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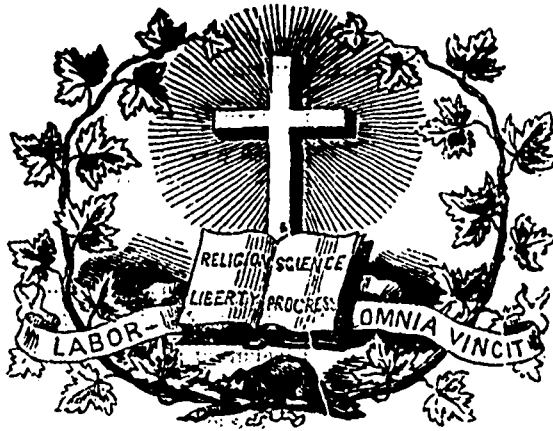
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JOURNAL OF EDUCATION.

Volume VI.

Montreal (Lower Canada) April, 1862.

No. 4.

SUMMARY.—**LITERATURE.**—**POETRY:** Why weep for the Young?—Work and Think.—Maize and Tobacco.—Notes of Travels in the East, by J. B. Forsyth, Esquire, (concluded).—**EDUCATION:** Keeping up the Interest.—Favorites in School.—Music a means of preserving Health.—Music an amusement of the Home.—**OFFICIAL NOTICES:** Notice on the subject of the Rules and Regulations for the examination of Teachers.—Appointments: School Commissioners.—Division, erection and annexation of School Municipalities.—Diplomas granted by Boards of Examiners.—**EDITORIAL:** Teachers' Examinations.—**MONTHLY SUMMARY:** Educational Intelligence.—Literary Intelligence.—Scientific Intelligence.—Miscellaneous Intelligence.—**OFFICIAL DOCUMENTS:** Rules and Regulations for the examination of Teachers, (concluded).

LITERATURE.

POETRY.

WHY WEEP FOR THE YOUNG?

Why weep for the young? They have gone to rest;
Ere pain or sorrow had entered their breast,
Gone back to heaven, all spotless and fair
And pure as the robes that angels wear.

Why weep for the young? for the spirit bright
That has soared away to the realms of light
Ere sin had entered their pure fresh heart,
Or remorse had pricked with its rankling dart.

Why weep for the young? if the morning's breath
Hath borne them away—it is not death.
They have floated off on angel's wing,
To sing the songs that angels sing.

Why weep for the young? this world of woe
Can shed no joy on us below:
And the longer we live, the more we see
Of the spirit chained that should be free.

Why weep for the young? no grief is theirs,
No wounded spirits, no bustling cares,
No fond hopes blighted—crushed in their bloom
To make this life a living tomb.

Why weep for the young? they have gone away,
To live through heaven's eternal day
And when we look at life's setting sun,
Our path and theirs—may they be made one.

M. C.

McGill Normal School, March, 9th 1862.

WORK AND THINK.

Hammer, tongs, and anvil ringing,
Waking echoes all day long,
In a deep-toned voice are ringing,
Thrifty labor's iron song.

From a thousand fly-wheels bounding,
From a thousand humming looms,
Night and day the notes are sounding,
Through the misty factory rooms.

Listen, workmen! to their playing,—
There's advice in every clink,—
Still they're ringing—Still they're saying:
"Whilst you labor learn to think."

Think! but not alone of living,
Like the horse from day to day:
Think! but not alone of giving
Health for self, or soul for pay.

Think! oh, be machines no longer—
Engines, made of flesh and blood!
Think! 't will make you fresher, stronger,
Link you to the right and good.

Thought exalts and lightens labor,
Thought forbids the soul to sink!
Self-respect and love of neighbor
Mark the men who "work and think."

—Student and Schoolmate.

MAIZE AND TOBACCO

The Indian corn looked over the fence,
And what do you think he spied?
A field of tobacco, just ready to bloom,
And stretching in lordly pride.

To the broad-leaved neighbor at once he called,
In accents loud and clear,
"I thought you belonged to a summer clime;
Pray, what are you doing here?"

So then, with a haughty air, replied
That plant of power and self,
"You are pleased to ask of my business, Sir—
What do you do yourself?"

- “ I feed the muscles, blood, and bone,
That make our farmers strong,
And furnish bread for the little ones
That round their table throng.”
- “ I move in a somewhat loftier sphere,”
The foreign guest rejoined,
“ As the chosen friend and companion dear,
Of men of wealth and mind.
- “ I’m the chief delight of the gay young spark ;
O’r the wise my sway I hold ;
I lurk in the book-worm student’s cell—
In the dowager’s box of gold.
- “ Thousands of hands at my bidding work ;
Millions of corn I raise ”—
He ceased to speak and in angry mood
Responded the tasseled Maize :
- “ You’re in secret league with dyspeptic ills—
A merciless traitor band ;
With clouds of smoke you pollute the air,
With floods of slime the land.
- “ You tax the needy laborer sore ;
You quicken the drunkard’s thirst ;
You exhaust the soil—and I wish you’d go
To the place whence you came at first.”

Student and Schoolmate.

Notes of Travel in the East.

(Concluded from our last.)

JERUSALEM AND VICINITY—JERICHO AND THE DEAD SEA.

On Sunday, the 1st of April, we attended the English Cathedral. The church was well filled; the service was conducted most impressively; the singing was good, and an excellent sermon was preached by the Right Rev. Bishop Gobat, on the text (peculiarly appropriate): “ He was numbered among the transgressors.” The Bishop’s delivery was slow, but very distinct for a foreigner; some of his hearers are said to complain that his discourses are rather long. I was not furnished with any letter to the Right Reverend Prelate, but he had the kindness to call and invite me to spend the evening with him; I had, however, previously proceeded to the Jordan.

The church is a very handsome building, though plain in style. The number of Protestants resident in Jerusalem does not much exceed an hundred and fifty; yet, at this season of the year, the congregation generally amounts to two or three hundred persons, so many English and American tourists constantly flocking to the Holy City at the time of Easter. The number of travellers from America is greatly in excess of that from Britain; but all, being accounted of the same Anglo-Saxon origin, are treated alike, and meet with the same attention in the East.

The Russians are acquiring a large portion of the city, and are building a spacious embassy; during my visit, they were digging out the foundations, and had gone to a great depth, some twenty feet below the present surface, but had found nothing save rubbish and heaps of stones. The Russians, indeed, seem as intent on acquiring a broad footing in Palestine, as the French are desirous of obtaining one in Syria and in Egypt. This eagerness probably arises, on the part of Russia, from a cherished policy to extend the influence of the Greek Church; for otherwise, in a political point of view, the possession of Judea must, from the rugged nature of the country and its almost impassable roads, be little worth.

On the 2nd of April, Mr. Brown, young Denny and myself, after an early breakfast, started for Jericho, Jordan, and the Dead Sea. We were in all a formidable party, for there is still, in going down to Jericho, some danger of “falling among thieves.” We were accordingly accompanied by a Sheikh, or a Head of a Jordan tribe, mounted on a superb Arab, and armed to the teeth. Our infantry consisted of two Arab boys, clad in coats of sheep-skin—their only uniform—and armed with muskets about seven feet long. Then there was our dragoman; also, a cook, with other servants, and thirteen or fourteen mules and horses. Our excursion would, in all

probability, only extend to a three-days’ journey; but we took with us tables, chairs, iron bedsteads, and, in fact, every article which we could have occasion to use.

Woe to the traveller who essays to make this journey without the protection of the sheikh; when he gets to Jericho, some of the Arabs will make him repent of, and pay for, his temerity. The very day after we started, two Frenchmen, who were determined to resist the imposition, and were desirous to avoid the expense (about two dollars and a half each), were robbed of everything which they had with them. A few weeks previously, the Consul at Aleppo paid a visit to the land of Moab, on the other side of the Jordan; and, although he had a numerous escort with him, he was not only robbed of everything, but was obliged to send to Beyrout for a large sum of money as a ransom.

The author of “Eothen” describes his excursion to that region, but apparently his own hardihood, and the smallness of his retinue, proved his safety; for the utter indifference, which he manifested, conjoined with these other causes, might induce the Arabs to consider him no great quarry.

On our way, we passed through Bethany, and visited the tomb of Lazarus; and then entered on our journey in good earnest. The road soon becomes, as it has been described, dreary and toilsome, running among white desolate hills, and wild rugged valleys, without a tree or shrub, or green grass-tuft, to relieve the eye. It has been justly remarked, that it would be almost insupportable, were it not for the associations connected with it, and a certain sense of danger and adventure. We travelled on, however, under the dazzling and broiling sun, over rock and hill, while the glare of the white, stony sand, reflecting the sun’s rays, rendered our progress very oppressive; but, at length, after eight hours’ riding, we found ourselves approaching Jericho.

From Jerusalem to the Valley of the Jordan, the country is “a vast howling wilderness;” and the great plain of this renowned river is truly described, as opening up suddenly before the eye of the traveller, with the green banks of the stream sunk down in a fissure in the middle of it, some thirteen hundred feet below the surface of the Mediterranean. On entering the valley, the mountain of Quarantania (according to tradition, the scene of Christ’s temptation) is pointed out to strangers; and, as it rises abruptly, white and bare, from the verdant plain, it certainly presents a striking and interesting appearance. From this point to Jericho, patches of green are to be seen every here and there; but the ground is covered with a coating of hard, dry sand.

On our way, we visited the celebrated “Fountain of Elisha,” now sometimes called the “Spring of the Sultan.” This is supposed to be the place mentioned by Sir Walter Scott, in his admirable tale of the Crusaders “The Talisman,” and called by him the “Diamond of the Desert,” near which Soliman and Sir Kenneth repused and refreshed themselves after their fierce encounter. I may be excused for quoting, on such an occasion, the beautiful passage immediately connected with a description of the well:—

“They had now arrived at the knot of palm-trees and the fountain, which welled out from beneath their shade in sparkling profusion. We have spoken of a moment of truce in the midst of war; and this, a spot of beauty in the midst of a sterile desert, was scarce less dear to the imagination. It was a scene, which perhaps elsewhere would have deserved little notice; but as the single speck in a boundless horizon, which promised the refreshment of shade and living water,—these blessings, held cheap where they are common,—rendered the fountain and its neighbourhood a little paradise. Some generous or charitable hand, ere yet the evil days of Palestine began, had walled in an arch over the fountain to preserve it from being absorbed in the earth or choked by the flitting clouds of dust, with which the least breadth of wind covered the desert. Stealing from under the arch, the waters were first received in a marble basin, much defaced indeed, but still cheering the eye by shewing that the place was anciently considered as a station, that the hand of man had been there, and that man’s accommodation had been in some measure attended to. The thirsty and weary traveller was reminded by these signs, that others had suffered similar difficulties, repused in the same spot, and doubtless found their way in safety to a more fertile country. Again, the scarce visible current which escaped from the basin, served to nourish the few trees, which surrounded the fountain; and where it sunk into the ground and disappeared, its refreshing presence was acknowledged by a carpet of velvet verdure.

“Ere they remounted to resume their journey, the Christian Knight again moistened his lips, and dipt his hands in the living

fountain, and said to his Pagan associate of the journey:—"I would I knew the name of this delicious fountain, that I might hold it in my grateful remembrance; for never did water slake more deliciously a more oppressive thirst, than I have this day experienced."—"It is called in the Arabic language (answered the Saracen) by a name which signifies the *Diamond of the Desert*."

Before proceeding to our tents, we visited the site of ancient Jericho; here, we saw nothing but the remains of a dry mud-wall and some low mounds of rubbish. Being now tired and hungry, we quickly made our way to modern Jericho, as it is called, being all that remains of the Jericho of the New Testament, a wretched and miserable collection of tumble-down huts. At the time, several hundred Russian pilgrims, accompanied by a regiment of Turks, were encamped outside the village, having just returned from bathing in the Jordan.

Our dragoman had pitched our tents, and everything in due order; we found, also, a capital dinner ready for us, equal in every respect to such as we had at the hotel. After wandering for some time among the Russian caravan, we were serenaded by a dozen Arabs, who sang and danced with great monotony, not forgetting the usual solicitations for *bachsheesh*, which we gave; and, retiring to our tents, we were soon asleep on our camp-bedsteads; I am very sure of this, tho' I have seldom slept so soundly as I did, under the tent, in front of Jericho, after the wanderings of that day.

Next morning we were early up, and soon on our way to the Jordan. The bridge-road, which leads to the banks, is very good, for these parts; so that we were able to canter along at a fair rate, and reached, without delay, this celebrated stream so often mentioned in Holy Writ. Tradition assigns to the spot, at which we had arrived, the passage of the Israelites, as well as the baptism of our Saviour by John, his forerunner. Here the Jordan is from sixty to eighty feet in breadth, very muddy, and runs as rapidly as a mill-sludge. We bathed in the stream, and did not omit to bring away some of the water.

The reader may probably expect some descriptive details of this celebrated valley and river, and it might be satisfactory to transcribe these from the best authorities; but such a task is hardly within the scope of the writer. It is sufficient to state, that the valley, in its full breadth, about ten miles, appears from our present position to be a long plain, inclosed on either side by bold and barren ridges, in the centre is the glen, through which the Jordan flows. This valley, once so noted for its fertility, for its palm-trees and balsams, has undergone a desolating change from long neglect and the fierce effects of a powerful sun on a locality so peculiarly situated, below the level of the sea. The Jordan itself flows through this glen at a depth of from fifty to eighty feet below the plain of the valley; and this glen varies from two hundred to six hundred yards in breadth, its sides being rugged and abrupt. The banks of the river are conspicuously marked with shrubs, willows and reeds. The stream gradually widens, as it approaches its entrance into the Dead Sea, where the width is about one hundred and eighty yards, but the depth only three feet; yet, owing to the soft and slimy nature of the soil, there is no practicable ford.

Striking across the plain from the spot where we had reached the Jordan, we arrived, after an hour's canter, at the shores of the Dead Sea, and rode fully a mile along this dull and dreary lake. Its length is stated at forty miles, and its breadth varies from five to nine, its depth being, in some places, upwards of two hundred fathoms! With Sodom and Gomorrah, and the Cities of the Plain, buried in its abyss—with its own muddy and slimy shores, surrounded by cliffs of naked rock, the Lake of Asphaltites reigns amidst a most desolate and melancholy scene. Its waters, though acrid and bitter beyond conception, are beautifully clear; and, in this respect, very different from those of the Jordan: their specific gravity is so considerably greater than that of the ocean, that it is not possible for the human body to sink in them.

The surface of the Dead Sea, as I have already indicated, is upwards of 1300 feet below that of the Mediterranean. Situated at such a depth, with cliffs of limestone rising immediately from its waters, on the south and west, and with the mountains of Moab on the opposite side, girding the scene as with a wall, this extraordinary monument of God's judgment against the Cities of the Plain, presents a most solemn picture of solitary desolation. No living object is discernible around;—no fishes float beneath, no birds fly over the surface of its waters. Yet the popular stories about the poisonous exhalations rising therefrom are of a mythic origin. The nature of the climate and the effect of the sun's rays, in so sunken a locality, cause an immense evaporation and an almost insufferable heat. The former effect will account for the

disposal of the water that enters the lake, and the latter for the habitual absence of animal existence in its vicinity. We were, however, favored on this occasion with a refreshing wind; and yet, from the shores of the Dead Sea to the Greek Convent of Mar Saba, whither we next proceeded, we had a very tiresome ride of four or five hours.

During the whole day, from the time we left Jericho till we reached Mar Saba, we did not meet a living creature, except one solitary camel without a rider. There were now, on our road to the convent, precipices so steep and chasms so vast, that it was at times frightful to contemplate their nature. I gave my horse the reins, and trusted entirely to his sure footing; but right glad were we to find ourselves, at length, within the extensive walls of the Convent of Mar Saba, which has been justly regarded, in the wild grandeur of its situation, as one of the most remarkable monastic institutions in Palestine. The large and irregular edifices of the convent cover an immense space of ground, and are inclosed in and protected by ranges of stone walls. There are rock terraces and patches of garden in every direction; chambers, natural and artificial caves, chapels, and other apartments, every here and there, upon ledges of rock and elsewhere, on this once most notable site of oriental anchorites and ascetics. The tomb of St. Sabas is shewn in a small chapel, as also the den, in which this chief of anchorites spent the greater part of his life; also several other cells consecrated by the odour of sanctity. The Reception Rooms are very good; and we passed the afternoon very comfortably in this secluded convent, so admirably situated for solitude and separation from the busy scenes of life. We were politely conducted to all the sites and objects worthy of inspection; and we certainly met with a most friendly reception.

After an early breakfast, on the following morning, with our hospitable entertainers, we started on our way towards Bethlehem. When we had continued our ride for an hour, we came upon some very large flocks of goats and sheep, which very naturally reminded us, on our approach to the birth-place of Jesus, of that simple and time-honoured hymn:—"While shepherds watched their flocks by night;" or, according to the more modern version:—

"While humble shepherds watched their flocks
On Bethlehem's plains, by night," &c.

On our way we had an excellent view of Jerusalem, which appeared in the distance as perched on a mountain. I remarked, that, in approaching the Holy City by the Jaffa Gate, one is apt to imagine, from the proximity of the Mount of Olives, that the city is on comparatively flat, level ground; but at the distance at which we now viewed it, the interval of two hundred feet between the walls and Olivet was not perceptible, so that the words of the Psalmist were brought forcibly to the mind:—"As the mountains are round about Jerusalem, so the Lord is round about his people from henceforth even for ever."—Psalm cxxv. 2.

We soon had Bethlehem in sight,—a beautiful village on the slope of a hill, surrounded by terraces and gardens,—and the immediate vicinity, which seemed to be, to all appearance, the most luxuriant part of Palestine that we had yet seen. The terraces appeared to be carefully cultivated and kept, and are abundantly adorned with olive-trees, fig-trees, and the vine. The great Convent, on the eastern side, from its vast extent and well-chosen site, has a very striking and commanding look. There are Latin, Greek and Armenian conventual communities in connection with the Church of the Nativity—a large and imposing edifice. We were most punctiliously conducted by a Monk over every spot of interest, and our guide shewed us every place connected with the life of the Redeemer, which tradition has assigned to the birth-place of our Lord. There is no doubt that the most beautiful part of the building was erected by the Empress Helena, in the early part of the fourth century; and it is, therefore, of great antiquarian interest. The Monk conducted us down a winding staircase to the Grotto of the Nativity, descending (as it were) into a vault hewn in the rock. Here he pointed out the identical spot, where our Lord is said to have been born. It is indicated by a marble slab fixed in the pavement, with a silver star in the centre, round which are the words:—"Hic de Virgine Mariâ Jesus Christus natus est."

J. B. FORSYTH.

EDUCATION.

Keeping up the Interest.

Were I required to give a rule in four words, for exciting an interest in school duties, it would be this: *keep each mind employed.*

Much may be accomplished by oral instruction; but hard study on the part of the pupil is necessary to mental vigor. Children should be taught ideas, not merely to commit to memory a confused mass of words, without connection or sense, or learn answers to questions contained in their books. Too many "complete their education" without learning how to study.

Emulation should be encouraged, so far as is consistent with harmony and good feeling; but, remember, emotions of envy and jealousy are easily excited in the youthful mind. Prizes are sometimes distributed by vote of the school. This accords perfectly with the republican spirit of our age. It is well to award prizes for amiable deportment towards teachers and playmates, as well as for good lessons.

Teachers are often troubled to find suitable employment for the infant portion of their schools. People are beginning to believe that children under six years of age, can best be instructed at home. Many, however, continue to send such little ones to school,—"it is so much trouble to teach them," "so convenient to feel that they are taken care of." If they come, let us take care of them. When the weather will admit of it they can, for the greater part of the time, employ themselves to the best advantage under a shade tree; but when obliged to confine them within doors, we should contrive to make their imprisonment as agreeable as possible. A slate and pencil, with small drawing cards or figures on the blackboard for them to imitate, answer a very good purpose. At all events, we must keep them busied, or they will give us plenty of business.

It is important that every association connected with school, should be pleasing. The reading exercise, which is often a lifeless repetition of what has been read many times before, may be made full of interest. A little monthly periodical, entitled *The Student and Schoolmate*, is extensively used as a school-reader. It is full of instruction and amusement, and children are delighted with it. Suppose a class subscribe for it: let all the numbers be kept through the month, in the hands of the teacher. Before reading, each member of the class is required to study carefully the article selected for the lesson, and, by the use of a dictionary, ascertain the meaning of every word not fully comprehended. No pupil should read a new piece, until he can properly read, spell, and define any word in the old lesson.

The old method of spelling senseless columns of words should be abolished. We have all seen those who could, parrot-like, spell page after page without "missing," and, yet, in writing, would misspell every fourth word.

Children ought, for several reasons, to learn writing quite young: 1st, Because it is the best way ever yet invented to teach spelling; 2d, That they may write sentences, and thus learn something of composition before they are old enough to feel diffident about it; 3d, Because it pleases them exceedingly.

The faithful teacher makes the duller studies interesting. His heart is in the work. Every item of foreign news, amusing anecdote applicable to certain lessons, ancient and modern history, are carefully treasured to give variety and life to recitations. Singing at the close of school inspires a kindly social feeling, and drowns the cares and vexations of the day. If music is taught in school, let the instruction be given at some fixed other hour. Then, at night, join in some favorite tune, and let all sing as well as they can. Even the little lisper will soon catch the sounds, if he don't the language. Those unfortunate teachers who cannot sing need not despair, for they may have scholars who can. So, let all our schools be singing-schools. We should not wholly disregard the amusements of our pupils. An occasional pic-nic, enjoyed with other schools, a pleasure excursion on a fine holiday, a meeting with them on a clear evening to point out the planets and constellations,—all throw a golden tinge over school days, and make impressions as enduring as the mind.—*New Hampshire Journal of Education.*

Favorites in School.

Some months since while engaged in teaching a grammar school, the mother of a pupil in our Intermediate Department remarked to

me with great bitterness, "Miss S. has favorites in school, I am told!" "That is hardly possible," was the reply, "in so desirable a department where there are so many lovable scholars and so few to dislike; there must surely be some mistake." Now as Miss S. had for a long time taught near me and succeeded so admirably in every arrangement, I felt truly indignant, having never known a neglect of duty on her part towards those whom she instructed, and I resolved that no effort of mine should be spared in bringing the parent to see the truth of what I had said. I thought much of the remark until I became sensitively alive to every look and tone, expecting soon to hear a similar one designed for me, though conscious of uprightness in that respect. At length I resolved to test my associate teacher. "You have a very pleasant school—such kind, affectionate pupils," I remarked "O, yes," she replied, "pretty good; but there is a girl (pointing cautiously) that I almost despise! so awkward and uncouth, it seems as if she never would learn to do any thing well." "Is she badly behaved?" I asked. "No, not really bad, only as I have said—so disagreeable—and then she dresses so very much out of taste that one is disgusted with her all the time." "O, is that all? do you, indeed, dislike her because she is not graceful and is poorly dressed? Poor child! who will love such when we whose duty it is to love and help them fail to do so?" "O I can help her," was my friend's reply, "just the same, but perhaps I am not considerate enough; I don't like her and probably never shall. And there is George B—the most hateful boy that ever stepped into boots; only yesterday he brought Cayenne pepper to sprinkle on his neighbors' desks and make them sneeze. I guess his back tingled for one while when I found him out! But what would you have done under the circumstances?" "I might have served him as once I did a lad for bringing snuff and distributing it until there was a general sneezing around the room. I called the rogue to my desk and obliged him to take the remainder from his box before us all. Whipping would have done no good, as he would have braced himself to receive all I chose to inflict, and then felt ready for something else as bad. But he was too sensitive to endure being laughed at, and at length asked pardon, promising never again to disgrace himself and trouble his teacher, which promise was duly remembered. But George—does he suspect your feelings towards him?" "Suspect? he knows very well that I do not like bad boys, and I have given him my views of his conduct pretty plainly. He is always in some mischief. I don't see when he gets his lesson; I am sure never to see him study here, and his books seldom are taken home." "Perhaps you might find him some employment, and thus prevent the trouble his mischief causes you. A book to read; extra examples to perform; a card to draw; or, better than all—something to do for his teacher that will make him feel usefully employed, and thus exhaust the surplus energy that will be expended in some way. And little Mary too, perhaps after all she sees you care less for her than her more fortunate neighbor, and has therefore become reserved and embarrassed before you. Many a little being fails to act out its generous, loving nature, for that very reason, and goes yearning and craving in awkward silence the love and appreciation it never receives." "Thank you; it may be so," said my friend, "I will try in future to look more deeply into these little hearts and see. He truly is no friend who does not try to improve us."

Are there not many teachers who never understand the peculiar dispositions of their pupils, or who are careless in administering judicious punishment? With dispositions so varied and home surroundings so different, no wonder we sometimes fail to judge rightly of character and also to estimate its real value. A severe reproof might crush the spirit of a sensitive child, while it might be a needed discipline to another temperament. Kind words fall soothingly on hearts unused to gentleness, and who may know where they are the most needed! A boy once told me "no one ever loved him." Can it be that in this Christian land there are others who thus long for sympathy and love? God grant that those to whom is committed the guardianship of young immortals should be faithful in the ministrations of love, and that both giver and receiver be made better by its influence.—*Connecticut Common School Journal.*

Music a Means of Preserving Health.

It is the opinion of our distinguished townsman, Dr. Rush, that singing by young ladies, whom the customs of society debar from many other kinds of healthy exercise, should be cultivated not only as an accomplishment, but as a means of preserving health.

He particularly insists that vocal music should never be neglected in the education of a young lady, and states, that besides its salutary operation in soothing the cares of domestic life, it has a still more direct and important effect. "I here introduced a fact," says Dr. Rush, "which has been subjected to me by my profession—it is, that the exercise of the organs of the breast by singing contributes to defend them very much from those diseases to which the climate and other causes expose them. The Germans are seldom afflicted with consumption, nor have I ever known more than one case of spitting of blood amongst them. This, I believe, is in part occasioned by the strength which their lungs acquire by exercising them frequently in vocal music, which constitutes an essential branch of their education."

This is irrefutable testimony, but that which follows is not less so:

"The music-master of an academy," says Mr. Gardiner, "has furnished me with an observation still more in favor of the opinion. He informs me that he has known several instances of persons strongly disposed to consumption, restored to health by the exercise of the lungs in singing. In the new establishment of infant schools for children of three or four years of age, everything is taught by the aid of song. Their little lessons, their recitations, their arithmetical countings, are all chanted, and as they feel the importance of their own voices when joined together, they emulate each other in the power of vociferating. The exercise is found to be very beneficial to their health. Many instances have occurred of weakly children, of two, three and four years of age, who could scarcely support themselves, having become robust and healthy by the constant exercise of the lungs. These results are perfectly philosophical. Singing tends to expand the chest, and thus increases the activity of the vital organs."—*Fitzgerald's Report on Music in the Philadelphia Public Schools.*

Music an Amusement of the Home.

What shall the amusements of the home be? When there are the ability and taste, I regard music as combining in happiest proportions instruction and pleasure, as standing at the head of the home evening enjoyments. What a never failing resource have those homes which God has blessed with this gift! How many pleasant family circles gather nightly about the piano! how many a home is vocal with the voice of song or psalm! In other days, in how many village homes the father's viol led the domestic harmony, and sons with clarinet or flute or manly voice, and daughters sweetly and clearly filling in the intervals of sound, made a joyous noise! There was then no piano, to the homes of this generation the great, the universal boon and comforter. One pauses and blesses it, as he hears it through the open farm-house window, or detects its sweetness stealing out amid the jargons of the city—an angel's benison upon a wilderness of discord, soothing the weary brain, lifting the troubled spirit, pouring fresh strength into the tired body, waking to worship, calling to rest. Touched by the hand we love, a mother, sister, wife,—say, is it not a ministrant of love to child, to man—a house-hold deity, now meeting our moods, answering to our needs, sinking to depths we cannot fathom, rising to heights we cannot reach, leading, guiding, great and grand and good, and now stooping to our lower wants, the frolic of our souls reverberating from its keys? The home that has a piano, what capacity for evening pleasure and profit has it! Alas! that so many wives and mothers should speak of their ability to play as a mere accomplishment of the past, and that children should grow up looking on the piano as a thing unwisely kept for company and show.—REV. J. F. W. WARE.

OFFICIAL NOTICES.

NOTICE.

His Excellency the Governor General in Council was pleased, on the 15th March, 1862, to order that those parts of the Rules and Regulations of the Council of Public Instruction for the Examination of candidates for Teachers' certificates, having reference to the Art of Teaching and Agriculture, shall not take effect until the Council shall have approved of Text Books appropriated to the study of these two branches of instruction.

LOUIS GIARD.
Recording Clerk.

APPOINTMENTS.

SCHOOL COMMISSIONERS.

His Excellency the Governor General in Council was pleased, the 24th March last, to approve of the following appointments of School Commissioners:—

County of Ottawa.—Maniwaki: Messrs. Charles McArthur, Morris Lynch, André Auger, Benjamin Rivet, and Michael Moore.

Same County.—Cameron and Bouchette: Messrs. François Nault, Joseph Groulx, Gabriel Neveu dit Lacroix, John Johnson, and Thaddeus Lynch.

Same County.—Wakefield: Messrs. Thomas Cassity, Michael Plunketts, Patrick Farrell, John Kelly, and David Cahill.

Same County.—Wright and Northfield: Messrs. Joseph Lafrance, Augustin Ethier, Paschal Barde, André Boismennu, and John Duffy.

DIVISION, ERECTION AND ANNEXATION OF SCHOOL MUNICIPALITIES.

His Excellency the Governor General in Council was pleased, on the 24th March last,

1. To define more precisely the limits of the School Municipality of Notre-Dame-de-la-Victoire, in the county of Levis, by adding the following to the description contained in the Order in Council of the 22nd August 1861, and published in the *Canada Gazette* of the 7th September of the same year, viz:—

Extending in depth to forty feet towards the St. Lawrence at low tide, and with the same limits on that side, as the town of Levis.

2. To annex the land of Jean Joseph Silfride Ancil to the School Municipality of Ste. Anne de la Pocatière No. One, in the county of Kamouraska.

3. To erect into a school municipality the Townships of Cameron and Bouchette, in the county of Ottawa, with the same limits as these townships.

4. To erect the Townships of Wright and Northfield, in the county of Ottawa, into a school municipality, with the same limits as these townships.

5. To change the name of the School Municipality of Bagot, in the County of Chicoutimi, to that of *School Municipality of Grand Bay.*

PROTESTANT BOARD OF EXAMINERS FOR THE DISTRICT OF MONTREAL.

At the meeting held by the above Board on the 8th April last, J. A. Gibson, Esq., was appointed Secretary in the room of A. N. Rennie, Esq., resigned.

BOARD OF EXAMINERS FOR THE DISTRICT OF THREE RIVERS.

Mr. Pierre Clovis Beauchesne and Miss Philomène Houle, obtained Model School certificates on the 3rd December 1861

Misses Céline Laplante, Emilie Lavigne and Caroline Tourigny, obtained Elementary certificates on the same day. Miss Marie Anne Piché obtained a Model School certificate on the 4th March, 1862. Messrs. George Boucher, Ferdinand Fusey, Ohs Oyprien Lafrenière, Frs. Xavier Massicotte, Calixte Milot and Misses Hermine Beaudoin, Mario Céline Barolette, Louise Courchène, Marie Alvina Caya, Eulalie Fugere, Rose de Lima Lefebvre, Joséphine Martel and Marie Précor obtained Elementary certificates on the 4th March, 1862.

J. M. DESILETS,
Secretary.

JOURNAL OF EDUCATION

MONTREAL (LOWER CANADA) APRIL, 1862.

Teachers' Examinations.

We hasten to offer the following explanation in answer to several questions addressed to this Department, respecting the regulations adopted by the Council of Public Instruction, a part of which appeared in our last.

In the first place it is proper to remark that though the Programmes indicate the subjects which may be taught in academies and model schools, the teaching of *all* subjects contained in them is not made obligatory. When the Council shall have prescribed the course of studies to be followed in each class of institutions, these subjects will be divided into two parts,—one comprising the branches in which tuition shall be obligatory, the other including those in which it shall be optional.

It is also quite plain that any candidate, whether for the elementary school or the academy, may present himself before any Board; he may select one having an extended jurisdiction, as there is nothing whatever binding him to appear before a local Board, the only restriction being that the jurisdiction of the Board granting his certificate shall extend over the municipality in which it is his intention to teach. For instance, a young lady of, let us say, Beauce, may address herself for an elementary diploma to the Board whose jurisdiction is limited to that district, but it will be equally in her power to present herself before the Quebec Board, having jurisdiction over one half of Lower Canada.

While upon this subject we may call the attention of our readers to a notice of importance to be found in another column, and by which it will be seen that the Programmes having reference to the Art of Teaching and Agriculture, are not to take effect until applicants shall have had an opportunity of preparing themselves for examination, by means of the Hand Books to be compiled expressly for the purpose. The want of cheap books available for teaching these two branches led the Council of Public Instruction to adopt this resolution, which has been confirmed by the Executive.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE

— The Deputy-Adjutant-General for Lower Canada having inspected, at Quebec, company No. 8 of the *Voltigeurs Canadiens*, and at Montreal, company No. 10 of the *Chasseurs Canadiens*, expressed his satisfaction in the most flattering terms at their fine appearance and efficiency. The first named company is composed exclusively of the professors and pupil-teachers of the Laval Normal School; the second is chiefly composed of the gentlemen of the educational department and of the pupil teachers of the Jacques-Cartier Normal School. Thus, about 80 pupil teachers, annually, will be well drilled and trained to military discipline, affording one of the readiest means of making drill a branch of teaching throughout Lower Canada.

— The ladies (pupil-teachers) of the McGill Normal School held last week, the annual public meeting of the Literary Association formed among themselves. The evening was most pleasantly spent. The hall of the Normal School was tastefully decorated with evergreens, flags and artificial flowers; music, vocal and instrumental, recitations, and the reading of literary compositions from the "Wreath," a manuscript periodical written by the young ladies themselves, attracted the attention of a large and highly respectable audience. Among the literary compositions read, we noticed a very graceful and highly creditable poem, which will be found in our columns. We are only sorry not to have been permitted to give the name of the author. At the close, the meeting was addressed in French by the Hon. the Superintendent of Education, who congratulated the young ladies on their literary success, and instanced as bright examples to be followed, Miss Ernestine Drouet, a young teacher in France, whose poetry obtained a prize from the French Academy, and Madame Pauline Braqueval, a teacher in Belgium, who obtained a prize from the Royal Academy of Music in that country, for the words of a *cantata*, which had been given to competition.

LITERARY INTELLIGENCE.

— The *Moniteur* publishes an official report on the donations made to the Imperial Library during the year 1861. Among the printed works may be cited twenty-one volumes from Prince Lucien Bonaparte, the fruits of his studies on the languages and idioms of Europe; and from the Russian Government a complete collection of the documents relating to the emancipation of the serfs, in twenty-nine volumes. In the geographical department, a very curious map of the world, on vellum, by Jehan Gossin, a Dieppe pilot, dated 1570; from the British Admiralty a collection of the charts published under its direction in 1860; and from the Minister of Public Instruction a copy of the splendid map of Gaul, under the proconsulate of Cæsar, published by order of the Emperor. Among the manuscripts an Ethiopiand, one containing the Futha-Nagast, or Ethiopian code, given by the Minister of State; and in antiquities, among other gifts from his Majesty the Emperor, a bronze Gallic-Roman vase, and a rare Gallic-Roman tessera in lead, bearing the name of Alesia.—*Educational Times*.

SCIENTIFIC INTELLIGENCE.

— In a paper read before the French Academy, on "Volcanic effects corresponding with geological epochs" (*Comptes Rendus*, January 27, 1862,) M. Pissis remarks that it is generally believed, in those districts of South America which are most subject to earthquakes, that these disturbances occur during the rainy season, and up to the period of drought. During twelve years of his own residence on the spot this theory has held good, and the years of most violent rain were distinguished by a greater number of earthquakes, and he adds, that if we consider that during the wet season the Andes are covered with a dense bed of snow, which is perpetually melting from contact with the soil, it will be obvious that an extensive infiltration must take place; so if there exist any fissures communicating with the interior, large quantities of water may be brought into contact with incandescent matter, and thus occasion very powerful disturbances.—*Intellectual Observer*.

— M. Secchi, of Rome, publishes in the *Comptes Rendus* a table of observations in 1861, from which it appears that the horizontal intensity of magnetic action has a tendency to vary with the wind. He observes, "this table evidently shows the predominance of a descending movement when the wind is south to the extent of 74 out of 100 times which this wind blows, and of an ascending movement during a north wind to the extent of 84 in 100." East and west he calls "winds of transition." He believes that the indications of a delicate galvanometer are capable of giving us notice of distant atmospheric perturbations, or of those which are coming within a couple of days.—*Ibid*.

— The same number of the *Comptes-Rendus* contains an extract from the *Annales de l'Observatoire* on the theory of Mercury, detailing various objections to the hypothesis of a large planet comparable with Mercury in size, and circulating within its orbit, and suggesting the belief in a series of asteroids, whose joint action might produce the disturbance which has to be accounted for. The writer urges the importance of noticing every regular spot that may appear on the disk of the sun, in order to ascertain whether it possesses the character of an asteroid.—(*ib*).

— M. Chanoit, director of the hydraulic works of the Paris and Lyons Railway, announces that he has in service a young man so well practised in discovering springs or masses of water with the divining rod, that he would undertake that if he were taken blindfold through Paris, he would indicate the various water channels and their relative importance. He has such confidence in his hydrologist, that he begs the Academy to appoint a commission to witness his performances.—*Cosmos*.

LIITHOGRAPHY.—M. Chevreul, in presenting to the French Academy some fresh researches of M. Niepce de St. Victor, explained two remarkable facts: "the first is, that the image produced by the sun is direct, and not inverted, like those obtained by ordinary methods, the second is, that the light whitens the parts which it strikes, through a special action of the dextrine and chloride of lead varnish, while without this varnish it would impress a violet tint on the chloride of silver of the daguerreotype plate—a remarkable result, since M. Niepce has observed that the shadows of an engraving are reproduced in black on plates prepared with his varnish. The colours of the image are not produced simultaneously, for example, the yellow appears before the green, and when this latter is manifested the yellow is weakened, if not effaced. Does it not follow from this, that the way to reproduce the colours with fidelity would be by the use of screens, so arranged as to cover the parts where the colours are first exhibited, so as to give more time to other colours which require it?"

— The Swedish Government has commenced and made some progress in the publication of an account of the scientific exploring expedition sent out by it during the years 1851-1853. The work, entitled "Kongliga Svenska Fregatten Eugénies, Resa omkring Jorden," that is, "Voyage round the Globe of the Royal Swedish Frigate Eugénie," under command of Capt. C. A. Virgin, appears in a royal quarto form, handsomely illustrated. The scientific results are published in sections, of which the *Zoologi* is now in its fifth part, *Botanik* in its second, *Fysik* in its second; and under these heads the naturalist or natural philosopher will find all the information he may desire. The lithography of the botanical and zoological plates is admirable, minute characteristics and details being brought out with all the clearness and delicacy of copper-plate. As Swedish is to many persons an unknown tongue, physicists will be glad to learn that the section *Fysik* is published with a translation in French, so that those who are interested in the great questions of temperature, currents, winds, and physical phenomena generally, will find their researches facilitated by this publication in a language with which few are unacquainted. The work is published at the rate of three or four parts in the year, under the superintendence of the Royal Academy of Sciences of Stockholm, by command of his Majesty the King of Sweden.—*Educational Times*.

— In a curious paper published by M. Haidinger, director-general of the Geological Survey of Austria, an analysis of which is given in a recent number of the *Critic*, we find the following curious calculations concerning *Aeolites*, or stones falling from the cosmical regions of our globe. Admitting that the weight of these bodies falling annually upon the earth is 450,000 lbs., or 450,000,000 lbs. in 1000 years, Barou

Reichenbach has started the question whether, in the course of centuries, our globe might not undergo such modification in weight as materially to affect its connexion with the solar system. Now, as our earth weighs about 13½ quadrillions of pounds, the formation of a meteoric agglomeration equal to our planet would require about 3000 trillions of years, hence any change like that contemplated by Baron Reichenbach would occur within a space of time far beyond our imagination to conceive. But M. Haidinger turns his attention to another question, asking whether, if our globe, in the course of one solar revolution, receives an increase of matter equal to 450,000 lb., this increase might not have been similar in weight, in describing any orbit of equal length? Mr. Greg has proved that meteoric falls are less frequent at the time of perihelion than at the time of aphelion, but it must also be recollected that the sun itself moves with considerable velocity through the stellar space. Taking these data into account, M. Haidinger calculates that the weight of meteoric matter existing and moving about in every direction within the space limited by the earth's and sun's motions during one year is equal to 450,000 lb. multiplied by one billion 218,460 millions, or about half a trillion of pounds. The weight of the earth is to 450,000 lb. of meteorites as 24 millions are to unity; but a far greater proportion of solid matter distributed into small bodies would be obtained were the great number of shooting-stars and fire-balls taken into account, which appear in our atmosphere, and many of which do not apparently deposit solid matter. According to Professor T. H. Norton, of Yale College, U. S., not less than ten millions of meteors of this description enter our atmosphere every day. This would make 3650 millions of shooting stars and fire-balls per annum!—(Ibid.)

—M. Petit estimates the velocity with which the bolide of the 9th of December, 1858, passed over the communes of Muret, Longage, etc., at 5200 mètres per second, and its height above the earth during the explosions at 5,000 mètres. A previous meteor (13th September, 1858) had an elevation of 220 kilometres, and a velocity of 29 kilomètres. The mètre is 39.37100 English inches, and the kilomètre 4 furlongs 213 yards 1 foot 10.2 inches. M. Petit observes that the last-named meteor exhibited a brilliant light, far beyond the limits usually assigned to our atmosphere.—(Ib.)

The Petroleum Springs of North America.—Dr. Abraham Gesner communicated to the Geological Society an account of these extraordinary springs, and an abstract of his paper will be found in the *Quarterly Journal*. The oil region comprises parts of Lower and Upper Canada, Ohio, Pennsylvania, Kentucky, Virginia, Tennessee, Arkansas, Texas, New-Mexico, and California, reaching from the 65th to the 128th degree of longitude west, and there are likewise outlying tracts. The oil is believed to be derived from silurian, devonian, and carboniferous rocks, and is conjectured to be a product of the chemical action by which ligneous matter is transmuted into coal. Dr. Gesner also suggests that in some cases animal matter may have been the source of the hydrocarbon. To obtain the petroleum, borings are made through various strata to the depth of 150 to 500 feet. As a general rule, these borings pass through clay, with boulders, sandstones, and conglomerates, shale, bituminous shale, and then the oil, underlaid by the oil-bearing stratum of fire clay, containing fragments of stigmaria and other coal plants. As soon as the oil stratum is reached there is an escape of carburetted hydrogen gas, often violent enough to blow the boring-rods into the air. When the oil comes it is ejected with much force, sometimes rising to the height of 100 feet. Some wells have at first given 4000 gallons in six hours, and the average daily yield of mineral oils in the United States is estimated at about 50,000 gallons.—(Ib.)

—A writer in the *Chemical News* proposes, as an illustration of the mechanical subdivision of matter, that a film of gold leaf reduced by Faraday's plan, through the action of cyanide of potassium, so as to be quite transparent, and about 1-3,000,000th of an inch in thickness, should be divided by cross-line 1-80,000th of an inch apart, like those in Norbert's test-plates, belonging to the highest series which the microscope would involve. By this means squares of gold might be obtained so small, that three billion eight hundred and forty million of them would occupy no more than a single square inch; and yet each one would be distinctly visible under the best objectives of modern microscopes.—(Ib.)

MISCELLANEOUS INTELLIGENCE.

—We copy the following details on the preparations for the Great London Exhibition from the London correspondence of the *Montreal Gazette*:—

The preparations for the forthcoming Exhibition are going steadily forward. But the death of the Prince Consort and absence of the Court—rob it of something of the éclat which it was expected would attend it and the present London season. Some of your readers will desire to know where the site of the present building is. Having passed up Piccadilly, beyond Apsley House, and the lower end of Hyde Park, the street branches into two forks, the one leading southerly to Brompton—the other, northerly up to Knightsbridge, and so to the Park side again. Beyond, and adjoining the Park, on the West, as all the world knows, lie Kensington Gardens, and the road there takes the name of the Kensington Road. Near the point where the Park merges in the Gardens, a road runs at right angles from the Kensington Road south to the Brompton, and this—opened, I believe, in 1851—is called the Exhibition

road. 1100 to 1200 feet farther on, another road runs parallel to the last, also connecting the Brompton and Kensington roads, and is called Prince Albert's road. The Brompton road, along the Southern point of the square block of land thus bounded, is called Cromwell road. On the eastern side of the Exhibition road, and north of the Cromwell or Brompton, is the Kensington Gore estate, on which, under Prince Albert's auspices, were planted the great Industrial Museums, formed out of the remains of the collections made, after 1851 and 1855. Immediately south of Kensington Gardens, only separated from them by the Kensington road, are the gardens of the Royal Horticultural Society, bounded east and west by the Exhibition and Prince Albert roads. Along the south—the Cromwell Street—front of these grounds, is the principal arcade of the Exhibition building—1150 feet in length, by 495 in width. This facade is something after the fashion of the Luxembourg at Paris, built of whitey-brown brick, and supremely ugly, in the opinion of most people. A transept runs across each end, of 730 feet in length, on the Exhibition and Prince Albert roads. In the middle of each transept is a monster dome of glass, larger than that of St. Paul's in London or St. Peter's at Rome, but somewhat less lofty than that of St. Peter's. Hence, having a greater diameter and less height, these, which would also have been the great beauties of the building, are marred by an appearance of dumpiness—if that be a permissible word. Added to the transept are annexes, stretching 770 feet up the Exhibition and Prince Albert roads, intruding on the space of the Horticultural grounds. These consist of a triple row of wooden sheds, of the same width as the transepts, i. e., 110 or 115 feet. The nave of the main building runs from dome to dome, with an arched open roof—the rafters and braces beautifully decorated, with the names of the various countries exhibiting painted on them. At each side of the nave are broad galleries; outside of them again aisles, lighted by glass roofs of this pattern Λ ; and outside of these, narrow galleries, fixed into a brick wall, which divides the refreshment rooms and offices on the one side, and the picture gallery on the other, from the rest of the Exhibition. The interiors of the nave and of the transepts proper are certainly very fine, the decorations very excellent, but (say those who saw it) the *tout ensemble* lacks the airiness and lofty look which the old Hyde Park building had; assuredly it compares very badly with that bit of fairy-land, the Crystal Palace at Sydenham. I have already said that the exterior has a dirty, ugly look, like some hastily run-up pretentious-looking rows of tenement houses. Enter with me at the corner of the Cromwell and Exhibition roads. In a little square room fitted up as an office you must show your ticket twice, once to the commissionaire on duty and once to the policeman. The commissionaires, most of your readers know, are trustworthy men licensed to go of errands, to act as guides, and do odd jobs for people, which strangers especially need such men to do for them. They have been a Parisian institution for a great many years. They have been recently organized here as a means of furnishing discharged soldiers with employment. Very few of them are without one, two or three medals, attesting their good service in the field. Issuing from this and descending to the ground floor we come upon the somewhat dimly lighted space assigned to the United States. They had a good space elsewhere allotted to them, but lost it through the conduct of the government at Washington, and got this assigned to them to replace it at the last moment. They lately held a meeting and are attempting to raise £1000 sterling, to fit up their court. Turning thence to the right up the eastern or exhibition road transept—between it and the dome are fine castings, the products of English foundries—among them a large number of bells. On the dais, under the dome are being erected seats for the musical performers at the approaching opening ceremonies, which are to be conducted by a Royal Commission representing the Crown, having the Duk of Cambridge at its head, and Lord Palmerston and the Earl of Derby among its members. Thence looking still northward along this annexe we see the departments allotted to various colonies. Nearest along the middle stands Victoria, next Tasmania, then Nova Scotia, then British Columbia, with New Brunswick and Prince Edward Island side by side occupying the next allotment, and last—but with the largest allotment comes Canada with a court 50 feet square here, and another under the eastern gallery of 50 by 25 feet. The Commissioners for Canada were disposed to grumble at first at their allotment, but the Commissioners have really dealt generously by us when our space is compared with that of the other colonies. Beyond us stretch the annexes where British ores, mineral products and cereals are to be exhibited, our collections in these two departments really forming an antechamber to theirs. Returning under the eastern gallery to the dome we have Newfoundland next to Canada, then Bermuda, then Ceylon and Malta, and next the dome Jamaica and other West India islands. The space under the western gallery is bricked off as part of the refreshment rooms, but as you approach the dome you come upon an additional small court for Nova Scotia, and the corner down the aisle of the main building is occupied by Australasian and African colonies. Overhead on this side is India, on the opposite the gallery of water colors and architectural drawings.

—“There is nothing new under the sun.” The modern method of naval warfare, as exhibited in the sinking of the *Cumberland* by the *Merrimac*, is merely a reproduction of the method of fighting practised by the ancient Greeks upwards of two thousand years ago, the difference being simply in the propelling power, and in the kind of missiles employed. In both cases the antagonists endeavoured to sink each

other, by dashing their prows or beaks into each other's sides, in one case by means of oars, in the other case by the power of steam, while, in both cases, they made use of shot after the fatal blow was struck. The *Merrimac* dashes its beak into the side of the *Cumberland*, and then fires her broadside upon its crippled foe; the ancient Greek did the same, and then poured in a flight of arrows and javelins. The following animated description of a sea fight that took place between the Athenians and Lacedaemonians during the Peloponnesian war, in which the latter were defeated, gives us some idea of a naval battle in the days of old. It forms part of a ballad supposed to be composed to be composed by one of the victors.

H. M.

With heads bent forward low, with ears thrown back in row,
Trembling over the edge of the water;
With breathless guzo we watch from our captain's lips to catch
The word for the charge and the slaughter.

'Tis given!—the oars dip, with a light half-stroke the ship
Glides off, the waves hiss in twain riven;
While our trumpet clamours high, and our short sharp battle cry,
As we strain every nerve, rings to heaven.

On, mariners, pull on, one glancing thought alone
At the homes and the loves which we cherish;
For we know from rush like this, as our prow shall hit or miss,
That the foemen or we must perish.

But our helmsman's skill is tried our armed beak to guide
Where their quarter lies hel, less before us.
While the thrilling jarring crash and the rattle of the smash
Tells our rowers that fortune smiles o'er us.

Look around upon the wreck, see the haughty Dorian's deck,
As they reel in their armour along it,
While our bowmen ply the string and each javelin's on the wing
Wafting death 'midst the bruggarts who throng it.

See where our gallant prow struck deep the deadly blow,
Shattered oars, mangled oarsmen, are lying;
See where their gaping side sucks in the swamping tide,
And the surge drowns the groans of the dying.

OFFICIAL DOCUMENTS.

Rules and Regulations for the Examination of Candidates for Teachers' Certificates or Diplomas.

(Concluded from our last.)

SCHEDULE G.

PROGRAMME N° 1.

ENGLISH GRAMMAR.

I.

1. What is the etymology of the word syntax?
2. What is syntax?
3. What is a sentence?
4. What is a simple sentence?
5. What is a compound sentence?
6. What are the essential parts of a simple sentence?
7. What is an *explicative sentence*? What an *interrogative sentence*? What an *imperative sentence*?
8. What is an incidental clause in a sentence?

II.

1. How many parts is syntax divided into? Name them.
2. What is *concord*? What is *government*? What is *position*?
3. What must a verb agree with in number and person?
4. When two or more nominatives are connected by *and*, in what number should the verb be?
5. When two or more singular nominatives are connected by the conjunctions *or* or *nor*, in what number should the verb be?
6. What must pronouns agree with in number, gender and person?

III.

1. What must the relative agree with?

2. Where is the present participle placed when used as an adjective?

3. Do neuter verbs admit of an objective?
4. After what kind of verbs is the past participle used?
5. Is it proper to place a clause of a sentence between the possessive case and the word following?
6. What do adverbs qualify?
7. When are two negatives proper in the same sentence?

IV.

1. What case is governed by prepositions?
2. Name some conjunctions, or adverbs, which have corresponding conjunctions.
3. When is an ellipsis proper?
4. How is the definite article used before adverbs?
5. How are the words *much* and *many* applied?

V.

1. How are *conversant with* and *conversant in* applied?
2. What is the difference between *reduce under* and *reduce to*?
3. What is the possessive of the pronoun *which*?
4. When should *hither*, *thither* and *whither* be used instead of *here*, *there* and *where*?
5. When a noun stands before the present participle, in what case should it usually be?

VI.

1. Is it proper to use both a noun and pronoun as a nominative to the same verb?
2. Is it proper to use adjectives as adverbs, or adverbs as adjectives?
3. When the relative is preceded by two antecedents of different persons, with which should it agree?
4. Has the pronoun *you* always a plural verb when applied to single individuals?
5. When is *who* applied to inferior animals?

VII.

1. What is a defective verb? Name the principal verbs of this class.
2. When should *may* and *might* be used instead of *can* and *could*?
3. Where should the auxiliary generally be placed in a sentence?
4. What is the difference between *into* and *in*?

VIII.

1. What is the difference between *so* and *such*?
2. What is the difference between *taste of* and *taste for*?
3. What is the difference between *disappointed of* and *disappointed in*?
4. What do *that* and *this* refer to when two things are contrasted?

IX.

1. What is the difference between *will* and *shall*?
2. Is it proper to use *from* before *hence*, *thence* and *whence*? Give the exception.
3. Is the infinitive ever used as the nominative to a verb?
4. Name some words and the appropriate prepositions by which they should be followed.
5. What is construction?

X.

1. What is prosody?
2. What is accent?
3. What is quantity?
4. What is emphasis?
5. What is pause in prosody?
6. What is tone in prosody?

PROGRAMME N° 2.

FRENCH GRAMMAR.

I.

1. When are the following substantives masculine and when feminine—*aide, aigle, amour, couleur, couple, délice, orgue, fou-dre*, and *gens*?
2. What is to be remarked with regard to nouns derived from other languages?
3. When are proper nouns declinable and when undeclinable?
4. What are collective nouns? How many kinds?
5. What are compound substantives?

II.

1. How should you form the plural, 1st, when a noun is composed of two nouns; 2ndly, when a noun is composed of two nouns joined by a preposition; 3rdly, when a noun is composed of a noun joined to a verb, adverb, or a preposition?
2. How should you write the plurals of the words *coupe-gorge, crève-cœur, porte-drapeau*, and *casse-cou*? And why should they be so written?
3. When are *du, de là*, and *des* employed?
4. When an adjective precedes a noun in what way is the article supplied? Are there any exceptions to this rule?
5. When does the complement of a collective noun (or of an adverb of quantity) require a preposition, and when an article?

III.

1. When is the adjective related to *nous* and *vous* singular?
2. When does an adjective related to several nouns agree with the last only?
3. What is to be remarked with regard to the adjectives *un, demi, excepté*, &c?
4. Give an example in which *demi* is written in the feminine plural.

IV.

1. What are the numeral adjectives which sometimes take the sign of the plural?
2. When is *même* an adjective, and when an adverb?
3. What rules is *quelque* subject to?
4. When is *tout* an adjective and when an adverb?

V.

1. When are personal pronouns standing for the subject placed after the verb?
2. Is the pronoun *le* declinable when it stands for a noun?
3. Is the same pronoun varied when it represents an adjective or a verb?
4. When *qui* is preceded by a preposition can it be applied to things?

VI.

1. In how many cases is *chacun* followed by *son, sa, ses*?
2. In how many cases is it followed by *leur, leurs*?
3. What is the difference between *l'un l'autre* and *l'un et l'autre*?
4. Are there cases in which *on* may be followed by an attribute feminine or plural? Give an example.

VII.

1. When the subjects are connected by *ni* in what number is the verb?
2. Can a noun or pronoun be governed by several verbs?
3. Are there exceptions to this rule?
4. When is the present used instead of the past?

5. Can a truth belonging to all time be expressed by the imperfect?

VIII.

1. After what kinds of verbs are the tenses of the subjunctive used?
2. When the first verb is in the present or future, in what tense of the subjunctive should the second verb be? Give the exceptions.
3. When the first verb is in the imperfect in what tense of the subjunctive should the second verb be?
4. Give conjunctions which require the indicative, and conjunctions which require the subjunctive.

IX.

1. Is the present participle ever declinable?
2. How can you distinguish the present participle from the verbal adjective?
3. Are all active participles varied when preceded by the direct objective?
4. In what manner do all passive participles agree?
5. How do all neuter participles agree?
6. How do all pronominal participles agree?
7. What is to be said about participles having the pronoun *en* for their objective,—participles followed immediately by the infinitive,—and participles which have *l'* or the adverb *pu* for their objective?

X.

1. When should the words *avant, autour*, and *plus* be used instead of *auparavant, alentour*, and *davantage*?
2. In how many ways is *plutôt* written?
3. What is the difference between *avant* and *devant*?
4. What is the difference between *quand* and *quant*?
5. Can *voici* and *voilà* be used indifferently?
6. What is the difference between *quoique* and *quoi que*?
7. Name the signs of punctuation and explain their use.

PROGRAMME N° 3.

GEOGRAPHY.

I.

1. What are the *equator, meridians, tropics*, and *polar circles*?
2. How many zones are there, and how are they called?
3. What are degrees of latitude and longitude?
4. What is the number of degrees contained between the poles?
5. What distance from the poles are the polar circles?
6. How can you find—1st, the latitude and longitude of a place; and 2ndly, a place the latitude and longitude of which is given?
7. How can you find the difference of latitude, longitude, and time, between two places?

II.

1. How many parts is the globe divided into?
2. How many principal races of men are there?
3. What are the principal religions?
4. How many open seas are there? What are their names?
5. What are the seas formed by the Great Ocean?
6. Name the four largest towns of the globe and their respective populations?
7. What is the approximate population of the globe?

III.

1. Point out the limits, extent and principal divisions of America.
2. What are the principal straits of America?

3. What are the gulfs and principal bays of America ?
4. What are the principal rivers of America and where do they fall ?
5. Point out the principal lakes of America.
6. What are the principal mountain chains of America ?
7. What are the most important islands of America ?

IV.

1. How many countries is North America divided into ?
2. Give some particulars of the climate and productions of North America.
3. What are the boundaries and principal divisions of Canada ?
4. What are the most elevated points in Canada ?
5. Name the principal canals of Canada.
6. What are the rivers and most important islands of Canada ?
7. Give particulars of the productions and commerce of Canada.

V.

1. What are the chief towns of Canada ?
2. What is the population of Upper Canada ? What of Lower Canada ?
3. Give the boundaries, the names of the capitals, and the population of New Brunswick, and of Nova Scotia.
4. Give the boundaries of the American Union.
5. Give the names of the States, with their capitals. What is the population of the American Union ?
6. What are the chief towns of the United States ?
7. Characterize the Government of the United States.
8. Give some particulars respecting the commerce of the United States.
9. What are the boundaries of Mexico ?—its capital?—its population ?
10. Define the position of Russian America, New Britain and Central America.

VI.

1. How is South America bounded ?
2. Name the chief states of South America.
3. How is Columbia divided ?
4. Name the chief countries of South America and their capitals.
5. Where is Chili situated ?
6. Give particulars of the climate and productions of South America.
7. What is the more common form of government in South America ?

VII.

1. What are the boundaries of Europe ?
2. Name the chief islands and peninsulas of Europe.
3. What are the inland seas of Europe ?
4. What are the principal rivers of Europe, and what countries do they drain ?
5. Point out the principal mountain ranges and their directions.
6. How are most of the states of Europe governed ?
7. Give the boundaries, — capitals — and population of the states of Northern Europe.
8. Give the boundaries, — capitals — and population of the states of Central Europe.
9. Give the boundaries, — capitals — and population of the states of Southern Europe.

VIII.

1. What are the British Isles ?
2. Give some particulars of the manufactures and commerce of Great Britain.
3. Name the chief towns of Great Britain.
4. Describe the climate and productions of France.
5. What are the chief towns of France ?
6. What is the most mountainous country of Europe ?

IX.

1. Give the boundaries and divisions of Asia.
2. Where are the principal volcanoes situated ?
3. What are the principal mountain ranges of Asia ?
4. Name the chief rivers of Asia ? What countries do they drain ?
5. Name the most populous empire of Asia, its boundaries, and its capital.
6. Point out the British possessions in Asia.

X.

1. What are the boundaries and divisions of Africa ?
2. Name the principal mountains.
3. What strait separates Europe from Africa ?
4. Where does the Nile empty itself ?
5. What is the physical aspect of Africa ?

XI.

1. What is Oceania ?
2. Give the principal divisions of Oceania.
3. Give some particulars of the climate and productions of Oceania.
4. What are the principal European possessions in Oceania ?
5. Name the chief towns of Australia.

PROGRAMME N° 4.

HISTORY OF ENGLAND.

I.

1. By what people were the British Isles originally occupied ?
2. Why did the Romans give the name of Albion to Britain ?
3. How long was Britain under the dominion of the Romans ?
4. What people ruled Britain immediately after the Romans ?
5. What country did the Anglo-Saxons originally come from ?

II.

1. What were the kingdoms founded by the Saxons ?
2. What were the kingdoms founded by the Angles ?
3. What is called the Heptarchy ?
4. Who was the king that established his authority over the entire Heptarchy ?
5. Give a sketch of the reign of Alfred the Great.

III.

1. Name some of the kings of the Saxon dynasty.
2. Where was the battle of Hastings fought and who was the victor ?
3. Give a sketch of the life of William the Conqueror.
4. Who were the Norman kings ?
5. How and when did William Rufus die ?
6. What were the results of the battle of Tinchebrai ?
7. What treaty did Stephen make with Matilda ?

IV.

1. Name the principal Plantagenet kings, properly so called.
2. Who was Henry II ?
3. How did the dispute between Henry II. and Thomas à Becket end ?
4. Give some particulars of the life and exploits of Richard Cœur-de-Lion.
5. What was the occasion of the quarrel between John and the Pope ?

V.

1. What are the Statutes of the University of Oxford ?
2. What is the origin of the title of Prince of Wales given to the eldest son of the Sovereign ?
3. How and in what year did Edward II. die ?

4. Upon what did Edward III. rest his claim to the Crown of France?

5. Where and by whom was John II., king of France, made prisoner?

VI.

1. What was the name of the Welsh chieftan who for a time successfully opposed Henry IV?

2. In whose reign, and in what year, was the battle of Agincourt fought, and who were the victors?

3. What were the terms of the treaty of Troyes?

4. What contest is known as the War of the Roses? What were the principal events of the war?

VII.

1. Name the kings of the dynasty of the Tudors.

2. What did Ireland become under Henry VII.?

3. In what year did Henry VIII. ascend the throne?

4. Relate the principal incidents of the reign of Henry VIII.

5. In what reign was Calais restored to France?

VIII.

1. By whom and in what reign was the Protestant faith established in Scotland?

2. What treatment did Mary Stuart receive at the hands of Elizabeth?

3. What was the Armada,—and what became of it?

4. Why was Essex beheaded?

5. In what year did the death of Elizabeth take place?

IX.

1. Name the kings of the dynasty of the Stuarts.

2. What was James I. before his accession to the throne of England?

3. How and in what year did Charles I. die?

4. How did Cromwell treat the Irish?

5. By whom was James II. dethroned?

X.

1. In whose reign and in what year was the peace of Ryswick concluded?

2. What general was intrusted with the war under Queen Anne?

3. In what year was the treaty of Utrecht signed?

4. What advantages were secured to Britain by this treaty?

5. What was the most important event of the reign of Anne with regard to Scotland?

XI.

1. Name the British sovereigns of the house of Brunswick.

2. What was the conduct of George I. towards Ireland?

3. Name the two statesmen who contended for power under George II.

4. In what reign was Canada ceded to Britain?

5. Give a sketch of the American Revolutionary War.

XII.

1. Why was the Prince of Wales appointed Regent?

2. What were the terms of the peace of Amiens?

3. In what struggle was Great Britain engaged against France during the reign of George III?

4. Under what monarch, and in what year, was the battle of Navarino fought, and who were the victors?

5. Under whose administration and in what year were the R. Catholics emancipated?

6. At what age and in what year did Queen Victoria ascend the throne?

7. What principal wars have been waged by Great Britain during Queen Victoria's reign? What were the theatres of these wars?

PROGRAMME N° 5.

HISTORY OF FRANCE.

I.

1. Who were the first inhabitants of Gaul, and from what country did they come?

2. What was the religion of the Gauls?

3. By whom were the Gauls subdued?

4. Who were the first apostles of the Gauls?

5. How many different tribes were there among the Gauls after the great invasions?

II.

1. By what Prince was the first dynasty founded?

2. In what reign and year, and against whom, was the battle of Châlons, on the Marne, fought?

3. In what year did Clodwig or Clovis, ascend the throne?

4. What were the most remarkable events in the reign of Clovis?

5. How did Clovis divide his kingdom?

III.

1. What was the fate of the children of Clodomir?

2. In what manner did Clotaire I. punish Chramme, his eldest son?

3. What was the origin of the contest between Brunchild and Fredegonde?

4. Who were called Mayors of the Palace?

5. In what year was the battle of Testry fought, and what were its results?

IV.

1. Who was the first king of the Carolingian line?

2. In what year did Charlemagne begin his reign?

3. Against what nations were the principal wars of Charlemagne waged?

4. By what Pope, and in what year, was Charlemagne crowned Emperor of the West?

5. What is meant by *Capitularies*?

V.

1. During what reign did the Normans ascend the Loire and Seine the first time?

2. Who were the defenders of Paris when that city was besieged by the Normans?

3. What is meant by the *feudal system*?

4. Where and in what year did the death of Charles the Simple take place?

5. Who was the last king of the Carolingian dynasty?

VI.

1. What is known as the *Truce of God*?

2. Give an account of the first Crusade.

3. What were the consequences of the repudiation of Eleanor by Louis VII?

4. Who were the Albigenes?

5. What results had the battle of Bouvines?

VII.

1. How was France ruled during the minority of St. Louis?

2. Against what English monarch did St. Louis wage war?

3. Give an account of the crusades undertaken by St. Louis.

4. In what reign did the massacre known as the *Sicilian Vespers* take place?

5. Who were the Templars, and to what punishment were they condemned?

VIII.

1. By virtue of what law did Philip VI. ascend the throne?

2. When, and by whom, were the battles of Sluys and Cressy won?
3. Where did the death of John the Good occur?
4. When, and by whom, was the battle of Agincourt won?
5. Give some account of Joan of Arc and of her career.

IX.

1. What was the *Ligue du bien public*?
2. What monarch deserved the name of *Father of the People*?
3. How and when did Henry IV. die?
4. What was the *Edict of Nantes*?
5. In what reign was Richelieu minister? Give an account of his administration.

X.

1. At what age, and in what year, did Louis XIV. ascend the throne?
2. Who was prime minister during the Regency?
3. What were the causes of the dissensions of the Fronde?
4. In what year was the treaty of Nimeguen signed, and what conquests did it secure to France?
5. What was the League of Augsburg, and on what occasion was it formed?
6. Give an account of the war of the Spanish succession.
7. Who was intrusted with the government after the death of Louis the Fourteenth?
8. What authors have rendered this reign illustrious?

XI.

1. What were the principal events of the Seven Years War?
2. Who was the successor of Louis XV?
3. What part did France take in the American War of Independence?
4. In what year were the States-General convoked?
5. What were the most important acts passed by the Constituent Assembly?
6. When and how did Louis XVI. die?
7. What was the Reign of Terror?
8. In what year and where was Napoleon Bonaparte born?

XII.

1. What treaty was signed after the first Italian campaign?
2. What remarkable battle terminated the second Italian campaign?
3. What pope crowned Napoleon?
4. What were the limits of the empire under Napoleon?
5. In what year did the death of Napoleon take place?
6. Who were the two last kings of the elder branch of the house of Bourbon?
7. How was Louis-Phillippe called to the throne, and in what manner was he deposed?
8. How many years did the second Republic continue?
9. What success attended the wars undertaken by Louis Napoleon?

PROGRAMME N° 6.

UNIVERSAL HISTORY.

I.

Fabulous and uncertain ages.

1. What is known about the history of the Egyptians from the foundation of their empire to the conquests of Sesostris?
2. By whom was the Assyrian Empire founded?
3. How long did the Assyrian Empire continue and what was its extent?
4. What were the most noted cities of the Assyrian Empire?
5. How was the Assyrian Empire destroyed?

6. What kingdoms sprung out of the ruins of the Assyrian Empire?
7. What is known of the history of Greece before the siege of Troy?

II.

Historical Times.—From 800 to 600 B. C.

8. Give a sketch of the history of Egypt from the time of Sesostris to that of Necho.
9. What is the reign of Necho remarkable for?
10. Under whom were the empires of Babylon and Nineveh united?
11. Relate the history of Nabuchadnezzar II.
12. How did Balthazar perish?
13. What were the four great republics of Greece, and by whom were they founded?
14. What was the form of government of each of the Greek Republics?
15. Who were the most celebrated lawgivers of Greece?
16. Give an account of the founding of Rome.

III.

From 600 to 400 B. C.

17. By whom was the Persian Empire founded?
18. What was the extent of the Persian Empire?
19. What were the chief cities of the Persian Empire?
20. How long did the Persian Empire last?
21. What was the condition of Egypt under the Persians?
22. Give an account of the expedition undertaken by Darius against the Greeks.
23. Give an account of Xerxes' expedition against the Greeks.
24. Who among the Greeks won imperishable laurels in the Persian war?
25. What was the origin of the Peloponnesian war?
26. What were the most important events of that war, and who fought with the greatest distinction?
27. How would you characterize each reign of the Kings of Rome?
28. When and how was Rome formed into a republic?
29. Give an outline of the history of Rome to the invasion of the Gauls.

IV.

From 400 to 200 B. C.

30. Describe the retreat of the ten thousand Greeks.
31. What relations existed between the Greek Republics after the Peloponnesian war?
32. Who subjected Greece to his dominion?
33. By what orator were the plans of Philip long thwarted?
34. By whom was the Macedonian Kingdom founded, and how long did it exist?
35. What was the extent of that empire?
36. What great victories did Alexander achieve?
37. What faults is he reproached with?
38. At what age did he die?
39. What were the quarrels between Alexander's lieutenants?
40. Name the principal kingdoms which succeeded to the Macedonian monarchy?
41. Give an account of the taking of Rome by the Gauls.
42. How long did the war against the Samnites last, and by what great events was it marked?
43. How long did the first Punic war last, and by what great events was it marked?

V.

From 200 B. C. to A. D.

44. What victories did Hannibal win over the Romans at the commencement of the second Punic war?

45. What success attended the Romans after the battle of Cannæ, and how did the second war terminate?

46. About what epoch may the Romans be considered to have made themselves complete masters of Italy?

47. How did the Romans succeed in making themselves masters of the known world?

48. What were the causes of the third Punic war, and how did it end?

49. Give a sketch of the history of Rome from the third Punic war to the first civil war.

50. What were the principal events of the first and second civil wars, and by what results were they attended?

51. Give some particulars of the life of Julius Cæsar.

52. What were the events that brought about the downfall of the Roman Republic?

53. By whom was the Roman Empire founded?

VI.

From 1 to 400 A. D.

54. When did the Redeemer come into the world?

55. What characterized the reigns of the emperors during the first and second centuries?

56. What persecutions distracted the Church?

57. By what means did the emperors generally succeed to the throne?

58. What great event marks the history of the empire in the fourth century?

59. How long did the Roman Empire continue in existence?

60. What two empires succeeded the old Empire of Rome?

61. When and how was the Western Empire destroyed?

62. What were the limits of the Eastern Empire, and how long did it last.

VII.

From 400 to 500 A. D.

63. What is meant by the invasion of the barbarians, and at what time did it commence?

64. Of what tribes or nations did the barbarians principally consist, and what were their origins, physical traits and morals?

65. Give an account of the invasion of the Goths, Visigoths, and Ostrogoths.

66. Give an account of the invasion of the Huns.

67. Give an account of the invasion of the Vandals, Sueves, and Burgundians.

68. Give an account of the invasion of the Saracens.

69. Who were the barbarians that invaded Gaul and founded the French monarchy?

70. Who was the founder of the Merovingian dynasty? From whom does it derive its name? Who was the greatest warrior of this line?

71. What were the most remarkable events in the reign of Clovis?

VIII.

From 500 to 900 A. D.

72. What is meant by the Heptarchy, and how long did it last?

73. Who was the founder of the Carolingian dynasty, and how long did it last? Who was the hero of this line?

74. Give a condensed account of the government of Charlemagne, and point out the peoples against whom he waged war.

75. What was the extent of the second Western Empire, and by what states was it succeeded?

76. In what condition were learning and the sciences in the interval between the fifth and tenth centuries?

IX.

From 900 to 1300 A. D.

77. Give an account of the invasion of the Danes and Normans.

78. Give a summary of the history of England from the end of the Heptarchy to the battle of Hastings.

79. Give a summary of the history of Germany to the end of the reign of Otho the Great.

80. What were the quarrels of the investitures, and by what events were they marked?

81. What states began to appear in the North of Europe, in the eleventh century?

82. What did the feudal system consist in, and how long did it continue?

83. Who were the most prominent princes of the Capetian line?

84. What were the Crusades?—Their cause and consequences?

85. What was the number of Crusades? Give some account of each.

X.

From 1300 to 1600 A. D.

86. What were the wars between France and England under the Valois? What their causes, chief events and consequences?

87. What great inventions and discoveries mark the fourteenth and fifteenth centuries?

88. Give a synopsis of the history of the kingdom of Spain from its foundation to the middle of the fifteenth century.

89. To what condition were Italy and Germany brought by the quarrels about the right of investiture?

90. Give an account of the religious contentions which agitated Europe from the Lutheran Reformation to the Reformation under Henry VIII. inclusive.

91. What were the leading events in the contest between Francis I. and Charles V?

92. What were the main incidents attending the religious wars in France, and by whom was peace restored?

93. What families occupied the throne of England till the close of the reign of James II?

94. How did royal authority struggle against the tide of Reformation in England?

95. What was the Thirty Years' War? What were its main incidents?

XI.

From 1600 to 1800 A. D.

96. What was the condition of Europe, and what were the limits of the different states, in 1661? (Decline of Spain, of Italy, and of the Empire. Dissensions in England. The power of Holland.)

97. What was the extent of the French monarchy in 1668?

98. What wars had Louis XIV. to sustain against the rest of Europe from 1672 to 1713?

99. Is there anything remarkable in the history of Sweden from the final separation of Norway to the death of Charles XII?

100. Who were the most distinguished sovereigns of Russia?

101. What was the naval and colonial power of England in the eighteenth century?

102. What were England's conquests and losses in America?

103. What brought about the French Revolution?

104. What were the principal events of the French Revolution?

105. How was order restored in France?

106. Give a sketch of the reign of Napoleon I?

PROGRAMME N^o 7.

COMPOSITION.

I.

1. What is composition?
2. Of what utility is the cultivation of belles-lettres?
3. What is style?
4. What is the first requisite in the art of writing?
5. How many different properties belong to style?

II.

1. What constitutes the common properties of style, and how are these common properties called?
2. What is *clearness*, and what causes tend to obscurity in the expression of thought?
3. What is essential to *purity* of style? What are *barbarisms* and *solecisms*?
4. What is *propriety* in style? Can a synonyme, in the strict sense of the word, be said to exist?
5. What is a *concise* style? What is *prolixity*?

III.

1. What is a *plain* style? What is *affectation*?
2. Define *taste*.—What are its elements and characteristics?
3. What is an *elegant* style?
4. What is a *florid* style?
5. What is *harmony*?

IV.

1. What are the *particular properties* of style?
2. How many *kinds* of style can you distinguish?
3. What is a *simple* style, and to what subjects is it most suited?
4. What properties should a simple style possess?

V.

1. What is *artlessness*? Is an artless style ever feigned in the authors?
2. In whose works have you found the most natural imitation of artlessness?
3. What is *ingenuity*?
4. What is called the *neat* style, and to what subjects is it suited?
5. What are the *essential* properties of the neat style?

VI.

1. What is *sublimity* of style, and to what class of composition is it suited?
2. What are the properties necessary to constitute a sublime style?

VII.

1. How many kinds of the sublime do you distinguish?
2. What is *sublime imagery*?
3. What difference is there between *sublimity* in the abstract and *sublimity of style*? Give an example.
4. When is sublimity in the sentiment?

VIII.

1. What is a *neologism*?
2. What is an *epithet*, and what effect must all epithets have?
3. How many acceptations can words have?
4. What is called a *figure*?
5. How many kinds of *figures* are there?
6. What figures of speech are termed *grammatical figures*?
7. What are the *figures of rhetoric*?
8. What is understood by *tropes*?

IX.

1. What is *exposition*, and what attainments are necessary to success?
2. What is *description*? How many *kinds* of *description* do you distinguish?
3. What is *narration*? What are the properties of narration?
4. What does narration comprise?
5. How many *kinds* of *narration* can you enumerate?

X.

1. What is the *epistolary* style?
2. What is a *letter*, and what are its essential characteristics?
3. Would you write a letter as if you were speaking?
4. What are the properties of the epistolary style?
5. Name some of the writers who have left the best models of this style.

PROGRAMME N° 8.

GEOMETRY.

I.

1. Definition of Geometry; of a line, point, and the different kinds of lines.
2. Definition of the circumference, superficies and divisions of a circle.
3. Radius, diameter, chord, arc, secant and tangent.
1. Angles, in general; right, acute, and obtuse angles; bisection of an angle.
5. Adjacent angles; complement and supplement of an angle.
6. The sum of two adjacent angles; of all angles contained within a right angle.
7. Contiguous angles, inscribed angles, angles of segments.
8. Measurement of contiguous angles, inscribed angles and angles of segments, with demonstrations.
9. Definition of perpendicular, oblique, vertical and horizontal lines.
10. Erection of a perpendicular.
11. Definition of parallel lines and secants, — to draw a parallel line.
12. To divide a given finite right line into any proposed number of equal parts.
13. To define superficies in general; curved, concave and convex superficies.

II.

14. Define a triangle; sides of a triangle; different kinds of triangles; altitude and base of a triangle.
15. Demonstrate that the three sides of every triangle taken together are equal to two right angles.
16. Demonstrate that the sides of a triangle opposed to equal angles are also equal.
17. Define a quadrangle; different kinds of quadrangles; altitude and diagonal of a quadrangle.
18. Define a polygon; regular polygon; inscribed and described regular polygon; centre, radius, apotheme and angles of a regular polygon.
19. Give the sum of the sides of an inscribed hexagon, with demonstration.
20. Define proportional quantities; mean, first and third proportionals of these quantities.
21. Demonstrate that two parallel right lines will cut an angle proportionally.
22. Define similar triangles.
23. Define homologous sides,—homologous vertices.

III.

24. Find a mean proportional between two given right lines.
25. Find a third proportional to two given right lines.
26. Find a fourth proportional to three given right lines.
27. Divide a right line in extreme and mean ratio.
28. Prove that the circumferences of circles are in proportion to each other as their diameters.
29. To demonstrate that parallelograms and triangles, having two equal angles, are to each other as the rectangles of the sides which are about those angles.
30. Show that in a right-angled triangle, a perpendicular from the right angle is a mean proportional between the segments of the hypotenuse.

31. Demonstrate that the right angle of a rectangular triangle is equal to the two other angles of the same triangle.

32. Find the superficies of a rectangle, square, parallelogram, and of a lozenge.

33. Find the superficies of a triangle, trapezium, and of a regular and irregular polygon; with demonstrations.

34. Define the terms *sector*, *segment*, and *arc of a circle*.

35. Find the superficies of a circle.

36. Find the superficies of a sector and segment.

37. Demonstrate that similar polygons are to each other as the squares of their homologous sides.

IV.

38. Define a solid; polyhedron; planes and edges of a polyhedron, regular and irregular polyhedron, solid angle. Name the regular polyhedrons.

39. Define a prism; right and oblique prisms, altitude of a prism; parallelepiped; regular and irregular pyramids; frustum of a pyramid.

40. Define a right and an oblique cylinder; axis of a cylinder.

41. Define a right and an oblique cone; axis of a cone; frustum of a cone.

42. Define a sphere, radius and diameter of a sphere, great and small circles of a sphere.

43. Define a zone; segment of a sphere; sector of a sphere, and spherical angle.

44. Method of finding the superficies of cubes of right and oblique prisms, and of right and oblique cylinders.

45. Method of finding the superficies of the sides of regular and irregular pyramids and of right and oblique cones.

46. Method of finding the superficies of the sides of the frustum of a regular pyramid, and of the frustum of a right cone.

47. Method of finding the superficies of a sphere, and segment of a sphere.

48. Method of finding the superficies of a spherical ungula.

49. Method of finding the contents of rectangular and other parallelepipeds, of right and oblique cubes and prisms.

50. Method of finding the contents of right and oblique cylinders.

51. To find the contents of any pyramid, knowing the proportions of two homologous sides of its frustum.

52. Method of finding the contents of the frustum of a rectangular pyramid, and of the frustum of a triangular prism.

53. Method of finding the contents of right and oblique cones, and of the frustum of a cone.

54. Method of finding the contents of a sphere, and spherical zone.

PROGRAMME N° 9.

ALGEBRA.

I.

1. What is algebra?

2. Why are figures and quantities represented by letters?

3. What are algebraic signs and what do they express?

4. What is a *coefficient*? What is an *exponent*?

5. Show the difference or similarity existing between the quantities a , $2a$, a^2 , \sqrt{a} ,—giving to a a known value.

6. What are *rational quantities*? What are *irrational quantities*?

7. What are *positive quantities*? What are *negative quantities*?

8. What is a *monomial*? What is a *binomial*? What are *multinomials*?

II.

9. How is addition performed in algebra?

10. How is subtraction performed in algebra?

11. How would you multiply monomials?

12. How would you multiply polynomials?

13. What is the rule for the signs in multiplication?

14. How is the division of monomials performed?

15. What is the value of a^0 and a^1 ?

16. How is the division of multinomials performed?

17. What is the rule for the signs in division?

18. Do algebraic fractions offer particular cases?

III.

19. How is any required power obtained from a whole or fractional monomial?

20. What is the rule for the signs?

21. How is the square of binomial and multinomial quantities obtained?

22. Raise a given quantity to its square by means of the formula $a^2 + 2ab + b^2$.

23. How is the square root of a monomial extracted?

24. How is the square root of a multinomial extracted?

25. How would you obtain the cube of monomial and multinomial quantities?

IV.

26. What is equality? What is an identical proposition? What is an equation?

27. What is the *unknown quantity* of an equation? What is a *simple equation*? What is a *quadratic equation*?

28. Prove that the *members* of an equation may be augmented or diminished by a like quantity without altering the value of the unknown quantities.

29. What rule is to be observed in *transposing terms*?

30. Prove that without altering the value of the unknown quantities, the two members of an equation may be divided, or multiplied, by a like quantity, provided that this is independent of the unknown quantities.

31. How would you clear an equation of fractions?

32. What is the rule to solve a simple equation containing one unknown quantity?

33. What is the rule to solve two simple equations containing two unknown quantities?

34. What is the difference between the methods of *elimination* by *comparison*, *substitution* and *reduction*?

35. What is the rule for solving any number of simple equations with an equal number of unknown quantities?

PROGRAMME N° 10.

SACRED HISTORY.

[This Programme is the same as that contained in Schedule F.]

PROGRAMME N° 11.

HISTORY OF CANADA.

I.

1. Into how many tribes would you class the Indians inhabiting Canada at the time of its discovery?

2. In what part of Canada did the Algonquins dwell?

3. How many tribes were the Algonquins divided into, and where did each of these tribes dwell?

4. What territory did the Iroquois occupy, and how many tribes were they divided into?

5. What was the country of the Hurons?

6. What were the moral endowments of the aborigines?

7. What were their physical characteristics?

8. What were their chief occupations?

9. How did the Indians make war?

10. What were the ceremonies gone through when peace was concluded?

11. What form of government prevailed among the Indians?
12. What was their religion?
13. What were the funeral rites of the Hurons?
14. Did the Indians possess any knowledge of written language or characters?

II.

15. How far into the interior did Cartier penetrate during his first voyage?
16. How was Cartier received at Stadacona on his second voyage?
17. Give an account of Cartier's visit to Hochelaga?
18. What accident occurred to Cartier during the winter?
19. In what year did he return to France?
20. What fault did Cartier commit on leaving the St. Lawrence?
21. When and by whom were the first attempts made at colonization, and what was their success?
22. What was the issue of the enterprise of M. de LaRoche?
23. Was any attempt made by France to colonize the country in the interval between 1578 and 1608?

III.

24. Give an account of the founding of Port Royal.
25. When did Champlain lay the foundation of Quebec?
26. What part did Champlain take in the war between the Indians?
27. What places did Champlain discover in his first expedition against the Iroquois?
28. What success attended the first expedition against the Iroquois?
29. What success attended the second expedition against the Iroquois?
30. What place did Champlain reach in 1613?

IV.

31. What were the Viceroys of Canada? Name some of the more prominent.
32. When did the first missionaries arrive in Canada?
33. What was the first Indian mission established by the Recollets?
34. What tracts of country did Champlain march through when on his third expedition against the Iroquois?
35. What success attended the third expedition against the Iroquois?
36. What progress did the colony of Quebec make previous to 1627?
37. In what did the views of Champlain differ from those entertained by the Society of Merchants?
38. When was the society of the Hundred Partners formed? What were its privileges and obligations?
39. What consequences followed the declaration of war between England and France in 1628?
40. Give an account of the surrender of Quebec to the British in 1629.

V.

41. How long did the British keep possession of Canada?
42. What important events occurred from 1632 to the death of Champlain?
43. What qualities did Champlain possess?
44. Give a short account of the missions founded by the Jesuits among the Hurons before the beginning of the war with the Iroquois.
45. Name the most important events that occurred from the death of Champlain until the founding of Montreal.
46. Give an account of the founding of Montreal.
47. What was the population of Canada about the year 1645?
48. What was the commercial freedom granted the inhabitants in 1645?

49. What were the functions of the Council of Quebec, and how was it composed?
50. Were the French exposed to the attacks of the Iroquois previous to 1653?

VI.

51. Who was the first missionary that fell a victim to the hate of the Iroquois?
52. Give an account of the dispersion of the Hurons by the Iroquois.
53. What did the Iroquois do after vanquishing the Hurons?
54. What was the duration of the peace concluded with the Iroquois in 1653?
55. Give an account of the gallant defence made by Dolard and his companions against the Iroquois.
56. What was the condition of the colony in 1662?
57. Give an outline of the most important events that occurred in Acadia from 1608 to 1613.

VII.

58. Who was the first bishop of the colony, and when did his arrival take place?
59. What were the difficulties between the bishop and M. d'Avangour?
60. What was the system adopted for the maintenance of the clergy?
61. When was the Seminary of Quebec founded?
62. At what time and by whom were the principal religious communities founded?
63. When was the *Conseil Souverain* established, and what were its functions?
64. What was the first municipal organization?
65. Give a short account of the administration of M. de Mécy.
66. By whom was M. de Mécy succeeded?

VIII.

67. Who were the functionaries that accompanied M. de Courcelle to Canada?
68. What did M. de Tracy on his arrival in the colony?
69. What was the order of the Court with regard to the Iroquois?
70. Give an account of Tracy's expedition against the Iroquois.
71. What were the efforts of M. Talon to insure the progress of the colony?
72. To what extreme northern and southern points did the missionaries and French *voyageurs* penetrate in 1672?
73. What were the nations unknown to Champlain that the missionaries and *voyageurs* discovered in the West?
74. Give an account of the discovery of the Mississippi.
75. When and by whom was Cataraqui (now Kingston) founded?
76. By whom was M. de Courcelle succeeded?

IX.

77. Give a short account of the first administration of M. de Frontenac.
78. By whom was de Frontenac succeeded in 1682?
79. Give a short account of the administration of M. de la Barre.
80. Why was de la Barre destituted, and who replaced him?
81. Give an account of de Denonville's expedition against the Iroquois.
82. How did *Le Rat* succeed in preventing the French and Iroquois from making peace?
83. Give an account of the massacre at Lachine.
84. By whom was M. de Denonville replaced?
85. What was M. de Callière's scheme to put a stop to the incursions of the Iroquois, and what was its success?

86. What contest took place between the English and French in Hudson's Bay ?
 87. Give an account of Troye's expedition to Hudson's Bay in 1686.
 88. Give an account of Iberville's exploits in Hudson's Bay.

X.

89. What success attended the three expeditions directed by Frontenac ?
 90. What course did the British Colonies determine to adopt when they found their territory laid waste by the incursions of the French ?
 91. What were the first military operations of Sir William Phipps ?
 92. Give an account of the siege of Quebec by Phipps.
 93. What happened the fleet under Phipps in his retreat from Quebec ?
 94. How were Canada and the British Colonies affected by the results of this war ?
 95. What success attended the second attempt to conquer Canada ?
 96. What success did the Iroquois meet with in the incursions they made between 1689 and 1693 ?
 97. What success attended Frontenac's expedition against the Iroquois ?
 98. Give an account of Iberville's exploits in Hudson's Bay and Newfoundland.
 99. When did the death of de Frontenac take place ? Give a sketch of his character.
 100. What were the ceremonies performed upon the occasion of signing the great treaty of peace with the Iroquois ?

XI.

101. Give a short account of the settlement of Louisiana before the death of Iberville.
 102. How was the settlement of Detroit commenced ?
 103. What was the third plan of attack against Canada, and with what success was it attended ? (War of the Spanish succession.)
 104. What was the fourth plan of attack against Canada ? (1711)—What success did it meet with ?
 105. How did France seek to repair the loss of Acadia, ceded to England by the treaty of Utrecht ?
 106. Give a short account of the administration of M. de Vaudreuil.
 107. When did the death of Vaudreuil take place, and by whom was he succeeded ?
 108. What were the claims of Great Britain with regard to the valley of the St. Lawrence and of the Mississippi ?
 109. What events of importance transpired between 1725 and 1744 ?
 110. Give an account of the discovery of the Rocky Mountains

XII.

111. What was the cause that led to the war of 1744 ?
 112. What steps did the Government of the colony take for its defence ?
 113. What led to the fall of Louisburg, and by what consequences was this event followed ?
 114. What disasters awaited d'Anville's expedition ?
 115. What warlike preparations did M. de la Jonquiere make ?
 116. Give an account of the death of Junonville and the surrender of Washington to Villiers.
 117. What was the fifth plan for the attack on Canada (1755) ?
 118. What was the relative strength in fighting men of the British and the French ?
 119. Give particulars of the dispersion of the Acadians.
 120. Give an account of the fight on the Monongahela.
 121. Give particulars of the defeat of general Dieskau.
 122. What were the results of the campaign of 1755 ?
 123. How many men had Britain and France under arms in 1756 ?

124. What was the first exploit of Montcalm in Canada ?
 125. Give an account of the capture of Fort William Henry.
 126. Give an account of the battle at Carillon.
 127. What was the condition of the country after 1755 ?

XIII.

128. What plan did the English adopt for the campaign of 1759 ?
 129. How many fighting men had the British ? What was the population, and what the number of armed men in Canada ?
 130. What were the first achievements of Wolfe at Quebec ?
 131. To what side did victory incline at Montmorency ?

XIV.

132. Give particulars of the first battle on the Heights of Abraham.
 133. What were the consequences of the first battle on the Heights of Abraham ?
 134. How was the news of the conquest of Canada received in England ?
 135. Whither did the French withdraw after the capitulation of Quebec ?
 136. Give an account of the second battle on the Plains of Abraham.
 137. What was the result of this battle ?
 138. Give particulars of the surrender of Montreal.
 139. What were the principal conditions of the capitulation ?

XV.

140. What was the aspect of the country when peace was restored ?
 141. When was the possession of Canada finally assured to Britain ?
 142. What civil and political changes did Great Britain make in her new possessions ?
 143. Give a view of the administration of the colony till 1775.
 144. What were the principal conditions of the capitulation of Quebec ?
 145. What were the causes that led to the war between the British Colonies and the mother country ?
 146. What was the behavior of the British and Canadians in the war of 1775 ?
 147. Give an account of the invasion of Canada by the Americans.
 148. When did the first meeting of the Legislative Council take place, and what were the principal laws passed ?
 149. What governor succeeded Carleton ?
 150. Give a short account of Haldimand's administration.

XVI.

151. Give a sketch of the Constitution granted Canada in 1791.
 152. When did the first meeting of Parliament take place ?
 153. Did anything worthy of remark occur, besides Parliamentary proceedings, in the interval between 1791 and 1807 ?
 154. What difficulties arose between the House of Assembly and the Council, and afterwards with Governor Craig ?
 155. Give a sketch of the administration of Sir George Prevost.
 156. What was the result of the first military operations of 1812 ?
 157. What was the result of the campaign of 1813 ?
 158. In what parts of the country did the events of the campaign of 1813 transpire, and what was the success of this campaign ?
 159. Give particulars of the defeat of the Americans at Châteauguay.
 160. What consequences followed the victory at Châteauguay ?

XVII.

161. What were the most remarkable events that occurred between 1814 and 1816 ?

162. What question created fresh difficulties between the Governor and the House of Assembly, and how long did these difficulties last?

163. When was the bishopric of Quebec erected into an archbishopric, and who was the first archbishop?

164. When was the first project of the Union of the Canadas presented?

165. What were the most remarkable events that occurred between 1822 and 1835?

166. What causes led to the insurrection, and where did the first outbreak take place?

167. What events transpired at Chambly, St. Denis, St. Charles, and St. Eustache?

168. What took place in Western Canada at the same time?

169. When were the Canadas united, and what led to this event?

170. What are the principal provisions of the Act of Union.

PROGRAMME N° 12.

ART OF TEACHING.

I.

1. What is the Art of Teaching?
2. Upon what basis does this science rest, and what are its principles?
3. What particular qualifications should a teacher possess?
4. What is Education?
5. What is Instruction?
6. What relation does instruction bear to education?
7. Why should education be at once physical, moral, and intellectual?
8. What is physical education?
9. In how far should a teacher look to the physical education of his pupils?
10. What means should be employed to develop the understanding of children?
11. To what degree should a teacher develop the feeling of *sensitiveness* in his pupils?
12. How should the power of *volition* be strengthened in children?
13. What is the groundwork of moral education?

II.

14. What should be the aim of the teacher in imparting instruction?
15. Show the utility of a fixed system of study in the school.
16. What essential advantages ought this system to have?
17. How should the teacher prepare himself for his class?
18. What are the faults which a teacher should not tolerate in his school?
19. Upon what principles is true discipline founded?
20. What duties devolve upon the teacher when in presence of his class?
21. How can a teacher secure obedience, order and silence? How can he impart habits of cleanliness? How should politeness and purity of manners be taught?
22. How can pupils be made attentive in school?

III.

23. What should the bearing of the teacher be towards the weak and the strong of the same class?
24. What is the *explanatory* method of teaching?
25. What is the *exhibitory* method of teaching?
26. What peculiarities does each of these offer?
27. How should the subjects be arranged?
28. What are the advantages obtained by proceeding from the *known* to the *unknown*,—from the *simple* to the *compound*?

29. What are the qualifications requisite to become a successful expositor?

30. What is the best method of questioning?

31. How should children be taught to remember *things*, and how should they be taught remember *words*.

IV.

32. What does the *individual* system of instruction consist in?

33. What does the *simultaneous* system of instruction consist in?

34. What does the *mutual* system of instruction consist in?

35. What are the advantages and defects of each system?

36. What are the essential characteristics of a good system?

37. What system is the most advantageous for the greatest number of schools?

38. What method can be adopted in teaching children the alphabet?

39. What method should be adopted to teach spelling?

40. What method should be followed to teach calligraphy?

41. How should children be taught the elements of orthography?

42. According to what method can grammar and arithmetic be taught?

43. What importance do you attach to mental arithmetic?

44. In teaching geography and history should it be your aim to exercise the memory or the intellect of pupils?

45. What are *object lessons*, and to what subjects may these lessons extend?

46. How should a teacher impart instruction about common things?

V.

47. What should the object of all rewards and punishments be?

48. In what manner should a teacher have recourse to rewards and punishments?

49. What do you understand by *positive* punishment and *natural* punishment?

50. In awarding punishment should the intention or the outward action be considered?

51. Should any fault be left unpunished?

52. How and when should punishment be awarded?

53. What is deserving of reward?

54. What should be the nature of rewards?

55. How and when should rewards be given?

VI.

56. What objects should a schoolhouse be provided with?

57. What are the duties of the teacher towards the school commissioners?

58. What are the obligations of the teacher towards the minister of religion?

59. What are the responsibilities of the teacher towards the parents of his pupils?

60. What are the responsibilities of the teacher towards the public?

PROGRAMME N° 13.

AGRICULTURE.

I.

1. What is Agriculture?
2. What advantages does agriculture offer?
3. What knowledge is necessary to become a good agriculturist?
4. Why is a knowledge of the different kinds of soil necessary?
5. Point out the qualities of the different kinds of soil, and the plants they are best adapted to produce.

II.

6. What are the most advantageous means of improving the soil?
7. What are the different fertilizers used to enrich the soil?
8. Why is it necessary to note the difference between fresh and old manure?
9. What care should be taken to prevent the deterioration of manure?
10. Of what utility is *plaster*?
11. What is *rotation of crops*, and what are the advantages secured by this system?
12. What is the best system of *rotation of crops*?
13. What is the utility of *drainage*, and how can it be effected?

III.

14. What are the principal varieties of seeds?
15. Why is it necessary to select the seed carefully?
16. What means are usually employed to clean grain?
17. Name the principal agricultural implements?
18. Of what importance are good implements to the agriculturist?
19. What are the principal agricultural labors?
20. Name the months in which each of these agricultural labors should be performed.
21. Point out the best method of ploughing.
22. Point out the advantages resulting from good ploughing.
23. Point out the best manner of cultivating plants.

IV.

24. Name the most common weeds, and point out the best means to be employed for their destruction.
25. Point out the necessity for the cultivation of grasses.
26. What are the grasses generally sown in Canada?
27. Name the principal domestic animals.
28. What should be the relative numbers of a farmer's live stock?
29. What is the object of the improvement of stock?
30. In what case may cross breeding be advantageous?
31. What precautions is it necessary to take in making good butter?
32. What are the fruits commonly cultivated in Canada?
33. What care is it necessary to bestow on fruit trees in general?

PROGRAMME N° 14.

BOOK-KEEPING.

I.

1. What is Book-keeping?
2. What is learned in book-keeping?
3. How many parts is it divided into?
4. How many books are required in single entry?

II.

5. What is a Blotter?
6. How are transactions entered in the Blotter or Day Book?
7. How should entries be worded?
8. Where is the name, surname and place of residence of persons written? Where are the dates, and amounts due and received written?
9. What is the Journal?
10. Are entries made in the same form in the Journal as in the Blotter?
11. Why is it necessary to simplify the entries of the Blotter when transferred to the Journal?
12. Is it necessary to add up each page of the Blotter and Journal?

13. When an account is transferred from the Blotter to the Journal, what are the means employed to indicate the folio from which it has been taken, and the folio to which it has been carried?

14. What is the Ledger?

15. How do the entries in the Ledger differ from those in the Journal and Blotter?

16. Are the entries carried to the Ledger daily, weekly or monthly?

17. On what side of the Ledger would you enter amounts due, and on what side would you enter amounts received?

18. How could you find the folio of the Journal from which an account had been posted?

19. How would you render a detailed account from the Books?

III.

20. What is an Index and why is it used?

21. What is a Bill Book?

22. Is it very useful to the merchant?

23. What is a Sales Book?

24. What entries does it contain?

25. Is an Invoice Book required, and what is its use?

26. What is a Cash Book?

27. What transactions are entered in the Cash Book?

28. How can a merchant inquire into the State of his affairs?

29. What is an Inventory?

30. What knowledge may be obtained with the assistance of an Inventory?

SCHEDULE H.

PROGRAMME N° 1.

PHILOSOPHY.

I.

1. Object of Philosophy; its utility and importance.
2. *Being; matter and form; cause and effect.*

II.

Logic.

3. Ideas in general, and their origin.
4. Character and kinds of ideas.
5. Language and its origin.
6. Judgment.
7. Different modes of reasoning.
8. Method in general; analysis, synthesis.
9. Doctrine of syllogisms; its rules and figures.
10. Proof; different kinds of proof.
11. Consciousness.
12. Evidence.
13. Testimony of men and monuments; traditional and historical testimony.

III.

Metaphysics.

1. Existence of God proved by the principal metaphysical arguments.
2. Existence of God proved by the principal physical arguments.
3. Existence of God proved by the principal moral arguments.
4. Eternal being of God; definition and proof.
5. Simplicity of God; definition and proof.
6. Immensity of God; definition and proof.
7. Independence of God, definition and proof.
8. Immutability of God; definition and proof.
9. Knowledge of God; definition and proof.

10. Power and freedom of God ; definition and proof.
11. Providence of God ; definition and proof.
12. Evil ; moral evil, physical evil.

IV.

Morals.

1. Motives which prompt our actions.
2. Fundamental principles of morals.
3. Difference between moral good and evil.
4. Moral obligations.
5. Laws.
6. Rewards and penalties.
7. Moral sanction.
8. Destiny of man.
9. Proofs of the immortality of the soul.
10. Necessity of religion.
11. Necessity of internal, external and public worship
12. Religion the basis of society.
13. Important duties which man owes to himself.
14. Active and passive duties to society.
15. Right of property and civil rights.
16. Origin of political organization.
17. Divers forms of political authority.
18. Principles of sovereign power.
19. Duty to the State.

PROGRAMME N° 2.

NATURAL PHILOSOPHY.

I.

1. Object of Natural Philosophy ; its relation to chemistry.
2. General properties of matter ; definitions.
3. Weight ; its direction ; laws affecting falling bodies.
4. The balance and its principle ; description ; conditions necessary to its efficiency.
5. Principle of Archimedes ; equilibrium of bodies, immersed and floating on the surface.
6. Principles which cause liquids to rise to their levels ; description ; Artesian wells.

II.

7. Density ; different modes of increasing it.
8. Description of areometer and its use.
9. Capillary attraction ; endosmose ; ascent of the sap in trees.

III.

10. Experiments illustrating atmospheric pressure ; cause.
11. Principle and description of pneumatic engine.
12. Principle and use of the barometer ; conditions necessary to insure its efficiency.
13. Weight of atmospheric pressure in pounds.
14. Law of Mariotte ; description and manner of using the manometer.
15. Principle of the balloon ; how to produce an ascensional force.
16. Principle of the syphon and the pump.
17. Description of the principal kinds of pumps.

IV.

18. Sound ; its production and the manner in which it is communicated.
19. Laws of the variation of the intensity of sound ; principle of the reflection of sound ; echo and vibration.

V.

20. Principle and use of the thermometer ; manner of construction and liquids employed.

21. Conditions necessary to ensure good qualities ; scale of the principal kinds of thermometers.

22. Manner of comparing the degrees of the scales of the Fahrenheit, Reaumur and Centigrade.

23. Unequal expansion of different liquids ; maximum density of water :

24. Conductors ; name the principal conductors in their order.

25. Point out the most advantageous means of securing warmth within habitations, according to the laws which influence conductors of heat ;—utility of double-windows.

VI.

26. Radiation of heat ; examples.

27. Intensity of radiation ;—capacity for heat ;—name the bodies possessing the greatest power of radiating heat.

28. Reflection of heat ;—its relation to radiation.

29. Application of the principles of radiation and reflection to heating and preservation of heat.

30. Fusion ;—refractory bodies ;—law of fusion.

31. Congelation ;—law of congelation.

32. Account for the equality of temperature maintained during the fusion and solidification of bodies.

33. Expansion of water during the process of solidification ;—cause of the floating of ice in water.

VII.

34. Ebullition and vaporization ;—causes which increase vaporization.

35. Phenomena of vaporization ;—cold produced by vaporization.

36. Freezing mixtures ; their use ; preparation and parts composing some of these mixtures.

37. Elastic force of vapor ; influence of temperature on this force.

VIII.

38. Principle of the steam engine, and description of boilers for generating steam.

39. Principal parts of the steam engine and their functions.

40. Single and double acting steam engines ;—condensing engine ;—high and low pressure principles ;—expansion engine.

41. Peculiar noise heard before ebullition takes place ;—nature of ebullition ;—tension of vapor.

42. Influence of pressure on ebullition, —influence of matter held in solution ;—distillation of liquids.

43. Principal sources of heat ;—means generally employed to produce artificial heat.

44. Necessary conditions to obtain a good draught in constructing the flue of a chimney.

45. Different modes of heating buildings, and their relative advantages.

IX.

46. Light ;—shade ;—penumbra.

47. Reflection of light and the laws which govern it.

48. Refraction ;—its laws ;—phenomena caused by refraction.

49. Cause of the *mirage*.

X.

50. Lenses ;—different kinds of lenses ;—properties of the lenses more commonly used.

51. White light ;—names of colors of the spectrum and the order in which they occur.

52. Cause of color in bodies.

53. Microscope ;—principle of the compound microscope.

54. Principle of the astronomical telescope ;—terrestrial telescopes.

55. Myopy ;—presbyopy ;—glasses used to correct these defects.

XI.

56. Magnetism ;—natural magnets ;—artificial magnets.
 57. Direction of the magnetic needle ;—cause ;—description of the mariner's compass and its use.
 58. Electricity ;—principal means employed for producing it ;—bodies best adapted for producing it.
 59. Influence of one electrified body upon another ; good and bad conductors ;—principal bodies which possess the property of conducting electricity.

XII.

60. Attraction of points ;—lightning-rods and their proper construction.
 61. Electrical machine and its proper construction.
 62. Disguised electricity ;—principle of the Leyden Jar, and the effects it may be made to produce.
 63. Cause of lightning and of the noise produced by thunder ;—returning stroke.

XIII.

64. Voltaic Pile ;—Grove and Bunsen's batteries.
 65. Physical, chemical, calorific and luminous effects of electric currents.
 66. Electro-plating in gold, silver and copper.
 67. *Electro-magnets and their principle.*
 68. Electric telegraph ;—description of Morse's Telegraph.

XIV.

69. Fogs ;—clouds ; names of different formations of clouds and descriptions.
 70. Dew ;—rime-frost ;—snow ;—hoar-frost ;—sleet ;—hail.
 71. Hygrometers ;—hair hygrometers ;—Daniel's hygrometer.
 72. Cause of the rainbow.

PROGRAMME N° 3.

CHEMISTRY.

I.

1. Definition of the science of chemistry ;—matter and the divers states in which it exists.
 2. Cohesion ;—affinity ;—difference of these two properties.
 3. Crystallization of bodies ;—different processes of crystallization.
 4. Difference between adhesion and chemical attraction, and modifying causes.
 5. Elementary bodies ; their number ;—metalloids and metals ;—principal substances of this class.
 6. Principle of the nomenclature ;—acids, bases, salts and neutral salts.
 7. Equivalents ; examples.

II.

8. Oxygen ; its preparation and its properties.
 9. Combustion ; examples of slow and quick combustion.
 10. Azote ; its preparation and its properties.
 11. Air ; its composition and its properties
 12. Hydrogen ; its preparation and its properties.
 13. Water ; analysis and synthesis.

III.

14. Carbon ; diamond ; plumbago ; coal ; lignites and peat.
 15. Preparation of charcoal, bone-black and lamp-black.
 16. Properties of carbon ;—its discoloring and disinfecting power.
 17. Preparation of oxide of carbon and carbonic acid, and their properties.

IV.

18. Formation of carbonic acid by animals, its decomposition by plants.
 19. Preparation of carbonated hydrogen ; its properties.
 20. Preparation and purification of gas used for illumination.
 21. Flame, and its cause.

V.

22. Nitrous acid ; its properties.
 23. Ammonia ; its properties and its use.
 24. Properties of sulphur ; mode of purifying sulphur.
 25. Sulphuric acid ; its properties, use, and preparation.
 26. Phosphorus ; its properties, use, and preparation.
 27. Properties of arsenic ; its antidotes.
 28. Chlorine ; its properties and preparation.
 29. Decoloring and disinfecting properties of chlorine.
 30. Chlorohydric acid, its properties, use and preparation.

VI.

31. Classification of metalloids.
 32. General properties of each class of metalloids.
 33. Properties of iron, —principal sorts of iron.
 34. Smelting from the ore.
 35. Preparation of cast-iron, steel and malleable iron.

VII.

36. Tin : its physical and chemical properties ; its use ;—salts of tin.
 37. Zinc ; its properties and use ; its salts.
 38. Lead ; properties and use ; its salts.
 39. Mercury ; properties and use ; its salts.

VIII.

40. Properties of gold and silver.
 41. Chemical principles of the Daguerreotype and photograph.
 42. Preparation of potash and caustic soda ;—their properties.
 43. Preparation of carbonate of potash and carbonate of soda ;—their use.
 44. Preparation of bichlorate of soda ;—its properties and use.
 45. Chlorid of sodium ; its preparation, properties, and use.

IX.

46. Lime, its preparation, properties, and use, —hypochlorid of lime.
 47. Carbonate of lime ;—different varieties, and their use.
 48. Sulphate of lime ;—its use.

X.

49. Properties of aluminum.
 50. Alum ; its preparation and use ;—alumina.
 51. Porcelain, and pottery ;—their manufacture.
 52. Glass ;—its composition and manufacture.

XI.

53. Organic and inorganic bodies.
 54. Starch ;—its preparation, properties and use.
 55. Gluten ;—manufacture of bread ;—illustration.
 56. Lignin ;—preservation of wood.
 57. Paper ;—its manufacture.

XII.

58. Fibrin ;—albumin, gelatine ; preparation and use.
 59. Tanning.
 60. Gums.
 61. Properties of sugar ;—extraction of sugar from the cane and from beets.
 62. Refining sugar.
 63. Glucose.

XIII.

64. Fermentation.
65. Alcohol;—its properties and use.
66. Manufacture of cider and beer.
67. Ether;—its preparation and use.
68. Manufacture of vinegar.

XIV.

69. Turpentine; its preparation and use;—varnish.
70. Caoutchouc;—vulcanized gum-elastic.
71. Manufacture of soap, stearine candles and tallow candles.
72. Dye stuffs; bleaching; mordants.
73. Cotton printing.
74. Oxalic, tartaric and tannic acids.

PROGRAMME N° 4.

NATURAL HISTORY.

I.

1. Definition of Natural History.
2. Division of natural bodies into three kingdoms.
3. Characteristics of organized and unorganized forms.
4. Characteristics of animals and plants.

II.

Zoology.

5. Animals; their organic tissue.
6. Brief description of digestive organs.
7. Structure and development of teeth.
8. Mastication;—digestion;—absorption.
9. Blood; its composition;—arterial and venous blood.
10. Heart;—arteries, veins.
11. Circulation of the blood.
12. System of circulation in different animals.
13. Respiration;—respiratory apparatus of man.
14. Branchial and tracheal respiration.
15. Animal heat;—warm and cold blood.
16. Secretions.

III.

17. Essential parts of the nervous system.
18. Sense of touch, taste, and of smell.
19. Organs of hearing and of sight.
20. Power of motion.
21. Power of walking, flying, swimming, and of creeping.

IV.

22. Classification of the animal kingdom.
23. Mammals; their general structure.
24. Division into orders.
25. Principal orders of mammalia.
26. Structure of birds.
27. Migration of birds.
28. Principal orders of birds; characteristic peculiarities of each order.
29. Reptiles; their general structure, and principal orders.
30. Fishes; their general structure, and principal divisions.
31. Annulated animals.
32. General structure of insects.
33. General structure of the *arachnida*.
34. General structure of the *crustacea*.
35. General structure of the *annelides*.
36. General structure of the *mollusca*.

V.

37. In what orders would you place the monkey, rat, elephant woodpecker and adder?

38. In what classes and orders would you place the cat, lobs-
ters, snipe, duck, and squirrel?

39. In what classes and orders would you place the hare, horse,
dog, bear and fox?

40. In what classes and orders would you place the weasel,
whale, crow, domestic cock, and the wolf?

41. In what classes and orders would you place the mackerel,
goose, grasshopper and beaver?

42. In what classes and orders would you place the owl, sheep,
midge, and the ox?

43. In what classes and orders would you place the lion, snail,
and polype?

VI.

Botany.

44. General structure of plants.
45. Stem and root; functions of roots.
46. Leaves; their divers forms.
47. Buds.
48. Circulation of sap.
49. Functions of leaves.
50. Influence of the respiration of plants on the atmosphere.

VII.

51. Growth of stems and leaves.
52. Grafting.
53. Flowers and their different parts.
54. Fruit and seed.
55. Dissemination and germination of seed.

VIII.

56. Natural and artificial classification of plants.
57. Acotyledons;—principal families.
58. Monocotyledons; principal families.
59. Dicotyledons;—principal families.

IX.

60. In what families and classes would you place wheat, the
mushroom, beech-tree, and onion?

61. In what families and classes would you place the marigold,
mint, and sorrel?

62. In what families and classes would you place the sugar-
cane, buck-wheat, and the potatoe?

63. In what families and classes would you place the tobacco
plant, dahlia, coffee-tree and carrot?

64. In what families and classes would you place celery, the
cabbage, pea, melon, and hemp?

65. In what families and classes would you place the oak,
poplar, walnut-tree, and the strawberry?

X.

Geology.

66. Geology and its object.
67. General structure of the solid surface of the earth.
68. Degradation of rocks.
69. Sedimentary deposits and crystalline matter in rocks;—
mode of deposition.
70. Presence or absence of fossils of organic life.
71. Phenomena of geology.
72. Successive sedimentary deposits.

XI.

73. Geological classification.
74. Primary strata and subdivisions;—principal rocks; whether
fossiliferous or not.
75. Transitory strata;—rocks and fossils.
76. Older secondary strata;—carboniferous system; its origin,
order and principal fossils.

77. Red sandstone systems ;—rocks and fossils.
78. Middle secondary strata ;—oolite system ; rocks and fossils.
79. Newer secondary strata ;—cretaceous system, rocks and fossils.
80. Tertiary strata ;—its divisions.
81. First fresh-water formation ;—its rocks and fossils.
82. First marine formation ;—its rocks and fossils.
83. Second fresh-water formation ;—its rocks and fossils.
84. Second marine formation ;—its rocks and fossils.
85. Alluvial deposits ;—erratic blocks.
86. Caverns and fossil bones.

XII.

87. Formation of superficial crust or soil.
88. Unstratified rocks ;—their relation to sedimentary rocks.
89. Granite, and porphyry.
90. Extinct volcanoes ; their relation to those in activity.—Basalt ;—lava.
91. Veins ;—upheavals ;—relative epochs of the upheaval of the principal chains of mountains.
92. Situations which the useful minerals usually occupy in the different strata.

PROGRAMME N° 5.

ALGEBRA.

I.

1. The multiplication or division of an inequation by a positive quantity results in an inequation in the same sense.
2. Application of this theorem.
3. Interpretation of negative quantities in problems.
4. Negative quantities may indicate the measures and places of magnitudes.
5. Cases of impossibility.

II.

6. Quadratic equations ; pure quadratics ; affected quadratics.
7. Form in which the equation $ax^2 + bx + c = 0$, may be expressed.
8. Formula employed in solving the equation $x^2 + px + q = 0$.
9. Rule drawn from the preceding formula for the solution of quadratic equations.

III.

10. Arithmetical progression ;—increasing and decreasing ratio.
11. To find a general expression for any term of an arithmetical progression.
12. To find a general expression for the sum of all the terms of an arithmetical progression.

IV.

13. Geometrical progression ;—increasing and decreasing ratio.
14. To find an expression for the n th term of a geometrical progression.
15. To find an expression for the sum of all the terms of a geometrical progression.
16. To find an expression for the sum of the terms of a decreasing geometrical progression when the number of terms is infinite.

V.

17. Summation of series.
18. To find the scale of relation in a recurring series of the first order.
19. To find the sum of an infinite recurring series of the second order.

20. Definition of logarithms.
21. Show that every number cannot be taken as the base of a logarithm.
22. Powers of logarithms.
23. System of logarithms most usually employed.
24. Characteristics ;—change produced by multiplying or dividing with a power of 10.
25. Negative characteristics.
26. Application of logarithms to a problem in compound interest.

PROGRAMME N° 6.

GEOMETRY AND TRIGONOMETRY.

I.

1. Definition of an ellipse ;—tracing the curve.
2. Axes, foci, and radius-vector of an ellipse.
3. Definition of a parabola ;—tracing the curve.
4. Axis, directrix and vertex of the diameter of a parabola.
5. Definition of a helicoid.

II.

6. Plane and spherical trigonometry.
7. Expression of the magnitude of an angle.
8. Relation between spherical lines of the same angle.
9. Relation between the sines and cosines of the angles and sides of a spherical triangle.

III.

10. Solution of rectangular triangles.
11. Solution of an oblique triangle, of which one side and two angles are given.
12. Solution of an oblique triangle of which two sides and the included angle are given.
13. Solution of an oblique triangle of which the three sides are given.

IV.

14. Surveying ; instruments required.
15. To find the distance from an accessible point to an inaccessible object.
16. To find the distance between two inaccessible points.
17. To prolong a right line beyond an obstacle.
18. Taking levels ; mode of operation.

PROGRAMME N° 7.

ASTRONOMY.

I.

1. Definition of astronomy.
2. Celestial sphere.—Axis of the sphere.—Poles.
3. Parallels.—Equator.—Meridians.
4. Vertical circle.—Zenith.—Nadir.—Horizon.

II.

5. Fixed stars ; their distance from the earth.
6. Rising and setting of the stars ;—Polar Star.
7. Stars of different magnitudes visible to the naked eye.
8. Periodical, temporary and colored stars.
9. Double stars ; Milky Way ; nebulae.
10. Cause for the disappearance of the stars during the day.
11. Circle of perpetual apparition and of perpetual occultation.
12. Classification of stars ; principal constellations.

III.

13. Form of the earth, and phenomena which indicate it.
14. Apparent horizon.—Real horizon.

15. Axis of the earth. — Terrestrial Poles. — Meridian. — Equator.

16. Geographical longitudes. First meridian.
17. Determination of longitude and of latitude.
18. Parallel, oblique and right spheres.
19. Rotatory motion of the earth; principal facts which prove it.

IV.

20. The sun's annual change of position.
21. Ecliptic; its obliquity.
22. Equinoxes and solstices; change of the equinoxes.
23. Polar circles. — Colure.
24. Signs of the Zodiac.
25. Radius, size, mass and density of the sun.
26. Distance of the sun from the earth.
27. Spots in the sun; — revolution of the sun on his axis.
28. Physical constitution of the sun.

V.

29. True solar day; mean day; — true solar time; mean time.
30. Commencement of civil day and solar day.
31. Length of civil year.
32. Calendar; — Gregorian Calendar.
33. Cause of inequality in the duration of day and night.
34. Duration of day in arctic regions.
35. Seasons; cause; unequal length.

VI.

36. Moon; its light; motion round the earth.
37. Lunar month; lunar day.
38. Distance of the moon from the earth.
39. Radius and size of the moon.
40. Mass and density of the moon.
41. Phases of the moon.
42. Rotatory motion of the moon.
43. Mountains and valleys of the moon.
44. Atmosphere and climate of the moon.
45. Tides and their cause.

VII.

46. Eclipses of the sun and moon; — cause.
47. Difference in these eclipses.
48. Umbra and penumbra.
49. Conditions necessary to produce an eclipse.
50. Partial, total and annular eclipse.

VIII.

51. Planets; difference between planets and fixed stars.
52. *Inferior* and *superior* planets.
53. Names of the principal planets.
54. Universal principle of gravitation.
55. Particulars about Mercury.
56. Particulars about Venus.
57. Particulars about Mars.
58. Particulars about Jupiter.
59. Particulars about Saturn.
60. Particulars about Uranus.
61. Particulars about Neptune.
62. Asteroids.
63. Comets. — Nuclens. — Envelope. — Tail.

PROGRAMME N° 5.

AGRICULTURE.

I.

1. Object and utility of lessons in agriculture.
2. Conditions necessary to successful germination.

3. Names of the different kinds of soil.
4. Substances of which different soils are composed; define those that impart valuable properties to the soil.
5. Influences of sub-soil on the quality of land; — sloping land.

II.

6. Modes of improving the soil.
7. Distribution of crops; its principle.
8. Organic fertilizers; principal fertilizers of this class.
9. Particulars about the relative properties of fertilizers, and methods of application to the soil.
10. Fermentation of manures; method of obtaining the best results.
11. Mineral fertilizers; — kinds of soils which derive benefit from the application of lime; — utility of plaster.
12. Object to be kept in view in the improvement of stock, and the best methods to insure success.
13. Choice of breeding stock; — care which should be bestowed on the sanitary condition of animals.

III.

14. Care which should be taken in selecting a farm; — what its size should be.
15. Buildings necessary to a farm; — their arrangement.
16. Principal agricultural implements, and description of their essential parts.
17. Drainage; its utility; — best method to be employed.
18. What constitutes good ploughing; size and depth of the furrow, and size of the beds.
19. Best time for ploughing, and the reasons which should induce a farmer to avail himself of it; — object of harrowing.
20. Rotation of crops; — the most common system employed.
21. Fallow land; benefits to be derived from fallow, and the method usually employed.

IV.

22. Care which should be taken in selecting seed, and the benefits to be derived from an occasional change.
23. Names of the plants most generally cultivated in Canada; — advantages of mowing before grasses have attained their full maturity.
24. Land most suited for the cultivation of wheat; time of sowing.
25. Cultivation of rye and barley; — land best adapted to these crops; — practical culture of barley.
26. Cultivation of oats, and their use.
27. Cultivation of Indian corn, and its use.
28. Soil best adapted to the culture of peas; mode of culture.
29. Cultivation of the potatoe; — soil best adapted.
30. Method of cultivating carrots and turnips; — their use.
31. Method of sowing and mowing clover; its use.
32. Particulars about the cultivation of hay; its use.
33. Live stock necessary to the farmer, and its care.
34. Description of a model dairy; — method of making butter.
35. Method of making cheese.

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