

exactly the same length; join to the extremities of the shadows, and on the line which joins them, which is the base of an isosceles triangle, describe an equilateral triangle on the contrary side of the line to that of the stick; a line drawn from the point where the staff goes into the ground to the vortex of this triangle will be the true meridian, or by simply drawing a line from the stick to the middle of the line joining the extremities of the shadows.

Place the compass on the line, and let them observe how much the two meridians differ: that the length of the shadow, at equal intervals from noon, will be the same both in the morning and in the afternoon, etc.

To draw a perpendicular from a given point in a line, or let one fall on a line from a point without it.

The one, that either of two exterior angles is greater than the interior and opposite angle—showing from this, how the angle under which an object is seen, diminishes as you recede from, and increases as you advance towards it.

The proposition about the areas of triangles and parallelograms, as applying to the superficial measurement of rectilinear figures.

The 47th in the first book, that the square of the side opposite the right angle is equal to the sum of the squares on the other two sides. All these from the first book are particularly of practical application.

It will be found very useful for fixing on their minds any particular geometrical truths likely to be of use to them afterwards, if the teacher tests it by application to actual measurement, and not to rest satisfied with proving it merely as an abstract truth; for instance, in this school-room there is a black line, marked on two adjoining walls, about a foot from the floor; as the walls are at right angles to each other, of course these lines are also; they are divided into feet and divisions of a foot, numbered from the corner or right angle, then taking any point in each of these lines, and joining them by a string, this forms a right-angled triangle. The boys have learned that the sum of the squares of the two sides containing the right angle is equal to the square on the third side, the teacher will tell them, for instance, to draw a line between the point marked six feet on the one and eight feet on the other; square each number, add them together, and extract the square root, which they find to be 10; then they apply the foot rule—measure the string, and find it exactly ten feet by measurement.

Again, draw the line between the point marked five feet on one and seven on the other: work it out, and they get a result 8.6 feet; the teacher would ask, is .6 half an inch or more?—More by a tenth.—They then measure the piece of string which reached between the extreme points, and find it perfectly correct.

The teacher would then point out that this would always be the case, when the walls stand at right angles to each other. The bricklayer knows this, and, laying out his foundation walls, measures eight feet along one line, and six along the other, from the same corner; he then places a ten foot rod between the extreme points, and if it *exactly* reaches, he is satisfied his walls are square.

Through the middle of the line on the end wall a vertical line is drawn, and divided in the same way, and higher up on the wall are marked three parallel lines — an inch, a foot and a yard in length; these are very convenient to refer to as a sort of standard of measure, and to show what multiple of an inch, a foot, a yard, etc., any lengths of the other lines are.

It is recorded, then, that at the time of Henry the First, the length of the king's arm was the standard yard: this gives an idea of the rudeness of the age.

A teacher with a little knowledge of geometry will see numberless ways in which these lines may be made useful. I feel a difficulty in entering further into this without having recourse to diagrams, which in the printing of this book I did not contemplate.

The following occur to me as simple:—Tell a boy to measure the width of the door and its height; now what length of string will it take to reach between opposite corners? work it out: then to take a piece of string and measure,—they correspond; the same for his book, slate, a table, etc. Measure the two sides of the room—find the line which would reach from corner to corner.

Again, let one of the boys hold the string against a fixed point in the upright wall, say four feet high, and another extend it to any point towards the middle of the floor—they see this forms a right-angled triangle; another boy takes the rule, measures from the point where the string touches the floor to the base of the black line, taking this as one side, the height four feet as the other, they

work it out, and then measure as before. The testing of theory by practice, gives them a great interest in what they are doing.

(To be continued.)

OFFICIAL NOTICES.



APPOINTMENTS:

EDUCATION OFFICE.

His Excellency, the Governor General, was pleased, on the 22nd November, to appoint James Phelan, Esq., Advocate, Clerk of the English Correspondence in the Education Office for Lower Canada, and Assistant-Editor of the Lower Canada *Journal of Education*, in the place of John Radiger, Esq., Advocate, resigned.

LAVAL NORMAL SCHOOL.

His Excellency, the Governor General in Council, was pleased, the 13th October last, to approve of the appointment of Mr. Francis N. Fortier as *maître d'étude*, vice Mr. O. Siron, resigned.

JACQUES-CARTIER NORMAL SCHOOL.

His Excellency, the Governor General in Council, was pleased, the 25th October last, to appoint Mr. A. Boire *maître d'étude*, vice Professor Delaney.

EXAMINER APPOINTED.

His Excellency, the Governor General in Council, was pleased, the 7th November, to appoint the Rev. Mr. T. Toupin, member of the Board of Examiners for the Rivers, vice the Rev. Mr. D. Paradis, resigned.

SCHOOL COMMISSIONERS AND SCHOOL TRUSTEES.

His Excellency, the Governor General, was pleased, on the 25th October last, to make the following appointments of School Commissioners:

County of Gaspé—Cap des Rosiers: MM. Pierre Cassovic, Guillaume Simon, son of Pierre, Henri Price, Alexander Simpson and Edouard Ferré, and William Hyman, Secretary Treasurer.

County of Gaspé—Gaspé Nord: MM. David Philipps, John Annett, William Ascah, Robert Ascah, Frederic Miller, and William Miller, secretary-treasurer.

County of Gaspé—Bay of Gaspé South: The Reverend François de la Marc, MM. John Eden, Jean C. Belleau, William Clark and Abraham Coffin, son of Benjamin, and Joseph Kavanaugh, secretary-treasurer.

County of Gaspé—York and Haldimand: The Reverend Mathew Kerr, Henry Harbour, William Harbour, James Baker and George Galichon, and Nicolas Bailey, secretary-treasurer.

County of Arthabaska—Chester East: MM. Jean Dumas, Joseph Louis Landry, Joseph Fortier, Joseph Forcade and Pierre Lebel.

County of Pislet—St. Aubert: MM. Isaac Gagnon and Alfred Bélanger.

County of Rimouski—St. Mathieu de Rioux: MM. Célestin Vaillancour, Damase Devas, Hyacinthe Gagnon, Vital Mousseau and Edouard Lagassé.

County of Témiscouata—Village St. Rdoard: MM. Jean-Baptiste A. Chamberland and Guillaume Henri Beaulieu.

County of Kamouraska—St. Onésime: MM. Henri Gaud, Rémi Aubert, Jacques Chrétien, Antoine Dubé, fils, and Gabriel Bernier.

County of Beauce—St. George d'Aubert Gallion: MM. Bénoni Pepin, and Augustin Pâquet.

County of Bellechasse—St. Raphaël: The Reverend Narcisse Beaulieu.

County of Missisquoi—St. Romuald de Farham: MM. François Parent and Charles Potvin.

City of Quebec—Protestants: The Reverend W. B. Clarke, the Reverend M. Percy and E. N. Montizambert, Esq.