Mathology 2 Correlation (Number) – New Brunswick

Curriculum Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression

N1a Say the number sequence from 0 to 100 by:
• 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5 and 10 respectively
	Teacher Cards
	Cluster 1: Counting
	2: Skip-Counting Forward
	4: Skip-Counting Backward
	5: Counting Consolidation
	Cluster 2: Number Relationships 1
	11: Decomposing to 20
	Cluster 3: Grouping and Place Value
	14: Making a Number Line
	15: Grouping to Count
	16: Grouping and Place Value Consolidation
	Cluster 5: Number Relationships 2
	24: Jumping on the Number Line
	25: Number Relationships 2 Consolidation
	Cluster 9: Financial Literacy
	43: Estimating Money
	44: Earning Money
	46: Saving Regularly
	
	Math Every Day Cards
	1A: Skip-Counting on a Hundred Chart
	1B: Skip-Counting with Actions
	    What's Wrong? What's Missing?
	3A: Adding Ten
	    Taking Away Ten
	3B: Thinking Tens
	9: Collections of Coins
		• What Would You Rather?
		• Ways to Count
		• Family Fun Day
		• Array's Bakery
		• The Money Jar
		
		To Scaffold:
		• On Safari!
		• How Many is Too Many?
		
		To Extend:
		• Finding Buster
		• How Numbers Work
		• Calla's Jingle Dress
			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.
			
			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)
			- Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set.
			- Recognizes and describes equal-sized sets as units within a larger set.
			
			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).

N1b Say the number sequence from 0 to 100 by: • 10s using starting points from 1 to 9.	**Teacher Cards** **Cluster 1: Counting** 3: Skip-Counting Flexibly **Cluster 3: Grouping and Place Value** 14: Making a Number Line **Math Every Day Cards** 1A: Skip-Counting from Any Number 1B: Skip-Counting with Actions 3A: Adding Ten Taking Away Ten 3B: Thinking Tens 9: Collections of Coins	• Ways to Count	**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. **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** - Determines 10 more/less than a given number without counting. **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).
N1c Say the number sequence from 0 to 100 by: • 2s starting from 1.	**Teacher Card** **Cluster 1: Counting** 3: Skip-Counting Flexibly **Math Every Day Card** 1A: Skip-Counting from Any Number	• Ways to Count	**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. **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).
N2 Demonstrate if a number (up to 100) is even or odd.	**Teacher Cards** **Cluster 2: Number Relationships 1** 8: Odd and Even Numbers 12: Number Relationships 1 Consolidation **Math Every Day Cards** 2A: Show Me in Different Ways Guess My Number 2B: Math Commander	• Ways to Count	**Big Idea: Numbers are related in many ways.** **Comparing and ordering quantities (multitude or magnitude)**

N3 Describe order or relative position using ordinal numbers (up to tenth).	**Teacher Cards** **Cluster 2: Number Relationships 1** 9: Ordinal Numbers 12: Number Relationships 1 Consolidation **Math Every Day Card** 2B: Math Commander	**To Scaffold:** • At the Corn Farm	**Big Idea: Numbers are related in many ways.**
			Comparing and ordering quantities (multitude or magnitude) - Determines and describes the relative position of objects using ordinal numbers. - Uses ordinal numbers in context.
			Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.
			Unitizing quantities and comparing units to the whole - Partitions 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).

N4 Represent and describe numbers to 100, concretely, pictorially and symbolically.	**Teacher Cards**
	Cluster 1: Counting
	1: Bridging Tens
	Cluster 2: Number Relationships 1
	11: Decomposing to 20
	12: Number Relationships 1 Consolidation
	Cluster 3: Grouping and Place Value
	13: Building Numbers
	15: Grouping to Count
	16: Grouping and Place Value Consolidation
	Cluster 5: Number Relationships 2
	23: Decomposing 50
	24: Jumping on the Number Line
	25: Number Relationships 2 Consolidation
	Cluster 9: Financial Literacy
	43: Estimating Money
	44: Earning Money
	
	Math Every Day Cards
	2A: Show Me in Different Ways
	   Guess My Number
	2B: Building an Open Number Line
	5A: Building Numbers
	5B: How Many Ways?
	   What's the Unknown Part?
	9: Showing Money in Different Ways
		• What Would You Rather?
		• Ways to Count
		• Family Fun Day
		• Back to Batoche
		• A Class-full of Projects
		• The Money Jar
		
		To Scaffold:
		• That's 10!
		• Canada's Oldest Sport
		
		To Extend:
		• Fantastic Journeys
		• Finding Buster
		• How Numbers Work
		• Math Makes Me Laugh
		• The Street Party
			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 **Recognizing and writing numerals** - Names, writes, and matches two-digit numerals to quantities.
			Big Idea: Numbers are related in many ways.
			Decomposing wholes into parts and composing wholes from parts - Decomposes/composes quantities to 20. - 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 two-digit numbers as units of tens and leftover ones. **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).

| **N5** Compare and order numbers up to 100. | **Teacher Cards**
Cluster 1: Counting
1: Bridging Tens
Cluster 2: Number Relationships 1
6: Comparing Quantities
7: Ordering Quantities
12: Number Relationships 1 Consolidation
Cluster 3: Grouping and Place Value
14: Making a Number Line
Cluster 9: Financial Literacy
43: Estimating Money
46: Saving Regularly

Math Every Day Cards
2A: Show Me in Different Ways
    Guess My Number
2B: Building an Open Number Line
5A: Which Ten is Nearer? | • What Would You Rather?
• Back to Batoche
• The Great Dogsled Race

To Scaffold:
• A Family Cookout
• At the Corn Farm
• How Many is Too Many?

To Extend:
• Fantastic Journeys
• Finding Buster
• Math Makes Me Laugh
• The Street Party
• Planting Seeds | **Big Idea: Numbers are related in many ways**
Comparing and ordering quantities (multitude or magnitude)
- Compares and orders quantities and written numbers using benchmarks.
- Determines how many more/less one quantity is compared to another. |
| **N6** Estimate quantities to 100 using referents. | **Teacher Cards**
Cluster 2: Number Relationships 1
10: Estimating with Benchmarks
Cluster 5: Number Relationships 2
22: Benchmarks on a Number Line
Cluster 9: Financial Literacy
43: Estimating Money | • What Would You Rather?
• Ways to Count

To Scaffold:
• A Family Cookout
• At the Corn Farm
• How Many is Too Many?

To Extend:
• Fantastic Journeys Math
  Finding Buster
• Makes Me Laugh
• Planting Seeds
• Sports Camp | **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; multiples of ten). |

N7 Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.	**Teacher Cards**
	Cluster 3: Grouping and Place Value
	13: Building Numbers
	16: Grouping and Place Value Consolidation
	
	Math Every Day Cards
	3A: Adding Ten
	    Taking Away Ten
	3B: Thinking Tens
	    Describe Me
		• Back to Batoche
		• A Class-full of Projects
		• The Money Jar
		
		To Scaffold:
		• At the Corn Farm
		
		To Extend:
		• Finding Buster
		• How Numbers Work
			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.

N8 Demonstrate and explain the effect of adding zero to or subtracting zero from any number.	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties **Cluster 7: Operational Fluency** 32: Complements of 10	**Below Grade:** • That's 10!	**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. **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).

| N9a Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:
• using personal strategies for adding and subtracting with and without the support of manipulatives. | **Teacher Cards**
Cluster 3: Grouping and Place Value
14: Making a Number Line
16: Grouping and Place Value Consolidation
Cluster 6: Conceptualizing Addition and Subtraction
27: Solving Problems 1
28: Solving Problems 2
29: Solving Problems 3
30: Solving Problems 4
31: Conceptualizing Addition and Subtraction Consolidation
Cluster 9: Financial Literacy
43: Estimating Money
44: Earning Money
46: Saving Regularly

Math Every Day Cards
3A: Adding Ten
  Taking Away Ten
7A: I Have… I Need…
  Hungry Bird | • Array's Bakery
• Marbles, Alleys, Mibs, and Guli!
• A Class-full of Projects
• The Money Jar
• The Great Dogsled Race

To Scaffold:
• On Safari!
• That's 10!
• Hockey Time!
• Cats and Kittens
• Buy 1 – Get 1
• Canada's Oldest Sport

To Extend:
• Math Makes Me Laugh
• The Street Party
• Planting Seeds
• Sports Camp
• Calla's Jingle Dress | **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
- Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6).
Big Idea: Numbers are related in many ways
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) |

N9b Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: • creating and solving problems that involve addition and subtraction	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 27: Solving Problems 1 28: Solving Problems 2 29: Solving Problems 3 30: Solving Problems 4 31: Conceptualizing Addition and Subtraction Consolidation **Math Every Day Cards** 6: What Math Do You See? 　What Could the Story Be? 7B: Hungry Bird	• Array's Bakery • Marbles, Alleys, Mibs, and Guli! • A Class-full of Projects • The Money Jar • The Great Dogsled Race **To Scaffold:** • On Safari! • That's 10! • Hockey Time! • Cats and Kittens • Buy 1 – Get 1 • Canada's Oldest Sport **To Extend:** • Math Makes Me Laugh • The Street Party • Planting Seeds • Sports Camp • Calla's Jingle Dress	**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** - Extends known sums and differences to solve other equations (e.g., using 5 + 5 to add 5 + 6). **Big Idea: Numbers are related in many ways** **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)
N9c Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: • explaining that the order in which numbers are added does not affect the sum	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties **Cluster 7: Operational Fluency** 32: Complements of 10	**To Scaffold:** • That's 10!	**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. **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).

N9d Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by: • explaining that the order in which numbers are subtracted may affect the difference.	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties	No direct correlation.	**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. **Developing fluency of addition and subtraction computation** - Fluently adds and subtracts with quantities to 10. **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).
N10a Apply mental mathematics strategies, such as: • using doubles to determine basic addition facts to 18 and related subtraction facts.	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties 27: Solving Problems 1 28: Solving Problems 2 29: Solving Problems 3 30: Solving Problems 4 31: Conceptualizing Addition and Subtraction Consolidation **Cluster 7: Operational Fluency** 32: Complements of 10 33: Using Doubles 34: Fluency with 20 36: Operational Fluency Consolidation **Math Every Day Cards** 6: What Math Do You See? 7A: Doubles and Near-Doubles	• Array's Bakery • Marbles, Alleys, Mibs, and Guli! • A Class-full of Projects • The Money Jar • The Great Dogsled Race **To Scaffold:** • On Safari! • Hockey Time! • Buy 1 – Get 1 • Canada's Oldest Sport • That's 10! • Cats and Kittens! **To Extend:** • Math Makes Me Laugh • Planting Seeds • Sports Camp	**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 recalls complements to 10 (e.g., 6 + 4; 7 + 3). - 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.

N10b Apply mental mathematics strategies, such as: • making 10 to determine basic addition facts to 18 and related subtraction facts.	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties 27: Solving Problems 1 28: Solving Problems 2 29: Solving Problems 3 30: Solving Problems 4 31: Conceptualizing Addition and Subtraction Consolidation **Cluster 7: Operational Fluency** 32: Complements of 10 34: Fluency with 20 36: Operational Fluency Consolidation **Math Every Day Cards** 6: What Math Do You See? 7B: Make 10 Sequences	• Marbles, Alleys, Mibs, and Guli! • A Class-full of Projects • The Money Jar • The Great Dogsled Race **To Scaffold:** • That's 10! • On Safari! • Hockey Time! • Cats and Kittens! • Buy 1 – Get 1 • Canada's Oldest Sport **To Extend:** • Math Makes Me Laugh • Planting Seeds • Sports Camp	**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 recalls complements to 10 (e.g., 6 + 4; 7 + 3).
N10c Apply mental mathematics strategies, such as: • one more, one less to determine basic addition facts to 18 and related subtraction facts.	**Teacher Cards** **Cluster 6: Conceptualizing Addition and Subtraction** 26: Exploring Properties 27: Solving Problems 1 28: Solving Problems 2 29: Solving Problems 3 30: Solving Problems 4 31: Conceptualizing Addition and Subtraction Consolidation **Cluster 7: Operational Fluency** 34: Fluency with 20 36: Operational Fluency Consolidation **Math Every Day Cards** 6: What Math Do You See?	• Marbles, Alleys, Mibs, and Guli! • A Class-full of Projects • The Money Jar • The Great Dogsled Race **To Scaffold:** • On Safari! • Paddling the River • How Many is Too Many • Hockey Time! • Cats and Kittens! • That's 10! • Buy 1 – Get 1 • Canada's Oldest Sport **To Extend:** • Math Makes Me Laugh • Planting Seeds • Sports Camp	**Big Idea: Numbers are related in many ways** **Comparing and ordering quantity (multitude or magnitude)** - Knows what number is one or two more and one or two less than another number.

| N10d Apply mental mathematics strategies, such as:
• two more, two less
to determine basic addition facts to 18 and related subtraction facts. | **Teacher Cards**
Cluster 6: Conceptualizing Addition and Subtraction
26: Exploring Properties
27: Solving Problems 1
28: Solving Problems 2
29: Solving Problems 3
30: Solving Problems 4
31: Conceptualizing Addition and Subtraction Consolidation
Cluster 7: Operational Fluency
34: Fluency with 20
36: Operational Fluency Consolidation

Math Every Day Cards
6: What Math Do You See? | • Marbles, Alleys, Mibs, and Guli!
• A Class-full of Projects
• The Money Jar
• The Great Dogsled Race

To Scaffold:
• On Safari!
• Paddling the River
• How Many is Too Many
• Hockey Time!
• Cats and Kittens!
• That's 10!
• Buy 1 – Get 1
• Canada's Oldest Sport

To Extend:
• Math Makes Me Laugh
• Planting Seeds
• Sports Camp | **Big Idea: Numbers are related in many ways**

Comparing and ordering quantity (multitude or magnitude)
- Knows what number is one or two more and one or two less than another number. |
| N10e Apply mental mathematics strategies, such as:
• building on a known double
to determine basic addition facts to 18 and related subtraction facts. | **Teacher Cards**
Cluster 6: Conceptualizing Addition and Subtraction
27: Solving Problems 1
28: Solving Problems 2
29: Solving Problems 3
30: Solving Problems 4
31: Conceptualizing Addition and Subtraction Consolidation
Cluster 7: Operational Fluency
33: Using Doubles
34: Fluency with 20
36: Operational Fluency Consolidation

Math Every Day Cards
6: What Math Do You See?
7A: Doubles and Near-Doubles | • The Money Jar
• The Great Dogsled Race
• Marbles, Alleys, Mibs, and Guli!
• A Class-full of Projects

To Scaffold:
• Buy 1 – Get 1
• On Safari!
• That's 10!
• Hockey Time!
• Cats and Kittens!
• Canada's Oldest Sport

To Extend:
• Planting Seeds
• Math Makes Me Laugh
• Sports Camp | **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
- 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. |

| N10f Apply mental mathematics strategies, such as:
• addition for subtraction to determine basic addition facts to 18 and related subtraction facts. | **Teacher Cards**
Cluster 6: Conceptualizing Addition and Subtraction
26: Exploring Properties
27: Solving Problems 1
30: Solving Problems 4
31: Conceptualizing Addition and Subtraction Consolidation
Cluster 7: Operational Fluency
34: Fluency with 20
36: Operational Fluency Consolidation

Math Every Day Cards
6: What Math Do You See?
7A: I Have… I Need…
7B: Hungry Bird | • A Class-full of Projects
• Marbles, Alleys, Mibs, and Guli!
• The Money Jar
• The Great Dogsled Race

To Scaffold:
• Hockey Time!
• On Safari!
• That's 10!
• Cats and Kittens!
• Buy 1 – Get 1
• Canada's Oldest Sport

To Extend:
• Math Makes Me Laugh
• Planting Seeds
• Sports Camp | **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.
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. |

Matthology 2 Correlation (Patterns and Relations) – New Brunswick

Curriculum Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
Patterns and Relations (Patterns)			
PR1 Demonstrate an understanding of repeating patterns (three to five elements) by: • describing • extending • comparing • creating patterns using manipulatives, diagrams, sounds and actions (numbers to 100).	**Teacher Cards** **Cluster 1: Repeating Patterns** 1: Exploring Patterns 2: Extending and Predicting 3: Errors and Missing Elements 4: Combining Attributes 5: Repeating Patterns Consolidation **Math Every Day Card** 1: Show Another Way Repeating Patterns Around Us	• Pattern Quest **To Scaffold:** • 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. - 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). - 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). - Identifies the repeating unit of patterns in multiple forms (e.g., circular, 2-D, 3-D).

PR2 Demonstrate an understanding of increasing patterns by: • describing • extending • comparing • creating patterns using manipulatives, diagrams, sounds and actions (numbers to 100).	**Teacher Cards** **Cluster 2: Increasing/Decreasing Patterns** 6: Increasing Patterns 1 7: Increasing Patterns 2 9: Extending Patterns 10: Reproducing Patterns 11: Creating Patterns 12: Errors and Missing Terms 13: Solving Problems 14: Consolidation **Math Every Day Cards** 2A: How Many Can We Make? Error Hunt 2B: Making Increasing Patterns	• The Best Surprise **To Extend:** • Namir's Marvellous Masterpieces	**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 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, …).
			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 20.

Patterns and Relations (Variables and Equations)

PR3 Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100). **PR4** Record equalities and inequalities symbolically using the equal symbol or the not equal symbol.	**Teacher Cards** **Cluster 3: Equality and Inequality** 15: Equal and Unequal Sets 16: Equal or Not Equal? 17: Exploring Number Sentences 20. Equality and Inequality Consolidation **Math Every Day Cards** 3A: Equal or Not Equal? How Many Ways? 3B: Which One Doesn't Belong?	• Kokum's Bannock **To Scaffold:** • Nutty and Wolfy **To Extend:** • A Week of Challenges	**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 - Compares sets to determine more/less or equal. - 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). - Records different expressions of the same quantity as equalities (e.g., 2 + 4 = 5 + 1). **Using symbols, unknowns, and variables to represent mathematical relations** - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). - Understands and uses the equal (=) and not equal (≠) symbols when comparing expressions.

Mathology 2 Correlation (Shape and Space) – New Brunswick

Curriculum Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
Shape and Space (Measurement)			
SS1 Relate the number of days to a week and the number of months to a year in a problem-solving context.	**Teacher Cards** **Measurement Cluster 3: Time and Temperature** 13: Days and Weeks 14: Months in a Year **Math Every Day Cards** 3A: Calendar Questions 3B: Monthly Mix-Up	**To Extend:** • Goat Island	**Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.** **Understanding relationships among measurement units** - Understands relationship of units of length (mm, cm, m), mass (g, kg), capacity (mL, L), and time (e.g., seconds, minutes, hours). **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) **Big Idea: Numbers are related in many ways.** **Comparing and ordering quantities (multitude or magnitude)** - Uses ordinal numbers in context (e.g., days on a calendar: the 3rd of March)
SS2 Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight).	**Teacher Cards** **Measurement Cluster 1: Using Non-Standard Units** 1: Measuring Length 1 4: Measuring Mass	• The Discovery **To Scaffold:** • Animal Measures **To Extend:** • Goat Island • The Bunny Challenge • Measurements About YOU!	**Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons** **Understanding relationships among measurement units** - Understands the inverse relationship between the size of the unit and the number of units (length, area, capacity, and mass).

SS3 Compare and order objects by length, height, distance around and mass (weight) using nonstandard units, and make statements of comparison.	**Teacher Cards** **Measurement Cluster 1: Using Non-Standard Units** 1: Measuring Length 1 2: Measuring Length 2 3: Measuring Distance Around 4: Measuring Mass 7: Using Non-Standard Units Consolidation **Math Every Day Card** 1: Estimation Scavenger Hunt Estimation Station	• Getting Ready for School • The Discovery **To Scaffold:** • The Amazing Seed • Animal Measures **To Extend:** • Goat Island • The Bunny Challenge • Measurements About YOU!	**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
			- Understands that there should be no gaps or overlaps when measuring.
			- 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.

			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 that some things have more than one attribute that can be measured (e.g., an object can have both length and mass). - Extends understanding of length to other linear measurements (e.g., height, width, distance around).
SS4 Measure length to the nearest non-standard unit by: • using multiple copies of a unit. • using a single copy of a unit (iteration process).	**Teacher Cards** **Measurement Cluster 1: Using Non-Standard Units** 1: Measuring Length 1 2: Measuring Length 2 7: Using Non-Standard Units Consolidation	• Getting Ready for School • The Discovery **To Scaffold:** • The Amazing Seed • Animal Measures **To Extend:** • Goat Island • The Bunny Challenge • Measurements About YOU!	**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
			- Understands that there should be no gaps or overlaps when measuring.
			- Demonstrates ways to estimate, measure, compare, and order objects by length, area, capacity, and mass with non-standard units by
			    • using multiple copies of a unit
			    • iterating a single unit

SS5 Demonstrate that changing the orientation of an object does not alter the measurements of its attributes.	**Teacher Card** **Measurement Cluster 1: Using Non-Standard Units** 1: Measuring Length	**To Extend:** • Goat Island • The Bunny Challenge • Measurements About YOU!	**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).

Shape and Space (3-D Objects and 2-D Shapes)

SS6 Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule.	**Teacher Cards** **Geometry Cluster 1: 2-D Shapes** 1: Sorting 2-D Shapes **Geometry Cluster 2: 3-D Objects** 6: Sorting 3-D Solids **Math Every Day Card** 2B: Which Solid Does Not Belong?	• I Spy Awesome Buildings • Sharing Our Stories **To Scaffold:** • 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 - Compares 2-D shapes and 3-D solids to find the similarities and differences. - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides, corners). - Classifies and names 2-D shapes based on common attributes
			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. - Sorts a set of objects based on two attributes.
SS7 Describe, compare, and construct 3-D objects, including: • cubes • spheres • cones • cylinders • pyramids.	**Teacher Cards** **Geometry Cluster 2: 3-D Objects** 6: Sorting 3-D Solids 8: Constructing 3-D Solids 9: Constructing Skeletons 10: 3-D Solids Consolidation **Geometry Cluster 3: Geometric Relationships** 13: Visualizing Shapes and Solids **Math Every Day Cards** 2A: Geometry in Poetry What Do You See? 3B: Name the Solid	• I Spy Awesome Buildings **To Scaffold:** • What Was Here? **To Extend:** • WONDERful Buildings	**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. - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides, corners). - Classifies and names 2-D shapes based on common attributes - Constructs and compares 3-D solids with given attributes (e.g., number of vertices, faces).

SS8 Describe, compare and construct 2-D shapes, including: • triangles • squares • rectangles • circles.	**Teacher Cards** **Geometry Cluster 1: 2-D Shapes** 1: Sorting 2-D Shapes 2: Exploring 2-D Shapes 3: Constructing 2-D Shapes 5: 2-D Shapes Consolidation **Geometry Cluster 3: Geometric Relationships** 13: Visualizing Shapes and Solids **Math Every Day Cards** 1: Visualizing Shapes Comparing Shapes 3B: Draw the Shape	• I Spy Awesome Buildings **To Scaffold:** • What Was Here? • The Tailor Shop **To Extend:** • WONDERful Buildings • Gallery Tour	**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 to find the similarities and differences. - Analyzes geometric attributes of 2-D shapes (e.g., number of sides, corners). - Classifies and names 2-D shapes based on common attributes. - Constructs and compares 2-D shapes with given attributes (e.g., number of vertices). **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. - Sorts a set of objects based on two attributes.
SS9 Identify 2-D shapes as parts of 3-D objects in the environment.	**Teacher Cards** **Geometry Cluster 2: 3-D Solids** 7: 3-D Solids Around Us **Geometry Cluster 3: Geometric Relationships** 12: Building with Solids **Math Every Day Card** 2B: Solids Around Us	• I Spy Awesome Buildings • Sharing Our Stories **To Scaffold:** • What Was Here? • The Tailor Shop **To Extend:** • WONDERful Buildings • Gallery Tour	**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. - Analyzes geometric attributes of 2-D shapes and 3-D solids (e.g., number of sides, corners). - Identifies 2-D shapes in 3-D objects in the environment. - Classifies and names 2-D shapes based on common attributes

Matholofy 2 Correlation (Statistics and Probability) – New Brunswick

Curriculum Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
Statistics and Probability (Data Analysis)			
SP1 Gather and record data about self and others to answer questions.	**Teacher Card** **Data Management and Probability** **Cluster 1: Data Management** 3: Creating a Survey **Math Every Day Card** 1: Conducting Surveys	• Big Buddy Days • Marsh Watch **To Scaffold:** • Graph It! **To Extend:** • Welcome to The Nature Park	**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. **Collecting data and organizing it into categories** - Collects data from simple surveys concretely (e.g., shoes, popsicle sticks) or using simple records (e.g., check marks, tallies).
SP2 Construct and interpret concrete graphs and pictographs to solve problems	**Teacher Cards** **Data Management and Probability** **Cluster 1: Data Management** 1: Interpreting Graphs 1 4: Making Graphs 1 6: Data Management Consolidation **Math Every Day Card** 1: Reading and Interpreting Graphs	• Big Buddy Days • Marsh Watch **To Scaffold:** • Graph It! **To Extend:** • Welcome to The Nature Park	**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). - Displays data collected in more than one way and describes the differences (e.g., bar graph, pictograph). **Reading and interpreting data displays** - Interprets displays by noting how many more/less than other categories. **Drawing conclusions by making inferences and justifying decisions based on collected data** - Poses and answers questions about data collected and displayed.

Note: The following activities are not specifically correlated to the New Brunswick curriculum outcomes for Grade 2 but may be of interest to teachers in preparing a strong foundation for mathematics:

Number

Activities 17 – 21: Early Fractional Thinking

Activity 35: Multi-Digit Fluency

Activities 37 – 42: Early Multiplicative Thinking

Activity 45: Spending Money

Activity 47: Financial Literacy Consolidation

Math Every Day Card 4A: Equal Parts from Home, Modelling Fraction Amounts

Math Every Day Card 4B: Regrouping Equal Parts, Naming Equal Parts

Math Every Day Card 8A: Counting Equal Groups to Find How Many, I Spy

Math Every Day Card 8B: How Many Blocks?, How Many Ways?

Pattern and Algebra

Activity 8: Decreasing Patterns

Activity 19: Missing Numbers

Math Every Day Card 3B: What's Missing?

Measurement

Activity 5: Measuring Area

Activity 6: Measuring Capacity

Activities 8 – 12: Using Standard Units

Math Every Day Card 2: What Am I?; Which Unit?

Activity 15: Measuring Time

Activity 16: Time to the Quarter-Hour

Activity 17: Changes in Temperature

Activity 18: Time and Temperature Consolidation

Math Every Day Card 3A: Hula Hoop Clock

Math Every Day Card 3B: Thermometer Drop or Pop

Geometry

Activity 4: Symmetry in 2-D Shapes

Activity 11: Making Shapes

Activity 14: Creating Pictures and Designs

Activity 15: Covering Outlines

Activity 16: Creating Symmetrical Designs

Activity 17: Geometric Relationships: Consolidation

Math Every Day Card 3A: Fill Me In!, Make Me a Picture

Activities 18 – 21: Location and Movement

Math Every Day Card 4A: Our Design, Treasure Map

Math Every Day Card 4B: Crazy Creatures, Perspective Matching Game

Activities 22 – 25: Coding

Math Every Day Card 5: Code of the Day, Wandering Animals

Data Management and Probability

Activity 2: Interpreting Graphs 2

Activity 5: Making Graphs 2

Activities 7 – 9: Probability and Chance

Math Every Day Card 2: What's in the Bag?, Word of the Day