Correlation to WNCP Curriculum and Grade 5 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.

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<tr>
<td>1. Represent and describe whole numbers to 1 000 000. [C, CN, V, T]</td>
<td>Chapter 2: Lessons 2.1, 2.2, 2.3, 2.5, Curious Maths, Chapter Review</td>
<td>Unit 2, Launch, p. 35; Unit 2, Lesson 1, pp. 36-38; Unit 2, Lesson 2, pp. 40-42; Unit 2, Lesson 3, pp. 43-47</td>
<td>Representing Whole Numbers Pathway 1: Representing Numbers to 10 000 Pathway 2: Representing Numbers to 10 000 Pathway 3: Representing Numbers to 1000 Pathway 4: Multiplying and Dividing by 10s Comparing Whole Numbers Pathway 1: Comparing Numbers to 100 000 Pathway 2: Comparing Numbers to 10 000 Pathway 3: Comparing Numbers to 1000</td>
<td>1. Represent and describe whole numbers to 10 000, pictorially and symbolically. [C, CN, V] 2. Compare and order numbers to 10 000. [C, CN]</td>
<td>1. Say the number sequence forward and backward from 0 to 1000 by: • 5s, 10s or 100s using any starting point • 3s using starting points that are multiples of 3 • 4s using starting points that are multiples of 4 • 25s using starting points that are multiples of 25. [C, CN, ME] 2. Represent and describe numbers to 1000, concretely, pictorially and symbolically. [C, CN, V] 3. Compare and order numbers to 1000. [CN, R, V] 4. Estimate quantities less than 1000 using referents. [ME, PS, R, V] 5. Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000. [C, CN, R, V]</td>
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</tbody>
</table>
### Grade 5 WNCP Outcomes

2. Use estimation strategies including:
   - front-end rounding
   - compensation
   - compatible numbers in problem-solving contexts.
   \[C, \text{CN, ME, PS, R, V}\]

### Math Focus 5

- Chapter 2: Lessons 2.4, 2.5, 2.9, Curious Math (Keep on Doubling), Chapter Review, Chapter 3: Lessons 3.1, 3.2, 3.3, 3.8, Math Game, Chapter Review, Chapter 6: Lessons 6.7, 6.11, Math Game, Chapter Review, Chapter Task

### Math Makes Sense 5

- Unit 2, Lesson 4, pp. 48-52
- Unit 2, Lesson 5, pp. 53-56
- Unit 2, Lesson 6, pp. 57-59
- Unit 2, Lesson 7, pp. 60-63
- Unit 2, Lesson 8, pp. 64, 65
- Unit 2, Unit Problem, pp. 68, 69
- Unit 3, Lesson 4, pp. 84-87
- Unit 3, Lesson 7, pp. 97-99

### Leaps and Bounds 5/6 Topics

- Adding and Subtracting
  - Pathway 1: Different Numbers of Digits
  - Pathway 2: Same Number of Digits
  - Pathway 3: Using Mental Math to Subtract
  - Pathway 4: Using Mental Math to Add

### Relating Situations to Operations

- Pathway 3: Subtraction Situations

### Grade 4 WNCP Outcomes

3. Demonstrate an understanding of addition of numbers with answers to 10 000 and their corresponding subtractions (limited to 3 and 4-digit numerals) by:
   - using personal strategies for adding and subtracting
   - estimating sums and differences
   - solving problems involving addition and subtraction.
   \[C, \text{CN, ME, PS, R}\]

4. Explain the properties of 0 and 1 for multiplication, and the property of 1 for division.
   \[C, \text{CN, R}\]

5. Describe and apply mental mathematics strategies, such as:
   - skip counting from a known fact
   - using doubling or halving
   - using doubling or halving and adding or subtracting one more group
   - using patterns in the 9s facts
   - using repeated doubling to determine basic multiplication facts to 9 × 9 and related division facts.
   \[C, \text{CN, ME, PS, R}\]

6. Describe and apply mental mathematics strategies for adding two 2-digit numerals, such as:
   - adding from left to right
   - taking one addend to the nearest multiple of ten and then compensating
   - using doubles.
   \[C, \text{ME, PS, R}\]

7. Describe and apply mental mathematics strategies for subtracting two 2-digit numerals, such as:
   - taking the subtrahend to the nearest multiple of ten and then compensating
   - thinking of addition
   - using doubles.
   \[C, \text{ME, PS, R, V}\]

8. Apply estimation strategies to predict sums and differences of two 2-digit numerals in a problem solving context.
   \[C, \text{CN, R}\]

9. Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 (limited to 1, 2 and 3-digit numerals) by:
   - 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.
   \[C, \text{CN, ME, PS, R}\]

10. Apply mental mathematics strategies and number properties, such as:
    - using doubles
    - making 10
    - using the commutative property
    - using the property of zero
    - thinking addition for subtraction to recall basic addition facts to 18 and related subtraction facts.
    \[C, \text{CN, ME, R, V}\]
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</table>
| 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] | Chapter 6  
  Chapter 9 | Unit 3  
  Unit 5, Lesson 9, pp. 194-196 | Multiplying Whole Numbers  
  Pathway 1: Multiplying Two-Digit Numbers  
  Pathway 2: Multiplying by One-Digit Numbers  
  Pathway 3: Multiplication Fact Strategies  
  Dividing Whole Numbers  
  Pathway 1: Dividing Three-Digit Numbers  
  Pathway 2: Dividing Two-Digit Numbers  
  Pathway 3: Division Fact Strategies  
  Relating Situations to Operations  
  Pathway 1: Division Situations  
  Pathway 2: Multiplication Situations | 6. Demonstrate an understanding of multiplication (2-or 3-digit by 1-digit) to solve problems by:  
  • using personal strategies for multiplication with and without concrete materials  
  • using arrays to represent multiplication  
  • connecting concrete representations to symbolic representations  
  • estimating products.  
  [C, CN, ME, PS, R, V] | 11. Demonstrate an understanding of multiplication to 5 × 5 by:  
  • representing and explaining multiplication using equal grouping and arrays  
  • creating and solving problems in context that involve multiplication  
  • modelling multiplication using concrete and visual representations, and recording the process symbolically  
  • relating multiplication to repeated addition  
  • relating multiplication to division.  
  [C, CN, PS, R] |
| 4. Apply mental mathematics strategies for multiplication, such as:  
  • annexing then adding zero  
  • halving and doubling  
  • using the distributive property.  
  [C, ME, R] | | | 7. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:  
  • using personal strategies for dividing with and without concrete materials  
  • estimating quotients  
  • relating division to multiplication.  
  [C, CN, ME, PS, R, V] | | |
| 5. Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems.  
  [C, CN, PS, V] | | | 8. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:  
  • using personal strategies for dividing with and without concrete materials  
  • estimating quotients  
  • relating division to multiplication.  
  [C, CN, ME, PS, R, 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] | | | 9. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:  
  • using personal strategies for dividing with and without concrete materials  
  • estimating quotients  
  • relating division to multiplication.  
  [C, CN, ME, PS, R, V] | | |
| 11. Demonstrate an understanding of multiplication to 5 × 5 by:  
  • representing and explaining multiplication using equal grouping and arrays  
  • creating and solving problems in context that involve multiplication  
  • modelling multiplication using concrete and visual representations, and recording the process symbolically  
  • relating multiplication to repeated addition  
  • relating multiplication to division.  
  [C, CN, PS, R] | | | 12. Demonstrate an understanding of division by:  
  • representing and explaining division using equal sharing and equal grouping  
  • creating and solving problems in context that involve equal sharing and equal grouping  
  • modelling equal sharing and equal grouping using concrete and visual representations, and recording the process symbolically  
  • relating division to repeated subtraction  
  • relating division to multiplication.  
  (limited to division related to multiplication facts up to 5 × 5)  
  [C, CN, PS, R] | | |
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<td>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]</td>
<td>Chapter 7: Lessons 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, Curious Math, Math Games, Chapter Review, Chapter Task</td>
<td>Unit 5, Lesson 1, pp. 166-169; Unit 5, Lesson 2, pp. 170-173; Unit 5, Lesson 3, pp. 174, 175</td>
<td>Representing Fractions Pathway 3: Proper Fractions: Parts of Sets Pathway 4: Proper Fractions: Parts of Wholes Comparing Fractions Pathway 2: Equivalent Fractions Pathway 3: Comparing: Same Numerators Pathway 4: Comparing: Same Denominators Pathway 5: Comparing Fractions to ½ and 1</td>
<td>8. Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations to: • name and record fractions for the parts of a whole or a set • compare and order fractions • model and explain that for different wholes, two identical fractions may not represent the same quantity • provide examples of where fractions are used. [C, CN, PS, R, V]</td>
<td>13. Demonstrate an understanding of fractions by: • explaining that a fraction represents a part of a whole • describing situations in which fractions are used • comparing fractions of the same whole with like denominators [C, CN, ME, R, V]</td>
</tr>
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| 11. Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths). [C, CN, PS, R, V] | Chapter 3: Lessons 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, Curious Math, Math Game, Chapter Review, Chapter Task | Unit 5, Lesson 10, pp. 197-199; Unit 5, Lesson 11, pp. 200-203; Unit 5, Lesson 12, pp. 205-209; Unit 5, Lesson 13, pp. 211-215 | **Decimal Computation**
*Pathway 1: Multiply and Divide by 10 or 100*
*Pathway 2: Add and Subtract to Thousandths*
*Pathway 3: Add and Subtract Thousandths*
*Pathway 4: Add and Subtract to Hundredths*
*Pathway 5: Add and Subtract Tenths or Hundredths* | 11. Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by:
- using compatible numbers
- estimating sums and differences
- using mental math strategies to solve problems. [C, ME, PS, R, V] | |

| Patterns and Relations: Patterns | Chapter 1: Lessons 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, Curious Math, Chapter Review, Chapter Task | Unit 1, Launch, pp. 4, 5; Unit 1, Lesson 1, pp. 6-8; Unit 1, Lesson 2, pp. 9-12; Unit 1, Lesson 3, pp. 13-16; Unit 1, Lesson 4, pp. 18, 19 | **Patterns**
*Pathway 1: Using Pattern Rules*
*Pathway 2: Growing and Shrinking Patterns* | 1. Identify and describe patterns found in tables and charts, including a multiplication chart. [C, CN, PS, V]
2. Reproduce a pattern shown in a table or chart using concrete materials. [C, CN, V]
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:
- describing
- extending
- comparing
- creating patterns using manipulatives, diagrams, sounds and actions (numbers to 1000). [C, CN, PS, R, V]
2. Demonstrate an understanding of decreasing patterns by:
- describing
- extending
- comparing
- creating patterns using manipulatives, diagrams, sounds and actions (numbers to 1000). [C, CN, PS, R, V] |
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<td>2. Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions. [C, CN, PS, R]</td>
<td>Chapter 1: Lessons 1.7, 1.8, Math Game, Chapter Review, Chapter Task Chapter 3: Lessons 3.3, 3.4</td>
<td>Unit 1, Lesson 5, pp. 20-22; Unit 1, Lesson 6, pp. 23-25; Unit 1, Lesson 7, pp. 26-28</td>
<td>Equality <em>Pathway 1: Using Algebra</em> <em>Pathway 2: Solving Equations</em></td>
<td>4. Identify and explain mathematical relationships using charts and diagrams to solve problems. [CN, PS, R, V]</td>
<td>3. Solve one-step addition and subtraction equations involving symbols representing an unknown number. [C, CN, PS, R, V]</td>
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**Shape and Space: Measurement**

<p>| 1. Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions. [C, CN, PS, R, V] | Chapter 8: Lessons 8.1, 8.2, 8.3, 8.4, Curious Math, Chapter Review, Chapter Task | Unit 4, Lesson 1, pp. 122-125; Unit 4, Lesson 2, pp. 126, 127; Unit 4, Lesson 3, pp. 128-130; Unit 4, Lesson 4, pp. 132-134 Unit 5, Lesson 8, pp. 191-193 | Length <em>Pathway 1: Perimeter of a Rectangle</em> <em>Pathway 2: Perimeter: Using Standard Units</em> <em>Pathway 3: Length: Using Standard Units</em> <em>Area</em> <em>Pathway 1: Area of a Rectangle</em> <em>Pathway 2: Using Standard Units of Area</em> | 3. Demonstrate an understanding of area of regular and irregular 2-D shapes by: • recognizing that area is measured in square units • selecting and justifying referents for the units cm² or m² • estimating area by using referents for cm² or m² • determining and recording area (cm² or m²) • constructing different rectangles for a given area (cm² or m²) in order to demonstrate that many different rectangles may have the same area. [C, CN, ME, PS, R, V] | 3. Demonstrate an understanding of measuring length (cm, m) by: • selecting and justifying referents for the units cm and m • 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] |
| 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] | | | | 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) • constructing different shapes for a given perimeter (cm, m) to demonstrate that many shapes are possible for a perimeter. [C, ME, PS, R, V] |</p>
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<tr>
<td>3. Demonstrate an understanding of volume by:</td>
<td>Chapter 8: Lessons 8.5, Math Game, 8.6, 8.7, 8.8, 8.9, 8.10, Math Game, Chapter Review, Chapter Task</td>
<td>Unit 4, Lesson 5, pp. 135-137; Unit 4, Lesson 6, pp. 138-141; Unit 4, Lesson 7, pp. 142-144; Unit 4, Lesson 8, pp. 145-147; Unit 4, Lesson 9, pp. 148-150; Unit 4, Lesson 10, pp. 151-154; Unit 4, Lesson 11, pp. 155-157</td>
<td>Volume and Capacity</td>
<td>Pathway 1: Volume Related to Area of Base</td>
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<tr>
<td>• selecting and justifying referents for cm³ or m³ units</td>
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<td>Pathway 2: Relating Volume and Capacity</td>
<td>Pathway 3: Volume: Cubic Centimetres</td>
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<td>• estimating volume by using referents for cm³ or m³</td>
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<td>Pathway 4: Capacity: Litres or Millilitres</td>
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<tr>
<td>• measuring and recording volume (cm³ or m³)</td>
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<td>• constructing rectangular prisms for a given volume.</td>
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<td>[C, CN, ME, PS, R, V]</td>
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<td>4. Demonstrate an understanding of capacity by:</td>
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<td>• describing the relationship between mL and L</td>
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<td>• selecting and justifying referents for mL or L units</td>
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<td>• estimating capacity by using referents for mL or L</td>
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<tr>
<td>• measuring and recording capacity (mL or L).</td>
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<tr>
<td>[C, CN, ME, PS, R, V]</td>
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**Leaps and Bounds 5/6 Correlation to WNCP curriculum and Grade 5 classroom resources**

1. Read and record time using digital and analog clocks, including 24-hour clocks. [C, CN, V]
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). [CN, ME, R]
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. [C, CN, PS, R, V]
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</table>
| Mass                  |             |                   | Mass  
Pathway 1: Mass: Kilograms and Grams  
Pathway 2: Mass: Using One Standard Unit | 4. Demonstrate an understanding of measuring mass (g, kg) by:  
• selecting and justifying referents for the units g and kg  
• 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] |
| Angles                |             |                   | Angles  
Pathway 1: Measuring and Drawing Angles  
Pathway 2: Comparing Angles |
| 3-D Objects and 2-D Shapes | Chapter 11: Lessons 11.1, 11.2, 11.3, 11.4, 11.5, Math Game, Curious Math, Chapter Review, Chapter Task | Unit 6, Lesson 1, pp. 222-225;  
Unit 6, Lesson 2, pp. 226-229;  
Unit 6, Lesson 3, pp. 230-233;  
Unit 6, Lesson 4, pp. 234-239;  
Unit 6, Lesson 5, pp. 240, 241  
Unit 6, Lesson 6, pp. 242-244;  
Unit 6, Lesson 7, pp. 246-249 | 3-D Shapes  
Pathway 1: Modelling with Nets  
Pathway 2: Modelling with Skeletons  
[C, CN, R, V]  
5. Demonstrate an understanding of line symmetry by:  
• identifying symmetrical 2-D shapes  
• creating symmetrical 2-D shapes  
• drawing one or more lines of symmetry in a 2-D shape.  
[C, CN, V]  
6. Describe 3-D objects according to the shape of the faces, and the number of edges and vertices.  
[C, CN, PS, R, V]  
7. Sort regular and irregular polygons, including:  
• triangles  
• quadrilaterals  
• pentagons  
• hexagons  
• octagons according to the number of sides.  
[C, CN, R, V] |
### Transformations

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</table>
| 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] | Chapter 5: Lessons 5.1, 5.2, 5.3, 5.4, 5.5, Math Game, Curious Math, Chapter Review, Chapter Task | Unit 8, Lesson 1, pp. 296-299; Unit 8, Lesson 3, pp. 302-305; Unit 8, Lesson 4, pp. 306-310; Unit 8, Lesson 5, pp. 311-313 | Transformations  
Pathway 1: Single Rotations  
Pathway 2: Multiple Reflections  
Pathway 3: Multiple Translations  
Pathway 4: Single Reflections and Translations | | |

### Location and Movement

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<tr>
<td>8. Identify a single transformation, including a translation, rotation and reflection of 2-D shapes. [C, T, V]</td>
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### Statistics and Probability: Data Analysis

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<tr>
<td>1. Differentiate between first-hand and second-hand data. [C, R, T, V]</td>
<td>Chapter 4: Lessons 4.1, 4.2, 4.3, Math Game, Chapter Review</td>
<td>Unit 7, Lesson 1, pp. 258-260</td>
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### Summarizing Data

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</table>
| 2. Construct and interpret double bar graphs to draw conclusions. [C, PS, R, T, V] | Chapter 4: Lessons 4.4, 4.5, 4.6, Curious Math, Chapter Review | Unit 7, Lesson 2, pp. 261-265; Unit 7, Lesson 3, pp. 266-269; Unit 7, Technology, pp. 270, 271 | Summarizing Data  
Pathway 1: Data: Using the Mean  
Pathway 2: Data: Using the Median and Mode  
Pathway 3: Data: Using Double Bar Graphs  
Pathway 4: Data: Using Line Plots | | |

### Displaying Data

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| 2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions. [C, R, T, V] | Chapter 4: Lessons 4.4, 4.5, 4.6, Curious Math, Chapter Review | Unit 7, Lesson 2, pp. 261-265; Unit 7, Lesson 3, pp. 266-269; Unit 7, Technology, pp. 270, 271 | Summarizing Data  
Pathway 1: Data: Using the Mean  
Pathway 2: Data: Using the Median and Mode  
Pathway 3: Data: Using Double Bar Graphs  
Pathway 4: Data: Using Line Plots | | |

1. Demonstrate an understanding of many-to-one correspondence. [C, R, T, V]
2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions. [C, PS, R, V]

### Displaying Data

<table>
<thead>
<tr>
<th>Grade 5 WNCP Outcomes</th>
<th>Math Focus 5</th>
<th>Math Makes Sense 5</th>
<th>Leaps and Bounds 5/6 Topics</th>
<th>Grade 4 WNCP Outcomes</th>
<th>Grade 3 WNCP Outcomes</th>
</tr>
</thead>
</table>
| 2. Construct and interpret double bar graphs to draw conclusions. [C, PS, R, T, V] | Chapter 4: Lessons 4.4, 4.5, 4.6, Curious Math, Chapter Review | Unit 7, Lesson 2, pp. 261-265; Unit 7, Lesson 3, pp. 266-269; Unit 7, Technology, pp. 270, 271 | Summarizing Data  
Pathway 1: Data: Using the Mean  
Pathway 2: Data: Using the Median and Mode  
Pathway 3: Data: Using Double Bar Graphs  
Pathway 4: Data: Using Line Plots | | |

1. Collect first-hand data and organize it using:  
- tally marks  
- line plots  
- charts  
- lists to answer questions. [C, CN, V]
2. Construct, label and interpret bar graphs to solve problems. [PS, R, V]
<table>
<thead>
<tr>
<th>Chance and Uncertainty</th>
<th>Grade 5 WNCP Outcomes</th>
<th>Math Focus 5</th>
<th>Math Makes Sense 5</th>
<th>Leaps and Bounds 5/6 Topics</th>
<th>Grade 4 WNCP Outcomes</th>
<th>Grade 3 WNCP Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Describe the likelihood of a single outcome occurring using words, such as:</td>
<td>Grade 5 WNCP Outcomes</td>
<td>Chapter 10: Lessons 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, Math Game, Curious Math, Chapter Review, Chapter Task</td>
<td>Unit 7, Lesson 4, pp. 272-275; Unit 7, Lesson 6, pp. 280-283</td>
<td>Probability</td>
<td>Pathway 1: Probability: Using Numbers</td>
<td>Pathway 2: Probability: Using Words</td>
</tr>
<tr>
<td>4. Compare the likelihood of two possible outcomes occurring using words, such as:</td>
<td></td>
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</tbody>
</table>