Leaps and Bounds 1/2
Correlation to Ontario Curriculum and Grade 2 Classroom Resources

GRADE 2 Core Resources Correlation with Grade 2 Ontario core resources			INTERVENTION Resources and Expectations Correlation between *Leaps and Bounds 1/2* and prerequisite expectations from Ontario Kindergarten		
Number Sense and Numeration: Quantity Relationships					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* **Topics**	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– represent, compare, and order whole numbers to 100, including money amounts to 100¢, using a variety of tools (e.g., ten frames, base ten materials, coin manipulatives, number lines, hundreds charts and hundreds carpets)	Chapter 2: Lessons 1, 2, 3, 4, 5, 6, 7, Chapter Task Chapter 4: Lesson 6 Chapter 6: Lessons 1, 2, 3, 4, 5, 6, Chapter Task Chapter 8: Lessons 2, 8, 9 Chapter 10: Lesson 6 Chapter 14: Lessons 2, 5, 6, Chapter Task	Unit 2: Lessons 1, 2, 3, 7, 8, 9, 10 Unit 3: Lessons 3, 6, 7, 8 Unit 7: Lessons 1 Unit 9: Lesson 7	**Topic 2: Representing Whole Numbers** *Subtopic:* Modelling Whole Numbers *Subtopic:* Subitizing *Subtopic:* Reading and Writing Numbers **Topic 3: Comparing Whole Numbers** *Subtopic:* Comparing Sets *Subtopic:* Comparing Numbers	– represent, compare, and order whole numbers to 50, using a variety of tools (e.g., connecting cubes, ten frames, base ten materials, number lines, hundreds charts) and contexts (e.g., real-life experiences, number stories) – demonstrate, using concrete materials, the concept of conservation of number (e.g., 5 counters represent the number 5, regardless whether they are close	– investigate some concepts of quantity through identifying and comparing sets with more, fewer, or the same number of objects (e.g., find out which of two cups contains more or fewer beans, using counters; investigate the ideas of more, less, and the same, using five and ten frames – compare two sets of objects that have the same number of items, one set having the items spread out, and recognize that both sets have the same quantity [concept of conservation] – recognize that the last count represents the actual number of objects in the set [concept of cardinality] – compare five beans with five blocks, and recognize that the number 5 represents the same quantity regardless of the different materials [concept of abstraction])

				together or far apart)	
– determine, using concrete materials, the ten that is nearest to a given two-digit number, and justify the answer (e.g., use counters on ten frames to determine that 47 is closer to 50 than to 40)	Chapter 2: Lesson 5 Chapter 6: Lessons 2, 3, 5		**Topic 1: Counting** *Subtopic:* Counting Sets **Topic 2: Representing Whole Numbers** *Subtopic:* Modelling Whole Numbers *Subtopic:* Subitizing *Subtopic:* Estimating Quantities **Topic 3: Comparing Whole Numbers** *Subtopic:* Comparing Numbers	– relate numbers to the anchors of 5 and 10 (e.g., 7 is 2 more than 5 and 3 less than 10)	– investigate the ideas of more, less, and the same, using five and ten frames – demonstrate an understanding of number relationships for numbers from 0 to 10, through investigation (e.g., initially: show smaller quantities using anchors of five and ten, such as their fingers or manipulatives; eventually: show quantities to 10, using such tools as five and ten frames and manipulatives) – recognize some quantities without having to count, using a variety of tools (e.g., dominoes, dot plates, dice, number of fingers) or strategies (e.g., composing and decomposing numbers, subitizing)
– read and print in words whole numbers to twenty, using meaningful contexts (e.g., storybooks, posters, signs)		Unit 2: Lessons 1, 11	**Topic 2: Representing Whole Numbers** *Subtopic:* Reading and Writing Numbers	– read and print in words whole numbers to twenty, using meaningful contexts (e.g., storybooks, posters, signs)	– use, read, and represent whole numbers to 10 in a variety of meaningful contexts (e.g., use a hundreds chart; use magnetic and sandpaper numerals; put the house number on a house built at the block centre; find and recognize numbers in the environment; use magnetic numerals to represent the number of objects in a set; write numerals on imaginary bills at the restaurant at the dramatic play centre)
– compose and decompose two-digit numbers in a variety of ways, using	Chapter 2: Lessons 3, 4, 5, 7, Chapter Task	Unit 2: Lessons 2, 7, 10 Unit 3: Lessons 7,	**Topic 2: Representing Whole Numbers**	– compose and decompose numbers up to 20	– investigate and develop strategies for composing and decomposing quantities to 10 (e.g., use manipulatives or "shake

concrete materials (e.g., place 42 counters on ten frames to show 4 tens and 2 ones; compose 37¢ using one quarter, one dime, and two pennies)	Chapter 4: Lessons 2, 3, 4, 8, 9, Chapter Task Chapter 6: Lessons 2, 3, 4, 6, 7, 8, 9, 10, Chapter Task Chapter 8: Lessons 1, 3, 4, 5, 6, 7, 8, Chapter Task	8 Unit 7: Lessons 1	*Subtopic:* Modelling Whole Numbers *Subtopic:* Reading and Writing Numbers **Topic 4: Adding** *Subtopic:* Decomposing and Recomposing **Topic 5: Subtracting** *Subtopic:* Decomposing	in a variety of ways, using concrete materials (e.g., 7 can be decomposed using connecting cubes into 6 and 1, or 5 and 2, or 4 and 3)	and spill" activities; initially: to represent the quantity of 8, the child may first count from 1 through to 8 using his or her fingers; later, the child may put up one hand, count from 1 to 5 using each finger, pause, and then continue to count to 8 using three more fingers; eventually: the child may put up all five fingers of one hand at once and simply say "Five", then count on, using three more fingers and saying "Six, seven, eight. There are eight.")
– estimate, count, and represent (using the ¢ symbol) the value of a collection of coins with a maximum value of one dollar.	Chapter 2: Lesson 7, Chapter Task Chapter 6: Lesson 4 Chapter 10: Lesson 6	Unit 3: Lessons 6, 7, 8 Unit 4: Lessons 3	**Topic 2: Representing Whole Numbers** *Subtopic:* Estimating Quantities	– identify and describe various coins (i.e., penny, nickel, dime, quarter, $1 coin, $2 coin), using coin manipulatives or drawings, and state their value (e.g., the value of a penny is one cent; the value of a toonie is two dollars) – represent money amounts to 20¢, through investigation using coin manipulatives – estimate the number of objects in a set, and check	– begin to use information to estimate the number in a small set (e.g., apply knowledge of quantity, use a common referent such as a five frame) – explore different Canadian coins, using coin manipulatives (e.g., role-play the purchasing of items at the store at the dramatic play centre; determine which coin will purchase more – a loonie or a quarter)

				by counting (e.g., "I guessed that there were 20 cubes in the pile. I counted them and there were only 17 cubes. 17 is close to 20.")	

Number Sense and Numeration: Counting

Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– count forward by 1's, 2's, 5's, 10's, and 25's to 200, using number lines and hundreds charts, starting from multiples of 1, 2, 5, and 10 (e.g., count by 5's from 15; count by 25's from 125)	Chapter 1: Lessons 5, 6, 7, Chapter Task Chapter 2: Lessons 1, 2, 3, 4, 5, 7, Chapter Task Chapter 4: Lesson 2 Chapter 6: Lessons 1, 4, 5, 6 Chapter 8: Lessons 2, 7, Chapter Task Chapter 9: Lessons 1, 2, 3, 7, Chapter Task Chapter 10: Lesson 3 Chapter 14: Lessons 2, 5, Chapter Task	Unit 2: Lessons 2, 3, 7, 8, 10 Unit 4: Lessons 3, 8 Unit 9: Lesson 7	**Topic 1: Counting** *Subtopic:* Counting Sets *Subtopic:* Counting Forwards by 1 *Subtopic:* Skip Counting	– demonstrate, using concrete materials, the concept of one-to-one correspondence between number and objects when counting – count forward by 1's, 2's, 5's, and 10's to 100, using a variety of tools and strategies (e.g., move with steps; skip count on a number line; place counters on a hundreds chart; connect cubes to show equal groups; count groups of pennies, nickels, or dimes)	– demonstrate understanding of the counting concepts of stable order (that is, the concept that the counting sequence is always the same – 1 is always followed by 2, 2 by 3, and so on) and of order irrelevance (that is, the concept that the number of objects in a set will be the same regardless of which object is used to begin the counting) – begin to make use of one-to-one correspondence in counting objects and matching groups of objects (e.g., one napkin for each of the people at the table)

– count backwards by 1's from 50 and any number less than 50, and count backwards by 10's from 100 and any number less than 100, using number lines and hundreds charts	Chapter 2: Lessons 1, 2 Chapter 4: Lessons 2, 6, 7, 8, Chapter Task Chapter 6: Lesson 5 Chapter 8: Lesson 7		**Topic 1: Counting** *Subtopic:* Counting Backwards by 1	– count backwards by 1's from 20 and any number less than 20 (e.g., count backwards from 18 to 11), with and without the use of concrete materials and number lines – count backwards from 20 by 2's and 5's, using a variety of tools (e.g., number lines, hundreds charts	– investigate the idea that quantity is greater when counting forwards and less when counting backwards (e.g., use manipulatives to create a quantity number line; move along a number line; move around on a hundreds carpet; play simple games on number-line game boards; build a structure using blocks, and describe what happens as blocks are added or removed)
– locate whole numbers to 100 on a number line and on a partial number line (e.g., locate 37 on a partial number line that goes from 34 to 41)	Chapter 2: Lessons 2, 5 Chapter 6: Lesson 5 Chapter 9: Lesson 3	Unit 2: Lesson 3	**Topic 1: Counting** *Subtopic:* Counting Forwards by 1 *Subtopic:* Counting Backwards by 1 *Subtopic:* Skip Counting	– use ordinal numbers to thirty-first in meaningful contexts (e.g., identify the days of the month on a calendar)	– use ordinal numbers in a variety of everyday contexts (e.g., line up toys and manipulatives, and identify the first, second, and so on; after reading a book, respond to the teacher's questions about who was the first or third person to come in the door; identify the first, seventh, or tenth person to arrive at school or in the group)

Number Sense and Numeration: Operational Sense					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– solve problems involving the addition and subtraction of whole numbers to 18, using a variety of mental strategies (e.g., "To add 6 + 8, I could double 6 and get 12 and then add 2 more to get 14.")	Chapter 4: Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, Chapter Task Chapter 13: Lesson 4 Chapter 14: Lesson 4	Unit 2: Lessons 4, 5, 6, 10 Unit 4: Lesson 1	**Topic 4: Adding** *Subtopic:* Decomposing and Recomposing *Subtopic:* Counting On *Subtopic:* Joining *Subtopic:* Part-	– solve a variety of problems involving the addition and subtraction of whole numbers to 20, using concrete materials and drawings (e.g.,	– investigate addition and subtraction in everyday activities through the use of manipulatives (e.g., interlocking cubes), visual models (e.g., a number line, tally marks, a hundreds carpet), or oral exploration (e.g., dramatizing of songs)

			Part-Whole **Topic 5: Subtracting** *Subtopic:* Decomposing *Subtopic:* Counting Back *Subtopic:* Separating *Subtopic:* Comparing *Subtopic:* Relating Addition and Subtraction	pictures, number lines)	
– describe relationships between quantities by using whole-number addition and subtraction (e.g., "If you ate 7 grapes and I ate 12 grapes, I can say that I ate 5 more grapes than you did, or you ate 5 fewer grapes than I did.")	Chapter 1: Lessons 6, 7, Chapter Task Chapter 4: Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, Chapter Task Chapter 6: Lessons 8, 9, Chapter Task Chapter 8: Lessons 7, 8, 9, Chapter Task Chapter 13: Lesson 4 Chapter 14: Lessons 4	Unit 2: Lessons 4, 6 Unit 4: Lessons 5, 6, 7, 8 Unit 7: Lessons 2, 4, 5, 6, 7	**Topic 4: Adding** *Subtopic:* Part-Part-Whole **Topic 5: Subtracting** *Subtopic:* Comparing *Subtopic:* Relating Addition and Subtraction		
– solve problems involving the addition and subtraction of two-digit numbers, with and without regrouping, using concrete materials (e.g., base ten materials, counters), student-generated	Chapter 6: Lessons 6, 7, 8, 9, 10, Chapter Task Chapter 8: Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, Chapter Task Chapter 14: Lessons 5, 6, Chapter Task	Unit 4: Lessons 3, 4, 5, 6, 7, 8 Unit 7: Lessons 2, 3, 4, 5, 6, 7	**Topic 4: Adding** *Subtopic:* Decomposing and Recomposing *Subtopic:* Counting On *Subtopic:* Joining *Subtopic:* Part-	– solve problems involving the addition and subtraction of single-digit whole numbers, using a variety of mental strategies (e.g., one	– investigate addition and subtraction in everyday activities through the use of manipulatives (e.g., interlocking cubes), visual models (e.g., a number line, tally marks, a hundreds carpet), or oral exploration (e.g., dramatizing of songs)

algorithms, and standard algorithms			Part-Whole **Topic 5: Subtracting** *Subtopic:* Decomposing *Subtopic:* Counting Back *Subtopic:* Separating *Subtopic:* Comparing *Subtopic:* Relating Addition and Subtraction	more than, one less than, counting on, counting back, doubles)	
– add and subtract money amounts to 100¢, using a variety of tools (e.g., concrete materials, drawings) and strategies (e.g., counting on, estimating, representing using symbols)	Chapter 4: Lesson 6 Chapter 6: Lesson 10 Chapter 8: Lesson 9 Chapter 9: Lesson 3 Chapter 10: Lesson 7, Chapter Task Chapter 14: Chapter Task	Unit 3: Lessons 6, 7 Unit 4: Lesson 3 Unit 7: Lesson 6		– add and subtract money amounts to 10¢, using coin manipulatives and drawings	
– represent and explain, through investigation using concrete materials and drawings, multiplication as the combining of equal groups (e.g., use counters to show that 3 groups of 2 is equal to 2 + 2 + 2 and to 3 × 2)	Chapter 9: Lessons Chapter 9: Lessons 1, 2, 3, 7, Chapter Task	Unit 10: Lessons 1, 2, 7, 8			
– represent and explain, through investigation using concrete materials and	Chapter 9: Lessons 4, 5, 6, 7, Chapter Task	Unit 3: Lesson 8 Unit 10: Lessons 3, 4, 7, 8			

drawings, division as the sharing of a quantity equally (e.g., "I can share 12 carrot sticks equally among 4 friends by giving each person 3 carrot sticks.")					

Measurement: Attributes, Units, and Measurement Sense					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* **Topics**	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– choose benchmarks – in this case, personal referents – for a centimetre and a metre (e.g. "My little finger is about as wide as one centimetre. A really big step is about one metre.") to help them perform measurement tasks	Chapter 5: Lessons 3, 4, Chapter Task	Unit 8: Lesson 3			
– estimate and measure length, height, and distance, using standard units (i.e., centimetre, metre) and non-standard units – record and represent measurements of length, height, and distance in a variety of ways (e.g., written, pictorial, concrete)	Chapter 5: Lessons 1, 2, 3, 4, Chapter Task Chapter 6: Lesson 2 Chapter 8: Lesson 4	Unit 8: Lessons 1, 2, 3, 4, 5, 9	**Topic 9: Length and Area** *Subtopic:* Comparing Length *Subtopic:* Measuring Length with Non-standard Units **Topic 9: Length and Area** *Subtopic:* Comparing Length *Subtopic:* Measuring Length with Non-standard Units	– demonstrate an understanding of the use of non-standard units of the same size (e.g., straws, index cards) for measuring – estimate, measure (i.e., by placing nonstandard units repeatedly, without overlaps or gaps), and record lengths, heights, and distances (e.g., a book is about 10	– compare and order two or more objects according to an appropriate measure (e.g., length, mass, area, temperature, capacity), and use measurement terms (e.g., hot/cold for temperature, small/medium/large for capacity, longer/shorter or thicker/thinner for length) – demonstrate, through investigation, an awareness of the use of different measurement tools for measuring different things (e.g., a balance is used for measuring mass, a tape measure for measuring length, a sandglass for measuring time) – demonstrate awareness of non-standard measuring devices (e.g., feet,

					paper clips wide; a pencil is about 3 toothpicks long)	hand spans, string, or cubes to measure length; hand claps to measure time; scoops of water or sand to measure capacity) and strategies for using them (e.g., place common objects end to end; use cubes to plan the length of a road at the sand table or the block centre; measure the distance between the classroom and the water fountain in number of footsteps)
- select and justify the choice of a standard unit (i.e., centimetre or metre) or a nonstandard unit to measure length (e.g. "I needed a fast way to check that the two teams would race the same distance, so I used paces.")	Chapter 5: Lessons 1, 2, 4, Chapter Task	Unit 8: Lessons 1, 4, 5, 9	**Topic 9: Length and Area** *Subtopic:* Measuring Length with Non-standard Units	– construct, using a variety of strategies, tools for measuring lengths, heights, and distances in non-standard units (e.g., footprints on cash register tape or on connecting cubes)	– demonstrate, through investigation, a beginning understanding of the use of non-standard units of the same size (e.g., straws, paper clips)	
– estimate, measure, and record the distance around objects, using non-standard units	Chapter 5: Lessons 6, 7, Chapter Task	Unit 8: Lessons 6, 9				
– estimate, measure, and record area, through investigation using a variety of non-standard units (e.g., determine the number of yellow pattern blocks it takes to cover an outlined shape)	Chapter 7: Lessons 8, 9, Chapter Task	Unit 8: Lessons 7, 8, 9	**Topic 9: Length and Area** *Subtopic:* Comparing Area	– estimate, measure (i.e., by minimizing overlaps and gaps), and describe area, through investigation using nonstandard units (e.g., "It took about 15 index cards to cover my desk, with only a little bit	– compare and order two or more objects according to an appropriate measure (e.g., length, mass, area, temperature, capacity), and use measurement terms (e.g., hot/cold for temperature, small/medium/large for capacity, longer/shorter or thicker/thinner for length)	

					of space left over.")	
– estimate, measure, and record the capacity and/or mass of an object, using a variety of non-standard units (e.g., "I used the pan balance and found that the stapler has the same mass as my pencil case.")	Chapter 11: Lessons 7, 8, 9, 10, Chapter Task	Unit 11: Lessons 1, 2, 3, 4, 5, 6	**Topic 10: Mass and Capacity** *Subtopic:* Comparing Mass *Subtopic:* Comparing Capacity	– estimate, measure, and describe the capacity and/or mass of an object, through investigation using non-standard units (e.g., "My journal has the same mass as 13 pencils." "The juice can has the same capacity as 4 pop cans.")	– compare and order two or more objects according to an appropriate measure (e.g., length, mass, area, temperature, capacity), and use measurement terms (e.g., hot/cold for temperature, small/medium/large for capacity, longer/shorter or thicker/thinner for length) – demonstrate, through investigation, an awareness of the use of different measurement tools for measuring different things (e.g., a balance is used for measuring mass, a tape measure for measuring length, a sandglass for measuring time) – demonstrate awareness of non-standard measuring devices (e.g., feet, hand spans, string, or cubes to measure length; hand claps to measure time; scoops of water or sand to measure capacity) and strategies for using them (e.g., place common objects end to end; use cubes to plan the length of a road at the sand table or the block centre; measure the distance between the classroom and the water fountain in number of footsteps)
– construct tools for measuring time intervals in non-standard units (e.g., a particular bottle of water takes about five seconds to empty)	Chapter 10: Lessons 2, 3, 4	Unit 3: Lessons 2, 3, 8	**Topic 9: Length and Area** *Subtopic:* Measuring Length with Non-standard Units	– estimate, measure, and describe the passage of time, through investigation using nonstandard units (e.g., number of	– demonstrate, through investigation, an awareness of the use of different measurement tools for measuring different things (e.g., a balance is used for measuring mass, a tape measure for measuring length, a sandglass for measuring time) – demonstrate awareness of non-

				sleeps; number of claps; number of flips of a sand timer)	standard measuring devices (e.g., feet, hand spans, string, or cubes to measure length; hand claps to measure time; scoops of water or sand to measure capacity) and strategies for using them (e.g., place common objects end to end; use cubes to plan the length of a road at the sand table or the block centre; measure the distance between the classroom and the water fountain in number of footsteps)
– tell and write time to the quarter-hour, using demonstration digital and analogue clocks (e.g., "My clock shows the time recess will start [10:00], and my friend's clock shows the time recess will end [10:15].")	Chapter 10: Lessons 2, 3, 4, 5, Chapter Task	Unit 3: Lessons 2, 3, 8		– read demonstration digital and analogue clocks, and use them to identify benchmark times (e.g., times for breakfast, lunch, dinner; the start and end of school; bedtime) and to tell and write time to the hour and half-hour in everyday settings	
– describe how changes in temperature affect everyday experiences (e.g., the choice of clothing to wear) – use a standard thermometer to determine whether temperature is rising or falling (e.g., the temperature of water, air)	Chapter 3: Lesson 4 Chapter 13: Lessons 1, 2	Unit 3: Lessons 5, 8		– relate temperature to experiences of the seasons (e.g., "In winter, we can skate because it's cold enough for there to be ice.")	– compare and order two or more objects according to an appropriate measure (e.g., length, mass, area, temperature, capacity), and use measurement terms (e.g., hot/cold for temperature, small/medium/large for capacity, longer/shorter or thicker/thinner for length)

Measurement: Measurement Relationships					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2 Topics*	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
				– compare and order objects by their linear measurements, using the same non-standard unit – use the metre as a benchmark for measuring length, and compare the metre with non-standard units	
– describe, through investigation, the relationship between the size of a unit of area and the number of units needed to cover a surface	Chapter 7: Lessons 8, 9, Chapter Task		**Topic 9: Length and Area** *Subtopic:* Comparing Area	– describe, through investigation using concrete materials, the relationship between the size of a unit and the number of units needed to measure length	
– compare and order a collection of objects by mass and/or capacity, using non-standard units (e.g. "The coffee can holds more sand than the soup can, but the same amount as the small pail.")	Chapter 11: Lessons 8, 10, Chapter Task	Unit 11: Lessons 1, 4, 5, 6	**Topic 10: Mass and Capacity** *Subtopic:* Comparing Mass *Subtopic:* Comparing Capacity	– compare two or three objects using measurable attributes (e.g., length, height, width, area, temperature, mass, capacity), and describe the objects using relative terms	

– determine, through investigation, the relationship between days and weeks and between months and years	Chapter 2: Lessons 1, 2 Chapter 3: Lesson 4 Chapter 10: Lesson 1	Unit 3: Lesson 4		– name the months of the year in order, and read the date on a calendar	

Geometry and Spatial Sense: Geometric Properties

Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– distinguish between the attributes of an object that are geometric properties (e.g., number of sides, number of faces) and the attributes that are not geometric properties (e.g., colour, size, texture), using a variety of tools (e.g., attribute blocks, geometric solids, connecting cubes)	Chapter 1: Lessons 2, 3 Chapter 7: Lessons 1, 2, 4, Chapter Task Chapter 11: Lessons 1, 2, 5, Chapter Task	Unit 6: Lessons 1, 2, 6, 7 Unit 9: Lessons 2, 3, 8	**Topic 7: 3-D Objects** *Subtopic:* Describing and Sorting 3-D Objects *Subtopic:* Building with 3-D Objects *Subtopic:* **Topic 8: 2-D Shapes** *Subtopic:* Describing and Sorting 2-D Shapes *Subtopic:* Building with 2-D Shapes	– identify and describe common two dimensional shapes (e.g., circles, triangles, rectangles, squares) and sort and classify them by their attributes (e.g., colour; size; texture; number of sides), using concrete materials and pictorial representations (e.g., "I put all the triangles in one group. Some are long and skinny, and some are short and fat, but they all have three sides.")	– explore, sort, and compare traditional and non-traditional two-dimensional shapes and three-dimensional figures (e.g., compare equilateral triangles with triangles that are not equilateral; sort different sizes of boxes, attribute blocks, pattern blocks, a variety of triangles, shapes with three curved sides, objects that create an open shape with three lines) – identify and describe, using common geometric terms, two-dimensional shapes (e.g., triangle) and three-dimensional figures (e.g., cone) through investigations with concrete materials
– identify and describe various polygons (i.e., triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons) and	Chapter 1: Lesson 2 Chapter 7: Lessons 1, 2, 4, Chapter Task	Unit 9: Lessons 1, 2, 3, 8	**Topic 8: 2-D Shapes** *Subtopic:* Describing and Sorting 2-D Shapes	– identify and describe common two dimensional shapes (e.g., circles, triangles,	– explore, sort, and compare traditional and non-traditional two-dimensional shapes and three-dimensional figures (e.g., compare equilateral triangles with triangles that are not equilateral; sort

sort and classify them by their geometric properties (i.e., number of sides or number of vertices), using concrete materials and pictorial representations (e.g., "I put all the figures with five or more vertices in one group, and all the figures with fewer than five vertices in another group.")			*Subtopic:* Building with 2-D Shapes	rectangles, squares) and sort and classify them by their attributes (e.g., colour; size; texture; number of sides), using concrete materials and pictorial representations (e.g., "I put all the triangles in one group. Some are long and skinny, and some are short and fat, but they all have three sides.")	different sizes of boxes, attribute blocks, pattern blocks, a variety of triangles, shapes with three curved sides, objects that create an open shape with three lines) – identify and describe, using common geometric terms, two-dimensional shapes (e.g., triangle) and three-dimensional figures (e.g., cone) through investigations with concrete materials
– identify and describe various three-dimensional figures (i.e., cubes, prisms, pyramids) and sort and classify them by their geometric properties (i.e., number and shape of faces), using concrete materials (e.g., "I separated the figures that have square faces from the ones that don't.")	Chapter 11: Lessons 1, 2, 3, 4, 5, 6, Chapter Task	Unit 6: Lessons 1, 2, 3, 5, 6, 7	**Topic 7: 3-D Objects** *Subtopic:* Describing and Sorting 3-D Objects *Subtopic:* Building with 3-D Objects	– identify and describe common three-dimensional figures (e.g., cubes, cones, cylinders, spheres, rectangular prisms) and sort and classify them by their attributes (e.g., colour; size; texture; number and shape of faces), using concrete materials and pictorial representations (e.g., "I put the cones and the	– build three-dimensional structures using a variety of materials, and begin to recognize the three-dimensional figures that the structure contains – investigate the relationship between two-dimensional shapes and three-dimensional figures in objects that they have made

				cylinders in the same group because they all have circles on them.") – describe similarities and differences between an everyday object and a three-dimensional figure (e.g., "A water bottle looks like a cylinder, except the bottle gets thinner at the top.") – trace and identify the two-dimensional faces of three-dimensional figures, using concrete models (e.g., "I can see squares on the cube.")	
– create models and skeletons of prisms and pyramids, using concrete materials (e.g., cardboard; straws and modelling clay), and describe their geometric properties (i.e., number and shape of faces, number of edges)	Chapter 11: Lessons 3, 4, 6, Chapter Task	Unit 6: Lessons 4, 5, 6, 7			

Grade 2 Ontario expectations	Nelson Mathematics 2	Math Makes Sense 2	Leaps and Bounds 1/2 Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– locate the line of symmetry in a two-dimensional shape (e.g., by paper folding; by using a Mira)	Chapter 7: Lessons 3, 4	Unit 9: Lessons 4, 5, 6, 8		– locate shapes in the environment that have symmetry, and describe the symmetry	

Geometry and Spatial Sense: Geometric Relationships

Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– compose and describe pictures, designs, and patterns by combining two-dimensional shapes (e.g. "I made a picture of a flower from one hexagon and six equilateral triangles.")	Chapter 7: Lessons 1, 2	Unit 9: Lessons 1	**Topic 8: 2-D Shapes** *Subtopic:* Building with 2-D Shapes	– compose patterns, pictures, and designs, using common two-dimensional shapes	– compose pictures and build designs, shapes, and patterns in two-dimensional shapes, and decompose two-dimensional shapes into smaller shapes, using various tools or strategies (e.g., sand at the sand table, stickers, geoboards, pattern blocks, a computer program)
– compose and decompose two-dimensional shapes			**Topic 8: 2-D Shapes** *Subtopic:* Building with 2-D Shapes	– identify and describe shapes within other shapes (e.g., shapes within a geometric design)	– compose pictures and build designs, shapes, and patterns in two-dimensional shapes, and decompose two-dimensional shapes into smaller shapes, using various tools or strategies (e.g., sand at the sand table, stickers, geoboards, pattern blocks, a computer program)
– cover an outline puzzle with two-dimensional shapes in more than one way		Unit 9: Lesson 1	**Topic 8: 2-D Shapes** *Subtopic:* Building with 2-D Shapes	– cover outline puzzles with two-dimensional shapes (e.g., pattern blocks, tangrams) (Sample problem: Fill in the outline of a boat with tangram pieces.)	
– build a structure using three-dimensional figures, and describe the two-	Chapter 11: Lessons 3, 4, 6, Chapter Task	Unit 6: Lessons 3, 4, 7	**Topic 7: 3-D Objects** *Subtopic:* Building	– build three-dimensional structures using	– build three-dimensional structures using a variety of materials, and begin to recognize the three-dimensional figures

dimensional shapes and three-dimensional figures in the structure (e.g. "I used a box that looks like a triangular prism to build the roof of my house.")			with 3-D Objects	concrete materials, and describe the two-dimensional shapes the structures contain	that the structure contains
Geometry and Spatial Sense: Location and Movement					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* **Topics**	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– describe the relative locations (e.g., beside, two steps to the right of) and the movements of objects on a map (e.g. "The path shows that he walked around the desk, down the aisle, and over to the window.") – draw simple maps of familiar settings, and describe the relative locations of objects on the maps	Chapter 6: Lesson 6 Chapter 7: Lesson 7	Unit 9: Lesson 7	**Topic 7: 3-D Objects** *Subtopic:* Describing Positions	– describe the relative locations of objects or people using positional language (e.g., over, under, above, below, in front of, behind, inside, outside, beside, between, along) – describe the relative locations of objects on concrete maps created in the classroom	– demonstrate an understanding of basic spatial relationships and movements (e.g., use above/below, near/far, in/out; use these words while retelling a story)
– create and describe symmetrical designs using a variety of tools (e.g., pattern blocks, tangrams, paper and pencil)	Chapter 7: Lessons 3, 4	Unit 9: Lessons 4, 5, 6, 8		– create symmetrical designs and pictures, using concrete materials (e.g., pattern blocks, connecting cubes, paper for folding), and describe the relative locations of	

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| | | | | | the parts | |

contexts (e.g., a geometric pattern on wallpaper, a rhythm pattern in music, a number pattern when counting dimes)	Chapter 2: Lessons 1, 4 Chapter 6: Lesson 10, Chapter Task Chapter 14: Lessons 2, 3, 6, Chapter Task		**Topic 6: Repeating Patterns** *Subtopic:* Identifying and Describing Patterns *Subtopic:* Extending Patterns	investigation, geometric repeating patterns involving one attribute (e.g., colour, size, shape, thickness, orientation)	materials, pattern blocks, a hundreds chart, toys, bottle tops, buttons, toothpicks) and actions (e.g., physical actions such as clapping, jumping, tapping) – identify and describe informally the repeating nature of patterns in everyday contexts (e.g., patterns in nature, clothing, floor tiles, literature, schedules), using oral expressions (e.g.,"goes before", "goes after","morning, noon, and night", "the four seasons") and gestures (e.g., pointing, nodding)
– represent a given growing or shrinking pattern in a variety of ways (e.g., using pictures, actions, colours, sounds, numbers, letters, number lines, bar graphs)	Chapter 1: Lessons 4, 5, 6, 7, Chapter Task Chapter 2: Lessons 1, 2, 4, 6, 7 Chapter 6: Lessons 5, 6 Chapter 14: Lesson 3, Chapter Task	Unit 2: Lessons 9, 10	**Topic 1: Counting** *Subtopic:* Skip Counting	– represent a given repeating pattern in a variety of ways (e.g., pictures, actions, colours, sounds, numbers, letters)	– identify, extend, reproduce, and create repeating patterns through investigation, using a variety of materials (e.g., attribute materials, pattern blocks, a hundreds chart, toys, bottle tops, buttons, toothpicks) and actions (e.g., physical actions such as clapping, jumping, tapping)
– create a repeating pattern by combining two attributes (e.g., colour and shape; colour and size)	Chapter 1: Lessons 1, 3	Unit 1: Lessons 2, 3, 4, 5	**Topic 6: Repeating Patterns** *Subtopic:* Creating Patterns	– create a repeating pattern involving one attribute (e.g., colour, size, shape, sound)	– identify, extend, reproduce, and create repeating patterns through investigation, using a variety of materials (e.g., attribute materials, pattern blocks, a hundreds chart, toys, bottle tops, buttons, toothpicks) and actions (e.g., physical actions such as clapping, jumping, tapping)
– create growing or shrinking patterns	Chapter 1: Lessons 4, 5, 6, 7, Chapter Task	Unit 2: Lesson 9, 10	**Topic 1: Counting** *Subtopic:* Skip Counting	– create a repeating pattern involving one attribute (e.g., colour, size, shape, sound)	– identify, extend, reproduce, and create repeating patterns through investigation, using a variety of materials (e.g., attribute materials, pattern blocks, a hundreds chart, toys, bottle tops, buttons, toothpicks) and actions (e.g., physical

					actions such as clapping, jumping, tapping)
– 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)	Chapter 1: Lessons 1, 3, 4, 5, 6, 7, Chapter Task Chapter 7: Lesson 6	Unit 1: Lessons 2, 3, 4, 5	**Topic 6: Repeating Patterns** *Subtopic:* Identifying and Describing Patterns *Subtopic:* Extending Patterns *Subtopic:* Creating Patterns	– identify a rule for a repeating pattern (e.g., "We're lining up boy, girl, boy, girl, boy, girl.")	– identify and describe informally the repeating nature of patterns in everyday contexts (e.g., patterns in nature, clothing, floor tiles, literature, schedules), using oral expressions (e.g.,"goes before", "goes after","morning, noon, and night", "the four seasons") and gestures (e.g., pointing, nodding)

Patterning and Algebra: Expressions and Equality					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* **Topics**	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– demonstrate an understanding of the concept of equality by partitioning whole numbers to 18 in a variety of ways, using concrete materials (e.g., starting with 9 tiles and adding 6 more tiles gives the same result as starting with 10 tiles and adding 5 more tiles)	Chapter 4: Lessons 3, 4, 5, 9, Chapter Task	Unit 2: Lessons 1, 11 Unit 4: Lessons 1, 3, 4, 8	**Topic 4: Adding** *Subtopic:* Decomposing and Recomposing **Topic 5: Subtracting** *Subtopic:* Decomposing *Subtopic:* Relating Addition and Subtraction		
– represent, through investigation with concrete materials and pictures, two number expressions that are equal, using the equal sign (e.g. "I can break a train of 10 cubes into 4 cubes and 6 cubes. I can also break 10	Chapter 4: Lessons 3, 4, 5, 7, 8, 9, Chapter Task Chapter 6: Lessons 7, 8, 9, Chapter Task Chapter 8: Lessons 1, 3, 5	Unit 2: Lessons 1, 11 Unit 7: Lessons 3	**Topic 3: Comparing Whole Numbers** *Subtopic:* Comparing Numbers **Topic 4: Adding** *Subtopic:*	– create a set in which the number of objects is greater than, less than, or equal to the number of objects in a given set – demonstrate	

cubes into 7 cubes and 3 cubes. This means 4 + 6 = 7 + 3.")			Decomposing and Recomposing **Topic 5: Subtracting** *Subtopic:* Decomposing *Subtopic:* Comparing	examples of equality, through investigation, using a "balance" model – determine, through investigation using a "balance" model and whole numbers to 10, the number of identical objects that must be added or subtracted to establish equality	
– determine the missing number in equations involving addition and subtraction to 18, using a variety of tools and strategies (e.g., modelling with concrete materials, using guess and check with and without the aid of a calculator)	Chapter 4: Lesson 8, Chapter Task Chapter 8: Lessons 4, 5	Unit 2: Lessons 5, 11 Unit 4: Lessons 4, 6, 8	**Topic 5: Subtracting** *Subtopic:* Relating Addition and Subtraction		
– identify, through investigation, and use the commutative property of addition (e.g., create a train of 10 cubes by joining 4 red cubes to 6 blue cubes, or by joining 6 blue cubes to 4 red cubes) to facilitate computation with whole numbers (e.g., "I know that 9 + 8 + 1 = 9 + 1 + 8. Adding becomes easier	Chapter 4: Lessons 4, 5, 9, Chapter Task	Unit 2: Lessons 6, 11 Unit 4: Lessons 1	**Topic 4: Adding** *Subtopic:* Decomposing and Recomposing *Subtopic:* Part-Part-Whole **Topic 5: Subtracting** *Subtopic:* Relating Addition and Subtraction		

because that gives 10 + 8 = 18.")					
– identify, through investigation, the properties of zero in addition and subtraction (i.e., when you add zero to a number, the number does not change; when you subtract zero from a number, the number does not change)			**Topic 4: Adding** *Subtopic:* Decomposing and Recomposing *Subtopic:* Part-Part-Whole		

Data Management and Probability: Collection and Organization of Data

Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– demonstrate an ability to organize objects into categories, by sorting and classifying objects using two attributes simultaneously (e.g., sort attribute blocks by colour and shape at the same time)	Chapter 1: Lessons 2, 3 Chapter 3: Lessons 1, 2, 3, 4, 5, 7, Chapter Task Chapter 7: Lesson 2 Chapter 11: Lessons 2, 4	Unit 1: Lessons 1, 5, 6 Unit 6: Lesson 1 Unit 9: Lesson 2	**Topic 7: 3-D Objects** *Subtopic:* Describing and Sorting 3-D Objects **Topic 8: 2-D Shapes** *Subtopic:* Describing and Sorting 2-D Shapes **Topic 11: Sorting and Displaying Data** *Subtopic:* Sorting	– demonstrate an ability to organize objects into categories by sorting and classifying objects using one attribute (e.g., colour, size), and by describing informal sorting experiences (e.g., helping to put away groceries)	– sort, classify, and compare objects and describe the attributes used (e.g., initially: sort them into piles or collections on the basis of a common attribute; eventually: state the rule they used to sort, classify, or compare)
– gather data to answer a question, using a simple survey with a limited number of responses (e.g., What is your favourite season?; How many letters are in your first name?)	Chapter 3: Lessons 4, 5, 6, 7, 8, Chapter Task	Unit 5: Lessons 4, 6	**Topic 11: Sorting and Displaying Data** *Subtopic:* Creating and Interpreting Graphs		

Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	Grade 1 Ontario expectations	Kindergarten Ontario expectations
– collect and organize primary data (e.g., data collected by the class) that is categorical or discrete (i.e., that can be counted, such as the number of students absent), and display the data using one-to-one correspondence in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), with appropriate titles and labels and with labels ordered appropriately along horizontal axes, as needed	Chapter 1: Lessons 2, 5, 6, 7 Chapter 3: Lessons 1, 3, 4, 5, 6, 7, Chapter Task Chapter 11: Lesson 10 Chapter 13: Lessons 3, 4, 5, 6, Chapter 3 Task	Unit 5: Lessons 3, 4, 5, 6 Unit 8: Lesson 5 Unit 11: Lesson 1	**Topic 11: Sorting and Displaying Data** *Subtopic:* Sorting *Subtopic:* Creating and Interpreting Graphs	– collect and organize primary data (e.g., data collected by the class) that is categorical (i.e., that can be organized into categories based on qualities such as colour or hobby) and display the data using one-to-one correspondence, prepared templates of concrete graphs and pictographs (with titles and labels), and a variety of recording methods (e.g., arranging objects, placing stickers, drawing pictures, making tally marks)	– collect objects or data and make representations of their observations, using concrete graphs (e.g., conduct simple surveys and use graphs to represent the data collected from questions posed; use a variety of graphs, such as graphs using people to represent things, bar graphs, pictographs; use tally charts)

Data Management and Probability: Data Relationships					
Grade 2 Ontario expectations	*Nelson Mathematics 2*	*Math Makes Sense 2*	*Leaps and Bounds 1/2* Topics	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– read primary data presented in concrete graphs, pictographs, line plots, simple bar graphs, and other graphic organizers (e.g., tally charts, diagrams), and describe the	Chapter 1: Lessons 2, 5, 6, 7 Chapter 3: Lessons 1, 3, 4, 5, 6, 7, 8, Chapter Task Chapter 11: Lesson 10	Unit 5: Lessons 3, 4, 5, 6 Unit 8: Lesson 5 Unit 11: Lesson 1	**Topic 11: Sorting and Displaying Data** *Subtopic:* Sorting *Subtopic:* Creating and Interpreting Graphs	– read primary data presented in concrete graphs and pictographs, and describe the data using comparative	

data using mathematical language (e.g., "Our bar graph shows that 4 more students walk to school than take the bus.")	Chapter 13: Lessons 3, 4, 5, 6, Chapter Task			language (e.g., more students chose summer than winter as their single favourite season)	
– pose and answer questions about class-generated data in concrete graphs, pictographs, line plots, simple bar graphs, and tally charts (e.g., Which is the least favourite season?)	Chapter 3: Lessons 3, 5, 6, 7, 8, Chapter Task	Unit 5: Lessons 3, 4, 5, 6 Unit 11: Lesson 1	**Topic 11: Sorting and Displaying Data** *Subtopic:* Creating and Interpreting Graphs	– pose and answer questions about collected data	– respond to and pose questions about data collection and graphs
– distinguish between numbers that represent data values (e.g. "I have 4 people in my family.") and numbers that represent the frequency of an event (e.g. "There are 10 children in my class who have 4 people in their family.")	Chapter 3: Lesson 2				
– demonstrate an understanding of data displayed in a graph (e.g., by telling a story, by drawing a picture), by comparing different parts of the data and by making statements about the data as a whole (e.g. "I looked at the graph that shows how many students were absent each month. More students were away in January than in	Chapter 3: Lessons 1, 2, 3, 4, 5, 6, 7, 8, Chapter Task Chapter 11: Lesson 10	Unit 5: Lessons 3, 4, 5 Unit 8: Lesson 5 Unit 11: Lesson 1	**Topic 11: Sorting and Displaying Data** *Subtopic:* Creating and Interpreting Graphs		

Data Management and Probability: Probability					
Grade 2 Ontario expectations	***Nelson Mathematics 2***	***Math Makes Sense 2***	***Leaps and Bounds 1/2* Topics**	**Grade 1 Ontario expectations**	**Kindergarten Ontario expectations**
– describe probability as a measure of the likelihood that an event will occur, using mathematical language (i.e., impossible, unlikely, less likely, equally likely, more likely, certain) (e.g. "If I take a new shoe out of a box without looking, it's equally likely that I will pick the left shoe or the right shoe.")	Chapter 13: Lessons 1, 2, 3, 4, 5, 6, Chapter Task	Unit 5: Lessons 1, 2, 3, 6		– describe the likelihood that everyday events will occur, using mathematical language (i.e., impossible, unlikely, less likely, more likely, certain) (e.g., "It's unlikely that I will win the contest shown on the cereal box.")	– use mathematical language in informal discussions to describe probability (e.g., chance, never, sometimes, always)
– describe the probability that an event will occur (e.g., getting heads when tossing a coin, landing on red when spinning a spinner), through investigation with simple games and probability experiments and using mathematical language (e.g., "I tossed 2 coins at the same time, to see how often I would get 2 heads. I found that getting a head and a tail was more likely than getting 2 heads.")	Chapter 13: Lessons 1, 2, 3, 4, 5, 6, Chapter Task	Unit 5: Lessons 2, 3, 6			