixed to Monkshood's "Rudyard Kipling, the Man and his work." In this letter he says: "There are so many ways in which a living man may fall from grace, that, were I you, I should be afraid to put so much enthusiasm into the abidingness of print until I was very sure of my man." Kipling has his limitations and faults. He has not the far-reaching flight of imagination that makes the very stars of heaven coigns of vantage from which these human souls of ours may view an eternity of space and time; such imagination as enabled Keats to write of the song

"that oft-times hath  
Charmed magic casements opening on  
the foam  
Of perilous seas, in faery lands forlorn."

But Kipling's imagination is strong and sound; his poetic gift is full of irresistible force; he sweeps us along with the resonant refrain—

"Oh, East is East, and West is West, and  
never the twain shall meet,  
Till earth and sky stand presently at God's  
great judgment seat;  
But there is neither East nor West, Border,  
nor Breed, nor Birth,  
When two strong men stand face to face,  
though they come from the ends of the  
earth!"

Kipling may not have that power of awaking emotions hitherto beyond the sphere of consciousness, emotions which leave us awe-struck when we contemplate the tempest-tost soul of King Lear, but he has in a very high degree, the power to make real and

vivid all the emotions of every-day experience.

Perhaps his most serious fault is prodigality of production. If he could reserve his pen but for high creative work; if he could but remember Goethe's words to Eckermann that the native land of poetic powers and poetic action is the good, the noble and the beautiful; if he would not do things to order, there would be less of the ephemeral in the volumes that bear his name. His needless coarseness has so often been referred to that criticism of it has become a commonplace. This coarseness may or may not be a fault. Those who daintily turn from many of his themes, would do well to remember that tip-toeing away from the seamy side of life with averted eyes or a look of condescension, may be but a subtle form of selfishness. In this connection it is well to remember that no one has written with more *tendresse* of the ways of little children than Rudyard Kipling. If his literary hail-good-fellowship takes him into unsavory and disreputable places, he is never found dallying there. He lets us know his opinion of the man who sent Jack Barrett to Quetta; nor is there any mistaking his estimate of Anne of Austria

"Who looted first  
The little silver crucifix  
That keeps a man from harm."

If coarseness is inseparable from the Carlylean earnestness with which he exposes hypocrisy, deceit and sham, we can forgive it. Everywhere may be read the tremendous moral—whatsoever a man soweth, that shall he also reap. Righteousness with Kipling is no sentimental twaddle. His sarcasm is never surer than when it shows what the so-called philosophic religion of the teacher with the taper fingers and the very tired look in his eyes, really is.

Like every great writer, this impetuous singer, and supreme story-

teller has a style all of his own. He may ignore rules of rhetoric; he may offend against rhyme and rhythm; he may overstep the bounds of grammatical good taste; but his witchcraft of insight and unbounded fancy, united to his simplicity and directness, give unique distinction to his literary expression; and the writer of the *Jungle Books* takes rank with the unknown authors of the *Arabian Nights*, not less for the matchless interest of his stories than for their perfection of form. More than this, Kipling has given us the point of view from which to judge his own work and that of every other imaginative writer. Nowhere has the secret of the true relations between realism and idealism in art, been more gloriously uttered than in the stanzas to the *True Romance*.

"Thy face is far from this our war,  
Our call and counter-cry,  
I shall not find Thee quick and kind,  
Nor know thee till I die:  
Enough for me in dreams to see  
And touch Thy garments' hem:  
Thy feet have trod so near to God  
I may not follow them."

These are not the words of a vulgar realist; they are the words of one who is in close touch with the eternal verities.

AGNES KNOX BLACK.

Cambridge, Mass.

### O.N.C. vs. H.C.I. Senior Leaving.

The first venture of the College basketball team on foreign ground was not very successful. On Feb. 7 they met the Senior Leaving Team of the Collegiate, and were defeated by a score of 21 to 4. This however scarcely indicates the game. The chief weakness of the College was in shooting, but with a few practices they will be able to put up a hard fight. The following was the team: Defence, Reid and Saunders; centre, Brady; forwards, Jolly and Black.

## The Concert at the Asylum.

On the evening of Thursday, January 25th, promptly at the appointed time, about fifty of the students availed themselves of the kindness of the Asylum Board and the generosity of the gentlemen of the Glee Club, and joined in the delightful drive to the Asylum. To many, that ascent of the mountain was a novel and interesting experience; to some the descent proved even more so.

Arriving at the Asylum, it would be difficult to say who were the entertained or the entertainers. During the first part of the evening the patients filled the concert hall and proved a very interested and interesting audience.

The selections given by the Glee Club were received with vigorous applause. "The Absent-Minded Beggar" was rendered by Mr. Johnson with patriotic spirit. To a rousing encore he responded with "Curl tae the Tee." "Life's Dream is O'er," was feelingly rendered by Miss McLellan and Miss Dowler. The recitation by Mr. Cook was fully appreciated and heartily encored. So well did he assume the *role* that, to the uninitiated, only the cloth seemed lacking. Last, but not least, came the farce given by the O. N. C. Histrionic Society, under the stage management of Mr. McKenzie. Only space prevents a lengthy dissertation on the merits of the several performers. Suffice it to say, all in their different parts were equally brilliant.

After the concert the patients retired and the hall was cleared of the chairs, tables brought in and refreshments served. Mr. Reid took this opportunity of thanking his hosts and hostesses, on behalf of the Glee Club, for the hospitality they had shown. Dr. Reynolds replied and by a few well chosen words gave everyone the pleasurable feeling of being a very welcome guest.

After all had enjoyed this refreshing part of the programme, the hall was again cleared, and those who could dance did full justice to the splendid floor; while those that could not dance did the next best thing, and enjoyed a very social hour. All too soon it was announced that the horses were waiting, and a very delightful evening was closed by singing "Auld Lang Syne" and "God Save the Queen." It was unanimously agreed that of all the enjoyable evenings spent by the Normal College students, none had been more delightful than that spent at the Asylum.

On the return journey an unfortunate accident occurred. One of the covered vans upset and all were thrown out. Miss Bulmer was struck on the side of the face and suffered considerable pain for several days. The rest escaped with a few bruises.

### NOTES.

An officer of the Glee Club was conspicuous by his absence.

Query in the audience—"Who is that tall young man, who carries so much music, but who does not sing?"

"Lady Ellen" drove home in her private coach, attended by three of her courtiers.

"What a large turn out there was of the Glee Club last night!"

"Yes, which turn out?"

The lancers was the most popular dance. There was a two-step—and but two stepped.

## Boarding-House Geometry.

The following have a familiar sound to all who have ever tried to follow old Euclid's vagaries of boarding-house life:—

### DEFINITIONS AND AXIOMS.

All boarding-houses are the same boarding-houses; boarders in the same boarding-house, and on the same

flat, are equal to one another ; a single room is that which has no posts and no magnitude. The landlady of a boarding-house is a parallelogram, that is an oblong and angular figure which cannot be described but which is equal to anything. A wrangle is the disinclination of two boarders to each other that meet together but are not on the same flat. All the other rooms being taken, a single is said to be a double room.

#### POSTULATES AND PROPOSITIONS.

A pie may be produced any number of times. The landlady can be reduced to her lowest terms by a series of propositions. A bee-line can be made from any boarding-house to any other boarding-house. The clothes of a boarding-house bed, though produced ever so far both ways, will not meet. Any two meals at a boarding-house are together less than two square meals. If from the opposite ends of a boarding-house a line be drawn, passing through all the rooms in turn, then the stove-pipe which warms the boarding-house will be within that line.

### “Helluland.”

#### SECOND PAPER.

The first to take advantage of the abundance of fish on the banks of Newfoundland and in the waters around the shores of the island were the fishermen of Brittany and Normandy. These were soon followed by others from the Basque Provinces in the northwest of Spain. Englishmen were later in commencing this industry, but they followed it up so vigorously that they soon gained rapidly upon their rivals, the French. The gold regions of South America attracted the enterprise of Spain, and soon Terra Nova was left to the entire possession of France and England. Both nations drew enormous wealth from the island ; both found

the prosecution of the industry the best means of training bold and skilful sailors. Colonies were planted by both with the intention of guarding and protecting the fisheries. In this way the Newfoundland fisheries really laid the foundation of England's maritime supremacy.

For more than a century and a half the settlement of the island and the cultivation of its soil were sternly prohibited by law. This was done in order to keep the numerous coves and harbors open to the use of the fishing captains and merchants who came from England every summer to catch and dry fish, and then return home at the end of the season with the products of their labor. This system went on for generations till these merchant monopolists began to consider the island their own. By their wealth and influence they were able to persuade the successive governments that the fisheries would be ruined if the island became populated, and that they would cease to furnish seamen for the Royal Navy. Therefore laws were enacted forbidding any one to go to Newfoundland as a settler. Masters of vessels gave bonds of £100 binding themselves to bring back each year all those persons taken out. Settlement within six miles of the coast was prohibited ; no one could enclose the smallest piece of land, or even repair a house without a license.

Blood counts for much. Climate, modes of life, general environment may do much to modify racial characteristics but can never efface them. Ancestry is an important factor in shaping the destinies of a people. The Saxon and the Celt have taken to the soil, battled with the billows and the ice-floes, drawn a scanty subsistence from the stormy ocean under discouragements of all kinds. They have buffeted the storms and drunk in the invigorating sea breezes until a hardy, robust race has sprung up, endowed with industry, energy, courage, self-reliance and true manhood.

The condition of the fisherman of to-day is greatly improved, yet even now his life is a hard one. His labors, when fish are abundant, are severe and never ceasing. About sundown the boys go "squidding" in a dory, and if squid are plentiful one boy will take enough for bait for that night's fishing. I have often seen a row of from 30 to 50 dories side by side with the men going through the most laughable movements in taking the squid. A shore fisherman tells when to go out to set his lines or place his traps by the movement of the capelin, a small fish about the size of an ordinary brook trout. When the capelin come up into the bays in great numbers it is a sign that the cod are coming, because the capelin are trying to escape their larger neighbors. Besides being used as bait the capelin are dried and form an article of food for the poorer classes. When taken in great abundance they are carted to the land and piled in compost heaps to be used for fertilizing the potato and turnip gardens. Much of the work of "making" or curing the fish is done by the women and girls whose work is often very heavy. Women do the weaving of nets for lobster traps, catch squid for bait, spread and pile the fish upon the stages and flakes for drying, and carry upon their backs the few hundredweight of hay from the "garden" for the goat's winter provision.

I'll never forget the appearance of St. John's during the fortnight that the *bankers* were preparing to leave for their summer's work. The spacious harbor was a perfect forest of masts. Every slip and cove was overcrowded with smacks of all sizes loading with firewood, salt, flour, pork and molasses—the salt for the cod to be taken at the banks, the other articles for the needs of the men. Water street, the main street of the city, running parallel with the harbor throughout its whole length, was swarming with big, brawny, sun-

burnt, wind-beaten fishermen in oil-skin clothes and heavy knee boots. These men assemble from the whole coast to get supplies from the merchants. The merchant or supplier fits out the crews with necessary gear and provisions for the voyage to the Banks. If the catch is a good one, the fisherman is able to pay for his summer supplies and have a snug balance with which to lay in a stock of provisions for the winter. The merchant takes great risks and in bad seasons his losses are often heavy. Then, too, the poor fisherman is at the mercy of the merchant who can sort and cull his fish to suit himself. Often the poorer shoremen have to sell their fish "talqual," *i.e.*, only partially dried.

When the fisherman's boat reaches his stage—a platform covered with spruce branches and supported on poles above the water—the fish are thrown out upon the floor with a "pew," a sort of two-tined fork. The "cut-throat" with a long knife slits open the fish and passes it to the "header" who first removes the liver, placing it in a vessel to be used for cod-liver oil. The head and viscera are saved and mixed with bog and earth for a fertilizer. The tongues and sounds, or air-bladders, are carefully saved for pickling. Next the "splitter" removes the backbone and then the "salter" washes away all the blood and salts the fish upon the floor of the fish-house. After remaining in heaps for a few days they are thrown into the shallow water along shore and washed. In doing this the men wear "cuffs," large four-ply knitted woollen mittens which are about five times as long as necessary when made, but they soon shrink to fit the hand. These are worn to prevent the projecting bones from tearing the operator's hands. The flattened fish are then carried to the "flakes" and spread out for drying. Every night they are piled and covered with old sails to keep out rain or fog. If in the

early stage of the drying there should come a few unfavorable days, the fish "slime over." The washing has then to be repeated before drying can be continued. If more than one "sliming" should occur, the cod takes a yellowish tinge and is no longer of first quality. After the curing is completed, the fish are sorted according to size and color into eight grades, 1st and 2nd Merchantable; 1st and 2nd Madeira; 1st and 2nd Brazils, and 1st and 2nd Cadiz.

Strict and well-enforced laws regulating modes of fishing, the taking of immature fish, the using of nets of a nature destructive to young fish and the observance of close seasons have done much to arrest the decline of this valuable industry. Added to this is the establishing at Dildo, on Conception Bay, of a hatchery for the artificial propagation of the cod and lobster. Now the spawn is carefully preserved and propagated in floating incubators. In this way millions of fry are placed in the waters annually.

While man is doing all that scientific study and invention can do to perpetuate the noble cod, Providence continues to provide food. It is one of Nature's peculiar provisions, one of her wonderful processes that makes good to come out of apparent evil. The Arctic Current carries in its icebergs, the terror of sailors, countless tons of ocean slime from the seas and rivers of the Arctic regions. Upon this "slime-food" swarms of microscopic crustaceans, annelids and mollusca feed. These in turn furnish food for the capelin, squid and herring which are devoured by the cod. When the cod is assimilated by man, Nature's circle is complete. Curious enough this slime is most abundant in the neighborhood of ice-fields and icebergs and so long as the Arctic Current flows, the existence of the cod fishery is assured.

These ice-fields carry another source of wealth. From the 10th to 20th of

February are born the young seals, and so rapidly do they grow, that by the middle of March they are in best condition to be taken. They must be sought before they take to the water, *i.e.* at about the sixth week of life. When born, and up to the time of leaving the ice, the baby seal is snowy white. After leaving the mother it is no longer a "white coat" with smooth woolly fur, but it becomes a "ragged jacket" with rough, spotted, darkish fur. These young seals are the best for oil and fur. The pelts with fat attached are taken in to St. John's or Harbor Grace, and there the oil is extracted by a process in which steam is used for "trying out." Large glass-roofed tanks hold the oil during the "sunning" or clarifying process.

These folk live most peaceably among themselves, a quiet, orderly, church-going, law-abiding, sober people. They have few warts, and apparently take life in a free-from-worry style. Everything is very uncertain. This has trained them to great patience and untiring perseverance. They have learned to be always ready for they know not the day nor the hour when their greatest harvest is to be taken. Their characteristics may be summed up by quoting two of their sayings—"It's too late to make your canvas when the breeze is on," and "Never bid the Devil good-morning till you meet him."

Education is quite backward. Only lately has any very serious attention been given to this need of the people. It is impossible to have school sections in the smaller settlements, in small coves widely separated by capes and promontories. There are hundreds of settlements consisting of from a dozen to twenty families, scattered along a shore, all poor and struggling hard for daily bread. There is no system of education; everything is carried on upon the denominational principle, there being four Superintendents of Education. There would

be more if there were more denominations to be represented. There are a few fairly good schools in St. John's with some attempt at preparing students for matriculation to the University of London.

In spite of privations and hardships there is perhaps as much genuine happiness among them as anywhere. They have many pleasures. Even in summer if the wind should be in the wrong direction for fishing, they can in a very short time get up a dance, and to the music of the fiddle, flute, or Jew's harp, they will "trip the light fantastic" (not always light but certainly fantastic) with vigor and honest heartiness. Weddings in particular are celebrated with great gaiety and festivity, which at once indicates an exuberance of animal spirits and much kindly sympathy with the "happy couple." Indeed sympathy is one of their cardinal virtues and is shown again even more strongly on funeral occasions. Often the corpse has to be taken miles in a boat in order to find earth enough in which to dig a grave, or to get to a clergyman or priest. A very sad and touching sight it is to see a procession of fishing boats and dories in funeral order. Then it is that the real, sympathetic, loving nature of these toilers by the sea best shows itself.

H. F. COOK.

### **Cramming : Its Uses and Abuses.**

[The number of replies received by the editors on the subject presented last month for general discussion, was disappointing. The few that came in were taken charge of by Mr. S. J. Courtice, who combined them into the article below. Owing to the fact that the examinations will be going on when the next issue comes out, it has been considered advisable not to offer any topic in this number.]

In a student's life there occurs a succession of crises, otherwise called

examinations. His ability to successfully pass them, depends upon his power to assimilate, master and reproduce thought. This power is of the same nature as that which he will afterwards be required to use in the emergencies of practical life. Hence, it is important for us to consider, keeping in mind the nature of our Education system, the place which cramming should occupy as one of the operations by which a student is fitted to successfully pass examinations. As the word cramming is used to designate so many modes of procedure, it will be necessary to discuss this subject from two or three different standpoints.

Cramming, in its narrowest application, refers to the process of storing the mind with facts which are not understood. Students have been known to memorize the whole of the first book of Euclid, without having the faintest glimmer of the underlying relations. Others, in a Greek-English translation, have memorized, by the aid of a key, the English rendering, without seeing any connection between the two languages. The benefits of such a practice are so difficult to perceive, while its evils are so apparent and manifold, that it would be useless to attempt an enumeration of them.

But in the sense of making a crude preparation for a special occasion by a hasty and extensive course of study, cramming has a very wide application. Nearly every student, who has made much progress, has been guilty, at some stage of his career, in one or two subjects at least, of preparing for examinations by this method. This requires, on the student's part, concentration of his faculties, ability to quickly seize the important outlines of thought, together with a very lively exercise of memory. While to some extent, this is undoubtedly true, yet on the very threshold of such a course, there is stamped the symbol of its real value, for in the

preparation of any work, to say that it is crude, is to acknowledge at once that there is pleasure neither for the student, who should be searching for truth, nor for those who are unfortunate enough to be obliged to peruse the result of his superficial investigations. There can be but small satisfaction to any student, when any subject is brought up for discussion, in having to acknowledge, to himself at least, that his ideas are so hazy that it would be dangerous to give them utterance.

From a physical standpoint, cramming, likewise, has its objections. A prolonged mental effort often results in an undue strain to our bodies and a strong, and often, harmful, reaction follows.

Having thus briefly viewed the process of cramming, in its objectionable forms, we shall now suggest a proper place for it, whether as a preparation for the actual examination of the student, or as a necessary training to enable him, when college days, all too soon, are over, to face manfully and at once, the emergencies of after-life. Undoubtedly, in the early stages of the process of mastering any subject, of interpreting the author's thought, cramming should play a very small, if indeed any, part. It may be that the student, during the year, has mastered the various parts of a subject, but if asked to pass a fairly difficult examination on it, with no opportunity of reviewing the subject, and thus marshalling the army of related facts to the front, he would be found to fail sadly. If then, to that hasty but thorough review, which follows the careful and reflective investigation of any subject, the name of cramming is given, we see that this process may become highly educational. But even for this somewhat new application of the term, the highest educational advantages cannot be claimed, since literary culture, the end of all education, consisting of the

thorough assimilation of various branches of knowledge, the conscious possession of them, and the contemplative delight arising from them, cannot possibly be attained by any system of cramming.

### For Freedom's Cause.

(WRITTEN FOR THE MONTHLY).

Sad the news and deep the wail,  
Dark and gloomy is the sky;  
They tell of Britain's bravest sons,  
Who dead, on Afric's soil now lie.

Deep the wound that tears the heart  
Of Britain, while the nations threat;  
O, Land of Freedom, will you die,  
Or will you stand for freedom yet?

Rouse, ye bards, through all the land;  
Rouse, ye songsters, great and free;  
Rouse, ye patriots, of our isles;  
Britons' Britain yet must be.

Rouse, ye Britons, for the fray!  
Calm and steady to your post.  
Ye shall triumph, ye shall win  
'Gainst the wild barbarian host.

Hear that faint and distant roar!  
Hear that long suppressed roll!  
Lo! it spreads o'er all the land  
And stirs the depth of Britain's soul.

See, the look of grim resolve  
Fastens on each Briton's face!  
See the fire in the eye!  
See the strength in every pace!

"We have set ourselves a task,"  
Comes a voice from East and West.  
"Shall we pause for Europe's hate  
And lay us in eternal rest?"

"We, who hold a thousand years  
Of glory, blood-bought in the past,  
Shall we extinguish from our souls  
The fires of freedom now, at last?"

"Shall we falter in the work?  
Shall we let the burden fall,  
Which our God has given to us?  
Shall we, in danger, scorn the call?"

"Shall we falter in our duty?  
We, who wear His glorious yoke!  
Never, never and yet never,  
Till our hearts are lifeless oak."

DEC. 19th, 1899.

### To The Flower De Luce.

The Iris is crowing so stately and slender  
 Down in the glen where the dark waters  
 flow.  
 Dost thou fear not the shadowy silence  
 beneath thee?  
 Nor long for the light when the hill-tops  
 glow?  
 Bright flower of the marshes! we gladly  
 enwreath thee,  
 Emblem of truth that the strong soul  
 would know.

The night-breeze is lingering with death-  
 signs about thee  
 Alone, all the night, he has sought thee;  
 in vain.  
 Thy fragrance, subdued by the pall brood-  
 ing o'er thee,  
 Shall never be borne through the hedge-  
 rows and lane.  
 Pale flower! in the darkness, bedimmed is  
 thy glory;  
 But Truth, crushed to earth, shall rise  
 stronger again.

Afar in the east, the bright blush of Aurora  
 Proclaims that her Sun-god rides over  
 the sea;  
 Thy petals shall ope at the touch of her  
 fingers,  
 Thy dew-drops shall glisten like gems of  
 the sea.  
 Then flower of the marshes! while day-  
 dawning lingers,  
 Emblem of truth that soon shall be free.  
 R. S. V. P.

### Society Notes.

Turnipsville was all agog on Friday, the 1st instant. The society event of the season took place, when Sheriff McLean invited his friends to witness the trial of a noted sheep-stealer, Ebenezer Hayreub, alias Huyck, alias *ad in, in*. Long before the court sat, all the beauty and chivalry of Turnipsville were gathered there. At last a heavy tramp announced to the brilliant throng the arrival of Lord Chief Justice Loucks, who looked stern and severe in his robes of black, and Judge Ramsay, who, to show that his former pro-Boer sentiments had been only *pro tempore*, had discarded his official gown, and draped himself in a Union Jack. The judges were preceded by Sheriff McLean, Knight

Commander of the Bath-towels, with his famous wooden sword. Then followed abreast Lawyer Munro, wholesale dispenser of epigrams and bons-mots, counsel for the plaintiff, and that silver-tongued orator, Lawyer Coons, counsel for the defendant. After them came the high-tension, India-rubber, irrepressible little Clerk of the Court, Mr. Young, who looked sweetly pretty in his black silk gown; and by his side the Court Crier, Mr. Cook, who was dressed in a suit of clothes with buttons down the front of the coat. A long line of sturdy constables brought up the rear.

When all were seated, the Crier, who, by the way, has finished just recently a long course of voice culture in both the De'sartean and Italian systems under the best masters in Europe, broke the solemn stillness with his recitative of the why and wherefore and the whereas of the present session. But Mr. Cook in his perambulations has picked up seventeen different languages, and for ten long minutes the Tower of Babel simply wasn't in it.

When order was restored the Court proceeded to select twelve honest men and true. A crowd of hobble-de-hoys from the back benches, including one idiot who was struck dumb with terror at the sight of the prisoner in an adjacent room, were the victims.

The prisoner, by the way, was as hard looking a character as one might wish to see. In order to create a good impression he had dressed himself in his best—a suit of blue cotton overalls of unequal length as to the legs, with a quadrilateral extension over the corsage. But a mirror is probably not included in the furnishings of his boudoir for he had neglected to extract the straws and hayseeds from his frowsy locks. He certainly deserved the punishment which in the course of justice was meted out to him. One almost felt sorry, when gazing at the moral wreck, that the

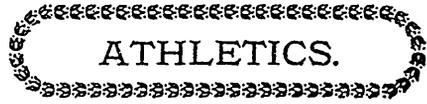
ancient laws have been repealed, but it must be to him a great amelioration of his grief to have his name mentioned here in such polite company.

The gowns worn by the ladies present were very handsome. Miss Baker wore a fichu of honiton lace and white organdie with diamond buckles. Miss Allan was radiant in black silk cretonne with an overdress of ostrich feathers. Mr. Nathaniel Hawbuck, the plaintiff, looked scrumptious in an overcoat of brown wool, girt with a triple cotton cord, and a goatee *a la Napoleon III*, and a coiffure *deshabille*. Miss Shawcross looked sweet in a handsome costume of mauve poplin trimmed with a bodice of pale chiffon on the pleats. Miss Bruce was in black corded silk, and wore a jewelled passamenterie on the train. Miss Campbell looked majestic in yellow silk, veiled with blue mousseline de soie with large metal buttons on the back. Elsie Carter, witness for the plaintiff, whose whiskers gained him many admirers, looked elegant in a tight bifurcated woollen skirt or pantaloon, sustained at each shoulder by elastic suspenders which slipped over metal buttons attached to the waist. Over all he wore a quondam black corded silk claw-hammer coat. High waterboots added to his well groomed appearance. Miss Procnier was beautiful in a green tartan bodice trimmed with linoleum flaps basted to the gores and veiled with saffron plumes.

Mr. Schooley, R. A., witness for the defendant, wore a nervous manner, and white duck pants with colored spots, a heavy knitted woollen jersey open at the front, and a soft black sombrero with a crenated edge. Around his neck he had a vivid scarlet woollen cravat tied in several true lover's knots. Miss Watterworth was magnificent in a tassellated reticule with iridescent sequins of blue guimpe brocade on the corsage and a waist-band of green lace with pendant

slashes in the sleeves. Miss Mitchell looked majestic in Swiss muslin with sable trimmings on the bias. Her hat was a large black beaver with orange plumes and white tulle slashed at the sides.

Many others were conspicuous but space forbids description. FRILLS.



## ATHLETICS.

### Athletic "At Home."

The Athletic "At Home," one of the College functions that precedent causes to be regarded in the light of an annual affair, took place in the Assembly Hall of the Institute on the evening of February 16th.

Shortly after eight o'clock the guests began to arrive, and were received by Mrs. MacPherson and Miss Mitchell, the Honorary President and President of the Women's Athletic Association, and by Mr. Dunkley, the President of the Men's Athletic Association. Mrs. MacPherson wore a most becoming gown of grey, trimmed with pretty pink silk. Miss Mitchell's dainty, white organdie, with its fine lace insertion and its pretty square-cut neck, was particularly becoming over a pale blue under-dress.

At about a quarter to nine, when the room was filled with a gay, happy company busily engaged arranging for promenades, it was announced that the program was about to begin.

The opening number, a piano solo by Mr. Bates, was much enjoyed by the audience. Mr. Cook's recitation, a pathetic little story of negro life, was exceedingly well rendered. In the next number on the program the fine rich voices of Messrs. Smith and Reid filled to perfection even the Assembly Hall. Judging by the enthusiasm that greeted the appearance of the Symphony Club, its rep-

utation is already established. The able conductor is to be congratulated upon the readiness with which every movement of his baton was responded to by the members of the club. Mr. Cook certainly proved to Friday's audience that he was a man of versatile attainments. Owing to a severe cold, Miss Kraft was unable to favor the audience with the vocal solo to which they had all been looking forward. The last number, a Shakespearian burlesque, "Place aux Dames," received, as it deserved, a careful hearing. All the young ladies won praise for the skilful manner in which they sustained their parts. Miss Burgess, in an old-fashioned, black silk dress, trimmed with white lace, made a very sweet Lady Macbeth. Her pretty grey curls bobbed around in quite a motherly fashion as she counselled her younger friends of the "Place." Miss Dickey, as Ophelia, wore a loose white robe, gathered in with a broad sash and brightened with roses. The gown that Miss Smith wore, in her representation as Juliet, was white organdie; a plain effect in front, a fichu over the shoulders, and a heavy girdle of gold and white around the waist. Miss Tennant took the part of Portia, and was dressed in the regulation cap and gown of the Trial Scene.

The remainder of the evening was spent in promenading to the inspiring strains of one of Hamilton's best orchestras, and in making occasional visits to the tea-room, where members of the College dispensed the good things that had thoughtfully been provided. It was but a few minutes after midnight when "God Save the Queen" broke up the meeting.

#### LADIES' BASKET BALL TOURNAMENT

The Women's Athletic Association in accordance with the vigorous policy which they have carried out from the first, organized a basket ball tournament, which commenced on

Thursday, February 1, at 4.15. The following were the teams entered:

Miss Henderson's team (O. N. C. No. 1)—Centre, Miss Henderson; goal, Misses Laidlaw, Wilson and Gould; defence, Misses Kyle, Shields and Wilkinson. Miss Shepard's team (O. N. C. No. 2)—Centre, Miss Shepard; goal, Misses Graham, Taylor and Wilkinson; defence, Misses Reynolds, Dixon and Trenaman. Miss Mitchell's team (O. N. C. No. 3)—Centre, Miss Mitchell; goal, Misses Blake, McDermott, and McLennan; defence, Misses Tasker, Henderson and Morrison. Miss Bauer's team (O. N. C. No. 4)—Centre, Miss Bauer; goal, Misses Buchner, Sealey and Moore; defence, Misses Procurier, Alexander and Shawcross. H. C. I. Senior Leaving—Centre, Miss Montgomery; goal, Misses Lillis, Disher and Bauer; defence, Misses Taylor, Soper and Murray.

The first day's play resulted: H. C. I. vs. O. N. C. No. 4, won by the former, 5 to 1; O. N. C. No. 1 vs. O. N. C. No. 2, a tie, 3 to 3; both games were rather slow.

On Saturday, Feb. 3, four games were played off. No. 3 defeated No. 4 by 4 to 0, the scoring being done by Miss McDermott and Miss Blake. The swiftest game of the afternoon was between H. C. I. and No. 2. The Collegiate combination was splendid, but the "marking" of the College girls and Miss Trenaman's defence kept the score down to 4-2 in favor of the H. C. I. No. 1 vs. No. 3 resulted in a victory for the latter by 8-2 through Miss McDermott's splendid shooting. No. 2 vs. No. 4 was won by the latter with a score of 5-4.

On Tuesday, Feb. 6, the tournament was continued. Only one game was played, but it proved most exciting and was well worth seeing. Greek met Greek when H.C.I. and No. 3 came together. Each side scored 2 points and the question of supremacy is still undecided.

Thursday, Feb. 8, saw the conclusion of a most interesting series and also a larger attendance. No. 3 downed No. 2 by 10-0, Miss McDermott doing the scoring. H.C.I. then took the floor against No. 1, determined to bring their total up to that of No. 3, but in spite of the fine catching and throwing of Miss Lillis, the game ended with only 4-0 in their favor.

After the war-whoops and cheers had subsided, it was announced that Miss Mitchell's team were the winners with 26 points; H.C.I. second, with 15 points; No. 3, 10 points; Nos. 1 and 4, 5 points each.

Although they did not head the list, the H.C.I. team have the satisfaction of knowing that they did not suffer a single defeat.

**HOCKEY.**—After making satisfactory arrangements with the Victoria Rink our Hockey Club opened the season by defeating the Victorias, by 9 to 7. From the good showing they made in this game, Donnelly, Simpson and Dunkley were asked to play on the Victoria team which is entered in the Niagara District Association. In the games in this league their work has been highly praised. The College team is arranging for games with the Bankers and Business College.

“Cramming is not such an unmitigated evil. True, too much of it will create a temporary mental dyspepsia, but it is a fine discipline for the will. The young horse needs the spur before a leap; soon the sight of the barrier will evoke the required additional effort. So with cramming at first. The month before the exams is one long agony of anxiety and overwork. But after one gets broken into the thing, one acquires confidence in one's own powers, and a long cram is faced with equanimity, if not with pleasure. Let us grind.”

COLLEGE NOTES.

HISTRIONIC SOCIETY.

Friday, March 2, is the date set for the dramatic evening to be given by the Histrionic Society, and judging by the excellent programme in course of preparation, it will prove a most enjoyable entertainment. The famous trial scene from the Merchant of Venice will be presented under the management of Mr. Coons, by the following caste:

Duke of Venice.....Mr. H. F. Cook  
 Shylock.....Mr. E. S. Coons  
 Antonio.....Mr. H. Donnelly  
 Bassanio.....Mr. D. Eagle  
 Gratiano.....Mr. J. Wren  
 Portia.....Miss M. H. Kyle  
 Nerissa.....Miss K. Evans  
 Attendants, Magnificos, etc.

The second part of the programme will be of an entirely different nature. “Tom Cobb, or Fortune's Toy,” a comedy by W. S. Gilbert, abounding in dry humor and brilliant repartee, will form a pleasing contrast to the first part. Mr. Martin Cleworth has been engaged to take charge of a few rehearsals. The cast is as follows:

Colonel O'Fipp, an Irish adventurer.....  
 .....Mr. P. Munro  
 Tom Cobb } Young { ..Mr. E. H. Young  
 Whipple } surgeons { ..Mr. P. H. Huyck  
 Matilda O'Fipp, the colonel's daughter...  
 .....Miss Morrison  
 Mr. Effingham } Members { ..Mr. E. Carter  
 Mrs. “ ” of a { ..Miss Taylor  
 Bulstrode “ } romantic { ..Mr. McTaggart  
 Caroline “ } family { Miss L. McLellan  
 Footman.....Mr. R. Simpson

Mr. Mackenzie has been appointed stage manager for the comedy.

Y. W. C. A.

The second meeting of this Society for 1900 was held on January 22nd, the topic, “The Life of John the Baptist,” being ably dealt with by Miss Gould. On January 30th Rev. Mr. McPherson gave a very interesting talk on “Mission Work in British Columbia,” and Miss A. Lick added much to the meeting by singing an

appropriate solo. The subject for February 6th, "Preparation, Key-word—Prayer," was taken up by Miss M. Norton, after which several other members offered thoughts bearing upon the subject. On February 12th the subject, "The Secret of Successful Prayer," was considered by Miss Smith, followed by several other members. This date being set apart for special prayer among students for all student movements, many prayers were offered on behalf of the work.

The Missionary Study class which was organized at the New Year, and meets every Friday at 4 p. m., has been well attended, and the discussion of the text has been found most interesting.

THE GLEE CLUB concert was a gratifying success from whatever point considered. Miss May Donaldson proved an elocutionist of more than ordinary talents, and soon reached the hearts of her audience. The violin selections of Miss Hilda Davis met with deserved applause, while the dancing of Mr. Matheson delighted all, and Mr. Johnson's solo merited the flattering appreciation it received. Under the leadership of Mr. Johnson, the Glee Club sustained its enviable reputation. The arduous duties of accompanist were skilfully discharged by Miss Dowler. The Committee are to be congratulated on the excellence of the programme, and the financial success which rewarded their efforts.

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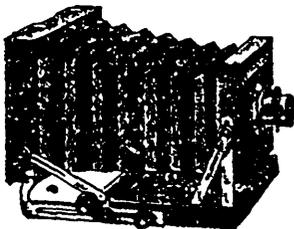
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HISTORY OF EDUCATION.

Examiners: { C. L. Crassweller, B.A.  
T. A. Kirkconnell, B.A.

1. (a) What were Plato's views as to the ideal education of Athenian youth?

(b) To what extent did the political condition of Athens influence him in forming these views?

(c) To what extent did Athenian practice endeavor to realize this ideal?

2. (a) Describe the work of the Jesuit schools of the 16th and 17th centuries under the following heads:—

- (i) Methods of teaching.
- (ii) Methods of discipline.
- (iii) Subjects taught.
- (iv) Goal aimed at.

(b) Discuss the adaptation of the means adopted in their work to the goal to be reached.

3. What were the chief contributions of Mulcaster to the science of education? Outline the reasonings on which he based his views.

4. What were the chief thoughts and suggestions that gave to Rousseau's *Emile* its importance in the educational world?

5. Outline and criticize Herbert Spencer's discussions of:—

(a) The object in view in teaching physical science.

(b) The methods to be adopted in teaching physical science.

SCIENCE OF EDUCATION.

Examiners: { T. Carscadden, M.A.  
J. Waugh, D. PÆD.

Note.—*Irrelevant matter will reduce the value of the answers.*

1. "We have now to judge the relative values of different kinds of knowledge for purposes of discipline."

(a) Give concisely the substance of Spencer's remarks on this subject

(b) Establish a "standard of values" for different kinds of knowledge for purposes of discipline, and thence criticize Spencer's views.

2. (a) State the principles which should regulate the alternation of subjects in order to secure the best results with the least mental outlay.

(b) Enumerate the alternations which would afford most mental relief to a pupil taking up the subjects of the High School programme.

3. "The true object of intellectual education is to instil, with the least possible expenditure of energy, the greatest number of generous and fruitful ideas." Remark on this opinion of the true object of intellectual education.

4. "Perhaps the most imperative duty is to inculcate the love of learning; and to this sentiment should be added the love of deep study, of probing a thing to its depths." State how you would proceed to inculcate the love of learning and of deep study.

5. (a) Estimate the value of "suggestion" as a means of intellectual and moral education.

- (b) Illustrate its use as a means of
- (i) securing order in the school-room,
  - (ii) strengthening the will.
  - (iii) improving the moral tone of the school.

PSYCHOLOGY.

Examiners: { T. Carscadden, M. A.  
J. Waugh, D. PÆD.

1. (a) What are "the bases of psychological life?"

(b) Define sensation.

(c) What are the characteristics of sensation?

(d) What are the conditions of sensation?

2. Give in brief your theory of the genesis of knowledge, discussing the proposition that "all knowledge is derived from sensation."

3. Examine "the faculty theory" as an educational hypothesis.

4. Give a brief account of the nature of kindergarten methods, making as much use as you can of material suggested by the foregoing part of this paper.

5. "Interest is subjective while knowledge is objective; interest is individual while knowledge is universal."

(a) Explain and discuss the above statement, showing clearly the nature of the contrast between subjective and objective, and between individual and universal.

(b) What is the nature of acquired interest? Discuss its educational importance.

(c) The stages of apperception are said to be sensation, perception, conception, and systematization.

Discuss the nature of each of these stages, showing its relation to the one following, and its place in the general movement of consciousness.

# SUPPLEMENT TO THE Ontario Normal College Monthly.

## MAY EXAMINATIONS, 1899.

### SCHOOL MANAGEMENT.

Examiners: { C. L. Crassweller B. A.  
                  { T. A. Kirkconnell, B. A.

1. To what extent should the school board and the staff be held responsible for the physical comfort and physical training of the students?

2. (a) What should be the objects sought in the punishments employed in the school-room?

(b) Outline the characteristics of proper punishments.

3. "Ability to conduct recitations is the best test of a teacher's professional skill."

(a) Discuss this statement.

(b) What conditions on the part of teacher and of pupil are essential to a good recitation?

4. What are the characteristics of a good question? Under what circumstances is it wise to vary both the method of questioning and the form of question?

5. "Honesty is a cardinal virtue of a well-governed school"

What opportunities are likely to occur in an ordinary school for training in this virtue? How may this training be best accomplished?

### METHODS IN SCIENCE.

(For Pass Candidates.)

Examiners: { J. A. Fife, B.A.  
                  { G. A. Smith, B.A.

Note.—In all work indicate clearly the parts taken by the teacher and scholar respectively.

1. Outline a lesson on the atmosphere under the following heads:—

(a) Lead your class to find out by experiment its chief constituents.

(b) Select apparatus and describe experiments you would use in order that the class may, by making their own observations and inferences, arrive at the volumetric composition of the atmosphere.

(c) A pupil infers from results of experiments in (b) that air is a chemical compound. How would you direct him to correct his error?

2. Your class has performed the following experiments:—

(a) Free hydrogen is passed through

ferric chloride solution for some time and the resulting substance tested for a ferric salt.

(b) Strips of zinc and dilute sulphuric acid are placed in a small quantity of a solution of ferric chloride and the action allowed to go on for some time. The resulting substance is then tested for a ferric salt.

(c) A pure solution of potassic chlorate is treated in the same way as the ferric chloride in (a) and (b), and the resulting substances are tested for chlorides.

(d) Caustic potash and fine iron filings are heated in a test-tube and the escaping gas is collected and identified.

(e) Potassium nitrate and fine iron filings are heated together in a test-tube and the escaping gas is collected and identified.

(f) Caustic potash, potassium nitrate, and fine iron filings are intimately mixed and heated in a test-tube, and the escaping gas is tested with red litmus paper.

(g) Free nitrogen and hydrogen are mixed in a jar and the mixture is tested with red litmus paper.

By a series of questions on the observations and inferences which the class has recorded on the above experiments, lead your pupils to discover an important chemical principle.

3. "It requires about 30 calories of heat to melt one gramme of ice."

Select your apparatus and state in detail your plan of leading your class to discover this fact.

4. (a) Give reasons why Botany should be taught in the junior forms in our secondary schools.

(b) Select some typical plant and by using it teach a lesson on elementary Botany, illustrating particularly your plan of introducing technical terms.

(c) Outline your work in Botany for a class of beginners for the latter part of the month of October and for November.

(d) Your class has studied the Mustard, Shepherd's Purse, Red Clover, Sweet Clover, Dandelion, Burdock, Evening Primrose and Great Willow Herb. Using these plants teach a short lesson on botanical classification.

5 The Earth Worm, Fresh Water Mussel and Crayfish have been studied. teach an introductory lesson on the Grasshopper.