Mathematics at Work 12

Foundational Outcomes

NOVA SCOTIA
NOUVELLE-ÉCOSSE

2020–2021

Website References

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Prepared by the Department of Education and Early Childhood Development

This is the most recent version of the current curriculum materials as used by teachers in Nova Scotia.

Outcomes Framework Mathematics at Work 12 (2020-2021)

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.

M01 Students will be expected to demonstrate an understanding of the limitations of measuring instruments including precision, accuracy, uncertainty, and tolerance, and solve problems. **Performance Indicators: all indicators**
G01 Students will be expected to solve problems by using the sine law and cosine law, excluding the ambiguous case. **Performance Indicators: all indicators**
G02 Students will be expected to solve problems that involve triangles, quadrilaterals, and regular polygons. **Performance Indicators: all indicators**
G03 Students will be expected to demonstrate an understanding of transformations on a 2-D shape or a 3-D object, including translations, rotations, reflections, and dilations. **Performance Indicators: all indicators**
N01 Students will be expected to analyze puzzles and games that involve logical reasoning, using problem-solving strategies. **Performance Indicators: all indicators**
N02 Students will be expected to solve problems that involve the acquisition of a vehicle by

buying, leasing, or leasing to buy.

Performance Indicators: all indicators

N03 Students will be expected to critique the viability of small business options by considering expenses, sales, and profit or loss.

Performance Indicators: all indicators

A01 Students will be expected to demonstrate an understanding of linear relations by
-recognizing patterns and trends
-graphing
-creating tables of values
-writing equations
-interpolating and extrapolating
-solving problems

Performance Indicators: all indicators

S01 Students will be expected to solve problems that involve measures of central tendency, including mean, median, mode, ~~weighted mean, and trimmed mean.~~

Performance Indicators:

S01.01 Explain, using examples, the advantages and disadvantages of each measure of central tendency.
S01.02 Determine the mean, median, and mode for a set of data.
S01.03 Identify and correct errors in a calculation of a measure of central tendency.
S01.04 Identify the outlier(s) in a set of data.
S01.05 Explain the effect of outliers on mean, median, and mode.
S01.06 Calculate the trimmed mean for a set of data, and justify the removal of the outliers.
S01.07 Explain, using examples such as course marks, why some data in a set would be given a greater weighting in determining the mean.
S01.08 Calculate the mean of a set of numbers after allowing the data to have different weightings (weighted mean)
S01.09 Explain, using examples from print and other media, how measures of central tendency and outliers are used to provide different interpretations of data.
S01.10 Solve a contextual problem that involves measures of central tendency.

S02 Students will be expected to analyze and describe percentiles.

Performance Indicators: all indicators

P01 Students will be expected to analyze and interpret problems that involve probability.

Performance Indicators: all indicators