Department of Education and Early Childhood Development

Financial and Workplace Mathematics Pathway

Geometry, Measurement and Finance 10, Financial and Workplace Mathematics 110, and Financial and Workplace Mathematics 120

2020-2021 Prioritized Curriculum

Table of Contents

Acknowledgements

The Department of Education and Early Childhood Development of New Brunswick (EECD) gratefully acknowledges the contributions of the following educators toward the development of the Financial and Workplace Mathematics 11 & 12 Prioritized Curriculum:

- Lyne Allain, ASD-East
- Bev Amos, ASD-West
- Susan Cochrane, ASD-South
- Sherry Fox, ASD-West
- Laura Ketch, ASD-North
- Marie-Claude LeBlanc, ASD-East
- Josh Little, ASD-South
- Joey Savoy, ASD-North
- Ryan Jones, EECD (Learning and Achievement)
- Yvan Pelletier, EECD (Assessment)

Background and Rationale

Due to the reduced learning time presented by school closures for COVID-19 and the uncertainty of what the 2020-2021 year will bring, the Department of Education and Early Childhood Development (EECD) is releasing a prioritized curriculum for select high school courses. This document provides a list of required outcomes that will frame the learning expectations for students and offer time for effective teaching practices.

A team of New Brunswick high school educators and Learning Specialists from EECD worked together to identify and curate a list of **Required Outcomes** for the 2020-2021 school year. Any outcomes that were not identified as being *required* were categorised as "**Remaining Outcomes**" and can be set aside for future learning or taught if time permits.

The *Required Outcomes* outlined in this document have been identified as the best representation of instructional outcomes to engage learners and contribute to student readiness for post-secondary mathematics and science studies and/or future life pursuits.

Identification of the *Required Outcomes* is but one of the necessary elements which will support learners in the province. Teachers will also consider how to engage students in deep and meaningful ways within the framework of the new learning environments (online, blended, and/or face-to-face).

Geometry, Measurement and Finance 10

The curriculum document can be accessed [here](#) / Le programme d'études est accessible [ici](#).

Required Outcomes	Remaining Outcomes

Note: A1 should be assessed through other outcomes.
 	
N1: Solve problems that involve unit pricing and currency exchange (focus on finding and using pricing and currency tools, not computation), using proportional reasoning.
 	
N2: Demonstrate an understanding of income, including: wages, salary, contracts, commission, piecework, and calculating gross pay and net pay.
 	
N3: Demonstrate an understanding of financial institution services used to access and manage finances.
 	
N4: Demonstrate an understanding of compound interest (Focus on understanding, not computation).
 	
N5: Demonstrate an understanding of credit options, including: credit cards, and loans.
 	
G2: Demonstrate an understanding of the Pythagorean theorem by: identifying situations that involve right triangles, verifying the formula, applying the formula, solving problems.
 	
G3: Demonstrate an understanding of primary trigonometric ratios (sine, cosine, tangent) by: applying similarity to right triangles, generalizing patterns from similar right triangles, applying the primary trigonometric ratios, and solving problems.
 	
Note: M1-M3: focus on relationships, estimation, and application of conversions by finding and using conversion tools.
 	
    M1: Demonstrate an understanding of the Système International (SI) by describing the relationships of the units for length, area, volume, capacity, mass and temperature.
 	
    M2: Demonstrate an understanding of the Imperial system by: describing the relationships of the units for length, area, volume, capacity, mass and temperature.
 	
    M3: Solve problems, using SI and Imperial units, that involve linear measurement using estimation and measurement strategies.
 	
M4: Solve problems, using SI and Imperial systems, that involve area measurements of regular, composite and irregular 2-D shapes, including decimal and fractional measurements, and verify the solutions.
	A1: Solve problems that require the manipulation and application of formulas related to: perimeter, area, volume, capacity, the Pythagorean theorem, primary trigonometric ratios, income. currency exchange, interest and finance charges.
	
	G1: Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies.
	
	G4: Solve problems that involve angle relationships between parallel, perpendicular and transversal lines.
	
	G5: Demonstrate an understanding of angles, including acute, right, obtuse, straight and reflex, by: drawing, replicating and constructing, bisecting, and solving problems.
	
	M5: Solve problems, using SI and Imperial units, that involve the surface area and volume of 3-D objects, including right cones, right cylinders, right prisms, right pyramids, and spheres.

Financial and Workplace Mathematics 110

The curriculum document can be accessed [here](#) / Le programme d'études est accessible [ici](#).

Required Outcomes	Remaining Outcomes
G1: Solve problems that involve two and three right triangles. **G2:** Solve problems that involve scale. **N2:** Analyze costs and benefits of renting, leasing and buying. **N4:** Solve problems that involve personal budgets. **A1:** Solve problems that require the manipulation and application of formulas related to: slope and rate of change, Rule of 72, finance charges, the Pythagorean theorem and trigonometric ratios. **A2:** Demonstrate an understanding of slope as rise over run, as rate of change, and by solving problems. **A3:** Solve problems by applying proportional reasoning and unit analysis. **S1:** Solve problems that involve creating and interpreting graphs, including: bar graphs, histograms, line graphs, and circle graphs.	**Note:** G3 & G4 can be explored through cross-curricular work in CAD. **G3:** Model and draw 3-D objects and their views. **G4:** Draw and describe exploded views, component parts and scale diagrams of simple 3-D objects. **N1:** Analyze puzzles and games that involve numerical reasoning, using problem-solving strategies. **N3:** Analyze an investment portfolio in terms of interest rate, rate of return, total return.

Financial and Workplace Mathematics 120

The curriculum document can be accessed [here](#).

Required Outcomes	Remaining Outcomes
M1: Demonstrate an understanding of the limitations of measuring instruments, including precision, accuracy, uncertainty, tolerance, and solve problems.	**G2:** Solve problems by using the sine law and cosine law, excluding the ambiguous case.
G1: Solve problems that involve triangles, quadrilaterals, regular polygons.	**G3:** Demonstrate an understanding of transformations on a 2-D shape or a 3-D object, including translations, rotations, reflections, dilations.
G2: Focus on reviewing and applying trigonometric ratios with right triangles, from *Financial and Workplace Mathematics 110* G1 & A1.	
N2: Critique the viability of small business options by considering expenses, sales, profit or loss.	**N1:** Analyze puzzles and games that involve logical reasoning, using problem-solving strategies.
A1: Demonstrate an understanding of linear relations by recognizing patterns and trends, graphing, creating tables of values, writing equations, interpolating and extrapolating, solving problems.	**S2:** Analyze and describe percentiles.
	P1: Analyze and interpret problems that involve probability.
S1: Solve problems that involve measures of central tendency, including mean, median, mode, weighted mean, trimmed mean.	**RP1:** Research and give a presentation on a historical event or an area of interest that involves mathematics.