

Mathematics 6

Foundational Outcomes

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Outcomes Framework Grade 6 (2020-21)

In September 2020, teachers will be working hard to create a space that is safe and welcoming for all learners no matter the location of their “classroom”. The first weeks will still be a time to establish a sense of community, engage learners in rich interactive experiences to promote critical thinking and create opportunities for collaboration and discussion. This is an opportune time to develop a culture and a climate for mathematics learning, conducive to collaboration, risk taking and inquiry.

The **Foundational Outcomes** identified in this document represent outcomes determined to be relevant for future learning in mathematics. Decisions about foundational outcomes were made in consultation with teachers, provincial mathematics team, Board and Regional Centre staff. The foundational outcomes are meant to guide teachers in making decisions about creating learning experiences that will prepare and engage their learners in a responsive way. However, a teacher’s professional judgment remains the most important guide to effectively responding to the needs of their learners.

Colour coding has been used to identify outcomes and indicators as foundational (**green**), optional (**orange**) or non-foundational (**red**) for the 2020-2021 school year.

N01 Students will be expected to demonstrate an understanding of place value for numbers greater than one million and less than one-thousandth.

Performance Indicators: all indicators

N02 Students will be expected to solve problems involving whole numbers and decimal numbers.

Performance Indicators: all indicators

N03 Students will be expected to demonstrate an understanding of factors and multiples by

- determining multiples and factors of numbers less than 100
- identifying prime and composite numbers
- solving problems using multiples and factors

Performance Indicators: all indicators

N04 Students will be expected to relate improper fractions to mixed numbers and mixed numbers to improper fractions.

Performance Indicators: all indicators

N05 Students will be expected to demonstrate an understanding of ratio, concretely, pictorially, and symbolically.

Performance Indicators: all indicators

N06 Students will be expected to demonstrate an understanding of percent (limited to whole numbers) concretely, pictorially, and symbolically.

Performance Indicators: all indicators

N07 Students will be expected to demonstrate an understanding of integers contextually, concretely, pictorially, and symbolically.

Performance Indicators: all indicators

N08 Students will be expected to demonstrate an understanding of multiplication and division of decimals (one-digit whole number multipliers and one-digit natural number divisors).

Performance Indicators: all indicators

N09 Students will be expected to explain and apply the order of operations, excluding exponents, with and without technology (limited to whole numbers).

Performance Indicators: all indicators

PR01 Students will be expected to demonstrate an understanding of the relationships within tables of values to solve problems.

Performance Indicators: all indicators

PR02 Students will be expected to represent and describe patterns and relationships, using graphs and tables.

Performance Indicators: all indicators

PR03 Students will be expected to represent generalizations arising from number relationships using equations with letter variables.

Performance Indicators: all indicators

PR04 Students will be expected to demonstrate and explain the meaning of preservation of equality concretely, pictorially, and symbolically.

Performance Indicators: all indicators

M01 Students will be expected to demonstrate an understanding of angles by

- identifying examples of angles in the environment
- classifying angles according to their measure
- estimating the measure of angles using 45° , 90° , and 180° as reference angles
- determining angle measures in degrees
- drawing and labelling angles when the measure is specified

Performance Indicators: all indicators

M02 Students will be expected to demonstrate that the sum of interior angles is 180° in a triangle and 360° in a quadrilateral.

Performance Indicators: all indicators

M03 Students will be expected to develop and apply a formula for determining the

- perimeter of polygons
- area of rectangles
- volume of right rectangular prisms

Performance Indicators: all indicators

G01 Students will be expected to construct and compare triangles, including scalene, isosceles, equilateral, right, obtuse, or acute in different orientations.

Performance Indicators: all indicators

G02 Students will be expected to describe and compare the sides and angles of regular and irregular polygons.

Performance Indicators: all indicators

G03 Students will be expected to perform a combination of translation(s), rotation(s), and/or reflection(s) on a single 2-D shape, with and without technology, and **draw** and describe the image.

Performance Indicators: all indicators

G04 Students will be expected to perform a combination of successive transformations of 2-D shapes to create a design and identify and describe the transformations.

Performance Indicators: all indicators

G05 Students will be expected to identify and plot points in the first quadrant of a Cartesian plane using whole number ordered pairs.

Performance Indicators: all indicators

G06 Students will be expected to perform and describe single transformations of a 2-D shape in the first quadrant of a Cartesian plane (limited to whole number vertices).

Performance Indicators: all indicators

SP01 Students will be expected to create, label, and interpret line graphs to draw conclusions.

Performance Indicators: all indicators

SP02 Students will be expected to select, justify, and use appropriate methods of collecting data, including questionnaires, experiments, databases, and electronic media.

Performance Indicators: all indicators

SP03 Students will be expected to graph collected data and analyze the graph to solve problems.

Performance Indicators: all indicators

SP04 Students will be expected to demonstrate an understanding of probability by

- identifying all possible outcomes of a probability experiment
- differentiating between experimental and theoretical probability
- determining the theoretical probability of outcomes in a probability experiment
- determining the experimental probability of outcomes in a probability experiment
- comparing experimental results with the theoretical probability for an experiment

Performance Indicators: all indicators