

# Mathematics 5

*Foundational Outcomes*

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## Outcomes Framework Grade 5 (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 represent and partition whole numbers to 1 000 000.

**Performance Indicators:** all indicators

**N02** Students will be expected to use estimation strategies, including front-end, front-end adjusted, rounding, and compatible numbers in problem-solving contexts.

**Performance Indicators:** all indicators

**N03** Students will be expected to describe and apply mental mathematics strategies and number properties to recall, with fluency, answers for basic multiplication facts to 81 and related division facts.

**Performance Indicators:** all indicators

**N04** Students will be expected to apply mental mathematics strategies for multiplication, including

- multiplying by multiples of 10, 100, and 1000

- halving and doubling
- using the distributive property

**Performance Indicators: all indicators**

**N05** Students will be expected to demonstrate, with and without concrete materials, an understanding of multiplication (two-digit by two-digit) to solve problems.

**Performance Indicators: all indicators**

**N06** Students will be expected to demonstrate, with and without concrete materials, an understanding of division (three-digit by one-digit), and interpret remainders to solve problems.

**Performance Indicators: all indicators**

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**N07** Students will be expected to demonstrate an understanding of fractions by using concrete, pictorial, and symbolic representations to

- create sets of equivalent fractions
- compare and order fractions with like and unlike denominators

**Performance Indicators: all indicators**

**N08** Students will be expected to describe and represent decimals (tenths, hundredths, and thousandths) concretely, pictorially, and symbolically.

**Performance Indicators: all indicators**

**N09** Students will be expected to relate decimals to fractions and fractions to decimals (to thousandths).

**Performance Indicators: all indicators**

**N10** Students will be expected to compare and order decimals (to thousandths) by using benchmarks, place value, and equivalent decimals.

**Performance Indicators: all indicators**

**N11** Students will be expected to demonstrate an understanding of addition and subtraction of decimals (limited to thousandths).

**Performance Indicators: all indicators**

**PR01** Students will be expected to determine the pattern rule to make predictions about subsequent terms.

**Performance Indicators: all indicators**

**PR02** Students will be expected to solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions.

**Performance Indicators: all indicators**

**M01** Students will be expected to design and construct different rectangles, given a perimeter or an area or both (whole numbers), and make generalizations.

**Performance Indicators: all indicators**

**M02** Students will be expected to demonstrate an understanding of measuring length (mm) by

- selecting and justifying referents for the unit millimetre (mm)
- modelling and describing the relationship between millimetre (mm) and centimetre (cm) units, and between millimetre (mm) and metre (m) units

**Performance Indicators: all indicators**

**M03** Students will be expected to demonstrate an understanding of volume by

- selecting and justifying referents for cubic centimetre (cm<sup>3</sup>) or cubic metre (m<sup>3</sup>) units
- estimating volume using referents for cubic centimetre (cm<sup>3</sup>) or cubic metre (m<sup>3</sup>)
- measuring and recording volume (cm<sup>3</sup> or m<sup>3</sup>)
- constructing rectangular prisms for a given volume

**Performance Indicators: all indicators**

**M04** Students will be expected to demonstrate an understanding of capacity by

- describing the relationship between millilitre (mL) and litre (L) units
- selecting and justifying referents for millilitre (mL) and litre (L) units
- estimating capacity using referents for millilitre (mL) and litre (L)
- measuring and recording capacity (mL or L)

**Performance Indicators: all indicators**

**G01** Students will be expected to describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are parallel, intersecting, perpendicular, vertical, and horizontal.

**Performance Indicators: all indicators**

**G02** Students will be expected to name, identify, and sort quadrilaterals, including rectangles, squares, trapezoids, parallelograms, and rhombi, according to their attributes.

**Performance Indicators: all indicators**

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

**Performance Indicators: all indicators**

**G04** Students will be expected to identify and describe a single transformation, including a translation, rotation, and reflection of 2-D shapes.

**Performance Indicators: all indicators**

**G05** Students will be expected to identify right angles.

**Performance Indicators: all indicators**

**SP01** Students will be expected to differentiate between first-hand and second-hand data.

**Performance Indicators: all indicators**

**SP02** Students will be expected to **construct and** interpret double bar graphs to draw conclusions.

**Performance Indicators:**

SP02.01 Determine the attributes (title, axes, intervals, and legend) of double bar graphs by comparing a given set of double bar graphs.

SP02.02 Represent a given set of data by creating a double bar graph, label the title and axes, and create a legend without the use of technology.

SP02.03 Draw conclusions from a given double bar graph to answer questions.

SP02.04 Identify examples of double bar graphs used in a variety of print and electronic media, such as newspapers, magazines, and the Internet.

SP02.05 Solve a given problem by constructing and interpreting a double bar graph.

**SP03** Students will be expected to describe the likelihood of a single outcome occurring, using words such as impossible, possible, and certain.

**Performance Indicators: all indicators**

**SP04** Students will be expected to compare the likelihood of two possible outcomes occurring, using words such as less likely, equally likely, or more likely.

**Performance Indicators: all indicators**