

DEPARTMENT OF MATHEMATICS.*

Algebra.—Multinomial Theorem, Exponential and Logarithmic Series, Interest and Annuities, Indeterminate Coefficients, Partial Fractions, Series (Convergency and Divergency, Reversion, Summation), Inequalities, Determinants, Reduction and Resolution of Equations of first four Degrees, and of Binomial Equations, Relations between Roots and Coefficients of Equations, Indeterminate Equations, Problems.

Analytical Plane Geometry.—The Point (including Transformation of Co-ordinates), the Right Line, the Circle, the Parabola, the Ellipse, the Hyperbola, the General Equation of the Second Degree, Abridged Notation.

Trigonometry.—Trigonometrical Ratios, General Values of Angles, Functions of Sum and Difference of Angles, Multiples and Sub-multiples of Angles, Trigonometrical Equations, Solution of Triangles, Measurement of Heights and Distances, Inscribed, Circumscribed and Escribed Circles of a Triangle, Quadrilaterals, Description of Vernor and Theodolite, Trigonometrical and Logarithmic Tables, Demoiivre's Theorem.

Dynamics.—Moments of Inertia, Uniform Circular Motion, Projectiles in Vacuo, Collisions, Simple Pendulum, Experimental Verifications.

Elementary Geometrical Optics.—Reflection and Refraction of Light at Plane and Spherical Surfaces (not including aberration); the Eye; Construction and Use of the more simple Instruments.

DEPARTMENT OF PHYSICAL SCIENCE.

Chemistry, Physics, Biology, Physiology.

In this group candidates will be allowed an option between Physics and Biology. A detailed synopsis of the work required under the above heads will be published.

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

GLENGARRY.—The Teachers' Association of the County of Glengarry held its half-yearly meeting in the Separate School, Alexandria, on Thursday and Friday, September 25th and 26th. A goodly number of teachers attended, and evinced much interest in the proceedings, which were eminently fitted to carry out the design for which such associations are instituted. The opening address, which was of a very able and practical character, was delivered by P. McDiarmid, M.D., I.P.S., President of the Association. Mr. Parker, B.A., read a highly instructive and interesting essay on "The Study of Literature," replete with much valuable information and useful hints to aid teachers in reading literature for practical purposes. This essay was ably supplemented by an address from D. McDonald upon "The merits of Macaulay and Addison as prose writers." C. Kennedy spoke at some length upon the relative merits of the different text-books on Arithmetic. Dr. McDiarmid, a practitioner of recognized ability, delivered a carefully prepared address on the subject of Hygiene, which closed the programme for the afternoon. On the evening of Thursday a large and appreciative audience assembled in the Town Hall to hear Mr. A. L. Parker, B.A., deliver a lecture upon "The Origin and Growth of the English Language." This lecture was listened to throughout with intense interest, and displayed deep research and intimate knowledge with the subject on the part of the lecturer. On Friday, Mr. McKenzie read a paper on "How to teach Geography," which paper evinced both originality of conception and boldness of design. During the discussion upon this paper an eloquent address, which was highly appreciated by the teachers, was delivered by Mr. Cannon, M.A., on the intimate association that should exist between the subjects of History and Geography. Mr. Kennedy, the principal of the County Model School, a teacher of long experience and marked success, dealt with the subject of "The Physical and Moral Training of the Pupil" in a brilliant and effective manner. "On the afternoon of Friday, Mr. McLaurin delineated in his usual clear and forcible style his beautifully simple method of teaching "Elementary Arithmetic." Mr. McDonald, principal of the Separate School, and Mr. C. Kennedy, demonstrated the beauty of the "Unitary Method" by the solution of several difficult problems upon the blackboard.

DURHAM.—The next half-yearly meeting of this Association will be held in the School Buildings, Bowmanville, on Friday and Saturday, October 17th and 18th, 1879. PROGRAMME.—Friday, 10 to 11 a.m., Reports of Committees; 11 to 12 m., Writing, G. Class; 1.30 to 2.30 p.m., Natural Philosophy, J. C. Harstone B.A.; 2.30 to 3, Essay, Miss Gillian; 3 to 4, History for Schools, what it ought to be and how to teach it, J. Gillilan; 4 to 5, Mathematical Geography, J. Tremear, B.A. Saturday, 9 to 10 a.m., Question Drawers, Messrs. Barber and Reynolds; 10 to 11, How should the first Principles of Geometry be presented to pupils? 11 to 12 m., Algebra, W. E. Tilley, M.A.; 1.30 to 2 p.m., the teacher's work outside the School Room, J. R. Wightman, M.A.; 2 to 3, Composition, J. J. Tilley, P. S. I.; 3 to 4, Unfinished Business. Jas. GILLILAN, Secretary. W. E. TILLEY, M.A., President.

* The following are recommended in addition to books prescribed for 1st C. ALGEBRA.—GROSS. ANALYTICAL GEOMETRY.—Puckle; Refer to Salmon's. TRIGONOMETRY.—Hamblin Smith's; Refer to Colenso's, or Todhunter's. DYNAMICS.—Kinematics and Kinetics.

NORTH HASTINGS.—The semi-annual meeting of the Association will be held in the Madoc Model School on October 9th and 10th. PROGRAMME.—Thursday, October 9th, 10 to 11 a.m., Report of Delegate to the Provincial Association and general business. 11 to 12, Hygiene, introduced by Dr. Dafoe. 2 to 3 p.m., Composition, introduced by Mr. E. D. Sutherland; 3 to 4, Essay on "Fact," Miss Kiddell; 4 to 5, Geography, introduced by J. Coyle Browne, P. S. I., 8 p.m., Public meeting in Town Hall, at which addresses on educational topics will be given by J. Coyle Brown, Esq., Inspector for Peterborough County; R. Dawson, B.A., Head Master, Belleville High School; J. Johnston, Esq., Inspector of S. W. H. Hastings; the resident clergyman and others. Friday, October 10th, 9 to 10 Grammar, introduced by Mr. George Kirk, 10 to 11, Book Keeping, introduced by Mr. J. Johnston, I. P. S.; 11 to 12, Principles of Statics, introduced by R. Dawson, B.A.; 2 to 3, English to advanced classes, by Mr. G. H. Thompson. 3 to 4, Question Drawer, in charge of Messrs. Brown, Dawson, Johnston, and Macintosh. N.B.—Questions for the "Drawer" should be given to the Secretary on the 9th. These questions may relate to anything connected with the teacher's work. GEORGE KIRK, Secretary. WM. MCINTOSH, President.

HALDIMAND.—The semi-annual meeting of this Association will be held in the Central School, Dunnville, on Friday and Saturday, Oct. 10th and 11th, 1879. PROGRAMME.—Friday, 1. Reading Minutes of Previous meeting, 2. Arithmetic T. Hammond, 3. Second-class Natural Philosophy, J. McNevin, 4. Classics as a Mental Training, Rev. Alex. Grant, B. A.; 5. Composition, Wm. Ayors; 6. Elements of Success in Teaching, R. P. Echlin, B.A.; 7. The Difficulties of the Teacher, Miss Emma Weir. Saturday, 1. Election of Officers; 2. Grammar, History and English Literature, J. M. Buchan, M.A.; 3. Model School Work, W. R. Telford, 4. Home Influence as a Factor in Education, Rev. J. Black, 5. Chemistry, C. W. Harrison, B.A. 6. School Apparatus, Alex. Small. On Friday Evening a Lecture will be delivered in Boswell Hall, by J. M. Buchan, M.A., High School Inspector. Subject—"Poetry and Politics." Lady teachers will be provided with accommodation in private families by communicating with Mr. Thomas Hammond, Dunnville, before the 8th October. R. P. ECHLIN, Secretary. —MOSES, President.

HALTON.—This association will hold its regular half-yearly meeting in the East Burlington Public School on Thursday, Friday, and Saturday, 2nd, 3rd and 4th of October, 1879. All teachers attending the association will be provided with temporary homes by addressing Mr. Hugh Cameron, P.S. Teacher, Burlington P.O. PROGRAMME.—Thursday, 2nd October, 1879; Forenoon Session—9.30 a.m., Opening; reading minutes; address by Dr. Lusk, Vice-President; "How to Teach Grammar," Miss Crooks, S.S. No. 7, Nelson. Afternoon Session—1.30 p.m., "Measurement of Surfaces," Mr. T. Moore, Acton; Analysis, Opening stanzas of Gray's Elegy, Mr. J. McN. Malcolm, S.S. No. 7, Trafalgar. Evening Session—7.30 p.m., Lecture in the Town Hall, by J. George Hodgins, Esq., LL.D., Deputy Minister of Education, subject, "A Plea for Elementary, Science and Industrial Training in our Schools." Friday, 3rd October, 1879; Forenoon Session—9 a.m., Opening; calling the roll; "Reading," Miss Watkins, Georgetown College; Arithmetic, Dr. Lusk, English Master, Oakville; H.S. Afternoon Session—1.30 p.m., "Derivation," Mr. Little, Inspector P. S. Writing, Rev. N. Burns, B.A., Georgetown College; "Address," Rev. R. J. Laidlaw, St. Paul's Church, Hamilton. Evening Session—7.30. Lecture in the Town Hall, by James Hughes Esq., M.A., Inspector of P.S., Toronto, subject, "Kindergarten." Saturday, 4th October; Forenoon Session—9, Opening; calling the roll; "Industrial Drawing," James Hughes, Esq.; "Uniform Promotions," Mr. H. Cameron, Burlington; Afternoon Session—"Library," report of Committee; Routine. R. COATES, Secretary.

SOUTH GREY.—The association will meet in Durham on Thursday and Friday, 9th and 10th October, at 9 o'clock a.m. PROGRAMME.—1. The President, "Concurrent Examinations;" 2. Dr. Gunn, "Chemistry, with Experiments;" 3. Mr. Armstrong, "Model Schools;" 4. Mr. Galbraith, "How to Teach Grammar," illustrated with a Junior Class;" 5. Miss M. Micken, "Object Lessons," illustrated with a Class;" 6. Miss Corry, "How to Teach Reading," illustrated with a Class;" 7. Miss J. Gibson, "School and Class Drill;" 8. Mr. D. Allan, "Education;" 9. Mr. McArthur, "Grammatical Difficulties;" 10. Mr. Jones, "Hints to Parents about to enter a Normal School;" 11. Mr. D. Grier, "Missing Links in the Canadian school System;" 12. Mr. Reid, "Music in Schools;" 13. Mr. McDonald, "Incentives to Study;" 14. Mr. Ritchie, "Corporal Punishment." W. FERGUSON, I.P.S., President. JOHN C. BAIN, Sec. Treasurer.

PRINCE EDWARD.—The next Annual Meeting of the Prince Edward Teachers' Association will be held in the County Council Chamber, Pictou, on Friday and Saturday, October 10th and 11th, commencing each day at 9.30 a.m. and 2 p.m. Subjects:—Friday—"Phonic System of Reading," Mr. James Hughes, Toronto; "Industrial Drawing," Mr. Hughes; "How to teach History," Mr. Hughes; "Arithmetic," Dr. McLellan; "How to secure attention," Mr. Hughes. Friday Evening, 7.30, Town Hall—Lecture by Mr. Hughes on "The Kindergarten;" Address by Dr. McLellan. Saturday—"Algebra," Dr. McLellan; "Reviews and Examinations," Mr. Hughes; "Statics," Dr. McLellan; Election of Officers; Question Drawer. Some Teachers will prepare on other subjects, and it is expected that all will enter heartily into the work of the Association. Questions for explanation must be sent into the County Inspector at least one week before the Convention. W. R. LAOWN, Secretary. G. D. PLATT, President.

NORTH YORK.—The next meeting of the above Association will be held in the First Division Room, Newmarket Public School, on Friday and Saturday, the 17th and 18th of October next, commencing at the usual time. The services of Dr. McLellan, H. S. Inspector, have been secured, and he will deliver a public Lecture on the evening of Friday, in addition to the general work of the Association; subject will be announced on a future occasion. The following is the Programme:—Analysis, part of "The Traveller," Jas. A. Brackin; Object Lesson (with class), Miss M. J. Thompson; Reading, V Book, page 228, Mr. McMahon; Arithmetic, I. and II. Examination Papers, 1879, Mr. Degeer; Essay, Order, Cleanliness, &c., in the School Room, Mr. W. F. Moore. D. FOTHERINGHAM, President. W. BANNIE, Secretary.

NORTH WELLINGTON.—Semi-annual Meeting in the Central School, Harrison, on Thursday and Friday, 2nd and 3rd October, 1879. PROGRAMME.—1. Address, J. Reid, B.A., H. M. Mount Forest High School. 2. Appointment of Committees on Finance, on Library, and Promotion Examinations. 3. Question Drawer Opened. 4. Geography Lesson, with IV. Class, C. F. Ming, H. M. Harrison P. S.; Critic—Messrs. R. Hislop, M. McKay, and H. Becker. 5. History for Entrance Examination, Peter McEachern, Parker P. S.; Critics—Messrs. R. E. Hamilton, S. B. Westervelt and J. Reid. 6. Roll Call. 7. Reading Lesson with III. Class and Callisthenics, G. A. Bingham, Harrison P. S.; Critics—Messrs. W. F. Mackenzie, R. W. Bright and J. McPherson. 8. Time Table, Registers and Reports, John M. Moran, I. P. S., North Wellington; Critics—Messrs. A. McPherson, R. S. Porry and A. Dickie. 9. "Spell It," D. F. Clapp, I. P. S., North Well-