

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Note: Codes to curriculum are for cross-referencing purposes only.

Ontario

Curriculum Expectations	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
<p>Overall Expectation</p> <p>N2 Counting: demonstrate an understanding of magnitude by counting forward to 200 and backwards from 50, using multiples of various numbers as starting points</p> <p>N3 Operational Sense: solve problems involving the addition and subtraction of one- and two-digit whole numbers, using a variety of strategies, and investigate multiplication and division</p> <p>Cross Strand: Patterning and Algebra</p> <p>P1 Patterns and Relationships: identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns</p> <p>P2 Expressions and Equality: demonstrate an understanding of the concept of equality between pairs of expressions, using concrete materials, symbols, and addition and subtraction to 18</p>	<p>Below Grade: Intervention</p> <p>15: How Many Do You See?</p> <p>16: Messy and Organize It</p> <p>On Grade: Teacher Cards</p> <p>37: Grouping in 2s, 5s, and 10s (N2.1, N3.3, N3.4, P2.1)</p> <p>38: Making Equal Shares (N3.3, N3.4)</p> <p>39: Making Equal Groups (N3.3, N3.4, P2.1)</p> <p>40: Exploring Repeated Addition (N2.1, N3.3, P1.1, P1.7)</p> <p>41: Repeated Addition and Multiplication (N2.1, N3.3, P1.1, P1.7)</p> <p>42: Early Multiplicative Thinking Consolidation (N2.1, N3.3, N3.4, P1.1, P1.7, P2.1)</p>	<p>Below Grade:</p> <ul style="list-style-type: none"> How Many Is Too Many? (Activities 37, 39, 42) <p>On Grade:</p> <ul style="list-style-type: none"> What Would You Rather? (Activity 37) Ways to Count (Activity 37) Family Fun Day (Activities 37, 39) The Best Birthday (Activity 38) Array's Birthday (Activities 38, 39, 40, 41, 42) Marbles, Alleys, Mibs, and Gull! (Activities 39, 40, 41, 42) <p>Above Grade:</p>	<p>Big Idea: Numbers tell us how many and how much.</p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2) <p>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> 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). (Activities 37, 41; MED 8A: 1, 2) Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) <p>Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.</p> <p>Developing Conceptual Meaning of Multiplication and Division</p>

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Ontario (continued)

<p>P1.1 identify and describe, through investigation, growing patterns and shrinking patterns generated by the repeated addition or subtraction of 1's, 2's, 5's, 10's, and 25's on a number line and on a hundreds chart</p> <p>P1.7 demonstrate, through investigation, an understanding that a pattern results from repeating an operation (e.g., addition, subtraction) or making a repeated change to an attribute (e.g., colour, orientation).</p> <p>P2.1 demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials</p>	<p>On Grade: Math Every Day Card 8A: Counting Equal Groups to Find How Many (N2.1) I Spy (N2.1, N2.14, P1.7) Card 8B: How Many Blocks? (N2.1, N2.14, P1.7) How Many Ways? (N2.1, N2.14, P1.1, P1.7, P2.1)</p>	<ul style="list-style-type: none"> • Calla's Jingle Dress (Activities 38, 39, 40, 41, 42) • Sports Camp (Activities 40, 41, 42) • Planting Seeds (Activities 41, 42) 	<ul style="list-style-type: none"> - Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2) - Models and solves equal sharing problems to 100. (Activities 38, 42) - Models and solves equal grouping problems to 100. (Activities 39, 42) - Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1) - Models equal groups and uses multiplication symbol (\times) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)
<p>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</p>			
<p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41, MED 8A: 2; MED 8B: 1) 			
<p>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</p>			
<p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42, MED 8A: 2, MED 8B: 2) 			

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Alberta/Northwest Territories/Nunavut

Learning Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
General Outcome Develop number sense			
Number 10. Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.	<p>Below Grade: Intervention 15: How Many Do You See? 16: Messy and Organize It</p> <p>On Grade: Teacher Cards 37: Grouping in 2s, 5s, and 10s 38: Making Equal Shares 39: Making Equal Groups 40: Exploring Repeated Addition (N10) 41: Repeated Addition and Multiplication 42: Early Multiplicative Thinking Consolidation (N10)</p> <p>On Grade: Math Every Day Card 8A: Counting Equal Groups to Find How Many I Spy Card 8B: How Many Blocks? How Many Ways?</p>	<p>Below Grade:</p> <ul style="list-style-type: none"> How Many Is Too Many? (Activities 37, 39, 42) <p>On Grade:</p> <ul style="list-style-type: none"> What Would You Rather? (Activity 37) Ways to Count (Activity 37) Family Fun Day (Activities 37, 39) The Best Birthday (Activity 38) Array's Birthday (Activities 38, 39, 40, 41, 42) Marbles, Alleys, Mibs, and Gull! (Activities 39, 40, 41, 42) <p>Above Grade:</p> <ul style="list-style-type: none"> Calla's Jingle Dress (Activities 38, 39, 40, 41, 42) Sports Camp (Activities 40, 41, 42) Planting Seeds (Activities 41, 42) 	<p>Big Idea: Numbers tell us how many and how much.</p> <p>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. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2)</p> <p>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</p> <p>Unitizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> 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). (Activities 37, 41; MED 8A: 1, 2) Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) <p>Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.</p> <p>Developing Conceptual Meaning of Multiplication and Division</p> <ul style="list-style-type: none"> Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2) Models and solves equal sharing problems to 100. (Activities 38, 42) Models and solves equal grouping problems to 100. (Activities 39, 42) Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Alberta/Northwest Territories/Nunavut (continued)

			<ul style="list-style-type: none"> - Models equal groups and uses multiplication symbol (\times) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)
			<p>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41; MED 8A: 2; MED 8B: 1) <p>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> - Uses the equal ($=$) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42; MED 8A: 2; MED 8B: 2)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Newfoundland and Labrador

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
General Outcome Develop number sense 2N10 Apply mental mathematics strategies for basic addition facts and related subtraction facts to 18.	Below Grade: Intervention 15: How Many Do You See? 16: Messy and Organize It On Grade: Teacher Cards 37: Grouping in 2s, 5s, and 10s 38: Making Equal Shares 39: Making Equal Groups 40: Exploring Repeated Addition (2N10) 41: Repeated Addition and Multiplication 42: Early Multiplicative Thinking Consolidation (2N10) On Grade: Math Every Day Card 8A: Counting Equal Groups to Find How Many I Spy Card 8B: How Many Blocks? How Many Ways?	Below Grade: <ul style="list-style-type: none"> How Many Is Too Many? (Activities 37, 39, 42) On Grade: <ul style="list-style-type: none"> What Would You Rather? (Activity 37) Ways to Count (Activity 37) Family Fun Day (Activities 37, 39) The Best Birthday (Activity 38) Array's Birthday (Activities 38, 39, 40, 41, 42) Marbles, Alleys, Mibs, and Gull! (Activities 39, 40, 41, 42) Above Grade: <ul style="list-style-type: none"> Calla's Jingle Dress (Activities 38, 39, 40, 41, 42) Sports Camp (Activities 40, 41, 42) Planting Seeds (Activities 41, 42) 	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. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2) Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. Unitizing Quantities and Comparing Units to the Whole <ul style="list-style-type: none"> 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). (Activities 37, 41; MED 8A: 1, 2) Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much. Developing Conceptual Meaning of Multiplication and Division <ul style="list-style-type: none"> Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2) Models and solves equal sharing problems to 100. (Activities 38, 42) Models and solves equal grouping problems to 100. (Activities 39, 42) Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Newfoundland and Labrador (continued)

			<ul style="list-style-type: none"> - Models equal groups and uses multiplication symbol (\times) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)
			<p>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing</p> <p>Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41, MED 8A: 2; MED 8B: 1) <p>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42, MED 8A: 2, MED 8B: 2)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Nova Scotia

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
General Outcome Develop number sense			
N10 Students will be expected to apply mental mathematics strategies to quickly recall basic addition facts to 18 and determine related subtraction facts.	<p>Below Grade: Intervention</p> <p>15: How Many Do You See? 16: Messy and Organize It</p> <p>On Grade: Teacher Cards</p> <p>37: Grouping in 2s, 5s, and 10s 38: Making Equal Shares 39: Making Equal Groups 40: Exploring Repeated Addition (N10) 41: Repeated Addition and Multiplication 42: Early Multiplicative Thinking Consolidation (N10)</p> <p>On Grade: Math Every Day Card 8A: Counting Equal Groups to Find How Many I Spy Card 8B: How Many Blocks? How Many Ways?</p>	<p>Below Grade:</p> <ul style="list-style-type: none"> How Many Is Too Many? (Activities 37, 39, 42) <p>On Grade:</p> <ul style="list-style-type: none"> What Would You Rather? (Activity 37) Ways to Count (Activity 37) Family Fun Day (Activities 37, 39) The Best Birthday (Activity 38) Array's Birthday (Activities 38, 39, 40, 41, 42) Marbles, Alleys, Mibs, and Gulji (Activities 39, 40, 41, 42) <p>Above Grade:</p> <ul style="list-style-type: none"> Calla's Jingle Dress (Activities 38, 39, 40, 41, 42) Sports Camp (Activities 40, 41, 42) Planting Seeds (Activities 41, 42) 	<p>Big Idea: Numbers tell us how many and how much.</p> <p>Applying the Principles of Counting</p> <ul style="list-style-type: none"> Fluently skip-counts by factors of 10 (e.g., 2, 5, 10) and multiples of 10 from any given number. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2) <p>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</p> <p>Utilizing Quantities and Comparing Units to the Whole</p> <ul style="list-style-type: none"> 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). (Activities 37, 41; MED 8A: 1, 2) Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) <p>Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much.</p> <p>Developing Conceptual Meaning of Multiplication and Division</p> <ul style="list-style-type: none"> Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2) Models and solves equal sharing problems to 100. (Activities 38, 42) Models and solves equal grouping problems to 100. (Activities 39, 42) Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Newfoundland and Labrador (continued)

			<ul style="list-style-type: none"> - Models equal groups and uses multiplication symbol (\times) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)
			<p>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing</p> <p>Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41, MED 8A: 2; MED 8B: 1) <p>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42, MED 8A: 2, MED 8B: 2)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Saskatchewan

Specific Outcomes	Mathology Grade 2 Classroom Activity Kit	Mathology Little Books	Pearson Canada K-3 Mathematics Learning Progression
General Outcome Develop number sense			
N2.1 Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by: <ul style="list-style-type: none"> N2.1a representing (including place value) N2.1b describing N2.1c skip counting N2.1d differentiating between odd and even numbers N2.1e estimating with referents N2.1f comparing two numbers N2.1g ordering three or more numbers 	Below Grade: Intervention 15: How Many Do You See? 16: Messy and Organize It On Grade: Teacher Cards 37: Grouping in 2s, 5s, and 10s (N2.1c) 38: Making Equal Shares 39: Making Equal Groups 40: Exploring Repeated Addition 41: Repeated Addition and Multiplication 42: Early Multiplicative Thinking Consolidation On Grade: Math Every Day Card 8A: Counting Equal Groups to Find How Many I Spy Card 8B: How Many Blocks? How Many Ways?	Below Grade: <ul style="list-style-type: none"> How Many Is Too Many? (Activities 37, 39, 42) On Grade: <ul style="list-style-type: none"> What Would You Rather? (Activity 37) Ways to Count (Activity 37) Family Fun Day (Activities 37, 39) The Best Birthday (Activity 38) Array's Birthday (Activities 38, 39, 40, 41, 42) Marbles, Alleys, Mibs, and Gulji! (Activities 39, 40, 41, 42) Above Grade: <ul style="list-style-type: none"> Calla's Jingle Dress (Activities 38, 39, 40, 41, 42) Sports Camp (Activities 40, 41, 42) Planting Seeds (Activities 41, 42) 	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. (Activities 37, 40, 41; MED 8A: 1, 2; MED 8B: 1, 2) 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). (Activities 37, 41; MED 8A: 1, 2) - Recognizes that, for a given quantity, increasing the number of sets decreases the number of objects in each set. (Activities 37, 39) Big Idea: Quantities and numbers can be grouped by, and partitioned into, units to determine how many or how much. Developing Conceptual Meaning of Multiplication and Division - Groups objects in 2s, 5s, and 10s. (Activities 37, 39, 42, MED 8B: 2) - Models and solves equal sharing problems to 100. (Activities 38, 42) - Models and solves equal grouping problems to 100. (Activities 39, 42) - Uses repeated addition of groups to solve problems. (Activities 40, 41, MED 8B: 1)

Curriculum Correlation

Number Cluster 8: Early Multiplicative Thinking

Saskatchewan (continued)

		<ul style="list-style-type: none"> - Models equal groups and uses multiplication symbol (\times) to symbolize operation. (Activities 41, 42; MED 8A: 2; MED 8B: 1, 2)
		<p>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</p> <p>Representing and Generalizing</p> <p>Increasing/Decreasing Patterns</p> <ul style="list-style-type: none"> - Identifies and extends familiar number patterns and makes connections to addition (e.g., skip-counting by 2s, 5s, 10s). (Activities 40, 41, MED 8A: 2; MED 8B: 1) <p>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.</p> <p>Using Symbols, Unknowns, and Variables to Represent Mathematical Relations</p> <ul style="list-style-type: none"> - Uses the equal (=) symbol in equations and knows its meaning (i.e., equivalent; is the same as). (Activities 40, 41, 42, MED 8A: 2, MED 8B: 2)