## Leapsumbounds <br> Toward MathOnderstandting

## Correlation to WNCP Curriculum and Grade 6 Classroom Resources

Note: Leaps and Bounds $5 / 6$ is a math intervention resource and therefore does not include new content and concepts being introduced to students for the first time in Grade 6. Leaps and Bounds includes content from Grades 3 to 5 that will prepare students who are struggling for work at the Grade 5 or 6 level.

| GRADE 6 Core Resources - Correlation with Grade 6 WNCP core resources |  |  | INTERVENTION Resources and Outcomes Correlation between Leaps and Bounds 5/6 and |  |  |  |
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| Number |  |  |  |  |  |  |
| Grade 6 WNCP Outcomes | Math Focus 6 | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 <br> WNCP Outcomes | Grade 3 <br> WNCP Outcomes |
| 1. Demonstrate an understanding of place value for numbers: <br> - greater than one million - less than one thousandth. [C, CN, R, T] | Chapter 2: <br> Lessons 1, 4, 5, 6, 7, 8, Curious Math, Math Game | Unit 2, Lesson 1, pp. 46-50; <br> Unit 3, Lesson 1, pp. 88-91 | Representing Whole Numbers <br> Pathway 1: Representing <br> Numbers to 100000 <br> Pathway 2: Representing <br> Numbers to 10000 <br> Pathway 3: Representing <br> Numbers to 1000 <br> Pathway 4: Multiplying <br> and Dividing by 10s <br> Comparing Whole <br> Numbers <br> Pathway 1: Comparing <br> Numbers to 100000 <br> Pathway 2: Comparing <br> Numbers to 10000 <br> Pathway 3: Comparing <br> Numbers to 1000 | 1. Represent and describe whole numbers to 1000 000. <br> [C, CN, V, T] | 1. Represent and describe whole numbers to 10 000, pictorially and symbolically. <br> [C, CN, V] <br> 2. Compare and order numbers to 10000. <br> [C, CN] | 2. Represent and describe numbers to 1000, concretely, pictorially and symbolically. <br> [C, CN, V] <br> 3. Compare and order numbers to 1000. <br> [CN, R, V] <br> 4. Estimate quantities less than 1000 using referents. <br> [ME, PS, R, V] <br> 5. Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000. [C, CN, R, V] |
| 2. Solve problems involving large numbers, using technology. [ME, PS, T] | Chapter 2: Lessons 1, 2, 3, 5, Chapter Task | Unit 2, Lesson 2, pp. 51-54; Unit Problem, pp. 84, 85 |  |  |  |  |


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| 3. Demonstrate an understanding of factors and multiples by: <br> - determining multiples and factors of numbers less than 100 <br> - identifying prime and composite numbers <br> - solving problems involving multiples. [PS, R, V] | Chapter 3: Lessons 1, <br> 2, 3, 4, 5, <br> 6, Curious <br> Math, Math <br> Game | Unit 2, Lesson 3, pp. 55-58; Lesson 4, pp. 59-62; Lesson 5, pp. 63-66; Game, p. 67; Lesson 6, pp. 68, 69 | Adding and Subtracting <br> Pathway 1: Different Numbers of Digits <br> Pathway 2: Same Number of Digits <br> Pathway 3: Using Mental Math <br> to Subtract <br> Pathway 4: Using Mental Math <br> to Add <br> Multiplying Whole Numbers <br> Pathway 1: Multiplying Two- <br> Digit Numbers <br> Pathway 2: Multiplying by One- <br> Digit Numbers <br> Pathway 3: Multiplication Fact <br> Strategies <br> Dividing Whole Numbers <br> Pathway 1: Dividing Three-Digit <br> Numbers <br> Pathway 2: Dividing Two-Digit <br> Numbers <br> Pathway 3: Division Fact <br> Strategies <br> Relating Situations to <br> Operations <br> Pathway 1: Division Situations <br> Pathway 2: Multiplication <br> Situations <br> Pathway 3: Subtraction <br> Situations | 2. Use estimation strategies including: <br> - front-end rounding <br> - compensation <br> - compatible numbers in problem-solving contexts. <br> [C, CN, ME, PS, R, V] <br> 3. Apply mental mathematics strategies and number properties, such as: <br> - skip counting from a known fact <br> - using doubling or halving <br> - using patterns in the 9s facts <br> - using repeated doubling or halving to determine answers for basic multiplication facts to 81 and related division facts. <br> [C, CN, ME, R, V] <br> 4. Apply mental mathematics strategies for multiplication, such as: <br> - annexing then adding zero <br> - halving and doubling <br> - using the distributive <br> property. [C, ME, R] | 3. Demonstrate an understanding of addition of numbers with answers to 10000 and their corresponding subtractions (limited to 3 and 4-digit numerals) by: <br> - using personal strategies for adding and subtracting <br> - estimating sums and differences <br> - solving problems involving addition and subtraction. <br> [C, CN, ME, PS, R] <br> 4. Apply mental mathematics strategies for multiplication, such as: <br> - annexing then adding zero <br> - halving and doubling <br> - using the distributive property. <br> [C, ME, R] <br> 5. Describe and apply mental mathematics strategies, such as: <br> - skip counting from a known fact <br> - using doubling or halving | 1. Say the number sequence forward and backward from 0 to 1000 by: <br> - 5s, 10s or 100s using any starting point <br> - 3s using starting points that are multiples of 3 <br> - 4s using starting points that are multiples of 4 <br> - 25 s using starting points that are multiples of 25 . <br> [C, CN, ME] <br> 6. Describe and apply mental mathematics strategies for adding two 2 digit numerals, such as: <br> - adding from left to right <br> - taking one addend to the nearest multiple of ten and then compensating <br> - using doubles. <br> [C, ME, PS, R, V] <br> 7. Describe and apply mental mathematics strategies for subtracting two 2-digit numerals, such as: <br> - taking the subtrahend to the nearest multiple of ten and then compensating <br> - thinking of addition <br> - using doubles. <br> [C, ME, PS, R, V] |


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| Grade 6 WNCP Outcomes | Math <br> Focus 6 | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 <br> WNCP Outcomes |
|  |  |  |  | 5. Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems. <br> [C, CN, PS, V] <br> 6. Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1digit) and interpret remainders to solve problems. [C, CN, PS] | - using doubling or halving and adding or subtracting one more group <br> - using patterns in the 9s facts <br> - using repeated doubling to determine basic multiplication facts to 9 $\times 9$ and related division facts. <br> [C, CN, ME, PS, R] <br> 6. Demonstrate an understanding of multiplication (2-or 3digit by 1 -digit) to solve problems by: <br> - using personal strategies for multiplication with and without concrete materials <br> - using arrays to represent multiplication - connecting concrete representations to symbolic representations - estimating products. [C, CN, ME, PS, R, V] | 8. Apply estimation strategies to predict sums and differences of two 2digit numerals in a problem solving context. <br> [C, ME, PS, R] <br> 9. Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 <br> (limited to 1, 2 and 3-digit numerals) by: <br> - using personal strategies for adding and subtracting with and without the support of manipulatives - creating and solving problems in contexts that involve addition and subtraction of numbers concretely, pictorially and symbolically. <br> [C, CN, ME, PS, R] <br> 10. Apply mental mathematics strategies and number properties, such as: <br> - using doubles <br> - making 10 <br> - using the commutative property <br> - using the property of zero <br> - thinking addition for subtraction to recall basic addition facts to 18 and related subtraction facts. [C, CN, ME, R, V] |


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|  |  |  |  |  | 7. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by: <br> - using personal strategies for dividing with and without concrete materials <br> - estimating quotients <br> - relating division to multiplication. <br> [C, CN, ME, PS, R, V] | 11. Demonstrate an understanding of multiplication to $5 \times 5$ by: <br> - representing and explaining multiplication using equal grouping and arrays <br> - creating and solving problems <br> in context that involve <br> multiplication <br> - modelling multiplication using concrete and visual representations, and recording the process symbolically <br> - relating multiplication to <br> repeated addition <br> - relating multiplication to <br> division. <br> [C, CN, PS, R] <br> 12. Demonstrate an <br> understanding of division by: <br> - representing and explaining <br> division using equal sharing <br> and equal grouping <br> - creating and solving problems <br> in context that involve equal <br> sharing and equal grouping <br> - modelling equal sharing and <br> equal grouping using concrete <br> and visual representations, and <br> recording the process <br> symbolically <br> - relating division to repeated <br> subtraction <br> - relating division to multiplication. (limited to division related to multiplication facts up to $5 \times 5) \quad[\mathrm{C}, \mathrm{CN}, \mathrm{PS}, \mathrm{R}]$ |


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| Grade 6 WNCP Outcomes | $\begin{gathered} \text { Math Focus } \\ 6 \end{gathered}$ | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 WNCP Outcomes |
| 4. Relate improper fractions to mixed numbers. [CN, ME, R, V] | Chapter 7: Lessons 1, 2, 3, 4, 5, 6, 7, Math Game, Curious Math, Chapter Task | Unit 5, Lesson 1, pp. 162-165; Lesson 2, pp. 166-169; Game, p. 170; <br> Lesson 3, pp. 171-175; Lesson 6, pp. 184, 185; Unit Problem, pp. 196, 197 | Representing Fractions <br> Pathway 3: Proper Fractions: <br> Parts of Sets <br> Pathway 4: Proper Fractions: <br> Parts of Wholes <br> Comparing Fractions <br> Pathway 2: Equivalent <br> Fractions <br> Pathway 3: Comparing: Same <br> Numerators <br> Pathway 4: Comparing: Same <br> Denominators <br> Pathway 5: Comparing <br> Fractions to $1 / 2$ and 1 | 7. Demonstrate an understanding of fractions by using concrete and pictorial representations to: - create sets of equivalent fractions - compare fractions with like and unlike denominators. $[\mathrm{C}, \mathrm{CN}, \mathrm{PS}, \mathrm{R}, \mathrm{~V}]$ | 8. Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to: <br> - name and record fractions for the parts of a whole or a set <br> - compare and order fractions <br> - model and explain that for different wholes, two identical fractions may not represent the same quantity <br> - provide examples of where fractions are used. <br> [C, CN, PS, R, V] | 13. Demonstrate an understanding of fractions by: <br> - explaining that a fraction represents a part of a whole <br> - describing situations in which fractions are used - comparing fractions of the same whole with like denominators. <br> [C, CN, ME, R, V] |
| 5. Demonstrate an understanding of ratio, concretely, pictorially and symbolically. [C, CN, PS, R, V] | Chapter 6: Lessons 1, 2, 5, 7, Chapter Task | Unit 5, Lesson 4, pp. 176-179; Lesson 5, pp. 180-183; Lesson 6, pp. 184, 185; Unit Problem, pp. 196, 197 |  |  |  |  |
| 6. Demonstrate an understandding of percent, (limited to whole numbers) concretely, pictorially and symbolically. [C, CN, PS, R, V] | Chapter 6: Lessons 3, 4, 6, 7, Math Game, Curious Math, Chapter Task | Unit 5, <br> Lesson 7, pp. <br> 186-189; <br> Lesson 8, pp. <br> 190-193; <br> Unit Problem, <br> pp. 196, 197 |  |  |  |  |


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| 7. Demonstrate an understanding of integers, concretely, pictorially and symbolically. [C, CN, R, V] | Chapter 3: Lessons 7, 8, Curious Math | Unit 2, <br> Lesson 8, pp. <br> 74-77; <br> Lesson 9, pp. <br> 78-81; Unit <br> Problem, pp. <br> 84, 85 |  |  |  |  |
| 8. Demonstrate an understanding of multiplication and division of decimals (1digit whole number multipliers and 1-digit natural number divisors). [C, CN, ME, PS, R, V] | Chapter 9: <br> Lessons 1, <br> 2, 3, 4, 5, <br> 6, 7, Math <br> Game, <br> Curious <br> Math, <br> Chapter <br> Task | Unit 3, <br> Lesson 2, pp. 92-94; <br> Lesson 3, pp. 95-98; <br> Lesson 4, pp. 99-102; <br> Lesson 5, pp. 103-107; <br> Lesson 6, pp. 108-111; Lesson 7, pp. 112-114; Game, p. 115; Lesson 8, pp. 116, 117; Unit Problem, pp. 120, 121 | Representing Decimals <br> Pathway 1: Representing <br> Thousandths <br> Pathway 2: Representing <br> Hundredths <br> Pathway 3: Representing <br> Tenths <br> Comparing Decimals <br> Pathway 1: Comparing Mixed <br> Decimals <br> Pathway 2: Comparing <br> Thousandths <br> Pathway 3: Comparing Tenths <br> and Hundredths <br> Decimal Computation <br> Pathway 1: Multiply and Divide <br> by 10 or 100 <br> Pathway 2: Add and Subtract to <br> Thousandths <br> Pathway 3: Add and Subtract <br> Thousandths <br> Pathway 4: Add and Subtract to <br> Hundredths <br> Pathway 5: Add and Subtract <br> Tenths or Hundredths | 8. Describe and represent decimals (tenths, hundredths, thousandths) concretely, pictorially and symbolically. <br> [C, CN, R, V] <br> 9. Relate decimals to fractions (to thousandths). [CN, R, V] <br> 10. Compare and order decimals (to thousandths) by using: <br> - benchmarks <br> - place value <br> - equivalent decimals. [CN, R, V] <br> 11. Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths). <br> [C, CN, PS, R, V] | 9. Describe and represent decimals (tenths and hundredths) concretely, pictorially and symbolically. <br> [C, CN, R, V] <br> 10. Relate decimals to fractions (to hundredths). <br> [CN, R, V] <br> 11. Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by: <br> - using compatible numbers <br> - estimating sums and differences <br> - using mental math strategies to solve problems. [C, ME, PS, R, V] |  |


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| 9. Explain and apply the order of operations, excluding exponents, with and without technology (limited to whole numbers). [CN, ME, PS, T] | Chapter 3: Lesson 9, Math Game | $\begin{array}{\|l\|} \hline \text { Unit 2, } \\ \text { Lesson } 7, \mathrm{pp} . \\ 70-73 \end{array}$ |  |  |  |  |
| Patterns and Relations: Patterns |  |  |  |  |  |  |
| 1. Demonstrate an understanding of the relationship within tables of values to solve problems. <br> [C, CN, PS, R] <br> 2. Represent and describe patterns and relationships using graphs and tables. [C, CN, ME, PS, R, V] | Chapter 1: <br> Lessons 1, <br> 2, 3, 4, 6, <br> Curious <br> Math, <br> Chapter <br> Task <br> Chapter 4: <br> Lessons 5, <br> 6, 7, <br> Chapter <br> Task | Unit 1, <br> Lesson 1, pp. <br> 6-10; Lesson <br> 2, pp. 11-15; <br> Lesson 3, pp. <br> 16, 17; <br> Game, p. 18; <br> Lesson 4, pp. <br> 19-23; <br> Lesson 6, pp. <br> 29-32; <br> Unit Problem, <br> pp. 42, 43 | Patterns <br> Pathway 1: Using Pattern Rules <br> Pathway 2: Growing and <br> Shrinking Patterns | 1. Determine the pattern rule to make predictions about subsequent elements. <br> [C, CN, PS, R, V] | 1. Identify and describe patterns found in tables and charts, including a multiplication chart. <br> [C, CN, PS, V] <br> 2. Reproduce a pattern shown in a table or chart using concrete materials. <br> [C, CN, V] <br> 3. Represent and describe patterns and relationships using charts and tables to solve problems. [C, CN, PS, R, V] | 1. Demonstrate an understanding of increasing patterns by: <br> - describing <br> - extending <br> - comparing <br> - creating <br> patterns using manipulatives, diagrams, sounds and actions (numbers to 1000). <br> [C, CN, PS, R, V] <br> 2. Demonstrate an understanding of decreasing patterns by: <br> - describing <br> - extending <br> - comparing <br> - creating <br> patterns using manipulatives, diagrams, sounds and actions (numbers to 1000). <br> [C, CN, PS, R, V] |


| Variables and Equations |  |  |  |  |  |  |
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| 3. Represent generalizations arising from number relationships using equations with letter variables. <br> [C, CN, PS, R, V] <br> 4. Demonstrate and explain the meaning of preservation of equality concretely, pictorially and symbolically. [C, CN, PS, R, V] | Chapter 1: <br> Lessons 3, 4, 5, <br> Math Game, <br> Chapter Task <br> Chapter 8: <br> Lesson 8, 9, 10 | Unit 1, Lesson <br> 4, pp. 19-23; <br> Lesson 7, pp. <br> 33-35; Lesson <br> 8, pp. 36-39; <br> Unit Problem, <br> pp. 42, 43 <br> Unit 6, Lesson <br> 7, pp. 226-230; <br> Lesson 8, pp. <br> 231-234 | Equality <br> Pathway 1: Using Algebra <br> Pathway 2: Solving Equations | 2. Solve problems involving singlevariable, one-step equations with whole number coefficients and whole number solutions. <br> [C, CN, PS, R] | 4. Identify and explain mathematical relationships using charts and diagrams to solve problems. [CN, PS, R, V] 5. Express a given problem as an equation in which a symbol is used to represent an unknown number. <br> [CN, PS, R] <br> 6. Solve one-step equations involving a symbol to represent an unknown number. <br> [C, CN, PS, R, V] | 3. Solve one-step addition and subtraction equations involving symbols representing an unknown number. [C, CN, PS, R, V] |
| Shape and Space: Measurement |  |  |  |  |  |  |
| 1. Demonstrate an understanding of angles by: <br> - identifying examples of angles in the environment <br> - classifying angles according to their measure <br> - estimating the measure of angles using $45^{\circ}, 90^{\circ}$ and $180^{\circ}$ as reference angles - determining angle measures in degrees <br> - drawing and labeling angles when the measure is specified. [C, CN, ME, V] | Chapter 8: Lessons 1, 2, 3 , 4, 5, 11, Math Game, Curious Math, Chapter Task Chapter 11: Lessons 3, 4, 5, Math Game, Curious Math, Chapter Task | Unit 4, Lesson <br> 1, pp. 126-129; <br> Lesson 2, pp. <br> 130-132; <br> Lesson 3, pp. <br> 133-138; <br> Lesson 4, pp. <br> 139-142; <br> Game, p. 143; <br> Lesson 5, pp. <br> 144, 145; Unit <br> Problem, pp. <br> 156, 157 | Angles <br> Pathway 1: Measuring and Drawing Angles Pathway 2: Comparing Angles |  |  |  |


| Shape and Space: Measurement |  |  |  |  |  |  |
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| Grade 6 WNCP Outcomes | $\begin{gathered} \text { Math Focus } \\ 6 \end{gathered}$ | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 wNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 wNCP Outcomes |
| 2. Demonstrate that the sum of interior angles is: <br> - $180^{\circ}$ in a triangle <br> - $360^{\circ}$ in a quadrilateral. [C, R] | Chapter 8: Lessons 6, 7, 11 | Unit 4, Lesson 6, pp. 146-149; Lesson 7, pp. 150-153; Unit Problem, pp. 156, 157 |  |  |  |  |
| 3. Develop and apply a formula for determining the: <br> - perimeter of polygons <br> - area of rectangles <br> - volume of right rectangular prisms. [C, CN, PS, R, V] | Chapter 8: <br> Lessons 8, 9, <br> 10, 11 | Unit 6, Lesson <br> 7, pp. 226-230; <br> Lesson 8, pp. <br> 231-234; <br> Lesson 9, pp. <br> 235-238; <br> Game, p. 239; <br> Unit Problem, <br> pp. 242, 243 | Length <br> Pathway 1: Perimeter of a Rectangle <br> Pathway 2: Perimeter: <br> Using Standard Units <br> Pathway 3: Length: Using Standard Units <br> Area <br> Pathway 1: Area of a <br> Rectangle <br> Pathway 2: Using Standard Units of Area Volume and Capacity Pathway 1: Volume Related to Area of Base Pathway 2: Relating Volume and Capacity Pathway 3: Volume: Cubic Centimetres Pathway 4: Capacity: Litres or Millilitres | 1. Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions. <br> [C, CN, PS, R, V] <br> 2. Demonstrate an understanding of measuring length (mm) by: <br> - selecting and justifying referents for the unit mm - modelling and describing the relationship between mm and cm units, and between mm and m units. <br> [C, CN, ME, PS, R, V] <br> 3. Demonstrate an understanding of volume by: <br> - selecting and justifying referents for $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ units - estimating volume by using referents for $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ <br> - measuring and recording volume ( $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ ) <br> - constructing rectangular prisms for a given volume. [C, CN, ME, PS, R, V] | 3. Demonstrate an understanding of area of regular and irregular 2-D shapes by: <br> - recognizing that area is measured in square units - selecting and justifying referents for the units $\mathrm{cm}^{2}$ or $\mathrm{m}^{2}$ <br> - estimating area by using referents for $\mathrm{cm}^{2}$ or $\mathrm{m}^{2}$ <br> - determining and recording area ( $\mathrm{cm}^{2}$ or $\mathrm{m}^{2}$ ) <br> - constructing different rectangles for a given area ( $\mathrm{cm}^{2}$ or $\mathrm{m}^{2}$ ) in order to demonstrate that many different rectangles may have the same area. [C, CN, ME, PS, R, V] | 5. Demonstrate an understanding of perimeter of regular and irregular shapes by: - estimating perimeter using referents for centimetre or metre - measuring and recording perimeter (cm, m) <br> - constructing different shapes for a given perimeter (cm, m) to demonstrate that many shapes are possible for a perimeter. <br> [C, ME, PS, R, V] <br> 3. Demonstrate an understanding of measuring length ( $\mathrm{cm}, \mathrm{m}$ ) by: <br> - selecting and justifying referents for the units cm and m |


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|  |  |  |  | 4. Demonstrate an understanding of capacity by: <br> - describing the relationship between mL and L <br> - selecting and justifying referents for mL or L units - estimating capacity by using referents for mL or L - measuring and recording capacity ( mL or L). <br> [C, CN, ME, PS, R, V] |  | - modelling and describing the relationship between the units cm and m - estimating length using referents - measuring and recording length, width and height. [C, CN, ME, PS, R, V] |
|  |  |  | Time <br> Pathway 1: Using <br> Elapsed Time <br> Pathway 2: Reading a Clock |  | 1. Read and record time using digital and analog clocks, including 24-hour clocks. <br> [C, CN, V] <br> 2. Read and record calendar dates in a variety of formats. [C, V] | 1. Relate the passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months, years). <br> [CN, ME, R] <br> 2. Relate the number of seconds to a minute, the number of minutes to an hour and the number of days to a month in a problem-solving context. <br> [C, CN, PS, R, V] |


| Shape and Space: Measurement |  |  |  |  |  |  |
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| Grade 6 WNCP Outcomes | $\begin{gathered} \text { Math Focus } \\ 6 \\ \hline \end{gathered}$ | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 WNCP Outcomes |
|  |  |  | Mass <br> Pathway 1: Mass: <br> Kilograms and Grams Pathway 2: Mass: Using One Standard Unit |  |  | 4. Demonstrate an understanding of measuring mass ( g , kg) by: <br> - selecting and justifying referents for the units g and kg <br> - modelling and describing the relationship between the units g and kg - estimating mass using referents - measuring and recording mass. [C, CN, ME, PS, R, V] |
| 3-D Objects and 2-D Shapes |  |  |  |  |  |  |
| 4. Construct and compare triangles, including: <br> - scalene <br> - isosceles <br> - equilateral <br> - right <br> - obtuse <br> - acute <br> in different orientations. <br> [C, PS, R, V] <br> 5. Describe and compare the sides and angles of regular and irregular polygons. [C, PS, R, V] | Chapter 11: <br> Lessons 1, 2, <br> 3, 4, 5, 6, 7, <br> Math Game, <br> Curious <br> Math, <br> Chapter Task | Unit 6, Lesson 1, pp. 200-204; Lesson 2, pp. 205-208; <br> Lesson 3, pp. 209-213; <br> Lesson 4, pp. <br> 214-218; <br> Lesson 5, pp. 219-223; <br> Lesson 6, pp. 224, 225; Unit Problem, pp. 242, 243 | 3-D Shapes <br> Pathway 1: Modelling with Nets <br> Pathway 2: Modelling with Skeletons Pathway 3: Modelling with Solid Shapes <br> 2-D Shapes <br> Pathway 1: Classifying Triangles Pathway 2: Classifying Quadrilaterals Pathway 3: Line Symmetry | 5. Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are: <br> - parallel <br> - intersecting <br> - perpendicular <br> - vertical <br> - horizontal. <br> [C, CN, R, T, V] <br> 6. Identify and sort quadrilaterals, including: <br> - rectangles <br> - squares <br> - trapezoids <br> - parallelograms <br> - rhombuses according to their attributes. [C, R, V] | 4. Describe and construct rectangular and triangular prisms. <br> [C, CN, R, V] <br> 5. Demonstrate an understanding of line symmetry by: <br> - identifying <br> symmetrical 2-D <br> shapes <br> - creating symmetrical <br> 2-D shapes <br> - drawing one or more lines of symmetry in a 2-D shape. <br> [C, CN, V] | 6. Describe 3-D objects according to the shape of the faces, and the number of edges and vertices. <br> [C, CN, PS, R, V] <br> 7. Sort regular and irregular polygons, including: <br> - triangles <br> - quadrilaterals <br> - pentagons <br> - hexagons <br> - octagons according to the number of sides. [C, CN, R, V] |


| Transformations |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade 6 WNCP Outcomes | $\begin{gathered} \text { Math Focus } \\ 6 \\ \hline \end{gathered}$ | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 WNCP Outcomes |
| 6. Perform a combination of translation(s), rotation(s) and/or reflection(s) on a single 2-D shape, with and without technology, and draw and describe the image. <br> [C, CN, PS, T, V] <br> 7. Perform a combination of successive transformations of 2-D shapes to create a design, and identify and describe the transformations. [C, CN, T, V] | Chapter 5: Lessons 4, 5, 6, Math Game, Curious Math, Chapter Task Chapter 8: Lesson 6 | Unit 8, Lesson <br> 3, pp. 303-307; <br> Lesson 4, pp. <br> 308-312; <br> Lesson 5, pp. <br> 313-317; <br> Lesson 6, pp. <br> 318, 319; <br> Technology <br> Lesson, p. 320; <br> Game, p. 321; <br> Unit Problem, <br> pp. 324, 325 | Transformations Pathway 1: Single Rotations Pathway 2: Multiple Reflections Pathway 3: Multiple Translations Pathway 4: Single Reflections and Translations | 7. Perform a single transformation (translation, rotation, or reflection) of a 2-D shape (with and without technology) and draw and describe the image. <br> [C, CN, T, V] <br> 8. Identify a single transformation, including a translation, rotation and reflection of 2-D shapes. [C, T, V] |  |  |
| 8. Identify and plot points in the first quadrant of a Cartesian plane using whole number ordered pairs. [C, CN, V] | Chapter 4: Lesson 4, Math Game, Curious Math, Math Game, Chapter Task | Unit 1, Lesson 5, pp. 24-28; Unit Problem, pp. 42, 43; Unit 8, Lesson 1, pp. 290-294 | Location and Movement Pathway 1: Using Cardinal Directions on Grids <br> Pathway 2: Locating Objects on Grids |  |  |  |
| 9. Perform and describe single transformations of a 2-D shape in the first quadrant of a Cartesian plane (limited to whole number vertices). [C, CN, PS, T, V] | Chapter 5: Lessons 1, 2, 3 | Unit 8, Lesson <br> 2, pp. 295-300; <br> Technology <br> Lesson, pp. <br> 301, 302; <br> Game, p. 321 |  |  |  |  |


| Grade 6 WNCP Outcomes |  | Math Makes Sense 6 | Leaps and Bounds 5/6 Topics | Grade 5 WNCP Outcomes | Grade 4 WNCP Outcomes | Grade 3 WNCP Outcomes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Summarizing Data Pathway 1: Data: Using the Mean Pathway 2: Data: Using the Median and Mode |  |  |  |
| 1. Create, label and interpret line graphs to draw conclusions. <br> [C, CN, PS, R, V] <br> 2. Select, justify and use appropriate methods of collecting data, including: <br> - questionnaires <br> - experiments <br> - databases <br> - electronic media. [C, PS, T] <br> 3. Graph collected data and analyze the graph to solve problems. [C, CN, PS] | Chapter 4 | Unit 7 | Displaying Data Pathway 1: Data: Using Broken-Line Graphs Pathway 3: Data: Using Double Bar Graphs Pathway 4: Data: Using Line Plots | 1. Differentiate between first-hand and secondhand data. <br> [C, R, T, V] <br> 2. Construct and interpret double bar graphs to draw conclusions. <br> [C, PS, R, T, V] | 1. Demonstrate an understanding of many-to-one correspondence. <br> [C, R, T, V] <br> 2. Construct and interpret pictographs and bar graphs involving many-toone correspondence to draw conclusions. [C, PS, R, V] | 1. Collect first-hand data and organize it using: <br> - tally marks <br> - line plots <br> - charts <br> - lists <br> to answer questions[C, CN, V] <br> 2. Construct, label and interpret bar graphs to solve problems. [PS, R, V] |
| Chance and Uncertainty |  |  |  |  |  |  |
| 4. Demonstrate an understanding of probability by: <br> - identifying all possible outcomes of a probability experiment <br> - differentiating between experimental and theoretical probability <br> - determining the theoretical probability of outcomes in a probability experiment <br> - determining the experimental probability of outcomes in a probability experiment <br> - comparing experimental results with the theoretical probability for an experiment. <br> [C, ME, PS, T] | Chapter <br> 10: <br> Lessons 1, <br> 2, 3, 4, <br> Math <br> Games, <br> Curious <br> Math, <br> Chapter <br> Task | Unit 7, <br> Lesson 6, pp. <br> 271-275; <br> Lesson 7, pp. <br> 276-279; <br> Technology <br> Lesson, p. <br> 280; Game, <br> p. 281; <br> Lesson 8, pp. <br> 282, 283; <br> Unit Problem, <br> pp. 286, 287 | Probability <br> Pathway 1: Probability: <br> Using Numbers <br> Pathway 2: Probability: <br> Using Words | 3. Describe the likelihood of a single outcome occurring using words, such as: <br> - impossible <br> - possible <br> - certain.[C, CN, PS, R] <br> 4. Compare the likelihood of two possible outcomes occurring using words, such as: <br> - less likely <br> - equally likely <br> - more likely. <br> [C, CN, PS, R] |  |  |

