



Correlation to Ontario Curriculum and Grade 5 Classroom Resources

Note: *Leaps and Bounds 5/6* is a math intervention resource which includes content from Grades 3 to 5 that will prepare students who are struggling for work at the Grade 5 or 6 level.

GRADE 5 Core Resources - Correlation with Grade 5 Ontario core resources			INTERVENTION Resources and Expectations Correlation between <i>Leaps and Bounds 5/6</i> and prerequisite expectations from Ontario Grades 3 and 4.		
Number Sense and Numeration: Quantity Relationships					
Grade 5 Ontario expectations	<i>Nelson Mathematics 5</i>	<i>Math Makes Sense 5</i>	<i>Leaps and Bounds 5/6</i> Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– represent, compare, and order whole numbers and decimal numbers from 0.01 to 100 000, using a variety of tools	Ch. 2 Getting Started, 2.2, 2.4, 2.6, 2.10, Ch. 2 Task, Ch. 5 Mental Imagery, 12.5	2.1, 4.1, 4.3	Representing Whole Numbers <i>Pathway 1:</i> Representing Numbers to 100 000 <i>Pathway 2:</i> Representing Numbers to 10 000 <i>Pathway 3:</i> Representing Numbers to 1000 <i>Pathway 4:</i> Multiplying and Dividing by 10s Comparing Whole Numbers <i>Pathway 1:</i> Comparing Numbers to 100 000 <i>Pathway 2:</i> Comparing Numbers to 10 000 <i>Pathway 3:</i> Comparing Numbers to 1000	– represent, compare, and order whole numbers to 10 000, using a variety of tools	– represent, compare, and order whole numbers to 1000, using a variety of tools – compose and decompose three-digit numbers into hundreds, tens, and ones in a variety of ways, using concrete materials
– demonstrate an understanding of place value in whole numbers and decimal numbers from 0.01 to 100 000, using a variety of tools and strategies	Ch. 2 Getting Started, 2.1, Ch. 2 Curious Math (Keep on Doubling), Ch. 2 Curious Math (Lots of Money), 2.2, 2.3, Ch. 2 Curious Math (Easy as 1, 2, 3), 2.5, 2.6, 2.7, 2.8, 2.10, Ch. 2 Task	2.1, 4.1	Representing Whole Numbers <i>Pathway 1:</i> Representing Numbers to 100 000 <i>Pathway 2:</i> Representing Numbers to 10 000 <i>Pathway 3:</i> Representing Numbers to 1000 <i>Pathway 4:</i> Multiplying and Dividing by 10s Representing Decimals <i>Pathway 1:</i> Representing Thousandths <i>Pathway 2:</i> Representing Hundredths <i>Pathway 3:</i> Representing Tenths	– demonstrate an understanding of place value in whole numbers and decimal numbers from 0.1 to 10 000, using a variety of tools and strategies	– identify and represent the value of a digit in a number according to its position in the number – represent and explain, using concrete materials, the relationship among the numbers 1, 10, 100, and 1000

Number Sense and Numeration: Quantity Relationships ctd					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– read and print in words whole numbers to ten thousand, using meaningful contexts	2.2, Ch. 2 Task	2.1	Representing Whole Numbers Pathway 1: Representing Numbers to 100 000 Pathway 2: Representing Numbers to 10 000 Pathway 3: Representing Numbers to 1000	– read and print in words whole numbers to one thousand, using meaningful contexts	– read and print in words whole numbers to one hundred, using meaningful contexts
– round decimal numbers to the nearest tenth, in problems arising from real-life situations	2.9, Ch. 2 Task	4.4		– round four-digit whole numbers to the nearest ten, hundred, and thousand, in problems arising from real-life situations	– round two-digit numbers to the nearest ten, in problems arising from real-life situations
– represent, compare, and order fractional amounts with like denominators, including proper and improper fractions and mixed numbers, using a variety of tools and using standard fractional notation	Ch. 12 Getting Started, 12.1, 12.2, 12.4, Ch. 12 Math Game (Target 1), Ch. 12 Task	8.2, 8.3	Representing Fractions Pathway 1: Improper Fractions: Parts of Sets Pathway 2: Improper Fractions: Parts of Wholes Pathway 3: Proper Fractions: Parts of Sets Pathway 4: Proper Fractions: Parts of Wholes Comparing Fractions Pathway 1: Fractions More and Less Than 1 Pathway 2: Equivalent Fractions Pathway 3: Comparing: Same Numerators Pathway 4: Comparing: Same Denominators Pathway 5: Comparing Fractions to 1/2 and 1	– represent fractions using concrete materials, words, and standard fractional notation, and explain the meaning of the denominator as the number of the fractional parts of a whole or a set, and the numerator as the number of fractional parts being considered – compare and order fractions (i.e., halves, thirds, fourths, fifths, tenths) by considering the size and the number of fractional parts – compare fractions to the benchmarks of 0, 1/2, and 1	– divide whole objects and sets of objects into equal parts, and identify the parts using fractional names, without using numbers in standard fractional notation
– demonstrate and explain the concept of equivalent fractions, using concrete materials	Ch. 12 Getting Started, 12.1, 12.2, 12.6, Ch. 12 Math Game (Target 1)	8.1	Comparing Fractions Pathway 2: Equivalent Fractions	– demonstrate and explain the relationship between equivalent fractions, using concrete materials and drawings	

Number Sense and Numeration: Quantity Relationships ctd					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– demonstrate and explain equivalent representations of a decimal number, using concrete materials and drawings	2.8, Ch. 2 Math Game (Decimal Snap)	8.4, 8.5	Representing Decimals <i>Pathway 2: Representing Hundredths</i> <i>Pathway 3: Representing Tenths</i>	– represent, compare, and order decimal numbers to tenths, using a variety of tools and using standard decimal notation	
– read and write money amounts to \$1000	2.11	6.4	Multiplying Whole Numbers <i>Pathway 1: Multiplying Two-Digit Numbers</i> <i>Pathway 2: Multiplying by One-Digit Numbers</i> <i>Pathway 3: Multiplication Fact Strategies</i> Dividing Whole Numbers <i>Pathway 1: Dividing Three-Digit Numbers</i> <i>Pathway 2: Dividing Two-Digit Numbers</i> <i>Pathway 3: Division Fact Strategies</i>	– read and represent money amounts to \$100	– represent and describe the relationships between coins and bills up to \$10 – estimate, count, and represent (using the \$ symbol) the value of a collection of coins and bills with a maximum value of \$10
– solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 100 000	Ch. 2 Getting Started, 2.1, Ch. 2 Ch. 2 Curious Math (Lots of Money), 2.2, 2.3, 2.4, 2.5, 2.6, Ch. 2 Task	2.1 with supporting BLM	Relating Situations to Operations <i>Pathway 1: Division Situations</i> <i>Pathway 2: Multiplication Situations</i> <i>Pathway 3: Subtraction Situations</i>	– solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 10 000	– solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 1000
Number Sense and Numeration: Counting					
– count forward by hundredths from any decimal number expressed to two decimal places, using concrete materials and number lines	2.7, 2.9	4.1 with supporting TG note	Representing Decimals <i>Pathway 2: Representing Hundredths</i> <i>Pathway 3: Representing Tenths</i> Comparing Decimals <i>Pathway 3: Comparing Tenths and Hundredths</i>	– count forward by halves, thirds, fourths, and tenths to beyond one whole, using concrete materials and number lines – count forward by tenths from any decimal number expressed to one decimal place, using concrete materials and number lines	– count forward by 1's, 2's, 5's, 10's, and 100's to 1000 from various starting points, and by 25's to 1000 starting from multiples of 25, using a variety of tools and strategies – count backwards by 2's, 5's, and 10's from 100 using multiples of 2, 5, and 10 as starting points, and count backwards by 100's from 1000 and any number less than 1000, using a variety of tools and strategies

Number Sense and Numeration: Operational Sense					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– solve problems involving the addition, subtraction, and multiplication of whole numbers, using a variety of mental strategies	Ch. 2 Mental Math, Ch. 2 Mental Math, Ch. 3 Mental Math, Ch. 4 Getting Started, 4.1, 4.4, 4.5, Ch. 4 Mental Math, Ch. 6 Getting Started, 6.1, 6.3, 6.4, 6.5, 6.9, Ch. 6 Mental Math, Ch. 9 Mental Math, Ch. 12 Mental Math	2.2, 2.5, 2.9, 10.1	<p>Adding and Subtracting <i>Pathway 1: Different Numbers of Digits</i> <i>Pathway 2: Same Number of Digits</i> <i>Pathway 3: Using Mental Math to Subtract</i> <i>Pathway 4: Using Mental Math to Add</i></p> <p>Multiplying Whole Numbers <i>Pathway 1: Multiplying Two-Digit Numbers</i> <i>Pathway 2: Multiplying by One-Digit Numbers</i> <i>Pathway 3: Multiplication Fact Strategies</i></p> <p>Dividing Whole Numbers <i>Pathway 1: Dividing Three-Digit Numbers</i> <i>Pathway 2: Dividing Two-Digit Numbers</i> <i>Pathway 3: Division Fact Strategies</i></p> <p>Relating Situations to Operations <i>Pathway 1: Division Situations</i> <i>Pathway 2: Multiplication Situations</i> <i>Pathway 3: Subtraction Situations</i></p>	– add and subtract two-digit numbers, using a variety of mental strategies – solve problems involving the addition and subtraction of four-digit numbers, using student-generated algorithms and standard algorithms – add and subtract money amounts by making simulated purchases and providing change for amounts up to \$100, using a variety of tools	– solve problems involving the addition and subtraction of two-digit numbers, using a variety of mental strategies – add and subtract three-digit numbers, using concrete materials, student generated algorithms, and standard algorithms – add and subtract money amounts, using a variety of tools, to make simulated purchases and change for amounts up to \$10
– add and subtract decimal numbers to hundredths, including money amounts, using concrete materials, estimation, and algorithms	4.6, 4.7, 4.8, 4.9, Ch. 4 Task	4.6, 4.7, 6.5	<p>Decimal Computation <i>Pathway 1: Multiply and Divide by 10 or 100</i> <i>Pathway 2: Add and Subtract to Thousandths</i> <i>Pathway 3: Add and Subtract Thousandths</i> <i>Pathway 4: Add and Subtract to Hundredths</i> <i>Pathway 5: Add and Subtract Tenths or Hundredths</i></p>	– add and subtract decimal numbers to tenths, using concrete materials and student-generated algorithms	

Number Sense and Numeration: Operational Sense ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– multiply two-digit whole numbers by two-digit whole numbers, using estimation, student-generated algorithms, and standard algorithms	Ch. 6 Getting Started, 6.1, 6.2, 6.4, 6.5, Ch. 6 Curious Math (Array Multiplication), Ch. 6 Math Game (Rolling Products), 6.9, Ch. 6 Task, Ch. 9 Getting Started	2.10, 2.13 with supporting TG note	Multiplying Whole Numbers <i>Pathway 1: Multiplying Two-Digit Numbers</i> <i>Pathway 2: Multiplying by One-Digit Numbers</i> <i>Pathway 3: Multiplication Fact Strategies</i>	– multiply to 9×9 and divide to $81 \div 9$, using a variety of mental strategies – solve problems involving the multiplication of one-digit whole numbers, using a variety of mental strategies – multiply two-digit whole numbers by one-digit whole numbers, using a variety of tools, student-generated algorithms, and standard algorithms	– relate multiplication of one-digit numbers and division by one-digit divisors to real life situations, using a variety of tools and strategies – multiply to 7×7 and divide to $49 \div 7$, using a variety of mental strategies
– divide three-digit whole numbers by one-digit whole numbers, using concrete materials, estimation, student-generated algorithms, and standard algorithms	Ch. 6 Getting Started, 6.9, Ch. 10 Getting Started, Ch. 10 Mental Math	2.11, 2.12 with supporting TG note	Dividing Whole Numbers <i>Pathway 1: Dividing Three-Digit Numbers</i> <i>Pathway 2: Dividing Two-Digit Numbers</i> <i>Pathway 3: Division Fact Strategies</i>	– divide two-digit whole numbers by one-digit whole numbers, using a variety of tools and student-generated algorithms	– multiply to 7×7 and divide to $49 \div 7$, using a variety of mental strategies
– multiply decimal numbers by 10, 100, 1000, and 10 000, and divide decimal numbers by 10 and 100, using mental strategies	9.2, Ch. 9 Curious Math (View-Masters), 10.2	4.8, 4.9 with supporting TG notes	Decimal Computation <i>Pathway 1: Multiply and Divide by 10 or 100</i> <i>Pathway 2: Add and Subtract to Thousandths</i> <i>Pathway 3: Add and Subtract Thousandths</i> <i>Pathway 4: Add and Subtract to Hundredths</i> <i>Pathway 5: Add and Subtract Tenths or Hundredths</i>	– multiply whole numbers by 10, 100, and 1000, and divide whole numbers by 10 and 100, using mental strategies	

Number Sense and Numeration: Operational Sense ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<p>– use estimation when solving problems involving the addition, subtraction, multiplication, and division of whole numbers, to help judge the reasonableness of a solution</p>	<p>Ch. 4 Getting Started, 4.2, 4.3, 4.4, Ch. 4 Math Game (Calculating Sums and Differences), 4.5, Ch. 6 Getting Started, 6.2, 6.5, Ch. 6 Math Game (Rolling Products), 6.9, Ch. 6 Task, Ch. 9 Getting Started</p>	<p>2.2, 2.4, 2.5, 2.11, 2.12</p>	<p>Adding and Subtracting <i>Pathway 1:</i> Different Numbers of Digits <i>Pathway 2:</i> Same Number of Digits <i>Pathway 3:</i> Using Mental Math to Subtract <i>Pathway 4:</i> Using Mental Math to Add</p> <p>Multiplying Whole Numbers <i>Pathway 1:</i> Multiplying Two-Digit Numbers <i>Pathway 2:</i> Multiplying by One-Digit Numbers <i>Pathway 3:</i> Multiplication Fact Strategies</p> <p>Dividing Whole Numbers <i>Pathway 1:</i> Dividing Three-Digit Numbers <i>Pathway 2:</i> Dividing Two-Digit Numbers <i>Pathway 3:</i> Division Fact Strategies</p> <p>Relating Situations to Operations <i>Pathway 1:</i> Division Situations <i>Pathway 2:</i> Multiplication Situations <i>Pathway 3:</i> Subtraction Situations</p>	<p>– use estimation when solving problems involving the addition, subtraction, and multiplication of whole numbers, to help judge the reasonableness of a solution</p>	<p>– use estimation when solving problems involving addition and subtraction, to help judge the reasonableness of a solution</p>
Number Sense and Numeration: Proportional Relationships					
<p>– describe multiplicative relationships between quantities by using simple fractions and decimals – determine and explain, through investigation using concrete materials, drawings, and calculators, the relationship between fractions (i.e., with denominators of 2, 4, 5, 10, 20, 25, 50, and 100) and their equivalent decimal forms</p>	<p>2.8, 12.5, 12.6, Ch. 12 Task</p>	<p>8.4, 8.5 with supporting TG note 10.1A (TG lesson)</p>	<p>Representing Decimals <i>Pathway 2:</i> Representing Hundredths <i>Pathway 3:</i> Representing Tenths</p> <p>Comparing Decimals <i>Pathway 3:</i> Comparing Tenths and Hundredths</p>	<p>– describe relationships that involve simple whole-number multiplication – determine and explain, through investigation, the relationship between fractions (i.e., halves, fifths, tenths) and decimals to tenths, using a variety of tools and strategies</p>	

Number Sense and Numeration: Proportional Relationships ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– demonstrate an understanding of simple multiplicative relationships involving whole-number rates, through investigation using concrete materials and drawings	2.1, Ch. 2 Curious Math (Keep on Doubling), Ch. 2 Curious Math (Lots of Money), 5.6, 6.1	1.4, 6.2, 6.3, Cross Strand Investigation, page 402		– demonstrate an understanding of simple multiplicative relationships involving unit rates, through investigation using concrete materials and drawings	
Measurement: Attributes, Units, and Measurement Sense					
– estimate, measure (i.e., using an analogue clock), and represent time intervals to the nearest second – estimate and determine elapsed time, with and without using a time line, given the durations of events expressed in minutes, hours, days, weeks, months, or years	5.7	6.1 6.1B (TG lesson)	Time <i>Pathway 1: Using Elapsed Time</i> <i>Pathway 2: Reading a Clock</i>	– estimate, measure (i.e., using an analogue clock), and represent time intervals to the nearest minute – estimate and determine elapsed time, with and without using a time line, given the durations of events expressed in five-minute intervals, hours, days, weeks, months, or years – solve problems involving the relationship between years and decades, and between decades and centuries	– solve problems involving the relationships between minutes and hours, hours and days, days and weeks, and weeks and years, using a variety of tools
– measure and record temperatures to determine and represent temperature changes over time	Supplement: Ch. 3, Lesson A: Collecting Data	5.4 with supporting TG note			– estimate, read, and record positive temperatures to the nearest degree Celsius – identify benchmarks for freezing, cold, cool, warm, hot, and boiling temperatures as they relate to water and for cold, cool, warm, and hot temperatures as they relate to air

Measurement: Attributes, Units, and Measurement Sense ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<p>– estimate and measure the perimeter and area of regular and irregular polygons, using a variety of tools</p>	<p>Ch. 5 Getting Started, 5.4, 5.5, Ch. 5 Task, Ch. 8 Getting Started, 8.1, 8.2, Ch. 8 Curious Math (Pushing Corners), 8.3, Ch. 8 Mental Imagery, 8.4, Ch. 8 Curious Math (Stretching and Shrinking Rectangles), 8.5, 8.6, Ch. 8 Task</p>	<p>9.5, 9.6, 9.7, 9.8, 9.9</p>	<p>Length <i>Pathway 1:</i> Perimeter of a Rectangle <i>Pathway 2:</i> Perimeter: Using Standard Units <i>Pathway 3:</i> Length: Using Standard Units</p> <p>Area <i>Pathway 1:</i> Area of a Rectangle <i>Pathway 2:</i> Using Standard Units of Area</p>	<p>– estimate, measure, and record length, height, and distance, using standard units (i.e., millimetre, centimetre, metre, kilometre) – draw items using a ruler, given specific lengths in millimetres or centimetres – estimate, measure using a variety of tools and strategies, and record the perimeter and area of polygons</p>	<p>– estimate, measure, and record the perimeter of two-dimensional shapes, through investigation using standard units – estimate, measure (i.e., using centimeter grid paper, arrays), and record area – compare and order various shapes by area, using congruent shapes and grid paper for measuring – describe, through investigation using grid paper, the relationship between the size of a unit of area and the number of units needed to cover a surface</p>
Measurement: Measurement Relationships					
<p>– select and justify the most appropriate standard unit (i.e., millimetre, centimetre, decimetre, metre, kilometre) to measure length, height, width, and distance, and to measure the perimeter of various polygons – solve problems requiring conversion from metres to centimetres and from kilometres to metres</p>	<p>2.7, 5.1, 5.6, Ch. 5 Curious Math (Kilometre Study Guide), Ch. 5 Task Ch. 6 Getting Started</p>	<p>9.1 9.2 with supporting BLM</p>	<p>Length <i>Pathway 1:</i> Perimeter of a Rectangle <i>Pathway 2:</i> Perimeter: Using Standard Units <i>Pathway 3:</i> Length: Using Standard Units</p> <p>Area <i>Pathway 1:</i> Area of a Rectangle <i>Pathway 2:</i> Using Standard Units of Area</p>	<p>– describe, through investigation, the relationship between various units of length (i.e., millimetre, centimetre, decimetre, metre, kilometre) – select and justify the most appropriate standard unit (i.e., millimetre, centimetre, decimetre, metre, kilometre) to measure the side lengths and perimeters of various polygons</p>	<p>– estimate, measure, and record length, height, and distance, using standard units (i.e., centimetre, metre, kilometre) – draw items using a ruler, given specific lengths in centimeters – compare standard units of length (i.e., centimetre, metre, kilometre), and select and justify the most appropriate standard unit to measure length – compare and order objects on the basis of linear measurements in centimetres and/or metres in problem-solving contexts</p>

Measurement: Measurement Relationships ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– solve problems involving the relationship between a 12-hour clock and a 24-hour clock	5.8	6.1A (TG lesson)	Time <i>Pathway 2: Reading a Clock</i>		– read time using analogue clocks, to the nearest five minutes, and using digital clocks, and represent time in 12-hour notation
– create, through investigation using a variety of tools and strategies, two-dimensional shapes with the same perimeter or the same area	8.3, Ch. 8 Mental Imagery, 8.4	9.5	Length <i>Pathway 1: Perimeter of a Rectangle</i> <i>Pathway 2: Perimeter: Using Standard Units</i> Area <i>Pathway 1: Area of a Rectangle</i> <i>Pathway 2: Using Standard Units of Area</i>	– compare, using a variety of tools, two-dimensional shapes that have the same perimeter or the same area	
– determine, through investigation using a variety of tools and strategies, the relationships between the length and width of a rectangle and its area and perimeter, and generalize to develop the formulas – solve problems requiring the estimation and calculation of perimeters and areas of rectangles	5.5, Ch. 8 Getting Started, 8.3, 8.4, Ch. 8 Curious Math (Stretching and Shrinking Rectangles), 8.5, 8.6, Ch. 8 Task	9.7, 9.8	Length <i>Pathway 1: Perimeter of a Rectangle</i> <i>Pathway 2: Perimeter: Using Standard Units</i> Area <i>Pathway 1: Area of a Rectangle</i> <i>Pathway 2: Using Standard Units of Area</i>	– determine, through investigation, the relationship between the side lengths of a rectangle and its perimeter and area – pose and solve meaningful problems that require the ability to distinguish perimeter and area	
– determine, through investigation, the relationship between capacity and volume, by comparing the volume of an object with the amount of liquid it can contain or displace – determine, through investigation using stacked congruent rectangular layers of concrete materials, the relationship between the height, the area of the base, and the volume of a rectangular prism, and generalize to develop the formula	11.6, 11.7, Ch. 11 Task	6.8 6.8A (TG lesson)	Volume and Capacity <i>Pathway 1: Volume Related to Area of Base</i> <i>Pathway 2: Relating Volume and Capacity</i> <i>Pathway 3: Volume: Cubic Centimetres</i> <i>Pathway 4: Capacity: Litres or Millilitres</i>	– estimate, measure, and record the capacity of containers, using the standard units of the litre and the millilitre – estimate, measure using concrete materials, and record volume, and relate volume to the space taken up by an object – determine, through investigation, the relationship between millilitres and litres	– estimate, measure, and record the capacity of containers, using the standard unit of the litre or parts of a litre – compare and order a collection of objects, using standard units of mass (i.e., kilogram) and/or capacity (i.e., litre)

Measurement: Measurement Relationships ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– select and justify the most appropriate standard unit to measure mass (i.e., milligram, gram, kilogram, tonne)	11.8, 11.9	6.9, 6.10	Mass <i>Pathway 1: Mass: Kilograms and Grams</i> <i>Pathway 2: Mass: Using One Standard Unit</i>	– estimate, measure, and record the mass of objects, using the standard units of the kilogram and the gram – compare and order a collection of objects, using standard units of mass (i.e., gram, kilogram) and/or capacity (i.e., millilitre, litre) – determine, through investigation, the relationship between grams and kilograms – select and justify the most appropriate standard unit to measure mass (i.e., milligram, gram, kilogram) and the most appropriate standard unit to measure the capacity of a container (i.e., millilitre, litre)	– choose benchmarks for a kilogram and a litre to help them perform measurement tasks – estimate, measure, and record the mass of objects, using the standard unit of the kilogram or parts of a kilogram
Geometry and Spatial Sense: Geometric Properties					
– distinguish among polygons, regular polygons, and other two-dimensional shapes	Ch. 7 Getting Started, 7.3, Ch. 5 Curious Math (Diagonal Angles), 7.4, 7.5, Ch. 7 Mental Imagery, 7.6, 7.7, 7.8, 7.9, Ch. 7 Task	3.1, 3.4	2-D Shapes <i>Pathway 1: Classifying Triangles</i> <i>Pathway 2: Classifying Quadrilaterals</i> <i>Pathway 3: Line Symmetry</i>	– identify and compare different types of quadrilaterals (i.e., rectangle, square, trapezoid, parallelogram, rhombus) and sort and classify them by their geometric properties	– identify and compare various polygons and sort them by their geometric properties (i.e., number of sides; side lengths; number of interior angles; number of right angles) – solve problems requiring the greatest or least number of two-dimensional shapes needed to compose a larger shape in a variety of ways – explain the relationships between different types of quadrilaterals – describe and name prisms and pyramids by the shape of their base – identify congruent two-dimensional shapes by manipulating and matching concrete materials

Geometry and Spatial Sense: Geometric Properties ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
– distinguish among prisms, right prisms, pyramids, and other three-dimensional figures	Ch. 11 Getting Started, 11.1, Ch. 11 Curious Math (Cross-Sections), Ch. 11 Mental Imagery	3.6 with supporting BLM	3-D Shapes <i>Pathway 1: Modelling with Nets</i> <i>Pathway 2: Modelling with Skeletons</i> <i>Pathway 3: Modelling with Solid Shapes</i>	– identify and describe prisms and pyramids, and classify them by their geometric properties (i.e., shape of faces, number of edges, number of vertices), using concrete materials	– compare and sort prisms and pyramids by geometric properties using concrete materials – identify and describe the two-dimensional shapes that can be found in a three dimensional figure
– identify and classify acute, right, obtuse, and straight angles – measure and construct angles up to 90°, using a protractor	7.2, 7.3, Ch. 7 Curious Math (Diagonal Angles), 7.4, 7.5, 7.6, 7.7, 7.8, Ch. 7 Task	3.2 with supporting TG note	Angles <i>Pathway 1: Measuring and Drawing Angles</i> <i>Pathway 2: Comparing Angles</i>	– identify benchmark angles (i.e., straight angle, right angle, half a right angle), using a reference tool, and compare other angles to these benchmarks – relate the names of the benchmark angles to their measures in degrees	– use a reference tool to identify right angles and to describe angles as greater than, equal to, or less than a right angle – compare various angles, using concrete materials and pictorial representations, and describe angles as <i>bigger than</i> , <i>smaller than</i> , or <i>about the same as</i> other angles
– identify triangles and classify them according to angle and side properties – construct triangles, using a variety of tools, given acute or right angles and side measurements	7.2, 7.3, 7.4, 7.8, Ch. 7 Task	3.1, 3.4, 3.5	2-D Shapes <i>Pathway 1: Classifying Triangles</i> <i>Pathway 2: Classifying Quadrilaterals</i> <i>Pathway 3: Line Symmetry</i> Angles <i>Pathway 1: Measuring and Drawing Angles</i> <i>Pathway 2: Comparing Angles</i>		
Geometry and Spatial Sense: Geometric Relationships					
– identify prisms and pyramids from their nets – construct nets of prisms and pyramids, using a variety of tools	11.2, 11.3	3.6, Unit 3 Technology Feature, page 102	3-D Shapes <i>Pathway 1: Modelling with Nets</i> <i>Pathway 2: Modelling with Skeletons</i> <i>Pathway 3: Modelling with Solid Shapes</i>	– construct a three-dimensional figure from a picture or model of the figure, using connecting cubes – construct skeletons of three-dimensional figures, using a variety of tools, and sketch the skeletons – draw and describe nets of rectangular and triangular prisms – construct prisms and pyramids from given nets – construct three-dimensional figures, using only congruent shapes	– construct rectangular prisms, and describe geometric properties (i.e., number and shape of faces, number of edges, number of vertices) of the prisms

Geometry and Spatial Sense: Location and Movement					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<ul style="list-style-type: none"> – locate an object using the cardinal directions (i.e., north, south, east, west) and a coordinate system – compare grid systems commonly used on maps (i.e., the use of numbers and letters to identify an area; the use of a coordinate system based on the cardinal directions to describe a specific location) 	Ch. 8 Getting Started, 8.7, Ch. 8 Task	7.1 with supporting TG note	Location and Movement <i>Pathway 1: Using Cardinal Directions on Grids</i> <i>Pathway 2: Locating Objects on Grids</i>	<ul style="list-style-type: none"> – identify and describe the general location of an object using a grid system 	<ul style="list-style-type: none"> – describe movement from one location to another using a grid map
<ul style="list-style-type: none"> – identify, perform, and describe translations, using a variety of tools – create and analyse designs by translating and/or reflecting a shape, or shapes, using a variety of tools 	Ch. 14 Getting Started, 14.1, 14.2, 14.4, 14.7 Ch. 14 Task	7.2, 7.6, 10.6, Unit 10 Technology Feature, page 371	Transformations <i>Pathway 1: Single Rotations</i> <i>Pathway 2: Multiple Reflections</i> <i>Pathway 3: Multiple Translations</i> <i>Pathway 4: Single Reflections and Translations</i>	<ul style="list-style-type: none"> – identify, perform, and describe reflections using a variety of tools – draw the lines of symmetry of two-dimensional shapes, through investigation using a variety of tools and strategies – create and analyse symmetrical designs by reflecting a shape, or shapes, using a variety of tools, and identify the congruent shapes in the designs 	<ul style="list-style-type: none"> – identify flips, slides, and turns, through investigation using concrete materials and physical motion, and name flips, slides, and turns as reflections, translations, and rotations – complete and describe designs and pictures of images that have a vertical, horizontal, or diagonal line of symmetry

Patterning and Algebra: Patterns and Relationships					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<ul style="list-style-type: none"> – create, identify, and extend numeric and geometric patterns, using a variety of tools – build a model to represent a number pattern presented in a table of values that shows the term number and the term – make a table of values for a pattern that is generated by adding or subtracting a number (i.e., a constant) to get the next term, or by multiplying or dividing by a constant to get the next term, given either the sequence or the pattern rule in words – make predictions related to growing and shrinking geometric and numeric patterns 	<p>Ch. 1 Ch. 14 Getting Started</p>	<p>1.1, 1.2, 1.3, 1.4, 1.5, 10.3, 10.4</p>	<p>Patterns <i>Pathway 1: Using Pattern Rules</i> <i>Pathway 2: Growing and Shrinking Patterns</i> <i>Pathway 3: Repeating Patterns</i></p>	<ul style="list-style-type: none"> – extend, describe, and create repeating, growing, and shrinking number patterns – connect each term in a growing or shrinking pattern with its term number, and record the patterns in a table of values that shows the term number and the term – create a number pattern involving addition, subtraction, or multiplication, given a pattern rule expressed in words – make predictions related to repeating geometric and numeric patterns 	<ul style="list-style-type: none"> – identify, extend, and create a repeating pattern involving two attributes – identify and describe, through investigation, number patterns involving addition, subtraction, and multiplication, represented on a number line, on a calendar, and on a hundreds chart – extend repeating, growing, and shrinking number patterns – create a number pattern involving addition or subtraction, given a pattern represented on a number line or a pattern rule expressed in words – represent simple geometric patterns using a number sequence, a number line, or a bar graph
<ul style="list-style-type: none"> – extend and create repeating patterns that result from translations, through investigation using a variety of tools 	<p>Ch. 14 Getting Started, 14.2, 14.4</p>	<p>7.2 with supporting TG note</p>	<p>Patterns <i>Pathway 3: Repeating Patterns</i></p>	<ul style="list-style-type: none"> – extend and create repeating patterns that result from reflections, through investigation using a variety of tools 	<ul style="list-style-type: none"> – demonstrate, through investigation, an understanding that a pattern results from repeating an action, repeating an operation, using a transformation, or making some other repeated change to an attribute

Patterning and Algebra: Variables, Expressions, and Equations					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<ul style="list-style-type: none"> – demonstrate, through investigation, an understanding of variables as changing quantities, given equations with letters or other symbols that describe relationships involving simple rates – demonstrate, through investigation, an understanding of variables as unknown quantities represented by a letter or other symbol – determine the missing number in equations involving addition, subtraction, multiplication, or division and one- or two digit numbers, using a variety of tools and strategies 	Supplement: Ch. 1, Lesson B: Variables in Expressions; Ch. 1, Lesson C: Solving Equations Ch. 4 Curious Math (Open Sentences), 4.9, Ch. 13 Math Game (Sixty-Six)	10.1 with supporting TG note 10.3 with supporting TG note	Equality <i>Pathway 1: Using Algebra</i> <i>Pathway 2: Solving Equations</i>	<ul style="list-style-type: none"> – determine, through investigation, the inverse relationship between multiplication and division – determine the missing number in equations involving multiplication of one- and two-digit numbers, using a variety of tools and strategies – identify, through investigation, and use the commutative property of multiplication to facilitate computation with whole numbers – identify, through investigation, and use the distributive property of multiplication over addition to facilitate computation with whole numbers 	<ul style="list-style-type: none"> – determine, through investigation, the inverse relationship between addition and subtraction – determine, the missing number in equations involving addition and subtraction of one- and two-digit numbers, using a variety of tools and strategies – identify, through investigation, the properties of zero and one in multiplication (i.e., any number multiplied by zero equals zero; any number multiplied by 1 equals the original number) – identify, through investigation, and use the associative property of addition to facilitate computation with whole numbers
Data Management and Probability: Collection and Organization of Data					
<ul style="list-style-type: none"> – distinguish between discrete data (i.e., data organized using numbers that have gaps between them, such as whole numbers, and often used to represent a count, such as the number of times a word is used) and continuous data (i.e., data organized using all numbers on a number line that fall within the range of the data, and used to represent measurements such as heights or ages of trees) 	3.1, Supplement: Ch. 3, Lesson A: Collecting Data	5.3 with supporting TG note			

Data Management and Probability: Collection and Organization of Data ctd.					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<ul style="list-style-type: none"> – collect data by conducting a survey or an experiment to do with themselves, their environment, issues in their school or community, or content from another subject, and record observations or measurements – collect and organize discrete or continuous primary data and secondary data and display the data in charts, tables, and graphs (including broken-line graphs) that have appropriate titles, labels, and scales that suit the range and distribution of the data, using a variety of tools 	Ch. 3 Getting Started, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, Ch. 3 Curious Math (Identifying the Mode on a Stem-and-Leaf Plot), Ch. 3 Task, 5.3, 5.5, 8.3, 11.5, 11.7, 11.8, 11.9, Ch. 13 Getting Started, Ch. 13 Mental Imagery, 13.2, 13.3, Ch. 13 Math Game (Sixty-Six), 13.4, 13.5, Ch. 13 Curious Math (Birthday Math), Ch. 13 Task	5.3, 5.4, 5.5, Unit 5 Problem, Unit 5 Technology Features, pages 163, 169, and 176	Summarizing Data <i>Pathway 1:</i> Data: Using the Mean <i>Pathway 2:</i> Data: Using the Median and Mode Displaying Data <i>Pathway 1:</i> Data: Using Broken-Line Graphs <i>Pathway 2:</i> Data: Using Stem-and-Leaf Plots <i>Pathway 3:</i> Data: Using Double Bar Graphs <i>Pathway 4:</i> Data: Using Line Plots	<ul style="list-style-type: none"> – collect data by conducting a survey or an experiment to do with themselves, their environment, issues in their school or the community, or content from another subject, and record observations or measurements – collect and organize discrete primary data and display the data in charts, tables, and graphs (including stem-and-leaf plots and double bar graphs) that have appropriate titles, labels, and scales that suit the range and distribution of the data, using a variety of tools 	<ul style="list-style-type: none"> – collect data by conducting a simple survey about themselves, their environment, issues in their school or community, or content from another subject – collect and organize categorical or discrete primary data and display the data in charts, tables, and graphs (including vertical and horizontal bar graphs), with appropriate titles and labels and with labels ordered appropriately along horizontal axes, as needed, using many-to-one correspondence – demonstrate an ability to organize objects into categories, by sorting and classifying objects using two or more attributes simultaneously
<ul style="list-style-type: none"> – demonstrate an understanding that sets of data can be samples of larger populations 	3.1, 3.3, 13.2, 13.3	5.5			
<ul style="list-style-type: none"> – describe, through investigation, how a set of data is collected 	3.1, 3.3, 8.1, 8.2, 8.4, 11.6, 11.7, 13.4	5.3 with supporting TG note			

Data Management and Probability: Data Relationships					
Grade 5 Ontario expectations	Nelson Mathematics 5	Math Makes Sense 5	Leaps and Bounds 5/6 Topics	Grade 4 Ontario expectations	Grade 3 Ontario expectations
<ul style="list-style-type: none"> – read, interpret, and draw conclusions from primary data and from secondary data, presented in charts, tables, and graphs (including broken-line graphs) – calculate the mean for a small set of data and use it to describe the shape of the data set across its range of values, using charts, tables, and graphs – compare similarities and differences between two related sets of data, using a variety of strategies 	Ch. 3 Getting Started, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, Ch. 3 Curious Math (Identifying the Mode on a Stem-and Leaf Plot), Ch. 3 Task, 5.3, 5.5, 8.3, 8.4, 11.5, 11.6, 11.7, 11.8, 11.9, Ch. 13 Getting Started, 13.2, 13.3, 13.4, 13.5, Ch.13 Task	5.1, 5.2 with supporting TG note, 5.3, 5.4, 5.4A (TG lesson)	Summarizing Data <i>Pathway 1:</i> Data: Using the Mean <i>Pathway 2:</i> Data: Using the Median and Mode Displaying Data <i>Pathway 1:</i> Data: Using Broken-Line Graphs <i>Pathway 2:</i> Data: Using Stem-and-Leaf Plots <i>Pathway 3:</i> Data: Using Double Bar Graphs <i>Pathway 4:</i> Data: Using Line Plots	<ul style="list-style-type: none"> – read, interpret, and draw conclusions from primary data and from secondary data, presented in charts, tables, and graphs (including stem-and-leaf plots and double bar graphs) – describe the shape of a set of data across its range of values, using charts, tables, and graphs – compare similarities and differences between two related sets of data, using a variety of strategies 	<ul style="list-style-type: none"> – read primary data presented in charts, tables, and graphs (including vertical and horizontal bar graphs), then describe the data using comparative language, and describe the shape of the data – interpret and draw conclusions from data presented in charts, tables, and graphs – demonstrate an understanding of mode, and identify the mode in a set of data
Data Management and Probability: Probability					
<ul style="list-style-type: none"> – determine and represent all the possible outcomes in a simple probability experiment, using systematic lists and area models – represent, using a common fraction, the probability that an event will occur in simple games and probability experiment– pose and solve simple probability problems, and solve them by conducting probability experiments and selecting appropriate methods of recording the results 	3.7, Chapter 13	11.1, 11.2, 11.3, 11.4, 11.5, 11.6	Probability <i>Pathway 1:</i> Probability: Using Numbers <i>Pathway 2:</i> Probability: Using Words	<ul style="list-style-type: none"> – determine, through investigation, how the number of repetitions of a probability experiment can affect the conclusions drawn – predict the frequency of an outcome in a simple probability experiment, explaining their reasoning; conduct the experiment; and compare the result with the prediction 	<ul style="list-style-type: none"> – demonstrate, through investigation, an understanding of fairness in a game and relate this to the occurrence of equally likely outcomes – predict the frequency of an outcome in a simple probability experiment or game, then perform the experiment, and compare the results with the predictions, using mathematical language