Mathematics Essentials 11

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 Essentials 11 (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 as foundational (**green**), optional (**orange**) or non-foundational (**red**) for the 2020-2021 school year.

A1 understand the various savings and investing alternatives commonly available
A2 explore the concepts of risk tolerance vs. reward investing and demonstrate an understanding of how it changes during different life stages
A3 understand the rights and responsibilities of landlords and tenants
A4 understand how to read a map
B1 know the multiplication and division facts
B2 extend multiplication and division facts to products of tens, hundreds, and thousands by single digit factors
B3 estimate sums and differences
B4 estimate products and quotients
B5 mentally calculate 25%, $33\frac{1}{3}\%$, $66\frac{1}{3}\%$ and of quantities compatible with these percents
B6 estimate percents of quantities
B7 calculate the cost of a loan using amortization tables
B8 determine the cost of using credit, using technology
B9 determine the cost associated with renting an apartment or buying a house

B10 determine the expenses related to taking a trip (i.e., gasoline, accommodations, meals, etc.)
B11 determine the distances using scales on a map
C1 interpret data from amortization tables
C2 explore the effects of parameter changes on the cost of borrowing money
C3 determine the effects of compound interest on deposits made into savings accounts using technology
C4 explore the growth of savings based on a variety of investment strategies ranging in amounts and time frames using technology
D1 demonstrate an understanding of the concept of perimeter and area
D2 calculate perimeter and area
D3 estimate perimeter and area using estimation strategies
D4 use perimeter and area to solve a variety of real world problems
D5 demonstrate an understanding of volume and surface area
D6 calculate surface area and volume of rectangular prisms and cylinders
D7 use surface area and volume to solve real world problems
D8 estimate the volume and surface area using estimation strategies
D9 calculate scale factors in 2-D scale diagrams and 3-D scale models; understand the relationship among the scale factor and the related change in area or volume
E1 understand the meaning and use of square root numbers when determining the dimensions (sides) of a square
E2 understand and apply the Pythagorean Theorem
E3 find the missing side measure in a right angle triangle
E4 create 2-D scale diagrams and 3-D scale models
F1 read and interpret various data displays
F2 analyze graphs to describe patterns within the context of the data and predict future trends
F3 select an appropriate display for a given set of data and explain the reasons for the choice
F4 represent given data in a variety of displays, using spreadsheets or other technology

F5 collect, display, and analyze data to draw appropriate conclusions about relevant questions or issues