Mathematics 4

Foundational Outcomes

NOVA SCOTIA
NOUVELLE-ÉCOSSE

2020–2021

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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 Grade 4 (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 10 000**.** **Performance Indicators: all indicators**
N02 Students will be expected to compare and order numbers to 10 000. **Performance Indicators: all indicators**
N03 Students will be expected to demonstrate an understanding of addition and subtraction of numbers with answers to 10 000 (limited to three- and four-digit numerals). **Performance Indicators: all indicators**
N04 Students will be expected to apply and explain the properties of 0 and 1 for multiplication and the property of 1 for division. **Performance Indicators: all indicators**

N05 Students will be expected to describe and apply mental mathematics strategies, to recall basic multiplication facts to 9 × 9, and to determine related division facts. **Performance Indicators: all indicators**
N06 Students will be expected to demonstrate an understanding of multiplication (one-, two-, or three-digit by one-digit numerals) to solve problems**.** **Performance Indicators: all indicators**
N07 Students will be expected to demonstrate an understanding of division (one-digit divisor and up to two-digit dividend) to solve problems. **Performance Indicators: all indicators**
N08 Students will be expected to demonstrate an understanding of fractions less than or equal to 1 by using concrete, pictorial, and symbolic representations. **Performance Indicators: all indicators**
N09 Students will be expected to describe and represent decimals (tenths and hundredths) concretely, pictorially, and symbolically. **Performance Indicators: all indicators**
N10 Students will be expected to relate decimals to fractions and fractions to decimals (to hundredths). **Performance Indicators: all indicators**
N11 Students will be expected to demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by ● estimating sums and differences ● using mental mathematics strategies to solve problems ● using personal strategies to determine sums and differences

Performance Indicators: all indicators

PR01 Students will be expected to identify and describe patterns found in tables and charts, including a multiplication chart.

Performance Indicators: all indicators

PR02 Students will be expected to translate among different representations of a pattern (a table, a chart, or concrete materials).

Performance Indicators: all indicators

PR03 Students will be expected to represent, describe, and extend patterns and relationships, using charts and tables, to solve problems.

Performance Indicators: all indicators

PR04 Students will be expected to identify and explain mathematical relationships, using charts and diagrams, to solve problems.

Performance Indicators:

PR04.01 Complete a given Carroll diagram to solve a problem.
PR04.02 Determine where new elements belong is a given Carroll diagram.
PR04.03 Solve a given problem using a Carroll diagram.
PR04.04 Identify a sorting rule for a given Venn diagram.
PR04.05 Describe the relationship shown in a given Venn diagram when the circles overlap, when one circle is contained in the other, and when the circles are separate.
PR04.06 Determine where new elements belong in a given Venn diagram.
PR04.07 Solve a given problem by using a chart or diagram to identify mathematical relationships.

PR05 Students will be expected to express a given problem as an equation in which a symbol is used to represent an unknown number.

Performance Indicators: all indicators

PR06 Students will be expected to solve one-step equations involving a symbol to represent an unknown number. **Performance Indicators: all indicators**
M01 Students will be expected to read and record time using digital and analog clocks, including 24-hour clocks. **Performance Indicators: all indicators**
M02 Students will be expected to read and record calendar dates in a variety of formats. **Performance Indicators: all indicators**
M03 Students will be expected to demonstrate an understanding of area of regular and irregular 2-D shapes. **Performance Indicators: all indicators**
G01 Students will be expected to describe and construct rectangular and triangular prisms. **Performance Indicators: all indicators**
G02 Students will be expected to demonstrate an understanding of congruency, concretely and pictorially. **Performance Indicators: all indicators**
G03 Students will be expected to demonstrate an understanding of line symmetry. **Performance Indicators: all indicators**
SP01 Students will be expected to demonstrate an understanding of many-to-one correspondence. **Performance Indicators: all indicators**

SP02 Students will be expected to construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.

Performance Indicators: all indicators