Leaps AND Bounds TOWARD Math Understanding

Correlation to WNCP Curriculum and Grade 8 Classroom Resources

Note: Leaps and Bounds 7/8 *is a math intervention resource and therefore does not include new content and concepts being introduced to students for the first time in Grade 8.* Leaps and Bounds 7/8 *includes content from Grades 5 to 7 that will prepare students who are struggling for work at the Grade 7 or 8 level.*

GRADE 8 Core Resources Correlation with Grade 8 WNCP core resources				**INTERVENTION Resources and Outcomes** Correlation between *Leaps and Bounds 7/8* and prerequisite outcomes from WNCP Grades 5 to 7.			
Grade 8 WNCP outcomes	***Nelson Math Focus 8***	***Math Makes Sense 8***	***MathLinks 8***	***Leaps and Bounds 7/8* Topics**	**Grade 7 WNCP outcomes**	**Grade 6 WNCP outcomes**	**Grade 5 WNCP outcomes**
Number							
				Representing Large Whole Numbers *Pathway 1*: Using Decimals for Large Whole Numbers *Pathway 2*: Representing Millions and Billions *Pathway 3*: Representing Six-Digit Numbers	7. Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using: • benchmarks • place value • equivalent fractions and/or decimals. [CN, R, V]	1. Demonstrate an understanding of place value for numbers: • greater than one million • less than one thousandth. [C, CN, R, T] 2. Solve problems involving large numbers, using technology. [ME, PS, T]	1. Represent and describe whole numbers to 1 000 000. [C, CN, V, T]
				Whole Number Operations *Pathway 1*: Order of Operations *Pathway 2*: Dividing Whole Numbers *Pathway 3*: Multiplying Whole Numbers **Relating Situations to Operations** *Pathway 1*: Recognizing Division Situations *Pathway 2*: Recognizing Multiplication Situations *Pathway 3*: Recognizing Subtraction Situations		2. Solve problems involving large numbers, using technology. [ME, PS, T] 9. Explain and apply the order of operations, excluding exponents, with and without technology (limited to whole numbers). [CN, ME, PS, T]	2. Use estimation strategies, including: • front-end rounding • compensation • compatible numbers in problem-solving contexts. [C, CN, ME, PS, R, V] 3. Apply mental mathematics strategies and number properties, such as: • skip counting from a known fact

							• using doubling or halving • using patterns in the 9s facts • using repeated doubling or halving to determine answers for basic multiplication facts to 81 and related division facts. [C, CN, ME, R, V] (See *Leaps and Bounds 5/6*.) 4. Apply mental mathematics strategies for multiplication, such as: • annexing then adding zero • halving and doubling • using the distributive property. [C, ME, R] 5. Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems. [C, CN, PS, V] 6. Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems. [C, CN, PS]

Grade 8 WNCP outcomes	*Nelson Math Focus 8*	*Math Makes Sense 8*	*MathLinks 8*	*Leaps and Bounds 7/8* Topics	Grade 7 WNCP outcomes	Grade 6 WNCP outcomes	Grade 5 WNCP outcomes
				Representing and Comparing Decimals *Pathway 1*: Decimals with Many Places *Pathway 2*: Comparing Decimals *Pathway 3*: Representing Decimal Thousandths *Pathway 4*: Multiplying and Dividing by 10s	4. Demonstrate an understanding of the relationship between positive repeating decimals and positive fractions, and positive terminating decimals and positive fractions. [C, CN, R, T] 7. Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using: • benchmarks • place value • equivalent fractions and/or decimals. [CN, R, V]	1. Demonstrate an understanding of place value for numbers: • greater than one million • less than one thousandth. [C, CN, R, T]	8. Describe and represent decimals (tenths, hundredths, thousandths) concretely, pictorially and symbolically. [C, CN, R, V] 9. Relate decimals to fractions (to thousandths). [CN, R, V] 10. Compare and order decimals (to thousandths), by using: • benchmarks • place value • equivalent decimals. [CN, R, V]
				Decimal Operations *Pathway 2*: Dividing Decimals by Whole Numbers *Pathway 3*: Multiplying with Decimals *Pathway 4*: Adding and Subtracting Decimals (See also *Leaps and Bounds 5/6*.) **Relating Situations to Operations** *Pathway 1*: Recognizing Division Situations *Pathway 2*: Recognizing Multiplication Situations *Pathway 3*: Recognizing Subtraction Situations	2. Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems. [ME, PS, T]	8. Demonstrate an understanding of multiplication and division of decimals (1-digit whole number multipliers and 1-digit natural number divisors). [C, CN, ME, PS, R, V]	11. Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths). [C, CN, PS, R, V]

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1. Demonstrate an understanding of perfect squares and square roots, concretely, pictorially and symbolically (limited to whole numbers). [C, CN, R, V] 2. Determine the approximate square root of numbers that are not perfect squares (limited to whole numbers). [C, CN, ME, R, T]	Chapter 1: Lessons 1.1, 1.2, 1.3, 1.4, 1.5, 1.7, Curious Math, Math Game, Chapter Task	Unit 1, Lessons 1.1, 1.2, 1.3, 1.4, Game, Technology, 1.5, 1.7, Unit Problem	Chapter 3: 3.1, 3.3 Wrap It Up! Math Games Challenge in Real Life: Building a Staircase Chapters 1–4 Review	**Multiplicative Relationships** *Pathway 1*: Divisibility Rules *Pathway 2*: Prime Numbers and Perfect Squares *Pathway 3*: Factors and Multiples	1. Determine and explain why a number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10, and why a number cannot be divided by 0. [C, R]	3. Demonstrate an understanding of factors and multiples by: • determining multiples and factors of numbers less than 100 • identifying prime and composite numbers • solving problems involving multiples. [PS, R, V]	
3. Demonstrate an understanding of percents greater than or equal to 0%. [CN, PS, R, V]	Chapter 4: Lessons 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, Math Game, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task	Unit 5, Lessons 5.1, 5.2, 5.3, 5.4	Chapter 4: 4.1–4.4 Wrap It Up! Math Games Challenge in Real Life: The Buying and Selling Game Chapters 1–4 Review Task: Test the Efficiency of a Ramp	**Rates, Percents, and Ratios** *Pathway 2*: Using Percents	3. Solve problems involving percents from 1% to 100%. [C, CN, PS, R, T]	6. Demonstrate an understanding of percent, (limited to whole numbers) concretely, pictorially and symbolically. [C, CN, PS, R, V]	
4. Demonstrate an understanding of ratio and rate. [C, CN, V]	Chapter 3: Lessons 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, Math Game, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task Chapter 4: Lessons 4.1, Chapter Review	Unit 5, Lessons 5.5, 5.6, Game, 5.7, 5.8, 5.9, 5.10, Unit Problem	Chapter 2: 2.1–2.2 Wrap It Up! Math Games Challenge in Real Life: Life of a Bush Pilot Chapters 1–4 Review Task: Test the Efficiency of a Ramp Task: Put Out a Forest Fire	**Rates, Percents, and Ratios** *Pathway 1*: Using Rates (Grade 8 WNCP) *Pathway 2*: Using Percents *Pathway 3*: Using Ratios **Relating Situations to Operations** *Pathway 2*: Recognizing Multiplication Situations	2. Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems. [ME, PS, T]	5. Demonstrate an understanding of ratio, concretely, pictorially and symbolically. [C, CN, PS, R, V]	

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5. Solve problems that involve rates, ratios and proportional reasoning. [C, CN, PS, R]	Chapter 3: Lessons 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task Chapter 4: Lessons 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task	Unit 5, Lessons 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, Unit Problem	Chapter 2: 2.1–2.3 Wrap It Up! Challenge in Real Life: Life of a Bush Pilot Chapters 1–4 Review Challenge in Real Life: Treasure Hunt Task: Put Out a Forest Fire	**Rates, Percents, and Ratios** *Pathway 1*: Using Rates (Grade 8 WNCP) *Pathway 2*: Using Percents *Pathway 3*: Using Ratios	3. Solve problems involving percents from 1% to 100%. [C, CN, PS, R, T]	5. Demonstrate an understanding of ratio, concretely, pictorially and symbolically. [C, CN, PS, R, V] 6. Demonstrate an understanding of percent, (limited to whole numbers) concretely, pictorially and symbolically. [C, CN, PS, R, V]	
6. Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers, concretely, pictorially and symbolically. [C, CN, ME, PS]	Chapter 2: Lessons 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, Math Game, Chapter Self-Test, Chapter Review, Chapter Task	Unit 3, Lessons 3.1, 3.2, 3.3, 3.4, Game, 3.5, 3.6, 3.7, 3.8, 3.9, Unit Problem	Chapter 6: 6.1–6.6 Wrap It Up! Math Games Challenge in Real Life: Rock, Paper, Scissors Task: Fraction Cubes Challenge in Real Life: Treasure Hunt Chapters 5–8 Review	**Comparing Fractions** *Pathway 1*: Fractions and Mixed Numbers *Pathway 2*: Proper Fractions *Pathway 3*: Equivalent Fractions **Fraction Operations** *Pathway 1*: Repeated Addition of Fractions *Pathway 2*: Adding and Subtracting Mixed Numbers *Pathway 3*: Subtracting Fractions *Pathway 4*: Adding Fractions	5. Demonstrate an understanding of adding and subtracting positive fractions and mixed numbers, with like and unlike denominators, concretely, pictorially and symbolically (limited to positive sums and differences). [C, CN, ME, PS, R, V] 7. Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using: • benchmarks • place value • equivalent fractions and/or decimals. [CN, R, V]	4. Relate improper fractions to mixed numbers. [CN, ME, R, V]	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 [C, CN, PS, R, V]

Grade 8 WNCP outcomes	*Nelson Math Focus 8*	*Math Makes Sense 8*	*MathLinks 8*	*Leaps and Bounds 7/8* Topics	Grade 7 WNCP outcomes	Grade 6 WNCP outcomes	Grade 5 WNCP outcomes
7. Demonstrate an understanding of multiplication and division of integers, concretely, pictorially and symbolically. [C, CN, PS, R, V]	Chapter 6: Lessons 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, Curious Math, Math Game, Chapter Self-Test, Chapter Review, Chapter Task	Unit 2, Lessons 2.1, 2.2, Game, 2.3, 2.4, 2.5, Unit Problem	Chapter 8: 8.1–8.5 Wrap It Up! Math Games Challenge in Real Life: Running a Small Business Challenge in Real Life: The Earth's Core Chapters 5–8 Review	**Integers** *Pathway 1*: Subtracting Integers *Pathway 2*: Adding Integers *Pathway 3*: Representing and Comparing Integers	6. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially and symbolically. [C, CN, PS, R, V]	7. Demonstrate an understanding of integers, concretely, pictorially and symbolically. [C, CN, R, V]	
Patterns and Relations (Patterns)							
1. Graph and analyze two-variable linear relations. [C, ME, PS, R, T, V]	Chapter 9: Lessons 9.1, 9.2, 9.3, 9.4, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task	Unit 6, Lessons 6.6, 6.7, Technology Lesson, Unit Problem	Chapter 9: 9.1–9.3 Wrap It Up! Math Games Challenge in Real Life: Comparing Wages Challenge in Real Life: The Earth's Core Chapters 9–12 Review	**Patterns** *Pathway 1*: Linear Relations *Pathway 2*: Representing Patterns *Pathway 3*: Exploring Simple Patterns	1. Demonstrate an understanding of oral and written patterns and their equivalent linear relations. [C, CN, R] 2. Create a table of values from a linear relation, graph the table of values, and analyze the graph to draw conclusions and solve problems [C, CN, R, V]	1. Demonstrate an understanding of the relationship within tables of values to solve problems. [C, CN, PS, R] 2. Represent and describe patterns and relationships using graphs and tables. [C, CN, ME, PS, R, V]	1. Determine the pattern rule to make predictions about subsequent elements [C, CN, PS, R, V]
Patterns and Relations (Variables and Equations)							
2. Model and solve problems using linear equations of the form: • $ax = b$ • $\frac{x}{a} = b$, $a \neq 0$ • $ax + b = c$ • $\frac{x}{a} + b = c$, $a \neq 0$	Chapter 9: Lessons 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, Math Game, Chapter Self-Test, Chapter Review, Chapter Task	Unit 6, Lesson 6.1, 6.2, 6.3, 6.4, 6.5, Game, Unit Problem	Math Games Chapter 10: 10.1–10.4 Wrap It Up! Math Games Challenge in Real Life: The Earth's Core Chapters 9–12 Review	**Algebra** *Pathway 1*: Solving Problems Using Equations *Pathway 2*: Solving Simple Equations *Pathway 3*: Using Variables	3. Demonstrate an understanding of preservation of equality by: • modelling preservation of equality, concretely, pictorially and symbolically • applying preservation of equality to solve	3. Represent generalizations arising from number relationships using equations with letter variables. [C, CN, PS, R, V] 4. Demonstrate and explain the meaning of	2. Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions. [C, CN, PS, R]

• $a(x + b) = c$ concretely, pictorially and symbolically, where a, b and c are integers. [C, CN, PS, V]					equations. [C, CN, PS, R, V] 4. Explain the difference between an expression and an equation. [C, CN] 5. Evaluate an expression given the value of the variable(s). [CN, R] 6. Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially and symbolically, where a and b are integers. [CN, PS, R, V] 7. Model and solve problems that can be represented by linear equations of the form: • $ax + b = c$ • $ax = b$ • $\frac{x}{a} = b$, $a \neq 0$ concretely, pictorially and symbolically, where a, b and c are whole numbers. [CN, PS, R, V]	preservation of equality concretely, pictorially and symbolically. [C, CN, PS, R, V]	

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Shape and Space (Measurement)							
1. Develop and apply the Pythagorean theorem to solve problems. [CN, PS, R, V, T]	Chapter 1: Lessons 1.6, 1.7, Chapter Task	Unit 1, Lessons 1.5, Technology Lesson, 1.6, 1.7, Unit Problem	Chapter 3: 3.2, 3.4–3.5 Wrap It Up! Challenge in Real Life: Building a Staircase Chapters 1–4 Review Task: Test the Efficiency of a Ramp				
2. Draw and construct nets for 3-D objects. [C, CN, PS, V]	Chapter 5: Lessons 5.1, 5.2, Curious Math, Chapter Task	Unit 4, Lessons 4.1, 4.2, 4.3, 4.4, 4.7	Chapter 5: 5.2–5.4 Wrap It Up! Challenge in Real Life: Design a Bedroom Chapters 5–8 Review Task: Fraction Cubes	**3-D Shapes** *Pathway 3*: Using Nets (Grade 8 WNCP)			
				Angles *Pathway 1*: Sum of Angle Measures in Polygons *Pathway 2*: Drawing Angles *Pathway 3*: Measuring Angles		1. Demonstrate an understanding of angles by: • identifying examples of angles in the environment • classifying angles according to their measure • estimating the measure of angles using 45°, 90° and 180° as reference angles • determining angle measures in degrees • drawing and labelling angles when the measure is specified. [C, CN, ME, V] 2. Demonstrate that the sum of interior angles is: • 180° in a triangle • 360° in a quadrilateral. [C, R]	

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3. Determine the surface area of: • right rectangular prisms • right triangular prisms • right cylinders to solve problems. [C, CN, PS, R, V]	Chapter 5: Lessons 5.3, 5.4, 5.7, Math Game, Chapter Task	Unit 4, Lessons 4.3, 4.4, 4.7, Unit Problem	Chapter 5: 5.3–5.4 Wrap It Up! Math Games Challenge in Real Life: Design a Bedroom Chapters 5–8 Review	**Area and Perimeter** *Pathway 1*: Area of Circles *Pathway 2*: Circumference of Circles *Pathway 4*: Area of Parallelograms and Triangles *Pathway 5*: Area and Perimeter of Rectangles **Volume and Surface Area** *Pathway 2*: Surface Area of Prisms (Grade 8 WNCP) **Metric Units** *Pathway 1*: Renaming Units *Pathway 2*: Selecting a Unit	1. Demonstrate an understanding of circles by • describing the relationships among radius, diameter and circumference of circles • relating circumference to pi • determining the sum of the central angles • constructing circles with a given radius or diameter • solving problems involving the radii, diameters and circumferences of circles. [C, CN, R, V] 2. Develop and apply a formula for determining the area of • triangles • parallelograms • circles. [CN, PS, R, V]	3. Develop and apply a formula for determining the: • perimeter of polygons • area of rectangles • volume of right rectangular prisms. [C, CN, PS, R, V]	1. Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions. [C, CN, PS, R, V] 2. Demonstrate an understanding of measuring length (mm) by: • selecting and justifying referents for the unit mm • modelling and describing the relationship between mm and cm units, and between mm and m units. [C, CN, ME, PS, R, V]

Grade 8 WNCP outcomes	*Nelson Math Focus 8*	*Math Makes Sense 8*	*MathLinks 8*	*Leaps and Bounds 7/8* Topics	Grade 7 WNCP outcomes	Grade 6 WNCP outcomes	Grade 5 WNCP outcomes
4. Develop and apply formulas for determining the volume of right prisms and right cylinders. [C, CN, PS, R, V]	Chapter 5: Lessons 5.5, 5.6, 5.7, Math Game, Chapter Task	Unit 4, Lessons 4.5, Game, 4.6, 4.8, Unit Problem	Chapter 7: 7.1–7.4 Wrap It Up! Math Games Challenge in Real Life: Create a Storage Container Chapters 5–8 Review	**Area and Perimeter** *Pathway 1*: Area of Circles *Pathway 4*: Area of Parallelograms and Triangles *Pathway 5*: Area and Perimeter of Rectangles **Volume and Surface Area** *Pathway 1*: Volume of Prisms: Using a Formula (Grade 8 WNCP) *Pathway 3*: Volume of Rectangular Prisms	1. Demonstrate an understanding of circles by • describing the relationships among radius, diameter and circumference of circles • relating circumference to pi • solving problems involving the radii, diameters and circumferences of circles. [C, CN, R, V] 2. Develop and apply a formula for determining the area of • triangles • parallelograms • circles. [CN, PS, R, V]	3. Develop and apply a formula for determining the: • perimeter of polygons • area of rectangles • volume of right rectangular prisms. [C, CN, PS, R, V]	3. Demonstrate an understanding of volume by: • selecting and justifying referents for cm^3 or m^3 units • estimating volume by using referents for cm^3 or m^3 • measuring and recording volume (cm^3 or m^3) • constructing rectangular prisms for a given volume. [C, CN, ME, PS, R, V] 4. Demonstrate an understanding of capacity by: • describing the relationship between mL and L • 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). [C, CN, ME, PS, R, V]
Shape and Space (3-D Objects and 2-D Shapes)							
5. Draw and interpret top, front and side views of 3-D objects composed of right rectangular prisms. [C, CN, R, T, V]	Chapter 11: Lessons 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, Math Game, Curious Maths, Chapter Self-Test, Chapter Review, Chapter Task	Unit 8, Lessons 8.1, Technology Lesson, 8.2, 8.3, Technology Lesson	Chapter 5: 5.1 Wrap It Up! Challenge in Real Life: Design a Bedroom Challenge in Real Life: Create a Storage Container Chapters 5–8 Review	**3-D Shapes** *Pathway 1*: Using Isometric Drawings *Pathway 2*: Using Different Views (Grade 8 WNCP)			

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				2-D Shapes *Pathway 3*: Sorting and Classifying Polygons		4. Construct and compare triangles, including: • scalene • isosceles • equilateral • right • obtuse • acute in different orientations. [C, PS, R, V] 5. Describe and compare the sides and angles of regular and irregular polygons. [C, PS, R, V]	6. Identify and sort quadrilaterals, including: • rectangles • squares • trapezoids • parallelograms • rhombuses according to their attributes. [C, R, V]
				Geometric Drawings *Pathway 1*: Bisecting Angles and Line Segments *Pathway 2*: Drawing Lines and Polygons *Pathway 3*: Drawing Circles *Pathway 4*: Drawing Triangles	1. Demonstrate an understanding of circles by • describing the relationships among radius, diameter and circumference of circles • relating circumference to pi • determining the sum of the central angles • constructing circles with a given radius or diameter • solving problems involving the radii, diameters and circumferences of circles. [C, CN, R, V] 3. Perform geometric constructions, including; • perpendicular line segments • parallel line segments • perpendicular bisectors • angle bisectors. [CN, R, V]	4. Construct and compare triangles, including: • scalene • isosceles • equilateral • right • obtuse • acute in different orientations. [C, PS, R, V]	5. Describe and provide examples of edges and faces of 3-D objects and sides of 2-D shapes that are: • parallel • intersecting • perpendicular • vertical • horizontal. [C, CN, R, T, V]
				Location *Pathway 1*: Plotting Points in 4 Quadrants *Pathway 2*: Plotting Points on a Grid	4. Identify and plot points in the four quadrants of a Cartesian plane using integral ordered pairs. [C, CN, V]	8. Identify and plot points in the first quadrant of a Cartesian plane using whole number ordered pairs. [C, CN, V]	

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Shape and Space (Transformations)							
6. Demonstrate an understanding of tessellation by: • explaining the properties of shapes that make tessellating possible • creating tessellations • identifying tessellations in the environment. [C, CN, PS, T, V]	Chapter 7: Lessons 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, Math Game, Curious Math, Chapter Self-Test, Chapter Review, Chapter Task	Unit 8, Lessons 8.4, 8.5, Game, 8.6, Technology Lesson, Unit Problem	Chapter 12: 12.1–12.4 Wrap It Up! Math Games Challenge in Real Life: Border Design Chapters 9–12 Review Task: Put Out a Forest Fire	**Transformations** *Pathway 3*: Combining Transformations *Pathway 4*: Performing Single Transformations	5. Perform and describe transformations (translations, rotations or reflections) of a 2-D shape in all four quadrants of a Cartesian plane (limited to integral number vertices). [CN, PS, T, V]	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. [C, CN, PS, T, V] 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] 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]	7. Perform a single transformation (translation, rotation or reflection) of a 2-D shape, (with and without technology) and draw and describe the image. [C, CN, T, V] 8. Identify a single transformation including a translation, a rotation and a reflection of 2-D shapes. [C, T, V]
Statistics and Probability (Data Analysis)							
1. Critique ways in which data is presented. [C, R, T, V]	Chapter 8: Lessons 8.1, 8.2, 8.3, 8.4, 8.5, Curious Math, Math Game, Chapter Self-Test, Chapter Review, Chapter Task	Unit 7, Lessons 7.1, Technology Lessons, 7.2, Unit Problem	Chapter 1: 1.1–1.3 Wrap It Up! Math Games Challenge in Real Life: Keep Your Community Green Chapters 1–4 Review	**Displaying Data** *Pathway 1*: Using Circle Graphs and Line Graphs *Pathway 2*: Bias and Sampling (Grade 8 WNCP) *Pathway 3*: Interpreting Graphs **Summarizing Data** *Pathway 1*: Effects of Changing Data *Pathway 2*: Using mean, Median, and Mode *Pathway 3*: Calculating the Mean	1. Demonstrate an understanding of central tendency and range by: • determining the measures of central tendency (mean, median, mode) and range • determining the most appropriate measures of central tendency to report findings. [C, PS, R, T] 2. Determine the effect on the mean, median and mode when an outlier is included in a data set. [C, CN, PS, R] 3. Construct, label and interpret circle graphs to solve problems. [C, CN, PS, R, T, V]	1. Create, label and interpret line graphs to draw conclusions. [C, CN, PS, R, V] 2. Select, justify and use appropriate methods of collecting data, including: • questionnaires • experiments • databases • electronic media. [C, PS, T] 3. Graph collected data and analyze the graph to solve problems. [C, CN, PS]	1. Differentiate between first-hand and second-hand data. [C, R, T, V] 2. Construct and interpret double bar graphs to draw conclusions. [C, PS, R, T, V]

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Statistics and Probability (Chance and Uncertainty)							
2. Solve problems involving the probability of independent events. [C, CN, PS, T]	Chapter 10: Lessons 10.1, 10.2, 10.3, 10.4, Curious Math, Math Game, Chapter Self-Test, Chapter Review, Chapter Task	Unit 7, Lessons 7.3, Game, 7.4, Technology Lesson, Unit Problem	Chapter 11: 11.1–11.3 Wrap It Up! Math Games Challenge in Real Life: Treasure Hunt Chapters 9–12 Review Task: Put Out a Forest Fire	**Probability** *Pathway 1*: Probability: Independent Events *Pathway 2*: Theoretical Probability *Pathway 3*: Experimental Probability	4. Express probabilities as ratios, fractions and percents. [C, CN, R, T, V] 5. Identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. [C, ME, PS] 6. Conduct a probability experiment to compare the theoretical probability (determined using a tree diagram, table or another graphic organizer) and experimental probability of two independent events. [C, PS, R, T]	4. Demonstrate an understanding of probability by: • identifying all possible outcomes of a probability experiment • differentiating between experimental and theoretical probability • determining the theoretical probability of outcomes in a probability experiment • determining the experimental probability of outcomes in a probability experiment • comparing experimental results with the theoretical probability for an experiment. [C, ME, PS, T]	3. Describe the likelihood of a single outcome occurring using words, such as: • impossible • possible • certain. [C, CN, PS, R] 4. Compare the likelihood of two possible outcomes occurring using words, such as: • less likely • equally likely • more likely. [C, CN, PS, R]