Mathology 3 Correlation (Number) – Ontario

Overall Expectation **A1. Social-Emotional Learning (SEL) Skills and the Mathematical Processes**
Mathology provides teachers with a flexible framework to support the development of students' Social Emotional Learning: o By using diverse resources that represent a variety of students in real-world contexts, students can see themselves and others while positively engaging in mathematics o By providing differentiated support that allows students to cope with challenges, start at a level that works for them, and build from there o By providing students with opportunities to learn by way of different approaches, through the use of digital (e.g., virtual tools) and print resources (e.g., laminated student cards and math mats), allowing students to reveal their mathematical thinking in a risk-free environment. o By providing students with a variety of learning opportunities (small group, pair, whole class), to work collaboratively on math problems, share their own thinking, and listen to the thinking of others o By including a variety of voices (built by and for Canadian learners) and opportunities to support local contexts (modifiable resources)

Curriculum Expectations 2020	**Mathology Grade 3 Mathology.ca**	**Mathology Little Books**	**Mathology Practice Workbook 3**	**Pearson Canada K–3 Mathematics Learning Progression**
Overall Expectation **B1.** Number Sense: demonstrate an understanding of numbers and make connections to the way numbers are used in everyday life				
Specific Expectation Whole Numbers				
B1.1 read, represent, compose and decompose whole numbers up to and including 1000, using a variety of tools and strategies, and describe various ways they are used in everyday life	**Number Unit 1: Counting** 1: Numbers All Around Us *Student Card 1: Where Do We See Numbers?* **Number Unit 2: Number Relationships** 6: Composing and Decomposing Quantities *Student Card 4: Escape the Room*	The Street Party Math Makes Me Laugh How Numbers Work Finding Buster Fantastic Journeys **To Scaffold:**	Unit 2 Questions 1, 2, 3 (pp. 8, 9) Unit 3 Questions 1, 2, 3, 4, 10 (pp. 13-14, 16) Unit 7 Questions 7, 10 (pp. 40-41)	**Big idea: Numbers tell us how many and how much.**

	8: Number Relationships Consolidation **Number Unit 3: Place Value** 9: Building Numbers 10: Representing Numbers in Different Ways *Student Card 5: Canadian Animals Map* 11: What's the Number? *Student Card 6: What Number Am I?*	What Would You Rather? Ways to Count Family Fun Day Back to Batoche A Class-full of Projects The Money Jar		**Applying the principles of counting** - Uses number patterns to bridge hundreds when counting forward and backward (e.g., 399, 400, 401). **Recognizing and writing numerals** - Names, writes, and matches three-digit numerals to quantities. - Orders three or more quantities using sets and/or numerals. **Big Idea: Numbers are related in many ways. Comparing and ordering quantities (multitude or magnitude)** **Decomposing wholes into parts and composing wholes from parts** - Composes two-digit numbers from parts (e.g., 14 and 14 is 28), and decomposes two-digit numbers into parts (e.g., 28 is 20 and 8). **Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing quantities into ones, tens, and hundreds place-value concepts)** - Writes, reads, composes, and decomposes three- digit numbers using ones, tens, and hundreds.
B1.2 compare and order whole numbers up to and including 1000, in various contexts	**Number Unit 2: Number Relationships** 7: Comparing and Ordering Quantities 8: Number Relationships Consolidation **Number Unit 3: Place Value** 9: Building Numbers 10: Representing Numbers in Different Ways *Student Card 5: Canadian Animals Map*	The Street Party Sports Camp Planting Seeds Math Makes Me Laugh Finding Buster Fantastic Journeys **To Scaffold:** What Would You Rather?	Unit 3 Questions 5, 6, 7, 8, 9, 10, 11 (pp. 15-17) Unit 4 Questions 6, 8 (pp. 20-21)	**Big Idea: Numbers are related in many ways** **Comparing and ordering quantities (multitude or magnitude)** - Orders three or more quantities using sets and/or numerals. **Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.**

	11: What's the Number? *Student Card 6: What Number Am I?*	Ways to Count Family Fun Day Back to Batoche The Money Jar		**Unitizing quantities into ones, tens, and hundreds (place-value concepts)** - Writes, reads, composes, and decomposes three-digit numbers using one, tens, and hundreds.
B1.3 round whole numbers to the nearest ten or hundred, in various contexts	**Number Unit 3: Place Value** 12: Rounding Numbers *Student Card 7: Round We Go!* 13: Place Value Consolidation	Math Makes Me Laugh Finding Buster Fantastic Journeys	Unit 4 Question 9 (p. 21)	**Big Idea: Numbers are related in many ways.** **Estimating quantities and numbers** - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10).
B1.4 count to 1000, including by 50s, 100s, and 200s, using a variety of tools and strategies	**Number Unit 1: Counting** 2: Counting to 1000 3: Skip-Counting Forward and Backward 4: Counting Consolidation *Student Card 2: Jumping on Clover* *Student Card 3: First to 500!* **Number Unit 7: Financial Literacy** 34: Estimating and Counting Money	Calla's Jingle Dress Planting Seeds Sports Camp Math Makes Me Laugh How Numbers Work Finding Buster **To Scaffold:** Ways to Count Family Fun Day Array's Bakery The Money Jar What Would You Rather?	Unit 2 Questions 5, 6, 7, 8, 9, 10 (pp. 10-12) Unit 4 Question 7 (p. 20) Unit 8 Questions 1, 2, 4, 5, 10 (pp. 42-44, 47)	**Big Idea: Numbers tell us how many and how much.** **Applying the principles of counting** - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. - Uses number patterns to bridge hundreds when counting forward and backward (e.g., 399, 400, 401). - Fluently skip-counts by factors of 100 (e.g., 20, 25, 50) and multiples of 100 from any given number. **Recognizing and writing numerals** - Names, writes, and matches three-digit numerals to quantities. **Big Idea: Numbers are related in many ways** **Estimating quantities and numbers** - Uses relevant benchmarks (e.g., multiples of 10) to compare and estimate quantities.

				Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. **Unitizing quantities and comparing units to the whole** - Recognizes number patterns in repeated units.
B1.5 use place value when describing and representing multi-digit numbers in a variety of ways, including with base ten materials	**Number Unit 3: Place Value** 9: Building Numbers 10: Representing Numbers in Different Ways *Student Card 5: Canadian Animals Map* 11: What's the Number? *Student Card 6: What Number Am I?* 13: Place Value Consolidation	The Street Party Math Makes Me Laugh How Numbers Work Finding Buster **To Scaffold:** Back to Batoche A Class-full of Projects The Money Jar What Would You Rather? The Great Dogsled Race	Unit 4 Questions 1, 2, 3, 4, 5, 6, 7, 8, 10 (pp. 18-22)	**Big Idea: Numbers are related in many ways.** **Comparing and ordering quantities (multitude or magnitude)** - Orders three or more quantities using sets and/or numerals. **Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing quantities into ones, tens, and hundreds (place-value concepts)** - Writes, reads, composes, and decomposes three-digit numbers using ones, tens, and hundreds

Specific Expectation Fractions				
B1.6 use drawings to represent, solve, and compare the results of fair-share problems that involve sharing up to 20 items among 2, 3, 4, 5, 6, 8, and 10 sharers, including problems that result in whole numbers, mixed numbers, and fractional amounts	**Number Unit 4: Fractions** 14: Exploring Equal Parts 15: Comparing Fractions 1 17: Partitioning Sets 26: Exploring Division	Hockey Homework	Unit 12 Questions 1, 2, 5, 7, 8, 9, 12, 13 (pp. 70-75)	**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning quantities to form fractions** - Partitions wholes into equal-sized parts to make fair shares or equal groups. - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. - Relates the size of parts to the number of equal parts in a whole (e.g., a whole cut into 2 equal pieces has larger parts than a whole cut into 3 equal pieces). - Compares unit fractions to determine relative size. - Counts by unit fractions (e.g., counting by ¼: ¼, 2/4, ¾). - Uses fraction symbols to name fractional quantities.
B1.7 represent and solve fair-share problems that focus on determining and using equivalent fractions, including problems that involve halves, fourths, and eighths; thirds and sixths; and fifths and tenths **Note:** see B2.8	**Number Unit 4: Fractions** 15: Comparing Fractions 1 16: Comparing Fractions 2 *Student Card 8: Fractions of a Whole* 18: Fractions Consolidation	Hockey Homework	Unit 12 Questions 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 (pp. 71-75)	**BIG IDEA: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning quantities to form fractions** - Compares unit fractions to determine relative size.

Overall Expectation **B2.** Operations: use knowledge of numbers and operations to solve mathematical problems encountered in everyday contexts				
Specific Expectation Properties and Relationships				
B2.1 use the properties of operations, and the relationships between multiplication and division, to solve problems and check calculations	**Number Unit 6: Multiplication and Division** 27: Relating Multiplication and Division *Student Card 15: Array Avenue* 28: Properties of Multiplication 30: Creating and Solving Problems 31: Building Fluency: The Games Room *Student Card 16: Multiplication Squares*	Calla's Jingle Dress Sports Camp Planting Seeds	Unit 16 Questions 4, 5, 6 (pp. 97-98)	**Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.** **Developing conceptual meaning of multiplication and division** - Models and symbolizes single-digit multiplication problems involving equal groups or measures (i.e., equal jumps on a number line), and relates them to addition. - Uses properties of multiplication and division to solve problems (e.g., multiplying and dividing by 1, commutativity of multiplication). - Models and symbolizes equal sharing and grouping division problems and relates them to subtraction.

Specific Expectation Math Facts				
B2.2 recall and demonstrate multiplication facts of 2, 5, and 10, and related division facts	**Number Unit 6: Multiplication and Division** 25: Exploring Multiplication 26: Exploring Division 27: Relating Multiplication and Division *Student Card 15: Array Avenue* 29: Multiplying and Dividing Larger Numbers 30: Creating and Solving Problem 31: Building Fluency: The Games Room *Student Card 16: Multiplication Squares* 33: Multiplication and Division Consolidation	Calla's Jingle Dress Sports Camp Planting Seeds	Unit 16 Questions 7, 11 (pp. 98, 101)	**Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.** **Developing conceptual meaning of multiplication and division** - Models and symbolizes single-digit multiplication problems involving equal groups or measures (i.e., equal jumps on a number line), and relates them to addition. - Uses properties of multiplication and division to solve problems (e.g., multiplying and dividing by 1, commutativity of multiplication). - Models and symbolizes equal sharing and grouping division problems and relates them to subtraction.
Specific Expectation Mental Math				
B2.3 use mental math strategies, including estimation, to add and subtract whole numbers that add up to no more than 1000 and explain the strategies used	**Number Unit 5: Addition and Subtraction** 20: Estimating Sums and Differences *Student Card 11: Add to Fit!* 21: Using Mental Math to Add and Subtract *Student Card 12: Aim for 100! Aim for 1000! Aim for 0!*	Math Makes Me Laugh Calla's Jingle Dress The Street Party Sports Camp Planting Seeds	Unit 5 Questions 1, 2, 3, 4, 5, 6, 11 (pp. 25-27, 30) Unit 7 Questions 8, 10 (pp. 40-41)	**Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing conceptual meaning of addition and subtraction** - Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). - Relates addition and subtraction as inverse operations. **Developing fluency of addition and subtraction computation** - Develops efficient mental strategies and algorithms to solve

				equations with multi-digit numbers. - Estimates sums and differences of multi-digit numbers. **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.** **Understanding equality and inequality, building on generalized properties of numbers and operations** - Decomposes and combines numbers in equations to make them easier to solve (e.g., 8 + 5 = 3 + 5 + 5).
Specific Expectation Addition and Subtraction				
B2.4 demonstrate an understanding of algorithms for adding and subtracting whole numbers by making connections to and describing the way other tools and strategies are used to add and subtract	**Number Unit 5: Addition and Subtraction** 19: Modelling Addition and Subtraction 22: Creating and Solving Problems 23: Creating and Solving Problems with Larger Numbers *Student Card 13: Tell a Number Story* 24: Addition and Subtraction Consolidation *Student Card 14: Fun Day!*	Calla's Jingle Dress The Street Party Sports Camp Planting Seeds Math Makes Me Laugh How Numbers Work Finding Buster **To Scaffold:** Array's Bakery Marbles, Alleys, Mibs, and Guli! A Class-full of Projects The Money Jar The Great Dogsled Race	Unit 5 Questions 7, 8, 12 (pp. 28, 30)	**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing quantities into ones, tens, and hundreds (place-value concepts)** - Writes, reads, composes and decomposes three- digit numbers using ones, tens, and hundreds. **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing conceptual meaning of addition and subtraction** - Uses symbols and equations to represent addition and subtraction situations. - Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part- whole, and compare). - Relates addition and subtraction as inverse operations.

				- Uses properties of addition and subtraction to solve problems (e.g., adding or subtracting 0, commutativity of addition). **Developing fluency of addition and subtraction computation** - Fluently adds and subtracts with quantities to 20. - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. - Estimates sums and differences of multi-digit numbers.
B2.5 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 1000, using various tools and algorithms	**Number Unit 5: Addition and Subtraction** 19: Modelling Addition and Subtraction 22: Creating and Solving Problems 23: Creating and Solving Problems with Larger Numbers *Student Card 13: Tell a Number Story* 24: Addition and Subtraction Consolidation *Student Card 14: Fun Day!* **Number Unit 7: Financial Literacy** 36: Purchasing and Making Change	Calla's Jingle Dress The Street Party Sports Camp Planting Seeds Math Makes Me Laugh How Numbers Work Finding Buster **To Scaffold:** Array's Bakery Marbles, Alleys, Mibs, and Guli! A Class-full of Projects The Money Jar The Great Dogsled Race	Unit 5 Questions 9, 10, 12 (pp. 29-30) Unit 7 Questions 6, 8, 10 (pp. 39-41)	**Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing conceptual meaning of addition and subtraction** - Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part- whole, and compare). - Relates addition and subtraction as inverse operations. - Uses properties of addition and subtraction to solve problems (e.g., adding or subtracting 0, commutativity of addition). **Developing fluency of addition and subtraction computation**. - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. - Estimates sums and differences of multi-digit numbers. - Fluently recalls complements to 100 (e.g., 64 + 36; 73 + 27).

Specific Expectation Multiplication and Division				
B2.6 represent multiplication of numbers up to 10 × 10 and division up to 100 ÷ 10, using a variety of tools and drawings, including arrays	**Number Unit 6: Multiplication and Division** 25: Exploring Multiplication 26: Exploring Division 27: Relating Multiplication and Division *Student Card 15: Array Avenue* 28: Properties of Multiplication 29: Multiplying and Dividing Larger Numbers 30: Creating and Solving Problem 31: Building Fluency: The Games Room *Student Card 16: Multiplication Squares*	Calla's Jingle Dress Sports Camp Planting Seeds	Unit 16 Questions 1, 3, 7, 11 (pp. 96-98, 101)	**Big Idea: Quantities and numbers can be grouped by, or partitioned into units to determine how many or how much.** **Developing conceptual meaning of multiplication and division** - Models and symbolizes single-digit multiplication problems involving equal groups or measures (i.e., equal jumps on a number line), and relates them to addition. - Uses properties of multiplication and division to solve problems (e.g., multiplying and dividing by 1, commutativity of multiplication). - Models and symbolizes equal sharing and grouping division problems and relates them to subtraction.
B2.7 represent and solve problems involving multiplication and division, including problems that involve groups of one half, one fourth, and one third, using tools and drawings	**Number Unit 6: Multiplication and Division** 30: Creating and Solving Problems 31: Building Fluency: The Games Room *Student Card 16: Multiplication Squares* 33: Multiplication and Division Consolidation	Calla's Jingle Dress Sports Camp Planting Seeds	Unit 16 Questions 2, 3, 8, 9, 10 (pp. 97, 99-100)	**Big Idea: Quantities and numbers can be grouped by, or partitioned into units to determine how many or how much.** **Developing conceptual meaning of multiplication and division** - Models and symbolizes single-digit multiplication problems involving equal groups or measures (i.e., equal jumps on a number line), and relates them to addition. - Uses properties of multiplication and division to solve problems (e.g., multiplying and dividing by 1, commutativity of multiplication). - Models and symbolizes equal sharing and grouping division problems and relates them to subtraction. **Developing fluency for multiplication and division computation** - Fluently multiplies and divides to 25.

B2.8 represent the connection between the numerator of a fraction and the repeated addition of the unit fraction with the same denominator using various tools and drawings, and standard fraction notation	**Number Unit 4: Fractions** 18: Fractions Consolidation *Student Card 9: Fraction Collage*		N/A	
B2.9 use the ratios of 1 to 2, 1 to 5, and 1 to 10 to scale up numbers and to solve problems	**Number Unit 6: Multiplication and Division** 32: Investigating Ratios		N/A	

Mathology 3 Correlation (Patterning and Algebra) – Ontario

Curriculum Expectations 2020	Mathology Grade 3 Mathology.ca	Mathology Little Books	Mathology Practice Workbook 3	Pearson Canada K–3 Mathematics Learning Progression
Overall Expectation **C1.** Patterns and Relationships: identify, describe, extend, create, and make predictions about a variety of patterns, including those found in real-life contexts				
Specific Expectation Patterns				
C1.1 identify and describe repeating elements and operations in a variety of patterns, including patterns found in real-life contexts	**Patterning and Algebra Unit 1: Patterns and Expressions** 1: Describing and Extending Patterns **Patterning and Algebra Unit 2: Repeating Patterns** 11: Identifying and Extending Patterns *Student Card 19: I'm Repeating!* 13: Repeating Patterns Consolidation	Namir's Marvellous Masterpieces **To Scaffold:** The Best Surprise Pattern Quest	Unit 1 Question 1 (p. 2)	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, sorting, and classifying attributes and patterns mathematically (e.g., number of sides, shape, size)** - Sorts and classifies objects with multiple attributes (e.g., big red 3-sided shape). - Sorts and classifies repeating patterns based on the repeating unit (core) (e.g., AAB, ABB). - Sorts a set of objects based on two attributes. **Identifying, reproducing, extending, and creating patterns that repeat** - Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). - Compares repeating patterns and describes how they are alike and different.

				- Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation).
				Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically. **Representing and generalizing increasing/decreasing patterns** – Identifies and extends non-numeric increasing/decreasing patterns (e.g., jump-clap; jump-clap-clap; jump-clap-clap-clap; etc.). - Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction.
C1.2 create and translate patterns that have repeating elements, movements, or operations using various representations, including shapes, numbers, and tables of values	**Patterning and Algebra Unit 1: Patterns and Expressions** 2: Representing Patterns 3: Creating Patterns 6: Exploring Multiplicative Patterns **Patterning and Algebra Unit 2: Repeating Patterns** 11: Identifying and Extending Patterns *Student Card 19: I'm Repeating!* 12: Creating Patterns 13: Repeating Patterns Consolidation	Namir's Marvellous Masterpieces **To Scaffold:** The Best Surprise Pattern Quest	Unit 1 Questions 2, 6, 8, 9 (pp. 3, 5-7)	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, sorting, and classifying attributes and patterns mathematically (e.g., number of sides, shape, size)** - Sorts and classifies objects with multiple attributes (e.g., big red 3-sided shape). - Sorts and classifies repeating

				patterns based on the repeating unit (core) (e.g., AAB, ABB). - Sorts a set of objects based on two attributes. **Identifying, reproducing, extending, and creating patterns that repeat** - Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). - Compares repeating patterns and describes how they are alike and different. - Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). **Representing and generalizing increasing/decreasing patterns** - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip- counting by 2s, 5s, 10s). - Identifies, reproduces, and extends increasing/decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. - Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. - Generalizes and explains the rule for arithmetic patterns including the starting point and change (e.g., for 28, 32, 36, the rule is start at 28 and add 4 each time). - Extends and represents patterns involving simple multiplicative relationships (e.g., doubling: 1, 2, 4, 8, 16, …; and tripling: 1, 3, 9, 27, 81, …).

C1.3 determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in patterns that have repeating elements, movements, or operations	**Patterning and Algebra Unit 1: Patterns and Expressions** 1: Describing and Extending Patterns 2: Representing Patterns 4: Identifying Errors and Missing Terms **Patterning and Algebra Unit 2: Repeating Patterns** 11: Identifying and Extending Patterns *Student Card 19: I'm Repeating!* 13: Repeating Patterns Consolidation	Namir's Marvellous Masterpieces **To Scaffold:** The Best Surprise Pattern Quest	Unit 1 Questions 3, 4, 5, 7, 8, 9 (pp. 3-7)	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, sorting, and classifying attributes and patterns mathematically (e.g., number of sides, shape, size)** - Sorts and classifies objects with multiple attributes (e.g., big red 3-sided shape). - Sorts and classifies repeating patterns based on the repeating unit (core) (e.g., AAB, ABB). - Sorts a set of objects based on two attributes. **Identifying, reproducing, extending, and creating patterns that repeat** - Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions). - Compares repeating patterns and describes how they are alike and different. Recognizes, extends, and creates repeating patterns based on two or more attributes (e.g., shape and orientation). -

				Representing and generalizing increasing/decreasing patterns - Identifies and extends non-numeric increasing/ decreasing patterns (e.g., jump-clap; jump-clap- clap; jump-clap-clap clap, etc.). - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). - Identifies, reproduces, and extends increasing/ decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. - Extends number patterns and finds missing elements (e.g., 1, 3, 5, _, 9,…). - Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. - Generalizes and explains the rule for arithmetic patterns including the starting point and change (e.g., for 28, 32, 36, the rule is start at 28 and add 4 each time). - Extends and represents patterns involving simple multiplicative relationships (e.g., doubling: 1, 2, 4, 8, 16, …; and tripling: 1, 3, 9, 27, 81, …).

C1.4 create and describe patterns to illustrate relationships among whole numbers up to 1000	**Patterning and Algebra Unit 1: Patterns and Expressions** 3: Creating Patterns 4: Identifying Errors and Missing Terms 6: Exploring Multiplicative Patterns 7: Patterns in Whole Numbers 9: Patterns and Expressions Consolidation	Namir's Marvellous Masterpieces **To Scaffold:** The Best Surprise Pattern Quest	Unit 1 Question 7 (p. 6)	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Representing and generalizing increasing/decreasing patterns** - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). - Identifies, reproduces, and extends increasing/ decreasing patterns concretely, pictorially, and numerically using repeated addition or subtraction. - Creates an increasing/decreasing pattern (concretely, pictorially, and/or numerically) and explains the pattern rule. - Generalizes and explains the rule for arithmetic patterns including the starting point and change (e.g., for 28, 32, 36, the rule is start at 28 and add 4 each time). - Extends and represents patterns involving simple multiplicative relationships (e.g., doubling: 1, 2, 4, 8, 16, …; and tripling: 1, 3, 9, 27, 81, …).
Overall Expectation **C2. Equations and Inequalities: demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts**				
Specific Expectation Variables				
C2.1 describe how variables are used and use them in various contexts as appropriate	***Link to Other Strands*** ***Number Unit 5: Addition and Subtraction*** *22: Creating and Solving Problems* *23: Creating and Solving Problems with Larger Numbers* *Student Card 13: Tell a Number Story*	A Week of Challenges **To Scaffold** Kokum's Bannock	Unit 7 Questions 1, 4, 5 (pp. 37-39)	**BIG IDEA:** **Patterns and relations can be represented with symbols, equations, and expressions.** **Using symbols, unknowns and variables to represent mathematical relations.** - Uses variables (i.e., letters or icons to describe relations (e.g., 10=_+?)

Specific Expectation Equalities and Inequalities				
C2.2 determine whether given sets of addition, subtraction, multiplication, and division expressions are equivalent or not .		A Week of Challenges **To Scaffold** Kokum's Bannock	Unit 7 Questions 2, 5, 9, 10 (pp. 38-39, 40-41)	**BIG IDEA:** **Patterns and relations can be represented with symbols, equations, and expressions.** **Understanding equality and inequality, building on generalized properties of numbers and operations.** -Writes equivalent multiplication and division equations in different forms (e.g., 3 x 4 – 12; 12 = 4 x 3).
C2.3 identify and use equivalent relationships for whole numbers up to 1000, in various contexts		A Week of Challenges **To Scaffold** Kokum's Bannock	N/A	**BIG IDEA:** **Patterns and relations can be represented with symbols, equations, and expressions.** **Understanding equality and inequality, building on generalized properties of numbers and operations.** -Justifies equivalence/non-equivalence of expressions using rational thinking (e.g., 25 = 88 + 0 = 88 + 25).

Overall Expectation **C3.** Coding: solve problems and create computational representations of mathematical situations using coding concepts and skills				
Specific Expectation Coding Skills				
C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential, concurrent, and repeating events	***Link to Other Strands*** ***Geometry Unit 3: Mapping and Coding*** *11: Describing Location* *13: Describing Movement on a Map* *Student Card 23: Neighbourhood Errands* *14: Coding on a Grid* *15: Exploring Loops in Coding*	**To Scaffold** Robo	Unit 11 Questions 6, 7, 8, 9, 10 (pp. 65-57)	**Big Idea: Objects can be located in space and viewed from multiple perspectives.** **Locating and mapping objects in space** - Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down). - Describes the relative position of two locations on a map.
C3.2 read and alter existing code, including code that involves sequential, concurrent, and repeating events, and describe how changes to the code affect the outcomes	***Link to Other Strands*** ***Geometry Unit 3: Mapping and Coding*** *14: Coding on a Grid* *15: Exploring Loops in Coding* *16: Altering Code* *17: Mapping and Coding Consolidation*	**To Scaffold** Robo	Unit 11 Questions 8, 9, 10 (pp. 65-67)	**Big Idea: Objects can be located in space and viewed from multiple perspectives.** **Locating and mapping objects in space** - Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down).

Overall Expectation C4. Mathematical Modelling: apply the process of mathematical modelling to represent, analyse, make predictions, and provide insight into real-life situations				
Specific Expectation Mathematical Modelling				
This overall expectation has no specific expectations. Mathematical modelling is an iterative and interconnected process that is applied to various contexts, allowing students to bring in learning from other strands. Students' demonstration of the process of mathematical modelling, as they apply concepts and skills learned in other strands, is assessed and evaluated.	**Patterning and Algebra Unit 1: Patterns and Expressions** 2: Representing Patterns 3: Creating Patterns **Patterning and Algebra Unit 2: Repeating Patterns** 12: Creating Patterns ***Link to Other Strands*** ***Number Unit 2: Number Relationships*** *6: Composing and Decomposing Quantities* *8: Number Relationships Consolidation* ***Number Unit 3: Place Value*** *9: Building Numbers* ***Number Unit 4: Fractions*** *14: Exploring Equal Parts* ***Number Unit 5: Addition and Subtraction*** *20: Estimating Sums and Differences* *Student Card 11: Add to Fit!* *21: Adding and Subtracting Money Amounts* *22: Creating and Solving Problems* *23: Creating and Solving Problems with Larger Numbers* *Student Card 13: Tell a Number Story* ***Number Unit 6: Multiplication and Division*** *26: Exploring Division* *30: Creating and Solving Problems* ***Number Unit 7: Financial Literacy***			

	36: Purchasing and Making Change *37: Financial Literacy Consolidation* ***Data Management and Probability Unit 1: Data Management*** *4: Drawing Graphs* *6: Data Management Consolidation* ***Data Management and Probability Unit 2: Probability and Chance*** *7: Making Predictions* *Student Card 25: Clear the Board!* ***Geometry Unit 2: 3-D Solids*** *7: Building Solids* ***Geometry Unit 3: Mapping and Coding*** *16: Altering Code*			

Mathology 3 Correlation (Data Management and Probability) – Ontario

Curriculum Expectations 2020	Mathology Grade 3 Mathology.ca	Mathology Little Books	Mathology Practice Workbook 3	Pearson Canada K–3 Mathematics Learning Progression
Overall Expectation **D1.** Data Literacy: manage, analyse, and use data to make convincing arguments and informed decisions in various contexts drawn from real life				
Specific Expectation Data Collection and Organization				
D1.1 sort sets of data about people or things according to two or three attributes, using tables and logic diagrams, including Venn, Carroll, and tree diagrams as appropriate.	**Data Management and Probability Unit 1: Data Management** 1: Sorting People and Things 3: Collecting and Organizing Data 6: Data Management Consolidation ***Link to Other Strands*** ***Geometry Unit 1: 2-D Shapes*** *1: Sorting Polygons* *3: What's the Sorting Rule?* *5: 2-D shapes Consolidation* ***Geometry Unit 2: 3-D Solids*** *6: Exploring Geometric Attributes of Solids*	Welcome to the Nature Park **To Scaffold:** Big Buddy Days Marsh Watch	Unit 9 Questions 1, 4, 5 (pp. 50-52) Unit 10 Question 10 (p. 61)	**Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.** **Investigating geometric attributes and properties of 2-D shapes and 3-D solids** - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). - Classifies and names 2-D shapes and 3-D solids based on common attributes. - Classifies and names 2-D shapes and 3-D solids using geometric properties (e.g., a rectangle has 4 right angles).

D1.2 collect data through observations, experiments, and interviews to answer questions of interest that focus on qualitative and quantitative data, and organize the data using frequency tables	**Data Management and Probability Unit 1: Data Management** 3: Collecting and Organizing Data 6: Data Management Consolidation	Welcome to the Nature Park **To Scaffold:** Big Buddy Days Marsh Watch	Unit 15 Question 6 (p. 92)	**Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.** **Formulating questions to learn about groups, collections, and events by collecting relevant data** - Formulates questions that can be addressed by counting collections (e.g., How many of us come to school by bus, by car, walking?) and questions that can be addressed through observation (e.g., How many people do/do not use the crosswalk?). **Collecting data and organizing them into categories** - Collects data by determining (most) categories in advance (e.g., yes/no; list of choices). - Orders categories by frequency (e.g., most to least). **Reading and interpreting data displays** - Reads and interprets information from data displays (e.g., orders by frequency, compares frequencies, determines total number of data points).
Specific Expectation Data Visualization				
D1.3 display sets of data, using many-to-one correspondence, in pictographs and bar graphs with proper sources, titles, and labels, and appropriate scales	**Data Management and Probability Unit 1: Data Management** 4: Drawing Graphs 6: Data Management Consolidation	Welcome to the Nature Park **To Scaffold:** Big Buddy Days Marsh Watch	Unit 14 Questions 4, 5 (p. 86)	**Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**

				Creating graphical displays of collected data - Creates simple many-to-one displays (e.g., pictograph where each symbol represents 5 data points). - Creates displays in different formats and scales (e.g., horizontal/vertical, one-to-one/many-to-one, bar graph, line plot). **Reading and interpreting data displays** - Reads and interprets information from data displays (e.g., orders by frequency, compares frequencies, determines total number of data points). - Describes the shape of data in informal ways. - Critiques whether the display used is appropriate for the data collected.
Specific Expectation Data Analysis				
D1.4 determine the mean and identify the mode(s), if any, for various data sets involving whole numbers, and explain what each of these measures indicates about the data	**Data Management and Probability Unit 1: Data Management** 5: Identifying the Mode and the Mean 6: Data Management Consolidation		Unit 14 Questions 6, 7, 8 (pp. 87-88)	**Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.** **Reading and interpreting data displays** - Reads and interprets information from data displays (e.g., orders by frequency, compares frequencies, determines total number of data points). - Describes the shape of data in informal ways. - Critiques whether the display used is appropriate for the data collected. **Drawing conclusions by making inferences and justifying decisions based on data collected** - Makes simple inferences about a population based on sample data collected.

D1.5 analyze different sets of data presented in various ways, including in frequency tables and in graphs with different scales, by asking and answering questions about the data and drawing conclusions, then make convincing arguments and informed decisions	**Data Management and Probability Unit 1: Data Management** 2: Interpreting Graphs 3: Collecting and Organizing Data 4: Drawing Graphs 5: Identifying the Mode and the Mean 6: Data Management Consolidation	Welcome to the Nature Park **To Scaffold:** Big Buddy Days Marsh Watch	Unit 14 Questions 1, 2, 3, 8 (pp. 84-85, 88)	**Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.** **Formulating questions to learn about groups, collections, and events by collecting relevant data** - Formulates questions that can be addressed by counting collections (e.g., How many of us come to school by bus, by car, walking?) and questions that can be addressed through observation (e.g., How many people do/do not use the crosswalk?). **Collecting data and organizing them into categories** - Collects data by determining (most) categories in advance (e.g., yes/no; list of choices). - Orders categories by frequency (e.g., most to least). **Creating graphical displays of collected data** - Creates simple many-to-one displays (e.g., pictograph where each symbol represents 5 data points). - Creates displays in different formats and scales (e.g., horizontal/vertical, one-to-one/many-to-one, bargraph, line plot). **Reading and interpreting data displays** - Reads and interprets information from data displays (e.g., orders by frequency, compares frequencies, determines total number of data points). - Describes the shape of data in informal ways. - Critiques whether the display used is appropriate for the data collected. **Drawing conclusions by making**

				inferences and justifying decisions based on data collected - Makes simple inferences about a population based on sample data collected. - Judges the validity of statements made from displayed data.
Overall Expectation **D2.** Probability: describe the likelihood that events will happen, and use that information to make predictions				
D2.1 use mathematical language, including the terms "impossible", "unlikely", "equally likely", "likely", and "certain", to describe the likelihood of events happening, and use that likelihood to make predictions and informed decisions	**Data Management and Probability Unit 2: Probability and Chance** 8: Describing the Likelihood of Outcomes *Student Card 24: Jumbler Machine* 10: Probability and Chance Consolidation *Student Card 26: Spinner*	Chance	Unit 15 Questions 1, 2, 3, 4, 5, 7, 8 (pp. 89-93)	**Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.** **Collecting data and organizing them into categories** - Collects and compares data from multiple trials of the same experiment. **Using the language of chance to describe and predict events** - Describes the likelihood of an event (e.g., impossible, unlikely, certain). - Makes predictions based on the question, context, and data presented. - Lists the possible outcomes of independent events (e.g., tossing coin, rolling number cube, spinning a spinner). - Compares the likelihood of two events (e.g., more likely, less likely, equally likely). - Predicts the likelihood of an outcome in simple probability experiments or games.

D2.2 make and test predictions about the likelihood that the mean and the mode(s) of a data set will be the same for data collected from different populations	**Data Management and Probability Unit 1: Data Management** 5: Identifying the Mode and the Mean **Data Management and Probability Unit 2: Probability and Chance** 7: Making Predictions *Student Card 25: Clear the Board!* 10: Probability and Chance Consolidation *Student Card 26: Spinner*		N/A	

Mathology 3 Correlation (Geometry and Measurement) – Ontario

Curriculum Expectations 2020	Mathology Grade 3 Mathology.ca	Mathology Little Books	Mathology Practice Workbook 3	Pearson Canada K–3 Mathematics Learning Progression
Overall Expectation **E1.** Geometric and Spatial Reasoning: describe and represent shape, location, and movement by applying geometric properties and spatial relationships in order to navigate the world around them				
Specific Expectation Geometric Reasoning				
E1.1 sort, construct, and identify cubes, prisms, pyramids, cylinders, and cones by comparing their faces, edges, vertices, and angles	**Geometry Unit 2: 3-D Solids** 6: Exploring Geometric Attributes of Solids 7: Building Solids **Geometry Unit 4: Angles** 18: Investigating Angles 19: Comparing Angles 20: Angles Consolidation	Wonderful Buildings Gallery Tour **To Scaffold:** I Spy Awesome Buildings Sharing Our Stories	Unit 10 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (pp. 56-61)	**Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.** **Investigating geometric attributes and properties of 2-D shapes and 3-D solids** - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). - Classifies and names 2-D shapes and 3-D solids based on common attributes. - Constructs and compares 2-D shapes and 3-D solids with given attributes (e.g., number of vertices, faces). - Classifies and names 2-D shapes and 3-D solids using geometric properties (e.g., a rectangle has 4 right angles). **Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition** - Constructs 3-D solids from nets.

E1.2 compose and decompose various structures, and identify the two-dimensional shapes and three-dimensional objects that these structures contain	**Geometry Unit 1: 2-D Shapes** 4: Composing Shapes *Student Card 21: Fill Me!* **Geometry Unit 2: 3-D Solids** 7: Building Solids 10: 3-D Solids Consolidation	Wonderful Buildings Gallery Tour **To Scaffold:** I Spy Awesome Buildings Sharing Our Stories	Unit 10 Questions 6, 7, 8, 9, 10 (pp. 58-61)	**Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.** **Investigating geometric attributes and properties of 2-D shapes and 3-D solids** - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). - Constructs and compares 2-D shapes and 3-D solids with given attributes (e.g., number of vertices, faces). - Classifies and names 2-D shapes and 3-D solids using geometric properties (e.g., a rectangle has 4 right angles).
E1.3 identify congruent lengths, angles, and faces of three-dimensional objects by mentally and physically matching them, and determine if the objects are congruent	**Geometry Unit 1 2-D Shapes** 5: 2-D shapes Consolidation **Geometry Unit 2: 3-D Solids** 6: Exploring Geometric Attributes 10: 3-D Solids Consolidation **Geometry Unit 4: Angles** 19: Comparing Angles 20: Angles Consolidation	Wonderful Buildings Gallery Tour **To Scaffold:** I Spy Awesome Buildings Sharing Our Stories	Unit 10 Questions 6, 9 (pp. 58, 60)	**Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.** **Investigating geometric attributes and properties of 2-D shapes and 3-D solids** - Classifies and names 2-D shapes and 3-D solids using geometric properties (e.g., a rectangle has 4 right angles). **Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.** **Exploring 2-D shapes and 3-D solids by applying and visualizing transformations** - Identifies congruent 2-D shapes and 3-D solids through physical movement (e.g., by rotating). - Identifies congruent 2-D shapes and 3-D solids through visualizing transformations.

Specific Expectation Location and Movement				
E1.4 give and follow multi- step instructions involving movement from one location to another, including distances and half- and quarter-turns	**Geometry Unit 3: Mapping and Coding** 11: Describing Location 13: Describing Movement on a Map *Student Card 23: Neighbourhood Errands* 14: Coding on a Grid	**To Scaffold:** Robo	Unit 11 Questions 1, 2, 4, 5, 10 (pp. 62-64, 67)	**Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.** **Exploring 2-D shapes and 3-D solids by applying and visualizing transformations** - Identifies congruent 2-D shapes and 3-D solids through physical movement (e.g., by rotating). - Identifies congruent 2-D shapes and 3-D solids through visualizing transformations. **Big Idea: Objects can be located in space and viewed from multiple perspectives.** **Locating and mapping objects in space** - Describes the movement of an object from one location to another on a grid map (e.g., moving 5 squares to the left and 3 squares down). - Describes the relative position of two locations on a map.

Overall Expectation **E2.** Measurement: compare, estimate, and determine measurements in various contexts				
Specific Expectation Length, Mass, and Capacity				
E2.1 use appropriate units of length to estimate, measure, and compare the perimeters of polygons and curved shapes, and construct polygons with a given perimeter	**Measurement Unit 1: Length, Perimeter, and Time** 3: Measuring Length 4: Introducing Perimeter 5: Measuring Perimeter 6: How Many Can You Make?	The Bunny Challenge Measurements About YOU! **To Scaffold:** The Discovery	Unit 6 Questions 4, 5, 6, 7, 8, 9, 10, 11, 12 (pp. 32-36) Unit 17 Question 2 (p. 103)	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **Understanding attributes that can be measured** - Understands conservation of length (e.g., a string is the same length when straight and not straight), capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). - Extends understanding of length to other linear measurements (e.g., height, width, distance around). **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.** **Selecting and using standard units to estimate, measure, and make comparisons** - Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by: using an intermediary object of a known measure; using multiple copies of a unit; and iterating a single unit. - Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time. - Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units (e.g., doorknob is 1 m from the ground; room temperature is 21°C).

E2.2 explain the relationships between millimetres, centimetres, metres, and kilometres as metric units of length, and use benchmarks for these units to estimate lengths	**Measurement Unit 1: Length, Perimeter, and Time** 1: Estimating Length 2: Relating Millimetres, Centimetre, Metres, and Kilometres 3: Measuring Length 4: Introducing Perimeter	Goat Island Measurements about YOU! **To Scaffold:** The Discovery	Unit 6 Questions 1, 2, 3, 4, 5, 6 (pp. 31-33)	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **Understanding attributes that can be measured** - Understands conservation of length (e.g., a string is the same length when straight and not straight), capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). - Extends understanding of length to other linear measurements (e.g., height, width, distance around). **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.** **Selecting and using standard units to estimate, measure, and make comparisons** - Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by: using an intermediary object of a known measure; using multiple copies of a unit; and iterating a single unit.

				- Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time. - Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units (e.g., doorknob is 1 m from the ground; room temperature is 21°C). **Understanding relationships among measurement units** - Understands relationships of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours).
E2.3 use non-standard units appropriately to estimate, measure, and compare capacity, and explain the effect that overfilling or underfilling, and gaps between units, have on accuracy	**Geometry Unit 2: Area, Mass, and Capacity** 12: Measuring Capacity with Non-Standard Units 13: Area, Mass, and Capacity Consolidation	Measurements about YOU!	Unit 17 Question 10 (p. 107)	
E2.4 compare, estimate, and measure the mass of various objects, using a pan balance and non-standard units	**Geometry Unit 2: Area, Mass, and Capacity** 11: Measuring Mass Using Non-Standard Units 13: Area, Mass, and Capacity Consolidation	Measurements about YOU!	Unit 17 Questions 5, 6, 8 (pp. 104-106)	

E2.5 use various units of different sizes to measure the same attribute of a given item, and demonstrate that even though using different- size units produce a different count, the size of the attribute remains the same	**Measurement Unit 1: Length, Perimeter, and Time** 1: Estimating Length 2: Relating Millimitres, Centimetres, Metres, and Kilometres 4: Introducing Perimeter 8: Length, Perimeter, and Time Consolidation **Measurement Unit 2: Area, Mass, and Capacity** 9: Measuring Area Using Non- Standard Units *Student Card 20: Cover Me!* 11: Measuring Mass Using Non-Standard Units 12: Measuring Capacity with Non-Standard Units 13: Area, Mass, and Capacity Consolidation	The Bunny Challenge **To Scaffold** The Discovery	**N/A**	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **Understanding attributes that can be measured** - Uses language to describe attributes (e.g., long, tall, short, wide, heavy). - Understands conservation of length (e.g., a string is the same length when straight and not straight), capacity (e.g., two differently shaped containers may hold the same amount), and area (e.g., two surfaces of different shapes can have the same area). - Extends understanding of length to other linear measurements (e.g., height, width, distance around). **Directly and indirectly comparing and ordering objects with the same measurable attribute** - Directly compares and orders objects by length (e.g., by aligning ends), mass (e.g., using a balance scale), and area (e.g., by covering). - Compares objects indirectly by using an intermediary object. **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.**

				Selecting and using non-standard units to estimate, measure, and make comparisons - Uses whole number measures to estimate, measure, and compare (e.g., this book is 8 cubes long and my pencil is 5 cubes long). - Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by: using an intermediary object; using multiple copies of a unit; and iterating a single unit. - Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, mass, and time. - Uses non-standard units as referents to estimate length (e.g., paper clips), area (e.g., square tiles), mass (e.g., cubes), and capacity (e.g., cups). **Selecting and using standard units to estimate, measure, and make comparisons** - Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by: using an intermediary object of a known measure; using multiple copies of a unit; and iterating a single unit. - Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time.

				- Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units (e.g., doorknob is 1 m from the ground; room temperature is 21°C). **Understanding relationships among measurement units** - Compares different sized units and the effects on measuring objects (e.g., small cubes vs. large cubes to measure length). - Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, mass). - Understands that decomposing and rearranging does not change the measure of an object. - Understands relationships of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours).
Specific Expectation Time				
E2.6 use analog and digital clocks and timers to tell time in hours, minutes, and seconds	**Measurement Unit 1: Length, Perimeter, and Time** 7: Telling Time 8: Length, Perimeter, and Time Consolidation	Goat Island Measurements About YOU! **To Scaffold:** Getting Ready for School The Discovery	Unit 13 Questions 6, 7, 8, 9, 10, 11 (pp. 78-81)	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **Understanding attributes that can be measured** - Explores measurement of visible attributes (e.g., length, capacity, area) and non-visible attributes (e.g., mass, time, temperature). - Uses language to describe attributes (e.g., long, tall, short, wide, heavy). **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.**

				Understanding relationships among measurement units - Understands relationships of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours).
Specific Expectation Area				
E2.7 compare the areas of two-dimensional shapes by matching, covering, or decomposing and recomposing the shapes, and demonstrate that different shapes can have the same area	**Measurement Unit 2: Area, Mass, and Capacity** 10: Measuring Area with Standard Units	The Bunny Challenge Measurements About YOU!	Unit 17 Questions 1, 2 (pp. 102-103)	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.**
				Understanding attributes that can be measured - Uses language to describe attributes (e.g., long, wide, heavy). **Directly and indirectly comparing and ordering objects with the same measurable attribute** - Directly compares and orders objects by length (e.g., aligning ends), mass (e.g., using a balance scale), and area (e.g., by covering). - Compares objects indirectly by using an intermediary object.
				Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.

				Selecting and using non-standard units to estimate, measure, and make comparisons - Uses whole number measures to estimate, measure, and compare (e.g., this book is 8 cubes long and my pencil is 5 cubes long). - Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by: using an intermediary object; using multiple copies of a unit; and iterating a single unit. - Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. - Uses non-standard units as referents to estimate length (e.g., paper clips), area (e.g., square tiles), mass (e.g., cubes), and capacity (e.g., cups).
E2.8 use appropriate non- standard units to measure area, and explain the effect that gaps and overlaps have on accuracy	**Measurement Unit 2: Area, Mass, and Capacity** 9: Measuring Area Using Non- Standard Units *Student Card 20: Cover Me!* 10: Measuring Area with Standard Units	The Bunny Challenge Measurements About YOU! **To Scaffold** The Discovery	N/A	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **Understanding attributes that can be measured** - Uses language to describe attributes (e.g., long, wide, heavy).

	13: Area Mass and Capacity Consolidation			**Directly and indirectly comparing and ordering objects with the same measurable attribute** - Directly compares and orders objects by length (e.g., aligning ends), mass (e.g., using a balance scale), and area (e.g., by covering). - Compares objects indirectly by using an intermediary object. **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.** **Selecting and using non-standard units to estimate, measure, and make comparisons** - Uses whole number measures to estimate, measure, and compare (e.g., this book is 8 cubes long and my pencil is 5 cubes long). - Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by: using an intermediary object; using multiple copies of a unit; iterating a single unit. - Selects and uses appropriate non-standard units to estimate, measure, and compare length, area, capacity, and mass. - Uses non-standard units as referents to estimate length (e.g., paper clips), area (e.g., square tiles), mass (e.g., cubes), and capacity (e.g., cups).

E2.9 use square centimetres (cm^2) and square metres (m^2) to estimate, measure, and compare the areas of various two-dimensional shapes, including those with curved sides	**Measurement Unit 3: Area, Mass, and Capacity** 10: Measuring Area with Standard Units	The Bunny Challenge Measurements About YOU!	Unit 17 Questions 1, 2, 3, 4 (pp. 102-104)	**Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.** **Selecting and using standard units to estimate, measure, and make comparisons** - Uses standard sized objects to measure (e.g., 10 centicube rod). - Demonstrates ways to estimate, measure, compare, and order objects by length, perimeter, area, capacity, and mass with standard units by: using an intermediary object of a known measure; using multiple copies of a unit; and iterating a single unit. - Selects and uses appropriate standard units to estimate, measure, and compare length, perimeter, area, capacity, mass, and time. - Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units (e.g., doorknob is 1 m from the ground; room temperature is 21°C). **Understanding relationships among measurement units** - Compares different sized units and the effects on measuring objects (e.g., small cubes vs. large cubes to measure length). - Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass).

Mathology 3 Correlation (Financial Literacy) – Ontario

Curriculum Expectations 2020	Mathology Grade 3 Mathology.ca	Mathology Little Books	Mathology Practice Workbook 3	Pearson Canada K–3 Mathematics Learning Progression
Overall Expectation **F1.** Money and Finance: demonstrate an understanding of the value and use of Canadian currency				
Specific Expectation Money Concepts				
F1.1 estimate and calculate the change required for various simple cash transactions involving whole- dollar amounts and amounts less than one dollar	**Number Unit 7: Financial Literacy** 34: Estimating and Counting Money 35: Adding and Subtracting Money Amounts 36: Purchasing and Making Change *Student Card 17: Let's Go Shopping!* 37: Financial Literacy Consolidation	The Street Party Calla's Jingle Dress **To Scaffold:** The Money Jar	Unit 8 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (pp. 42-47)	**Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing conceptual meaning of addition and subtraction** - Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part- whole, and compare). **Developing fluency of addition and subtraction** **Computation** - Develops efficient mental strategies and algorithms to solve equations with multi-digit numbers. - Fluently recalls complements to 100 (e.g., 64 + 36; 73 + 27).