

REPORT

OF THE

MONTREAL

Ladies' Educational Association,

SIXTH SESSION—1876-77.

Montreal :

PRINTED AT THE "GAZETTE" PRINTING HOUSE

1877.

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Journal of the ...

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Mrs. A. W.
Mrs. BALL
Mrs. BRYD
Miss ADEL
Miss CORD
Mrs. S. E.
Miss EDKIN
Mrs. JOHN
LADY GAL
Miss GORD
Mrs. E. K.
Mrs. GREEN

Mrs. F
M

Hon. CHAS.
Principal D
Ven. Archd
Hon. J. J. C

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LADIES' EDUCATIONAL ASSOCIATION.

PATRONESS,

HER EXCELLENCY THE COUNTESS OF DUFFERIN.

VICE-PATRONESS,

MRS. MOLSON.

PRESIDENT,

MRS. REDPATH,

HONORARY SECRETARY,

MRS. MERCER.

VICE-PRESIDENTS,

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HONORARY TREASURER,

JOHN MOLSON, Esq.

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MISS EDKINS,	MRS. THOS. MACDUFF,	MISS SYMMERS,
MRS. JOHN FRASER,	MRS. ROBERT MACKAY,	MRS. STEPHEN THOMPSON,
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MRS. GREENSHIELDS,	MRS. JOHN McDougall,	MRS. THOS. WORKMAN.

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MRS. FRASER,	MISS LUNN,	MRS. LEWIS,
MRS. M. McCULLOCH,		MRS. JOSEPH TIFFIN, JR.

Honorary Members.

HON. CHAS. DEWEY DAY, D.C.L., LL.D.	G. W. CAMPBELL, Esq., M.A., M.D.
Principal DAWSON LL.D., F.R.S., F.G.S.	Prof. P. J. DAREY, M.A., B.C.L.
Ven. Archdeacon LEACH, D.C.L., LL.D.	Rev. Prof. CORNISH, LL.D.
Hon. J. J. C. ABBOTT, D.C.L., Q.C.	T. STERRY HUNT, Esq., LL.D., F.R.S.

Professor GOLDWIN SMITH, M.A.

Communications should be addressed to

MISS HELEN GAIRDNER,
Assistant Secretary,
15 St. Edward Street.

LIST OF MEMBERS, SESSION 1876-77.

Mrs. Anderson.	Mrs. Howard.	Miss E. A. Ramsay.
" A. W. Atwater.	Miss Kerry.	Mrs. Raynes.
" Baldwin.	" Lane.	" Reddy.
Miss Benny.	Mrs. Gavin Lang.	" Redpath.
Mrs. Bessey.	Miss Lawder.	Miss Redpath.
" Ed. Bond.	Mrs. Lawford.	" E. Redpath.
" Botterell.	" Lay.	Mrs. Reekie.
" Brydges.	" Leishman.	" And. Robertson.
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" C. Cordner.	" Thos. Macduff.	" G. W. Simpson.
Mrs. Crathern.	Miss Macfarlan, Aber-	Miss Skelton.
" Dawson.	foyle place.	" Smith.
" S. E. Dawson.	Mrs Robert Mackay.	" Symmers.
" De Witt.	Miss Mackintosh.	" Symmers 2nd.
Miss De Witt.	" McArthur.	Mrs. T. M. Taylor.
" Douglas.	Mrs. M. McCuHoch.	Miss Thomas.
Mrs. Dow.	Miss McDonald.	Mrs. Thornton.
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Mrs. John Fraser.	" Hugh McLennan,	Miss Trotter.
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Lady Galt.	" S. H. May.	Miss Wight.
Miss Gordon.	" Mercer.	Mrs. Wilkes.
Mrs. E. K. Greene.	Miss Mercer.	" Miles Williams.
" Greenshields.	Mrs. Molson.	Miss Wood.
" Haldane.	" J. H. Molson.	Mrs. Thos. Workman.
" Hampson.	Miss Morgan.	
Miss Hill.	Mrs. W. W. Ogilvie.	

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REPORT

OF THE

Montreal Ladies' Educational Association.

SIXTH SESSION—1876-77.

It is a gratification to be enabled to submit the Report of a Sixth Session of the "Ladies' Educational Association," showing undiminished interest and steady advance in its educational character. As before, the best comment on its work and progress will be found in the very full and satisfactory letters of the professors.

The session opened with an Inaugural Lecture from the Rev. J. F. STEVENSON, to whom the ladies beg now to tender their thanks for his interesting address and views on the subject of Higher Education.

The first of a course of ten lectures on "The Elements of Structural and Systematic Botany" was given on Monday, October 2nd, by Principal DAWSON. The great interest in the subject and appreciation of the lecturer was shewn by a crowded room through the whole course, and, at the close, the largest number of students that has yet gone up for an examination. During the lectures there were microscopic demonstrations, and illustrations by the aid of beautifully executed models. As a further inducement to students, Dr. DAWSON promised those who took the examination one or two additional meetings with the

class, in aid of their forming collections for themselves in spring. The formal report is most gratifying, and in a previous letter Dr. DAWSON remarks:—"The papers are exceptionally good and I fancy much credit is due to the teachers who superintended the home studies of the Students, or of some of them, as I have scarcely ever seen such good work as the result of so few lectures."

MCGILL COLLEGE, MONTREAL,
December 18th, 1876.

*To the Honorary Secretary of the
Ladies' Educational Association :*

DEAR MADAM,—I beg to enclose herewith the Report of the Examination of the Class of Botany, held on the 11th instant.

I have much pleasure in expressing my gratification with the attendance of students, the interest manifested by them, and the results of the Examination.

The course of lectures was so short and the ground gone over so extensive, that I confess I had some apprehension as to the result, but was agreeably disappointed.

Of forty-seven students who presented themselves for examination, forty-five were entitled to certificates, and of these no less than eighteen passed in the First Class, while the papers of the greater part of the remainder were of a highly creditable character.

On the whole, I cannot too highly commend the diligence and intelligence of the class, and I trust that many of its members will turn to practical account the knowledge of the elements of Botany which they have acquired, in studying the flora of our country and forming collections for themselves.

I have the honour to be,

Yours sincerely,

J. W. DAWSON.

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The twenty lecture course by the Rev. Prof. CAMPBELL was on "Ancient History and Literature." This opened a new field to many of the auditors and students, requiring much reading and study. The difficulty of obtaining the necessary books of reference was frequently felt, a difficulty which Professor CAMPBELL did all in his power to obviate, but which prevented many students from submitting to the test of an examination, although the interest in the lectures was sustained to the end. Professor CAMPBELL'S report makes further comment needless.

MONTREAL, Dec. 23rd, 1876.

*To the Honorary Secretary of the
Ladies' Educational Association.*

MADAM,—I have the honour to send you the report of the recent examination in Ancient History and Literature, from which it will be found that of the sixteen ladies who sent in papers, seven have obtained First Class, two high Second Class, and seven very creditable Third Class standing.

The marked excellence of one of the answers of the lady who stands at the head of the First Class called for more than the maximum allotted to it, so superior was it to any answer that I had anticipated receiving. As the other answers were perfect, this will account for the papers of that student being marked a little above the maximum. The other papers which obtained First and Second Class standing are worthy of the highest commendation, and are fully equal in point of merit to those of any class of students examined by me. The Third Class papers give evidence of conscientious study and promise of future excellence.

Taking into consideration the magnitude of the field under review, the shortness of the time given to its study and the difficulty presented in the want of a suitable textbook, I cannot but congratulate the Ladies' Educational

Association upon the powers of serious application and the mental grasp of the students under its care.

The attendance and attention of students left nothing to be desired.

Permit me, in conclusion, Madam, to acknowledge the assistance kindly rendered by yourself and the Lady President in illustrating the history of Egypt and Assyria by your valuable collections of photographs and other objects of interest.

I have the honour to remain, Madam,

Your most obedient servant,

JOHN CAMPBELL.

The introductory lecture of Prof. JOHNSON'S course on "Electricity (Frictional and Voltaic) and Magnetism" was given on Thursday, January 11th, and continued on the Monday and Thursday of each week. These lectures were illustrated by experiments, for which the Association is indebted to the University of McGill for the use of its splendid apparatus. Dr. JOHNSON'S very flattering report embraces every detail so fully, that it is superfluous to enter further into the subject.

MONTREAL, April 9th, 1877.

To the Honorary Secretary of the

Ladies' Educational Association.

MADAM,—I have just been looking over the reports which I had the honour to submit to the "Association" in previous years, and I find that if my present report on the twenty lectures in "Electricity and Magnetism" recently given, be compared with them, it can hardly escape the charge of monotony in the renewed expressions of satisfaction and pleasure which it must contain. These feelings will, moreover, be found constantly prominent in the reports of former Examiners, all of whom are unanimous in their testimony to the unbroken success

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and continued progress, educationally, of the Association.

A little variation may be created, on the present occasion, by the account of a temporary perplexity in which I was involved at the end of the late examination.

I suffered, in fact, from an "embarrassment of riches," in the form of a superabundance of the best answering. To understand how I could have been surprised in this way after my previous experience, it must be explained that a new element was introduced in the late course of lectures which seriously disturbed my calculations, namely, the necessity for a minute inspection of the Apparatus employed in the experiments. On many lecture days a satisfactory inspection was impossible, and I had reason to believe that the absence of it was found to be a great source of difficulty in the study of the science.

Partly on this account, and partly because it is usual to make some allowance for mistakes due to the haste which is unavoidable on examination days, I announced, in the Synod Hall, that full marks (100) would be given for correct answers to any 13 out of the 15 questions set on the paper, candidates being, of course, at liberty to try all. I supposed, as will be seen from this, that the best answerer would miss at least two of the questions. I must acknowledge that it was with confusion as well as pleasure I discovered, on reading the papers sent in, that four of the candidates had answered every one of the 15 questions. There was a prize to be given. How was it to be awarded? A second reading, and a most careful comparison of the answers to each question were of no avail in making a distinction—one or two trifling blemishes noted in one set of papers being counterbalanced by equivalents in the others.

Another examination of these candidates seemed unavoidable. But I learned, on enquiry from the Secretary, that only two of the candidates in question could be considered, according to the rules, as competitors for the prizes, and that as there were two prizes there would probably be no difficulty.

It will be understood, then, that the maximum marks which each of these ladies attained are given according to

the rule announced in the Hall, and do not represent the extra answers.

Three other ladies gained over 90 per cent. of the maximum.

Out of 23 candidates in all who presented themselves for examination, *thirteen* are placed in the *First Class*, the standard for which is three-fourths of the maximum; *seven* in the *Second Class*, the standard being one-half; and *three* in the *Third Class*, the standard for which is usually one-fourth of the maximum,—but the lowest answering on the present occasion gained more than one-third.

These numbers speak for themselves, and I will make no comment. I ought to add that the questions were of the same kind as I usually give in the University on this subject, excepting, of course, those involving mathematical calculations and formulæ.

The general attendance on lectures, including that of auditors, was very satisfactory.

I have filled up the certificates in the form I have heretofore employed, using the terms "very creditably," "creditably," and "satisfactorily," according to the class. I do not know what terms other examiners have used, but I may be permitted to suggest that it would be convenient to have uniformity on this point, and that it would be well for the Association to select such terms as they may deem appropriate. A separate report contains the details of the examination.

I have the honour to be, Madam,

Your obedient servant,

ALEXANDER JOHNSON.

The Rev. Principal LOBLEY commenced on Monday, 15th January, a ten lecture course on "Grecian History and Literature," at the time of the Ascendency of Athens. The number of both auditors and students was most satisfactory, and again the report testifies that the work done met with the full approval of the lecturer.

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MONTREAL, April 14th, 1877.

*To the Committee of the
Ladies' Educational Association :*

LADIES—I have the honour to report to you the impressions that I have received from the attendance at the course of lectures that I have had the privilege to deliver before your Association during the past winter, and from the examination which followed.

The subject of the lectures was that portion of the History of Ancient Greece which belongs to the period usually known as the Period of Athenian Supremacy. The subject would, I suppose, be generally regarded as an uninteresting one, except to scholars; but the large number of those who attended the lectures, from beginning to end, seems to show that many of your members are fully alive to the claims of such studies upon their attention. I was very much pleased, both with this large attendance and with the steady attention which all present seemed to pay to the lectures.

This attention, and the care and pains which had been bestowed upon the subject outside the Lecture Room, were strikingly shown by the examination which took place on Monday, March 20th. I must candidly own that the results of that examination surprised me, that I was not prepared for the style, quality and quantity of work which the ladies sent up, and which would have done credit to a class of the best trained students in our English universities. I marked the papers as I should have marked in such a case; yet the average of the marks obtained was decidedly a high one. Out of thirty-three students who presented themselves for examination, one obtained 288 marks—the highest possible aggregate being 300—and eight obtained over 250. Of the rest the great majority passed a very satisfactory examination.

The chief—I might almost say the only—faults that I noticed in the examination were a tendency in some cases to be content with a mere vague indication of the facts asked for, instead of a distinct and circumstantial account of them, and the failure on the part of several to

apprehend the point of the question, and so to give the answer required without adding information upon other topics.

I feel satisfied that the attention which has been given to this subject must have been useful to the members of your Association, not only as adding to their knowledge, but as a means of mental training also.

I have the honour to be, Ladies,
Your obedient servant,

J. A. LOBLEY.

The Association is enabled to offer, through the liberality of the McGill University, prizes for competition, under the following conditions:—

Recommendation for the Disposal of the "Hannah Willard Lyman Memorial Fund."

1. The income to be divided into two equal Prizes, to be given to the regular students who, having passed creditably in the subjects of Examination before Christmas, shall take the highest marks in the *First Class*, in the Written Examinations, in one of the subjects at the end of the Session.
2. The Lecturers to be Examiners, and the answers of the successful candidates to be transmitted to the Corporation of the University, with the Reports of the Examiners.
3. The Prizes to be given in books, properly inscribed.

In April, 1875, the Corporation of McGill University passed the further regulation:—

"Any student having taken one of the Prizes may compete in a subsequent Session, but not in the same subject in which the previous Prize was taken; and in no case shall more than two Prizes be awarded to the same student."

Owing to the number of lectures for the session of 1877-78 having been reduced to forty, the following amendment was passed at a meeting of the Committee, May 3rd, 1877:—

"Candidates will be required to have passed creditably in all the subjects of the Session."

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The Association has this year the satisfaction of seeing enrolled the names of 87 students (against 30 in the last Report), 57 of whom passed one or more examinations. 116 certificates were given, viz.:—First Class, 47; Second Class, 47; and Third Class, 22. Of these ladies only four fulfilled the conditions necessary for the Prize Competition. To Miss Creighton the "History" Prize was at once awarded. In the examination in "Electricity," a difficulty arose which Dr. JOHNSON has explained in his report, and to obviate the necessity for dividing the prize, the University has consented to give, at the special request of the President and Ladies of the Committee, a Third Prize from the Reserve Fund of the Hannah Willard Lyman bequest, and Miss Creighton and Miss Julia Sanborn have had equal prizes awarded them. From the great merit of the papers, this has been a gratification to the Committee.

The Association has again to tender warm thanks to Principal DAWSON, not only for his ever ready counsel and assistance, but for his kindness and liberality. An extract from his own letter will best show the nature of their last obligation, which has tended to prevent a session, educationally a brilliant success, from being financially a failure: "Will you kindly say to the ladies that my lectures are a free contribution to the funds of the Association, and I trust they will take them in that way, without any feeling of obligation in the matter."

Many causes have contributed to make the subscription list unusually small: the state of business has been most unfavourable, several of our former members have been absent; visits to the Centennial proved a drawback in the early part of the session, and many returned too late to enter with interest in the lectures before Christmas, and only took tickets for those of the second part of the

session. Our receipts have been :—From members' subscriptions, \$1080.00; from students' tickets, interest, &c., \$349.22; the expenditure, \$1520.22, leaving a deficit which has been covered by a loan, by permission, from a reserve fund for experimental lectures. This loan it will be the object of the Committee to refund as soon as possible.

With a view to retrenchment, it has been decided to reduce the number of lectures for the Session 1877-78 to 40, to be given in four courses of ten lectures each, on the Monday and Thursday of each week, at the Synod Hall. The Committee in arranging for the programme of the session has been obliged to deviate from the suggestions embodied in the last year's report, as the reduced number of lectures has limited the choice of subject. Dr. JOHNSON has kindly consented to give a course of ten lectures on "Sound" in the first part of the session. The Rev. Principal LOBLEY will at the same time give a Period in Roman History, "The Civil Wars," with the Literature. In the second part of the session "Music," by Dr. DAVIES, will follow with advantage on Sound, and Dr. CLARK MURRAY will give a course on "Rhetoric," a subject which has frequently been suggested as desirable study. A special programme gives every detail with synopsis of each course, and the text-books, enabling those intending to take the lectures to read up and prepare for them. It is hoped that schools will continue to avail themselves of the great advantages offered to their senior pupils by these lectures.

The General Committee suggest, for the Session of 1878-79, several subjects for lectures; in the final decision the Executive must in some measure be guided by circumstances. Those proposed are: "History and Literature of some Special Period," "Astronomy," "Physical

"Geography and Cosmology." A suggested

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A wish should be attended t the Assoc the first st lecturers tion educ comments exerted a and which constant t encourage a family to for research this exten bond of in formerly a been found for mutual work done Association forming th atic work weighty. to yield to

"Geography," "Moral Philosophy," and "Political Economy." An "Illustrative Art Course" has also been suggested as likely to be much appreciated.

It is desirable to call the attention of members to the fact that it is in their power to confer solid benefit in the bestowal of their students' tickets, when not required for their own families and friends. Spare tickets, if sent to the Secretary or Assistant Secretary, can always be given to students, who appreciate the gift as a great boon.

A wish has been expressed that some special certificate should be granted to students who have for three years attended the lectures and passed all the examinations of the Association, and this has been carried into effect as the first step towards a regular course. The letters of the lecturers give so completely the history of the Association educationally during the past year, that closing comments are scarcely needed. Socially it has, however, exerted a wider influence than can be easily estimated, and which ought not to remain unnoticed. We have constant testimony borne to the taste for reading it has encouraged, the means it has been of drawing members of a family together, brothers and sisters on common ground, for research on, and discussion of, special subjects, and of this extending beyond the home circle and forming a bond of interest with many. During a season of the year formerly almost entirely devoted to amusement, time has been found by young ladies attending the lectures to meet for mutual help and encouragement, to compare notes of work done and plans for the future. This alone, if our Association bore no other fruit, would be important, as forming the best ground for more extended and systematic work; the influence on auditors, too, has also been weighty. It is with great regret that we are compelled to yield to the pressure of the times and reduce the num-

ber of the lectures, but as a greater interest has never been shown by auditors and students, and our members are now nearly all regular attendants at the lectures, we trust that brighter times will so increase our list as to enable us to resume the longer courses. We have endeavoured to keep up in every respect the educational standard of our programme and to connect the work with what has gone before. The fact of our being in a position to give certificates for three years is in itself most encouraging, and, as a step towards our aim, a regular course, is more than we ventured to hope for, and must prove an incentive to perseverance. Although beset with the difficulties and uncertainties of a precarious income, depending mainly on the number of our subscribers, we trust that we may in time gain sufficient ground to be considered an established and recognised educational institution, with a settled income and member list. Many of the points most strenuously urged in last year's report have been carried out with advantage, especially with regard to examinations, as the certificates given show 116 against 37 of last year; and with the subjects offered for next session, we do not fear any diminution in the interest. The names alone of the gentlemen whom the Committee has been fortunate in securing as lecturers, is sufficient guarantee of the intellectual and educational claims of the Association.

It may be added that the report of last year was most favourably noticed in the English "Journal of the Women's Education Union."—the system and working considered so good as to furnish valuable hints to other similar institutions, which is indeed an encouragement from such a source to our Association.

(Signed) JANE REDPATH,
President.

" MARY A. N. MERCER,
Honorary Secretary.

The Montreal Ladies' Educational Association.--Financial Statement
SESSION, 1876-77.

1877.	Dr.	1877.	Cr.	
May 10th.	To payment for Lectures.....	\$1,000 00	By Balance from last year.....	\$ 18 60
"	To Rent of Synod Hall, with attendance.....	200 00	By Members' Tickets--90 at \$12.....	1,080 00
"	To Stationery, Printing, Advertising, and Postage.....	112 26	By Students' Tickets and Exchanges.	328 00
"	To Salary of Assistant Secretary....	200 00	By Interest to Dec. 31st, 1876, on Cash in Bank.....	21 22
"	To expenses for Examinations.....	3 50	By Borrowed from fund in trust for Experimental Lectures.....	80 00
"	To Incidental Expenses.....	4 46		
"	Balance,—Cash in Molson's Bank...	7 60		
		<u>\$1,527 82</u>		<u>\$1,527 82</u>

The vouchers for Disbursements have been examined, and found correct.

May 10th, 1877.

F. WOLFERSTAN THOMAS.

RESULT OF EXAMINATIONS.

Certificates obtained during the Session of 1876-7.

The Roman Figures show the Rank of Certificates.

Students' No.	Botany.	Ancient History and Literature.	Grecian History and Literature.	Electricity and Magnetism.
5.....	.....II.....	.....	.....	.....I.....
6.....	.....II.....	.....	.....	.....
7.....	.....III.....	.....	.....	.....III.....
8.....	.....I.....	.....I.....	.....	.....
9.....	.....I.....	.....	.....	.....
12.....	.....I.....	.....	.....II.....	.....
13.....	.....	.....	.....	.....II.....
14.....	.....I.....	.....I.....	.....I.....	.....I.....
15.....	.....III.....	.....I.....	.....II.....	.....
16.....	.....	.....	.....II.....	.....
17.....	.....II.....	.....III.....	.....II.....	.....II.....
18.....	.....II.....	.....III.....	.....II.....	.....
19.....	.....I.....	.....I.....	.....I.....	.....I.....
20.....	.....II.....	.....	.....	.....I.....
24.....	.....II.....	.....	.....	.....
25.....	.....II.....	.....	.....	.....
26.....	.....III.....	.....	.....III.....	.....
27.....	.....I.....	.....	.....I.....	.....I.....
30.....III.....I.....
31.....I.....
32.....III.....III.....
33.....III.....III.....III.....
34.....II.....II.....I.....
36.....II.....
38.....III.....II.....
39.....I.....II.....II.....

Students No.

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Students No.	Botany.	Ancient History and Literature.	Grecian History and Literature.	Electricity and Magnetism.
40	I.			
42	III.	III.	II.	
45	II.		I.	I.
46	II.			I.
47			II.	
48	I.		II.	II.
49		I.	II.	
50	II.			
51			III.	II.
52	II.		II.	
53	II.	III.	I.	
56	I.		II.	
57			III.	
58	II.			
59	I.	II.	I.	I.
61	II.	I.	I.	I.
63			II.	
64	II.			
65	II.			
66	I.			I.
68	I.		II.	II.
69				III.
70				I.
71	II.	III.	II.	
74	II.			
75	I.			
76	I.		I.	
77	I.	I.		
78	II.			I.
79	I.	II.		
80			III.	II.

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LADIES' EDUCATIONAL ASSOCIATION.

EXAMINATION IN BOTANY.

MONDAY, DEC. 11TH, 1876 :—2 P.M. TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Describe the vegetable cell, stating its parts and manner of multiplication.
2. Describe the various kinds of Vascular Tissue, with their mode of formation and uses.
3. Explain the character and arrangement of the tissues in Exogenous Stems, and the differences in Endogenous Stems.
4. Explain the normal structure and functions of the Leaf.
5. Describe minutely the Stamen, with reference to its parts, products, position and uses.
6. Explain Coalescence and Adnation of the parts of the flower, with examples.
7. Describe the organs of fructification in Mosses, and compare them with those in Phænogams.
8. Describe the structure of any Flower and the microscopic appearance of any of its parts.
9. Describe shortly the parts and structures denoted by the following terms:—Parenchyma, Root fibril, Phyllodium, Silique, Petiole, Receptacle, Ovule.
10. Give examples of Phænogams, Cryptogams, Exogens and Endogens, properly arranged.

LADIES' EDUCATIONAL ASSOCIATION, MONTREAL.
ANCIENT HISTORY AND LITERATURE.

MONDAY, DECEMBER 18TH, 1876 :—2 TO 5 P.M.

Examiner,.....JOHN CAMPBELL, M.A.

- I.—Give an outline of the history of Egypt.
- II.—Define and illustrate the relations of the Assyrian and Babylonian monarchies with Egypt and Palestine.
- III.—State the sources of our information regarding the early history of Arabia, and characterize it.
- IV.—What do we know of the history of Palestine prior to Joshua's conquest?
- V.—Compare the Phœnicians with other peoples of antiquity.
- VI.—Mention some of the more important facts of early Chinese history and culture.
- VII.—What is the application of the terms Aryan and Turanian; and what relations subsisted between the races thus designated?
- VIII.—Give a brief account of ancient Indian and Persian literature.
- IX.—What is the historical value of recent Trojan and Etruscan researches?
- X.—Tell the story of hieroglyphic and cuneiform interpretation; at the same time stating and illustrating your views respecting the origin and development of the art of writing in general.
- XI.—Characterize the art and literature of the more important nations mentioned in the course, with other features of their civilization that may occur to you.
- XII.—Give a comparative sketch of ancient religions.

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LADIES' EDUCATIONAL ASSOCIATION, 1877.
GRECIAN HISTORY.

MONDAY, MARCH 26TH :—2 TO 5 P.M.

1. Describe roughly the physical conformation of Greece, and the geographical situation of the various nationalities at the time of the Persian Invasion.
2. Relate the events following the Battle of Mycalé which led to the transference of the command of the allied fleets from Sparta to Athens.
3. Compare the characters of Themistocles and Aristides.
4. Describe the process by which the confederacy of Delos was changed into an Athenian Domination.
5. What was Ostracism? Mention the chief occasions on which it was used at Athens during the period of her supremacy.
6. Give a brief account of the chief sculptors and painters of the Age of Pericles.
7. Write an outline of the plot of the Trilogy of Æschylus known as the "Orestia"; or of the "Edipus at Colonus" and the "Antigone" of Sophocles.
8. Describe the circumstances which embittered the Corinthians against Athens, and so led to the breaking out of the Peloponnesian War.
9. Give an account of the life of Thucydides, and state what were his merits as an historian.
10. Relate the story of the siege of Plataea, or of the Athenian occupation of Pylus.
11. Describe the character of Alcibiades, and mention some of the steps by which he contributed to the ruin of his country.
12. Give an account of the life and teaching of Socrates.
13. Write down, as nearly as you can, the dates of (i) the Battle of Plataea (ii) the capture of Scyros; (iii) the death of Pericles; (iv) the Battle of Delium; (v) the Battle of Arginusæ; (vi) the Capture of Athens.
14. Explain the following terms: (i) Ephor; (ii) the Pnyx; (iii) Dicasteria; (iv) Graphé Paranomon; (v) The Prytanes.

LADIES' EDUCATIONAL ASSOCIATION,
MONTREAL.

ELECTRICITY AND MAGNETISM.

WEDNESDAY, MARCH 28TH, 1877 :—2 TO 5 P.M.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. State the two-fluid theory of Electricity, and describe experiments indicating the distinction of the two kinds.
2. Describe the Electroscope chiefly used in the lectures. State the mode and rule by which the character of the electricity on a charged body was determined by means of it. If the body could not be moved to the electroscope, what method was employed?
3. Describe any experiment showing that electricity lies only on the surface of bodies.
4. An insulated metal ball is charged and afterwards touched against the *inside* of an insulated tin can; the ball is then tested for electricity; after all electricity has been removed in the usual way from the apparatus the ball is again charged, touched against the *outside* of the tin can, and again tested: state the results of the tests in both cases, and explain them according to the laws of electricity.
5. Arrange the following bodies in the order of their conducting power:—Feathers, paper, brass, wollen cloth, the human body, silk, glass, vegetables, water, smoke.
6. In the Plate machine, explain clearly the manner in which the prime conductor is charged by the action of the brass points or comb placed in front of the glass.
7. Describe the manner and explain the action by which in the Holtz machine, the first armature and the corresponding conductor are charged.
8. By what experiment may it be shown that the two magnetic fluids are present in every part of a magnetic needle, and not merely accumulated at the ends?
9. Describe any one method of magnetizing a needle by another magnet or magnets.
10. State any facts seeming to show a connection between the magnetism of the Earth and the condition of the Sun.
11. When a soft iron bar is magnetized by a current of electricity passing in a helix round it, a sound is heard, and the bar is lengthened. Explain this.
12. When a current of electricity passes on a wire, which is parallel to a magnetic needle, and the needle is deflected, by what rule can we tell beforehand the direction in which it will turn?
13. State Ampère's theory of magnetism.
14. A magnet is thrust into, and after some time pulled out of a helix, which is connected with a galvanometer; state the effects. Describe them considering the magnet as a solenoid in Ampère's theory.
15. Give Grotthuss' hypothesis of the action that takes place when water is decomposed by the current.

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LECTURE ROOM, SYNOD HALL, MONTREAL.

SEVENTH SESSION, 1877-78.

THE arrangement of LECTURES for the Session 1877-78 differs in some respects from that of past years. It has been found necessary, from a diminished subscribers' list, to give only Ten Lectures in each Course. The interest in the Association has not lessened, as the Students far outnumber the usual average, 116 certificates having been granted, but depression in business has no doubt obliged many to withdraw their support, and the funds have suffered in consequence.

The Committee has endeavoured, as far as possible, to act on the suggestions embodied in last year's Report, modified by circumstances, the reduction in the number of lectures having limited the choice of subjects. For Science "SOUND" has been decided on, and will be followed by "MUSIC"; a special period in "ROMAN HISTORY," and a course on "RHETORIC," complete the programme for the Session. The interests of both Auditors and Students taking only a single course have been considered, as each subject stands alone, but the Association would again urge on actual students the desirability of availing themselves of the full course of Lectures. The experiments in connection with the lectures on "SOUND" promise to be of unusual interest, as several additions have been made recently to the valuable Apparatus at McGill College, which will be used for illustration.

A Course of Ten Lectures on "Sound."

By PROFESSOR JOHNSON, LL.D.

The Introductory Lecture will be delivered on Monday, the 8th October, at 4 p.m., and the Class will meet every Monday at the same hour.

OUTLINE OF THE COURSE:—

Connection between the sensation of sound and motion in external bodies—Character of this motion—Its production, propagation, reflection, &c.—Echoes—Physical distinction between a noise and a musical sound—Principles of various musical instruments. Experimental examination of the motion of tuning forks, vibrating strings, wires, rods, plates, bells, of the air in organ pipes, &c.—Sound boards. Physical causes of the loudness, pitch and quality of a musical note. Physical cause of harmony. Analysis of a musical sound.—Sounds that diminish or destroy one another.—Beats.—Singing flames, &c.

Various methods of investigation, not requiring the aid of the ear will be experimentally exhibited, viz: the "optical" and "graphical" methods, and the method of manometric flames. Such principles of Mechanics as are necessary to the proper study of the subject will be explained and illustrated as fully as possible in the time.

Text Book:—Ganot's Elements of Physics, translated by Atkinson; or Deschanel's Natural Philosophy, translated by Everett, Part 4, which can be had separately.

Tyndall "On Sound" is recommended to students desiring to study the subject more fully.

A Course of Ten Lectures on "Roman History." The Period of the Civil Wars. 133-30 B.C.

By REV. PRINCIPAL LOBLEY, M.A.

The Introductory Lecture will be delivered on Thursday, the 11th October, at 3.30 p.m., and the Class will meet every Thursday at the same hour.

OUTLINE OF THE COURSE:—

First Period.—Tib. Gracchus, Scipio the Younger, C. Gracchus.—Jugurtha and Metellus.—Marius and the Cimbrians.—Rise of Sylla.—The Social War.—The First Civil War.—The First Mithridatic War.—The Second Civil War.—Dictatorship and Death of Sylla.

Roman Oratory, Cicero.—The Drama.

Second Period.—Lepidus, Sertorius, Spartacus, Pompey and Crassus.—The Third Mithridatic War.—Cæsar, Cicero, Catiline.—The First Triumvirate.—The Second Civil War.—Cæsar, Ruler of Rome.—Brutus and Cassius, Octavius and Antony.—Cleopatra.—The Battle of Actium.

Latin Poetry; Lucretius, Catullus, Virgil, Horace.

Cæsar as an author.—Art.

Text Book:—Liddell's History of Rome (in Smith's Series), Books VI and VII.

For Reference:—Niebuhr's Lectures, 77 to 100; Arnold's History of the later Roman Commonwealth; Merivale's History of the Romans, vol. I. Cicero, Cæsar, Virgil and Horace, in Blackwood's Series.

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A Course of Ten Lectures on "Music."

By CHAS. F. DAVIES, Mus. Doc.

The Introductory Lecture will be delivered on Monday, the 14th January, at 4 p.m. and the Class will meet every Monday at the same hour.

SYNOPSIS OF THE COURSE :—

Origin of Music in the voice of Nature.—The Music of the Bible.—The Ambrosian and Gregorian systems.—Invention of Harmony.—The gradual development of Music, both sacred and secular, down to the present day.—Biographical notes of the great Composers, and comments on their various styles.—Musical Theory relating to Melody and Harmony.—Thorough-bass, Counterpoint and Fugue.—Musical Form.—The Symphony, Concerto and Sonata.—A general review of musical studies, &c., &c.

Text Book recommended :—Sir John Hawkins' History of Music, 2 vols.—Bible Music by Francis Jacox, and Richter's Manual of Harmony.

A Course of Ten Lectures on "Rhetoric."

By PROFESSOR J. CLARK MURRAY, LL.D.

The Introductory Lecture will be delivered on Thursday, 17th Jan., at 4 p.m., and the Class will meet every Thursday at the same hour.

OUTLINE OF THE COURSE :—

The Course will be divided into four Parts, treating respectively of the Laws of Perspicuity, of Vigour, of Elegance, and of Simplicity in Style. Each of these Parts will be subdivided into three Sections, explanatory of the Rules for the observance of these Laws—(1) in the Choice of Words; (2) in the Construction of Sentences; (3) in the Arrangement of an entire Composition.

Text Books :—Any of the following works may with advantage be consulted :—Bain's *English Composition and Rhetoric*; Quackenbos' *Advanced Course of Composition and Rhetoric*; Blair's *Lectures on Rhetoric*.

The Introductory Lecture of each Course is free to Ladies.

The Students who have attended each Course will be afforded an opportunity of submitting themselves for examination on the subjects of the Lectures, and to those who pass such examination satisfactorily certificates to that effect will be given.

It is proposed to grant a special certificate to ladies who have attended a three years' course of the Lectures and passed all the examinations of the Association.

The "*Hannah Willard Lyman Memorial Fund*" will provide two equal prizes in books, properly inscribed, to the regular students who shall take the highest marks in the first class in the written examinations in one of the subjects at the end of the Session, under the following conditions:

1. Competitors will be required to have passed creditably in all the subjects of the Session.
2. No Student can receive a prize more than once in any one subject.
3. In no case shall more than two prizes be awarded to the same Student.

The Inaugural Lecture of the Session, free to Ladies and Gentlemen, will be delivered on Thursday, the 4th October, 1877 at 4 p. m.

SCALE OF FEES.

MEMBER'S SUBSCRIPTION..... \$12

This entitles to one Member's Ticket, with one Student's Ticket, non-transferable, or

" " " " Visitor's Ticket, transferable.

A Member can exchange her own Ticket for a Student's Ticket, on the payment of three dollars additional.

A Member can exchange her Student's Ticket for Four Tickets, (each to admit to a single course) on the payment of three dollars additional.

STUDENT'S TICKET, to admit to Four Courses of Lectures.....\$3.00

" " " One Course of 10 Lectures.....\$4.00

Special arrangements will be made with the heads of Schools who may wish to have the advantage of the Lectures for their Pupils.

Ladies engaged in, or preparing for, the profession of Teaching, or in any way connected with the work of Education, may obtain a reduction of the above fees upon application to the Secretaries.

The officers of the Association will be glad to give any information which may be desired by those who purpose entering the classes.

Communications should be addressed to

MRS. MERCER, *Hon. Secretary,*
9 Prince of Wales Terrace.

Or to MISS HELEN GAIRDNER, *Assistant Secretary,*
15 St. Edward Street.

Of whom Tickets may be had.