Mathology Grade 1 Correlation (Number) – Alberta

Organizing Idea:
Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

Guiding Question: How can quantity be communicated? **Learning Outcome:** Students interpret and explain quantity to 100.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
A numeral is a symbol or group of symbols used to represent a number. The absence of quantity is represented by 0.`	Quantity is expressed in words and numerals based on patterns. Quantity in the world is represented in multiple ways.	Represent quantities using words, numerals, objects, or pictures.	**Number Cluster 1: Counting** 1: Counting to 20 2: Counting to 50 **Number Cluster 6: Early Place Value** 21: Tens and Ones 22: Building and Naming Numbers 23: Different Representations 24: Consolidation	A Family Cookout (Numbers to 50) <u>Grade 2</u> Ways to Count (Numbers to 100)	**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence forward through the teen numbers. - Creates a set to match a verbal number or written numeral. - Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). **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 two-digit numbers as units of tens and leftover ones.
		Identify a quantity of 0 in familiar situations.	**Number Cluster 1: Counting** 3: Counting On and Back		**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequences forward and backward from a given number. - Knows that rearranging objects in a set does not change the quantity (i.e., conservation of number).

Counting can begin at any number. Counting more than one object at a time is called skip counting.	Each number counted includes all previous numbers (counting principle: hierarchical inclusion). A quantity can be determined by counting more than one object in a set at a time.	Count within 100, forward by 1s, starting at any number, according to the counting principles.	**Number Cluster 1: Counting** 1: Counting to 20 2: Counting to 50 3: Counting On and Back 4: Bridging Tens 6: Consolidation **Number Cluster 7: Financial Literacy** 36: Value of Coins 38: Counting Collections	Cats and Kittens	**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence starting with 1 and counting forward. - Coordinates number words with counting actions, saying one word for each object (i.e., one-to-one correspondence/tagging). - Says the number name sequence forward through the teen numbers. - Creates a set to match a verbal number or written numeral. - Says the number name sequences forward and backward from a given number. - Knows that rearranging objects in a set does not change the quantity (i.e., conservation of number). - Uses number patterns to bridge tens when counting forward and backward (e.g., 39, 40, 41). - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number (e.g., finding the value of a collection of dimes). **Recognizing and Writing Numerals** - Names, writes, and matches two-digit numerals to quantities. **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)** - Identifies different attributes of objects (e.g., buttons with different sizes, colours, shapes, number of holes).
		Count backward from 20 to 0 by 1s.	**Number Cluster 1: Counting** 3: Counting On and Back		**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequences forward and backward from a given number. - Knows that rearranging objects in a set does not change the quantity (i.e., conservation of number).
		Skip count to 100, forward by 5s and 10s, starting at 0.	**Number Cluster 1: Counting** 5: Skip-Counting Forward 6: Consolidation **Number Cluster 7: Financial Literacy** 36: Value of Coins 38: Counting Collections	How Many is too Many? <u>Grade 2</u> Ways to Count Family Fun Day	**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence starting with 1 and counting forward. - Coordinates number words with counting actions, saying one word for each object (i.e., one-to-one correspondence/tagging).

					- Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number (e.g., finding the value of a collection of dimes). **Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing Quantities and Comparing Units to the Whole** - Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones (e.g., counting a set by 1s or by 5s gives the same result). **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)** - Identifies different attributes of objects (e.g., buttons with different sizes, colours, shapes, number of holes).
		Skip count to 20, forward by 2s, starting at 0.	**Number Cluster 1: Counting** 5: Skip-Counting Forward 6: Consolidation **Number Cluster 7: Financial Literacy** 36: Value of Coins 38: Counting Collections	On Safari!	**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence starting with 1 and counting forward. - Coordinates number words with counting actions, saying one word for each object (i.e., one-to-one correspondence/tagging). - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number (e.g., finding the value of a collection of dimes). **Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing Quantities and Comparing Units to the Whole** - Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones (e.g., counting a set by 1s or by 5s gives the same result). **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)** - Identifies different attributes of objects (e.g., buttons with different sizes, colours, shapes, number of holes).

Sharing involves partitioning a quantity into a certain number of groups. Grouping involves partitioning a quantity into groups of a certain size.	Quantity can be partitioned by sharing or grouping.	Partition a set of objects by sharing and grouping.	**Number Cluster 4: Composing and Decomposing** 17: Equal Groups 18: Equal Parts		**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing Quantities and Comparing Units to the Whole** - Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones (e.g., counting a set by 1s or by 5s gives the same result). **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions.
		Demonstrate conservation of number when sharing or grouping.	**Number Cluster 4: Composing and Decomposing** 17: Equal Groups 18: Equal Parts		**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Unitizing Quantities and Comparing Units to the Whole** - Partitions into and skip-counts by equal-sized units and recognizes that the results will be the same when counted by ones (e.g., counting a set by 1s or by 5s gives the same result). **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions.
Familiar arrangements of small quantities facilitate subitizing.	A quantity can be perceived as the composition of smaller quantities.	Recognize quantities to 10.	**Number Cluster 2: Spatial Reasoning** 7: Subitizing to 10 9: Consolidation **Number Cluster 6: Operational Fluency** 26: Complements of 10		**Big Idea: Numbers tell us how many and how much.** **Recognizing Quantities by Subitizing** - Uses grouping (e.g., arrays of dots) to determine quantity without counting by ones (i.e., conceptual subitizing). **Recognizing and Writing Numerals** - Names, writes, and matches numerals to numbers and quantities to 10. **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing Fluency of Addition and Subtraction Computation** - Fluently adds and subtracts with quantities to 10. Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). **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** - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).

Comparisons of quantity can be described by using word such as • equal • not equal • less • more Equality can be modelled using a balance. The equal sign, =, is used to show equality between two quantities. The unequal sign, ≠, is used to show that two quantities are not equal.	Two quantities are equal when there is the same number of objects in both sets. Equality is a balance between two quantities.	Investigate equal and unequal quantities, including using a balance model.	**Patterning Cluster 4: Equality and Inequality** 13: Exploring Sets 14: Making Equal Sets 15: Using Symbols 16: Consolidation	Nutty and Wolfy <u>Grade 2</u> Kokum's Bannock	**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** - Creates a set that is more/less or equal to a given set. - Models and describes equality (balance; the same as) and inequality (imbalance; not the same as).
		Identify numbers that are one more, two more, one less, and two less than a given number.	**Number Cluster 6: Operational Fluency** 25: More or Less		**Big Idea: Numbers are related in many ways.** **Comparing and Ordering Quantities (Multitude or Magnitude)** - Adds/removes object(s) to make a set equal to a given set. - Knows what number is one or two more and one or two less than another number. **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing Fluency of Addition and Subtraction Computation** - Fluently adds and subtracts with quantities to 10. Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3).
		Represent a quantity relative to another, including symbolically.	**Number Cluster 3: Comparing and Ordering** 10.Comparing Sets Concretely 11: Comparing Sets Pictorially 12: Comparing Numbers to 100 13: Consolidation **Number Cluster 5: Early Place Value** 25: More or Less	Paddling the River (Numbers to 20.) Cats and Kittens (Numbers to 20.) Nutty and Wolfy (Numbers to 20.)	**Big Idea: Numbers are related in many ways.** **Comparing and Ordering Quantities (Multitude or Magnitude)** - Adds/removes object(s) to make a set equal to a given set. - Knows what number is one or two more and one or two less than another number. - Determines how many more/less one quantity is compared to another. - Orders three or more quantities to 20 using sets and/or numerals. - Orders three or more quantities using sets and/or numerals. **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing Fluency of Addition and Subtraction Computation** - Fluently adds and subtracts with quantities to 10. Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3).

Guiding Question: How can addition and subtraction provide perspectives of number? **Learning Outcome:** Students examine addition and subtraction within 20.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
Quantities can be composed or decomposed to model a change in quantity. Addition can be applied in various contexts, including • combining parts to find the whole • increasing an existing quantity Subtraction can be applied in various contexts, including • comparing two quantities • taking away one quantity from another • finding a part of a whole Addition and subtraction can be modelled using a balance.	Addition and subtraction are processes that describe the composition and decomposition of quantity.	Visualize quantities between 10 and 20 as compositions of 10 and another quantity.	**Number Cluster 2: Spatial Reasoning** 7: Subitizing to 10 8: Estimating Quantities 9: Consolidation	That's 10! Paddling the River Hockey Time!	**Big Idea: Numbers tell us how many and how much.** **Recognizing Quantities by Subitizing** - Uses grouping (e.g., arrays of dots) to determine quantity without counting by ones (i.e., conceptual subitizing). **Recognizing and Writing Numerals** - Names, writes, and matches numerals to numbers and quantities to 10. **Big Idea: Numbers are related in many ways.** **Conceptual Thread: Estimating Quantities and Numbers** - Uses relevant benchmarks to compare and estimate quantities (e.g., more/less than 10).
		Model addition and subtraction within 20 in various ways, including with a balance.	**Number Cluster 6: Operational Fluency** 27: Adding to 20 28: Subtracting to 20 30: The Number Line 32: Part-Part-Whole 33: Patterns in Addition and Subtraction		**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). **Developing Fluency of Addition and Subtraction Computation** - Fluently adds and subtracts with quantities to 20.
		Relate addition and subtraction to various contexts involving composition or decomposition of quantity.	**Number Cluster 4: Composing and Decomposing** 14: Decomposing 10 15: Numbers to 10 16: Numbers to 20 20: Consolidation		**Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills). - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills).
Strategies are meaningful steps taken to solve problems. Addition and subtraction strategies include	Addition and subtraction are opposite (inverse) mathematical operations.	Investigate addition and subtraction strategies.	**Number Cluster 4: Composing and Decomposing** 16: Numbers to 20 **Number Cluster 6: Operational Fluency** 31: Doubles	That's 10! Hockey Time! Canada's Oldest Sport	**Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills). **Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing Conceptual Meaning of Addition and Subtraction**

• counting on • counting back • decomposition • compensation • making tens Sums and differences can be expressed symbolically using the addition sign, +, the subtraction sign, -, and the equal sign, =. The order in which two quantities are added does not affect the sum (commutative property). The order in which two quantities are subtracted affects the difference. Addition of 0 to any number, or subtraction of 0 from any number, results in the same number (zero property). A missing quantity in a sum or difference can be represented in different ways, including					- Models and symbolizes addition and subtraction problem types (i.e., join, separate, part-part-whole, and compare). **Developing Fluency of Addition and Subtraction Computation** - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6).
		Add and subtract within 20.	**Number Cluster 4: Composing and Decomposing** 16: Numbers to 20 **Number Cluster 6: Operational Fluency** 27: Adding to 20 28: Subtracting to 20 29: Fluency with 20 30: The Number Line 32: Part-Part-Whole 35: Consolidation	Buy 1—Get 1 Hockey Time! Cats and Kittens! Canada's Oldest Sport	**Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills). **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** - Fluently adds and subtracts with quantities to 20.
		Check differences and sums using inverse operations.	**Number Cluster 6: Operational Fluency** 27: Adding to 20 28: Subtracting to 20 30: The Number Line 31: Doubles 32: Part-Part-Whole 34: Solving Story Problems 35: Consolidation	Buy 1—Get 1 Canada's Oldest Sport Cats and Kittens! Hockey Time!	**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** - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). - Fluently adds and subtracts with quantities to 20.
		Determine a missing quantity in a sum or difference, within 20, in a variety of ways.	**Number Cluster 6: Operational Fluency** 32: Part-Part-Whole 34: Solving Story Problems 35: Consolidation		**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** - Fluently adds and subtracts with quantities to 20.

• a + b = □ • a + □ = c • □ + b = c • e - f = □ • e - □ = g • □ - f = g		Express addition and subtraction symbolically.	**Number Cluster 6: Operational Fluency** 30: The Number Line 32: Part-Part-Whole 34: Solving Story Problems 35: Consolidation		**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** - Fluently adds and subtracts with quantities to 20.
		Solve problems using addition and subtraction.	**Number Cluster 6: Operational Fluency** 34: Solving Story Problems 35: Consolidation		**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** - Fluently adds and subtracts with quantities to 20.
Addition and subtraction number facts represent part-part-whole relationships. Fact families are groups of related addition and subtraction number facts.	Addition number facts have related subtraction number facts.	Identify patterns in addition and subtraction, including patterns in addition tables.	**Number Cluster 7: Operational Fluency** 33: Patterns in Addition and Subtraction	Paddling the River	**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).
		Recognize families of related addition and subtraction number facts.	**Number Cluster 7: Operational Fluency** 32: Part-Part-Whole 34: Solving Story Problems		**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** - Fluently adds and subtracts with quantities to 20.
		Recall addition number facts, with addends to 10, and related subtraction number facts.	**Number Cluster 7: Operational Fluency** 26: Complements of 10	That's 10!	**Big Idea: Quantities and numbers can be added and subtracted to determine how many or how much.** **Developing Fluency of Addition and Subtraction Computation** - Fluently adds and subtracts with quantities to 10. Fluently recalls complements to 10 (e.g., 6 + 4; 7 + 3). **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 - Explores properties of addition and subtraction (e.g., adding or subtracting 0, commutativity of addition).
Guiding Question: In what ways can parts and wholes be related? **Learning Outcome:** Students examine one-half as a part-whole relationship.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
One-half can be one of two equal groups or one of two equal pieces.	In a quantity partitioned into two equal groups, each group represents one-half of the whole quantity. In a shape or object partitioned into two identical pieces, each piece represents one-half of the whole.	Identify one-half in familiar situations.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	Grade 2 The Best Birthday	**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills).
		Partition an even set of objects into two equal groups, limited to sets of 10 or less.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves	Grade 2 The Best Birthday	**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills).
		Partition a shape or object into two equal pieces.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves		**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills).

		Describe one of two equal groups or pieces as one-half.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves		**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills).
		Verify that the two halves of one whole group, shape, or object are the same size.	**Number Cluster 4: Composing and Decomposing** 19: Exploring Halves		**Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.** **Partitioning Quantities to Form Fractions** - Partitions wholes (e.g., intervals, sets) into equal parts and names the unit fractions. **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Decomposes quantities to 10 into parts and remembers the whole (e.g., 10 is 3 and 7; showing $10 using different coins and bills).

Mathology Grade 1 Correlation (Geometry) – Alberta

Organizing Idea:
Shapes are defined and related by geometric attributes.

Guiding Question: In what ways can shape be characterized? **Learning Outcome:** Students interpret shape in two and three dimensions.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
Familiar two-dimensional shapes include • squares • circles • rectangles • triangles Familiar three-dimensional shapes include • cubes • prisms • cylinders • spheres • pyramids • cones	A shape can be modelled in various sizes and orientations. A shape is symmetrical if it can be decomposed into matching halves.	Identify familiar shapes in various sizes and orientations.	**Geometry Cluster 1: 2-D Shapes** 2: Identifying Triangles 3: Identifying Rectangles 4: Visualizing Shapes **Geometry Cluster 2: 3-D Solids** 8: Exploring 3-D Solids 9: Sorting 3-D Solids 10: Identify the Sorting Rule 11: Consolidation	Memory Book What Was Here? <u>Kindergarten</u> The Castle Wall	**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). **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)** - Identifies the sorting rule used to sort sets.
		Model two-dimensional shapes.	**Grade 2 Geometry Cluster 1: 2-D Shapes** 5: Constructing 2-D Shapes		**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** - Constructs and compares 2-D shapes and 3-D solids with given attributes (e.g., number of vertices, faces).
		Sort shapes according to one attribute and describe the sorting rule.	**Geometry Cluster 1: 2-D Shapes** 1: Sorting Shapes 6: Sorting Rules 7: Consolidation	What Was Here?	**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).

A composite shape is composed of two or more shapes. A line of symmetry indicates the division between the matching halves of a symmetrical shape.			**Geometry Cluster 2: 3-D Solids** 8: Exploring 3-D Solids 9: Sorting 3-D Solids 10: Identify the Sorting Rule 11: Consolidation		**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 a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape). - Identifies the sorting rule used to sort sets.
		Compose and decompose two- or three-dimensional composite shapes.	**Geometry Cluster 3: Geometric Relationships** 13: Making Designs 14: Covering Outlines 18: Consolidation **Geometry Cluster 1: 2-D Shapes** 5: Constructing 2-D Shapes **Geometry Cluster 3: Geometric Relationships** 12: Making Shapes 17: Building with Solids	The Tailor Shop	**Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.** **Investigating 2-D Shapes, 3-D Solids, and Their Attributes Through Composition and Decomposition** - Constructs composite pictures or structures with 2-D shapes and 3-D solids. - Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids. - Completes a picture outline with shapes in more than one way. **Investigating Geometric Attributes and Properties of 2-D Shapes and 3-D Solids** - Compares 2-D shapes and 3-D solids to find the similarities and differences. - Constructs and compares 2-D shapes and 3-D solids with given attributes (e.g., number of vertices, faces).
		Identify familiar shapes within two- or three-dimensional composite shapes.	**Geometry Cluster 3: Geometric Relationships** 15: Identifying Shapes in Designs **Geometry Cluster 3: Geometric Relationships** 12: Making Shapes 16: Faces of Solids 17: Building with Solids	The Tailor Shop What Was Here? Memory Book <u>Kindergarten</u> The Castle Wall Zoom In, Zoom Out	**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** - Compares 2-D shapes and 3-D solids to find the similarities and differences. - Recognizes 2-D shapes and 3-D solids embedded in other images or objects. - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides/edges, faces, corners). **Investigating 2-D Shapes, 3-D Solids, and Their Attributes Through Composition and Decomposition** - Constructs composite pictures or structures with 2-D shapes and 3-D solids. - Constructs and identifies new 2-D shapes and 3-D solids as a composite of other 2-D shapes and 3-D solids.

		Investigate symmetry of two-dimensional shapes by folding and matching.	**Geometry Cluster 4: Symmetry** 19: Finding Lines of Symmetry 20: Symmetry in 2-D Shapes 21: Creating Symmetrical Designs 22: Consolidation	The Tailor Shop	**Big Idea: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.** **Exploring Symmetry to Analyze 2-D Shapes and 3-D Solids** - Physically explores symmetry of images by folding, cutting, and matching parts. - Constructs and completes 2-D/3-D symmetrical designs. - Identifies line(s) of symmetry on regular 2-D shapes.

Mathology Grade 1 Correlation (Measurement) – Alberta

Organizing Idea:
Attributes such as length, area, volume, and angle are quantified by measurement.

Guiding Question: In what ways can length provide perspectives of size? **Learning Outcome:** Students relate length to the understanding of size.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
Size may refer to the length of an object, including • height • width • depth A length does not need to be a straight line. The length between any two points in space is called distance. Familiar contexts of distance include • distance between objects or people • distance between objects on the land	Length is a measurable attribute that describes the amount of fixed space between the end points of an object. Length remains the same if an object is repositioned but may be named differently.	Recognize the height, width, or depth of an object as lengths in various orientations.	**Measurement Cluster 1: Length, Capacity, and Area** 2: Matching Lengths	Animal Measures The Amazing Seed <u>Kindergarten</u> The Best in Show	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **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. - Uses relative attributes to compare and order (e.g., longer/longest, taller/tallest, shorter/shortest).
		Compare and order objects according to length.	**Measurement Cluster 1: Length, Capacity, and Area** 1: Comparing Length 2: Matching Lengths	Animals Measures	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **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. - Uses relative attributes to compare and order (e.g., longer/longest, taller/tallest, shorter/shortest).
		Describe distance in familiar contexts.	**Measurement Cluster 1: Length, Capacity, and Area**		**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.**

• distance between home and school • distance between towns or cities			3: Exploring Distance		**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).
Indirect comparison is useful when objects are fixed in place or difficult to move. Comparisons of size can be described by using words such as • higher • wider • deeper	The size of two objects can be compared indirectly with a third object.	Compare the length, area, or capacity of two objects directly or indirectly using a third object.	**Measurement Cluster 1: Length, Capacity, and Area** 1: Comparing Length 2: Matching Lengths 4: Comparing Capacity 5: Making Comparisons 6: Comparing Area 7: Consolidation	Animals Measures The Amazing Seed <u>Kindergarten</u> To Be Long	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **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. - Uses relative attributes to compare and order (e.g., longer/longest, taller/tallest, shorter/shortest).
		Order objects according to length, area, or capacity.	**Measurement Cluster 1: Length, Capacity, and Area** 1: Comparing Length 2: Matching Lengths 4: Comparing Capacity 5: Making Comparisons 6: Comparing Area 7: Consolidation	The Amazing Seed	**Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.** **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. - Uses relative attributes to compare and order (e.g., longer/longest, taller/tallest, shorter/shortest).

Mathology Grade 1 Correlation (Patterns) – Alberta

Organizing Idea:
Awareness of patterns supports problem solving in various situations.

Guiding Question: What can patterns communicate? **Learning Outcome:** Students examine pattern in cycles.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
A cycle can express repetition of events or experiences. Cycles include • seasons • day/night • life cycles • calendars The same pattern can be represented with different elements. A pattern core is a sequence of one or more elements that repeats as a unit.	A pattern that appears to repeat may not be a cycle. A cycle is a repeating pattern that repeats in the same way forever.	Recognize cycles encountered in daily routines and nature.	**Pattern Cluster 3: Patterns in Cycles** 9: Investigating Cycles		**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Identifies the repeating unit (core) of a pattern.
		Investigate cycles found in nature that inform First Nations, Métis, or Inuit practices.	**Pattern Cluster 3: Patterns in Cycles** 9: Investigating Cycles		**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Identifies the repeating unit (core) of a pattern.
		Identify the pattern core, up to four elements, in a cycle.	**Pattern Cluster 3: Patterns in Cycles** 10: Identifying and Describing Patterns in Cycles **Pattern Cluster 1: Investigating Repeating Patterns** 1: Repeating the Core	Midnight and Snowfall	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Identifies the repeating unit (core) of a pattern. - Predicts missing element(s) and corrects errors in repeating patterns. - Recognizes similarities and differences between patterns. - Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core).

		Identify a missing element in a repeating pattern or cycle.	**Pattern Cluster 3: Patterns in Cycles** 10: Identifying and Describing Patterns in Cycles **Pattern Cluster 2: Creating Patterns** 7: Errors and Missing Elements	Midnight and Snowfall	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Predicts missing element(s) and corrects errors in repeating patterns. - Recognizes similarities and differences between patterns.
		Describe change and constancy in repeating patterns and cycles.	**Pattern Cluster 3: Patterns in Cycles** 10: Identifying and Describing Patterns in Cycles 3: Predicting Elements		**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Predicts missing element(s) and corrects errors in repeating patterns. - Recognizes similarities and differences between patterns. - Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core).
		Create different representations of the same repeating pattern or cycle, limited to a pattern core of up to four elements.	**Pattern Cluster 3: Patterns in Cycles** 11: Creating and Extending Patterns in Cycles **Pattern Cluster 1: Investigating Repeating Patterns** 2: Representing Patterns 3: Predicting Elements 4: Consolidation **Pattern Cluster 2: Creating Patterns** 5: Extending Patterns	Midnight and Snowfall	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Identifies the repeating unit (core) of a pattern. - Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core).

		Extend a sequence of elements in various ways to create repeating patterns.	**Pattern Cluster 3: Patterns in Cycles** 11: Creating and Extending Patterns in Cycles 12: Consolidation **Pattern Cluster 1: Investigating Repeating Patterns** 3: Predicting Elements **Pattern Cluster 2: Creating Patterns** 5: Extending Patterns 6: Translating Patterns 8: Consolidation	Midnight and Snowfall	**Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.** **Identifying, Reproducing, Extending, and Creating Patterns That Repeat** - Reproduces, creates, and extends repeating patterns based on copies of the repeating unit (core). - Represents the same pattern in different ways (i.e., translating to different symbols, objects, sounds, actions, coding instructions).

Mathology Grade 1 Correlation (Time) – Alberta

Organizing Idea:
Duration is described and quantified by time.

Guiding Question: How can time characterize change? **Learning Outcome:** Students explain time in relation to cycles.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
Time can be perceived through observable change. First Nations, Métis, and Inuit experience time through sequences and cycles in nature, including cycles of seasons. Cycles from a calendar include days of the week and months of the year.	Time is an experience of change. Time can be perceived as a cycle.	Describe cycles of time encountered in daily routines and nature.	**Measurement Cluster 2: Time** 8: Ordering Events 9: Cycles in Seasons		**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).
		Describe observable changes that indicate a cycle of time.	**Measurement Cluster 2: Time** 10: The Calendar 11: Cycles in the Calendar		**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).
		Relate cycles of seasons to First Nations, Métis, or Inuit practices.	**Measurement Cluster 2: Time** 9: Cycles in Seasons		**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).
		Identify cycles from a calendar.	**Measurement Cluster 2: Time** 10: The Calendar 11: Cycles in the Calendar 12: Consolidation		**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).

Mathology Grade 1 Correlation (Statistics) – Alberta

Organizing Idea:
The science of collecting, analyzing, visualizing, and interpreting data can inform understanding and decision making.

Guiding Question: How can data be used to answer questions about the world? **Learning Outcome:** Students investigate and represent data.					
Knowledge	**Understanding**	**Skills & Procedures**	**Grade 1 Mathology**	**Mathology Little Books**	**Pearson Canada Grades K–3 Mathematics Learning Progression**
Data can be collected information.	Data can be answers to questions.	Share wonderings about people, things, events, or experiences.	**Data Management Cluster 1: Data Management** 3: Data in Our World	Graph It!	**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 through simple surveys (e.g., Should we get bananas for the class picnic?).
		Gather data by sharing answers to questions.	**Data Management Cluster 1: Data Management** 1: Making Concrete Graphs 2: Making Pictographs	Graph It!	**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 displays by arranging concrete data or with simple picture graphs (using actual objects or images). - Creates displays using objects or simple pictographs (may use symbol for data). - Organizes display so categories are ordered by frequency. - Creates one-to-one displays (e.g., line plot, dot plot, bar graph). - Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). **Collecting Data and Organizing It 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).

					- Generates data by counting or measuring (e.g., linking cube tower: number of cubes or height). Limited to whole units.
A graph is a visual representation of data. A graph can represent data by using objects, pictures, or numbers.	Data can be represented in a graph.	Collaborate to construct a concrete graph using data collected in the learning environment.	**Data Management Cluster 1: Data Management** 1: Making Concrete Graphs 4: Consolidation	Graph It!	**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 displays by arranging concrete data or with simple picture graphs (using actual objects or images). **Collecting Data and Organizing It 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). - Generates data by counting or measuring (e.g., linking cube tower: number of cubes or height). Limited to whole units.
		Create a pictograph from a concrete graph.	**Data Management Cluster 1: Data Management** 2: Making Pictographs 4: Consolidation	Graph It!	**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 displays using objects or simple pictographs (may use symbol for data). - Organizes display so categories are ordered by frequency. - Creates one-to-one displays (e.g., line plot, dot plot, bar graph). - Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). **Collecting Data and Organizing It 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). - Generates data by counting or measuring (e.g., linking cube tower: number of cubes or height). Limited to whole units.

Mathology Grade 1 Correlation (Financial Literacy) – Alberta

Organizing Idea:
Informed financial decision making contributes to the well-being of individuals, groups, and communities.

Guiding Question: In what ways can money be used?
Learning Outcome: Students explore money and how it is used for everyday living.

Knowledge	Understanding	Skills & Procedures	Grade 1 Mathology	Mathology Little Books	Pearson Canada Grades K–3 Mathematics Learning Progression
Canadian money comes in many forms, such as • coins • bills • debit cards • credit cards Canadian coins and bills come in different denominations, such as • nickels • dimes • quarters • loonies • toonies • $5 • $10 • $20 • $50 • $100	Money can be used to exchange for goods and services. Money has value and purpose in everyday living. Money has unique features to represent its value.	Explore the value of Canadian coins and bills.	**Number Cluster 7: Financial Literacy** 36: Value of Coins 37: Value of Bills 38: Counting Collections 39: Money Amounts	Buy 1-Get 1	**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence starting with 1 and counting forward. - Coordinates number words with counting actions, saying one word for each object (i.e., one-to-one correspondence/tagging). - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number (e.g., finding the value of a collection of dimes). **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills). **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)** - Identifies different attributes of objects (e.g., buttons with different sizes, colours, shapes, number of holes).
		Sort Canadian coins and bills.	**Number Cluster 7: Financial Literacy** 36: Value of Coins 37: Value of Bills 38: Counting Collections		**Big Idea: Numbers tell us how many and how much.** **Applying the Principles of Counting** - Says the number name sequence starting with 1 and counting forward.

Images on Canadian coins and bills include • wildlife • sports • boats • emblems • historic figures Money can be • shared • earned • saved • spent • borrowed Goods are things that are made and produced and can be touched, such as • toys • cars • clothing • electronics • books Services are things individuals do for others, such as • health services • personal services • entertainment • restaurants • recreational activities			39: Money Amounts		- Coordinates number words with counting actions, saying one word for each object (i.e., one-to-one correspondence/tagging). - Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number (e.g., finding the value of a collection of dimes). **Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills). **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)** - Identifies different attributes of objects (e.g., buttons with different sizes, colours, shapes, number of holes).
		Identify goods and services that can be exchanged for money.	**Number Cluster 7: Financial Literacy** 40: Fair Trades 41: Wants and Needs 42: Goods and Services 43: Consolidation		**Big Idea: Numbers are related in many ways.** **Decomposing Wholes into Parts and Composing Wholes from Parts** - Composes and decomposes quantities to 20 (e.g., 14 and 6 is 20; showing $20 using different coins and bills). **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 a set of objects in different ways using a single attribute (e.g., buttons sorted by the number of holes or by shape).