



## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Number)

| Curriculum Expectations                                                                                                              | Grade 5 Mathology.ca                                                                                                        | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>General Outcome</b><br>Develop number sense.<br><b>Specific Outcomes</b><br>1. Represent and describe whole numbers to 1 000 000. | <b>Number Unit 1: Number Relationships and Place Value</b><br>1: Representing Larger Numbers<br>2: Comparing Larger Numbers | <b>Big Idea: The set of real numbers is infinite.</b><br><b>Extending whole number understanding to the set of real numbers</b><br>- Extends whole number understanding to 1 000 000.<br><b>Big Idea: Numbers are related in many ways.</b><br><b>Comparing and ordering quantities (multitude or magnitude)</b><br>- Compares, orders, and locates whole numbers based on place-value understanding and records using $<$ , $=$ , $>$ symbols.<br><b>Estimating quantities and numbers</b><br>- Rounds whole numbers using place-value understanding (e.g., 4736 can be rounded to 5000, 4700, 4740).<br><b>Decomposing and composing numbers to investigate equivalencies</b><br>- Composes and decomposes whole numbers using standard and non-standard partitioning (e.g., 1000 is 10 hundreds or 100 tens).<br><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b><br><b>Unitizing quantities into base-ten units</b><br>- Writes and reads whole numbers in multiple forms (e.g., 1358; one thousand three hundred fifty-eight; $1000 + 300 + 50 + 8$ ).<br>- Understands that the value of a digit is ten times the value of the same digit one place to the right. |

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| <p>2. Use estimation strategies in problem-solving contexts.</p>                                                                                                                           | <p><b>Number Unit 1: Number Relationships and Place Value</b><br/>3: Estimating to Solve Problems</p> <p><b>Number Unit 2: Fluency with Addition and Subtraction</b><br/>5: Estimating Sums and Differences</p> <p><b>Number Unit 4: Fluency with Multiplication and Division</b><br/>20: Using Estimation for Multiplication and Division</p> | <p><b>Big Idea: Numbers are related in many ways.</b><br/><b>Comparing and ordering quantities (multitude or magnitude)</b><br/>- Compares, orders, and locates whole numbers based on place-value understanding and records using <math>&lt;</math>, <math>=</math>, <math>&gt;</math> symbols.</p> <p><b>Estimating quantities and numbers</b><br/>- Rounds whole numbers using place-value understanding (e.g., 4736 can be rounded to 5000, 4700, 4740).</p> <p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b><br/><b>Developing conceptual meaning of operations</b><br/>- Extends whole number computation models to larger numbers.</p> <p><b>Developing fluency of operations</b><br/>- Estimates the result of whole number operations using contextually relevant strategies (e.g., How many buses are needed to take the Grade 8 classes to the museum?).<br/>- Solves whole number computation using efficient strategies (e.g., mental computation, algorithms, calculating cost of transactions and change owing, saving money to make a purchase).</p> |
| <p>3. Apply mental mathematics strategies and number properties in order to understand and recall basic multiplication facts (multiplication tables) to 81 and related division facts.</p> | <p><b>Number Unit 4: Fluency with Multiplication and Division</b><br/>19: Relating Multiplication and Division Facts</p>                                                                                                                                                                                                                       | <p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b><br/><b>Investigating number and arithmetic properties</b><br/>- Recognizes and generates equivalent numerical expressions using commutative and associative properties.<br/>- Understands operational relationships (e.g., inverse relationship between multiplication/division, addition/subtraction).<br/>- Understands the identity of operations (e.g., <math>5 + 0 = 5</math>; <math>7 \times 1 = 7</math>).</p> <p><b>Developing fluency of operations</b><br/>- Fluently recalls multiplication and division facts to 100.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| 4. Apply mental mathematics strategies for multiplication.                                                                                                                                                                                                         | <b>Number Unit 4: Fluency with Multiplication and Division</b><br>20: Using Estimation for Multiplication and Division<br>21: Strategies for Multiplying Larger Numbers | <b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b><br><b>Developing conceptual meaning of operations</b><br>- Understands the effect of multiplying and dividing whole numbers by powers of 10.<br>- Extends whole number computation models to larger numbers.                                                                                                                                                                                                                                                                                                |
| 5. Demonstrate, with and without concrete materials, an understanding of multiplication (2-digit by 2-digit) to solve problems.                                                                                                                                    | <b>Number Unit 4: Fluency with Multiplication and Division</b><br>22: Multiplying Whole Numbers                                                                         | <b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b><br><b>Developing conceptual meaning of operations</b><br>- Extends whole number computation models to larger numbers.<br><b>Developing fluency of operations</b><br>- Solves whole number computation using efficient strategies (e.g., mental computation, algorithms, calculating cost of transactions and change owing, saving money to make a purchase).                                                                                                                                                |
| 6. Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit), and interpret remainders to solve problems.                                                                                                                | <b>Number Unit 4: Fluency with Multiplication and Division</b><br>23: Dividing Larger Numbers                                                                           | <b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b><br><b>Developing conceptual meaning of operations</b><br>- Extends whole number computation models to larger numbers.<br><b>Developing fluency of operations</b><br>- Solves whole number computation using efficient strategies (e.g., mental computation, algorithms, calculating cost of transactions and change owing, saving money to make a purchase).                                                                                                                                                |
| 7. Demonstrate an understanding of fractions by using concrete, pictorial and symbolic representations to: <ul style="list-style-type: none"> <li>• create sets of equivalent fractions</li> <li>• compare fractions with like and unlike denominators.</li> </ul> | <b>Number Unit 3: Fractions and Decimals</b><br>10: Equivalent Fractions<br>12: Comparing and Ordering Fractions                                                        | <b>Big Idea: Numbers are related in many ways.</b><br><b>Comparing and ordering quantities (multitude or magnitude)</b><br>- Compares, orders, and locates fractions with the same numerator or denominator using reasoning (e.g., $\frac{3}{5} > \frac{3}{6}$ because fifths are larger parts).<br>- Compares, orders, and locates fractions using flexible strategies (e.g., comparing models; creating common denominators or numerators).<br><b>Estimating quantities and numbers</b><br>- Estimates the location of decimals and fractions on a number line.<br>- Estimates the size and magnitude of |

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|                                                                                                                 |                                                                                                                                 | <p>fractions by comparing to benchmarks.</p> <p><b>Decomposing and composing numbers to investigate equivalencies</b></p> <ul style="list-style-type: none"> <li>- Generates and identifies equivalent fractions using flexible strategies (e.g., represents the same part of a whole; same part of a set; same location on a number line).</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <ul style="list-style-type: none"> <li>- Partitions fractional parts into smaller fractional units (e.g., partitions halves into thirds to create sixths).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8. Describe and represent decimals (tenths, hundredths, thousandths), concretely, pictorially and symbolically. | <p><b>Number Unit 3: Fractions and Decimals</b></p> <p>13: Representing Decimals</p>                                            | <p><b>Big Idea: The set of real numbers is infinite.</b></p> <p><b>Extending whole number understanding to the set of real numbers.</b></p> <ul style="list-style-type: none"> <li>- Extends decimal number understanding to thousandths.</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <p><b>Decomposing and composing numbers to investigate equivalencies</b></p> <ul style="list-style-type: none"> <li>- Composes and decomposes decimal numbers using standard and non-standard partitioning (e.g., 1.6 is 16 tenths or 0.16 tens).</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p><b>Unitizing quantities into base-ten units</b></p> <ul style="list-style-type: none"> <li>- Understands that the value of a digit is ten times the value of the same digit one place to the right.</li> <li>- Understands that the value of a digit is one-tenth the value of the same digit one place to the left.</li> <li>- Writes and reads decimal numbers in multiple forms (i.e., numerals, number names, expanded form).</li> </ul> |
| 9. Relate decimals to fractions and fractions to decimals (to thousandths).                                     | <p><b>Number Unit 3: Fractions and Decimals</b></p> <p>13: Representing Decimals</p> <p>16: Relating Fractions and Decimals</p> | <p><b>Big Idea: Numbers are related in many ways.</b></p> <p><b>Comparing and ordering quantities</b></p> <ul style="list-style-type: none"> <li>- Models and explains the relationship between a fraction and its equivalent decimal form (e.g., <math>\frac{2}{5} = \frac{4}{10} = 0.4</math>).</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|                                                                                                                                                                                        |                                                                                                                                                                                                   | <p><b>Unitizing quantities into base-ten units</b></p> <ul style="list-style-type: none"> <li>- Uses fractions with denominators of 10 to develop decimal fraction understanding and notation (e.g., five-tenths is <math>\frac{5}{10}</math> or 0.5).</li> <li>- Understands that the value of a digit is ten times the value of the same digit one place to the right.</li> <li>- Understands that the value of a digit is one-tenth the value of the same digit one place to the left.</li> <li>- Writes and reads decimal numbers in multiple forms (i.e., numerals, number names, expanded form).</li> </ul>                                                                                                                                                                                                                                              |
| <p>10. Compare and order decimals (to thousandths) by using:</p> <ul style="list-style-type: none"> <li>• benchmarks</li> <li>• place value</li> <li>• equivalent decimals.</li> </ul> | <p><b>Number Unit 3: Fractions and Decimals</b></p> <p>15: Comparing and Ordering Decimals</p>                                                                                                    | <p><b>Big Idea: Numbers are related in many ways.</b></p> <p><b>Comparing and ordering quantities</b></p> <ul style="list-style-type: none"> <li>- Compares, orders, and locates decimal numbers using place-value understanding.</li> </ul> <p><b>Estimating quantities and numbers</b></p> <ul style="list-style-type: none"> <li>- Estimates the location of decimals and fractions on a number line.</li> </ul> <p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b></p> <p><b>Unitizing quantities into base-ten units</b></p> <ul style="list-style-type: none"> <li>- Understands that the value of a digit is ten times the value of the same digit one place to the right.</li> <li>- Understands that the value of a digit is one-tenth the value of the same digit one place to the left.</li> </ul> |
| <p>11. Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths).</p>                                                                              | <p><b>Number Unit 5: Operations with Decimals</b></p> <p>26: Estimating Sums and Differences with Decimals</p> <p>27: Adding with Decimal Numbers</p> <p>28: Subtracting with Decimal Numbers</p> | <p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b></p> <p><b>Developing conceptual meaning of operations</b></p> <ul style="list-style-type: none"> <li>- Demonstrates an understanding of decimal number computation through modelling and flexible strategies.</li> </ul> <p><b>Developing fluency of operations</b></p> <ul style="list-style-type: none"> <li>- Estimates sums and differences of decimal numbers (e.g., calculating cost of transactions involving dollars and cents).</li> <li>- Solves decimal number computation using efficient strategies.</li> </ul>                                                                                                                                                                                                                                 |

## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Patterns and Relations: Patterns)

| Curriculum Expectations                                                                                                                                                                                      | Grade 5 Mathology.ca                                                                                                                                                  | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <p><b>General Outcome</b><br/>Use patterns to describe the world and to solve problems.</p> <p><b>Specific Outcomes</b><br/>1. Determine the pattern rule to make predictions about subsequent elements.</p> | <p><b>Patterning Unit 1: Patterning</b><br/>1: Investigating Geometric Patterns<br/>2: Investigating Number Patterns<br/>3: Using Pattern Rules to Solve Problems</p> | <p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b><br/><b>Representing patterns, relations, and functions</b></p> <ul style="list-style-type: none"> <li>- Describes, generates, extends, translates, and corrects number and shape patterns that follow a predetermined rule.</li> <li>- Uses multiple approaches to model situations involving repetition (i.e., repeating patterns) and change (i.e., increasing/decreasing patterns) (e.g., using objects, tables, graphs, symbols, loops and nested loops in coding).</li> <li>- Represents a numeric or shape pattern using a table of values by pairing the term value with a term number.</li> <li>- Generates a visual model to represent a simple number pattern.</li> <li>- Represents a mathematical context or problem with expressions and equations using variables to represent unknowns.</li> </ul> <p><b>Generalizing and analyzing patterns, relations, and functions</b></p> <ul style="list-style-type: none"> <li>- Explains the rule for numeric patterns including the starting point and change (e.g., given: 16, 22, 28, 34, .... Start at 16 and add 6 each time).</li> <li>- Describes numeric and shape patterns using words and numbers.</li> <li>- Predicts the value of a given element in a numeric or shape pattern using pattern rules.</li> </ul> |

## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Patterns and Relations: Variables and Equations)

| Curriculum Expectations                                                                                                                                                                                                                                         | Grade 5 Mathology.ca                                                                                                                                                                                                            | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p><b>General Outcome</b><br/>Represent algebraic expressions in multiple ways.</p> <p><b>Specific Outcomes</b><br/>2. Express a given problem as an equation in which a letter variable is used to represent an unknown number (limited to whole numbers).</p> | <p><b>Patterning Unit 2: Variables and Equations</b><br/>5: Using Variables<br/>6: Solving Addition and Subtraction Equations<br/>7: Solving Multiplication and Division Equations<br/>8: Using Equations to Solve Problems</p> | <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions. Understanding equality and inequality, building on generalized properties of numbers and operations</b><br/>- Expresses a one-step mathematical problem as an equation using a symbol or letter to represent an unknown number (e.g., Sena had some tokens and used four. She has seven left: <math>\square - 4 = 7</math>).</p> <p><b>Using variables, algebraic expressions, and equations to represent mathematical relations</b><br/>- Understands an unknown quantity (i.e., variable) may be represented by a symbol or letter (e.g., <math>13 - \square = 8</math>; <math>4n = 12</math>).<br/>- Flexibly uses symbols and letters to represent unknown quantities in equations (e.g., knows that <math>4 + \square = 7</math>; <math>4 + x = 7</math>; and <math>4 + y = 7</math> all represent the same equation with <math>\square</math>, <math>x</math>, and <math>y</math> representing the same value).<br/>- Interprets and writes algebraic expressions (e.g., <math>2n</math> means two times a number; subtracting a number from 7 can be written as <math>7 - n</math>).<br/>- Understands a variable as a changing quantity (e.g., <math>5s</math>, where <math>s</math> can be any value).</p> |
| <p>3. Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions.</p>                                                                                                                               | <p><b>Patterning Unit 2: Variables and Equations</b><br/>5: Using Variables<br/>6: Solving Addition and Subtraction Equations<br/>7: Solving Multiplication and Division Equations</p>                                          | <p><b>Big Idea: Patterns and relations can be represented with symbols, equations, and expressions. Understanding equality and inequality, building on generalized properties of numbers and operations</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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|  | <p>8: Using Equations to Solve Problems</p> | <ul style="list-style-type: none"> <li>- Determines an unknown number in simple one-step equations using different strategies (e.g., <math>n \times 3 = 12</math>; <math>13 - \square = 8</math>).</li> <li>- Uses arithmetic properties to investigate and transform one-step addition and multiplication equations (e.g., <math>5 + 4 = 9</math> and <math>5 + a = 9</math> have the same structure and can be rearranged in similar ways to maintain equality: <math>4 + 5 = 9</math> and <math>a + 5 = 9</math>).</li> <li>- Uses arithmetic properties to investigate and transform one-step subtraction and division equations (e.g., <math>12 - 5 = 7</math> and <math>12 - b = 7</math> have the same structure and can be rearranged in similar ways to maintain equality: <math>12 - 7 = 5</math> and <math>12 - 7 = b</math>).</li> </ul> <p><b>Using variables, algebraic expressions, and equations to represent mathematical relations</b></p> <ul style="list-style-type: none"> <li>- Understands an unknown quantity (i.e., variable) may be represented by a symbol or letter (e.g., <math>13 - \square = 8</math>; <math>4n = 12</math>).</li> <li>- Flexibly uses symbols and letters to represent unknown quantities in equations (e.g., knows that <math>4 + \square = 7</math>; <math>4 + x = 7</math>; and <math>4 + y = 7</math> all represent the same equation with <math>\square</math>, <math>x</math>, and <math>y</math> representing the same value).</li> <li>- Interprets and writes algebraic expressions (e.g., <math>2n</math> means two times a number; subtracting a number from 7 can be written as <math>7 - n</math>).</li> <li>- Understands a variable as a changing quantity (e.g., <math>5s</math>, where <math>s</math> can be any value).</li> </ul> |
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Shape and Space: Measurement)

| Curriculum Expectations                                                                                                                                                                                                                                                   | Grade 5 Mathology.ca                                                                                                                           | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>General Outcome</b><br>Use direct and indirect measurement to solve problems.<br><b>Specific Outcomes</b><br>1. Identify 90° angles.                                                                                                                                   | <b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b><br>2: Investigating Quadrilaterals                                                          | <b>Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes. Investigating geometric attributes and properties of 2-D shapes and 3-D solids</b><br>- Understands angle as a geometric figure formed from two rays or line segments sharing a common endpoint.                                                                                                                                                                                       |
| 2. Design and construct different rectangles, given either perimeter or area, or both (whole numbers), and make generalizations.                                                                                                                                          | <b>Measurement Unit 1: Length, Perimeter, and Area</b><br>4: Relating the Perimeter and Area of Rectangles                                     | <b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons. Understanding relationships among measured units</b><br>- Develops and generalizes strategies to compute area and perimeter of rectangles.<br>- Investigates the relationship between perimeter and area in rectangles.                                                                                                                                                                          |
| 3. Demonstrate an understanding of measuring length (mm) by: <ul style="list-style-type: none"> <li>selecting and justifying referents for the unit mm</li> <li>modelling and describing the relationship between mm and cm units, and between mm and m units.</li> </ul> | <b>Measurement Unit 1: Length, Perimeter, and Area</b><br>1: Estimating and Measuring in Millimetres<br>2: Measuring Length in Different Units | <b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons. Selecting and using units to estimate, measure, construct, and make comparisons</b><br>- Chooses the most appropriate unit to measure a given attribute of an object (e.g., classroom area measured in square metres).<br><b>Understanding relationships among measured units</b><br>- Understands and applies the multiplicative relationship among metric units of length, mass, and capacity. |

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| <p>4. Demonstrate an understanding of volume by:</p> <ul style="list-style-type: none"> <li>• selecting and justifying referents for <math>\text{cm}^3</math> or <math>\text{m}^3</math> units</li> <li>• estimating volume, using referents for <math>\text{cm}^3</math> or <math>\text{m}^3</math></li> <li>• measuring and recording volume (<math>\text{cm}^3</math> or <math>\text{m}^3</math>)</li> <li>• constructing right rectangular prisms for a given volume.</li> </ul> | <p><b>Measurement Unit 2: Mass, Capacity, and Volume</b><br/> 10: Investigating Volume<br/> 11: Investigating Volume with Rectangular Prisms</p> | <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b><br/> <b>Understanding attributes that can be measured, compared, and ordered</b><br/> - Understands volume and capacity as attributes of 3-D objects that can be measured and compared.<br/> <b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b><br/> <b>Selecting and using units to estimate, measure, construct, and make comparisons</b><br/> - Chooses the most appropriate unit to measure a given attribute of an object (e.g., classroom area measured in square metres).<br/> - Develops understanding of a unit cube and uses unit cubes to estimate and measure volume of 3-D objects.<br/> - Measures, constructs, and estimates volume using standard cubic units (e.g., cubic centimetre).<br/> <b>Understanding relationships among measured units</b><br/> - Understands and applies the multiplicative relationship among metric units of length, mass, and capacity.</p> |
| <p>5. Demonstrate an understanding of capacity by:</p> <ul style="list-style-type: none"> <li>• describing the relationship between mL and L</li> <li>• selecting and justifying referents for mL or L units</li> <li>• estimating capacity, using referents for mL or L</li> <li>• measuring and recording capacity (mL or L).</li> </ul>                                                                                                                                           | <p><b>Measurement Unit 2: Mass, Capacity, and Volume</b><br/> 8: Investigating Capacity</p>                                                      | <p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b><br/> <b>Understanding attributes that can be measured, compared, and ordered</b><br/> - Understands volume and capacity as attributes of 3-D objects that can be measured and compared.<br/> <b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b><br/> <b>Selecting and using units to estimate, measure, construct, and make comparisons</b><br/> - Chooses the most appropriate unit to measure a given attribute of an object (e.g., classroom area measured in square metres).<br/> <b>Understanding relationships among measured units</b></p>                                                                                                                                                                                                                                                                                                                                         |

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|  |  | - Understands and applies the multiplicative relationship among metric units of length, mass, and capacity. |
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Shape and Space: 3-D Objects and 2-D Shapes)

| Curriculum Expectations                                                                                                                                                                                                                                                                                                                                                                                                                    | Grade 5 Mathology.ca                                                                                                                          | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>General Outcome</b><br/>Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</p> <p><b>Specific Outcomes</b><br/>6. Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are:</p> <ul style="list-style-type: none"> <li>• parallel</li> <li>• intersecting</li> <li>• perpendicular</li> <li>• vertical</li> <li>• horizontal.</li> </ul> | <p><b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b><br/>1: Properties of 2-D Shapes and 3-D Objects<br/>2: Investigating Quadrilaterals</p> | <p><b>Big Ideas: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes. Investigating geometric attributes and properties of 2-D shapes and 3-D solids</b><br/>- Sorts, describes, constructs, and classifies polygons based on side attributes (e.g., parallel, perpendicular, regular/irregular).<br/>- Sorts, describes, constructs, and classifies 3-D objects based on edges, faces, vertices, and angles (e.g., prisms, pyramids).<br/><b>Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition</b><br/>- Identifies types of lines in 2-D images (e.g., parallel, intersecting, perpendicular).<br/>- Investigates 2-D shapes that do or do not have parallel and perpendicular lines.</p> |
| <p>7. Identify and sort quadrilaterals, including:</p> <ul style="list-style-type: none"> <li>• rectangles</li> <li>• squares</li> <li>• trapezoids</li> <li>• parallelograms</li> <li>• rhombuses</li> </ul> <p>according to their attributes.</p>                                                                                                                                                                                        | <p><b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b><br/>2: Investigating Quadrilaterals</p>                                                 | <p><b>Big Ideas: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes. Investigating geometric attributes and properties of 2-D shapes and 3-D solids</b><br/>- Identifies and draws parallel, intersecting, and perpendicular lines.<br/>- Sorts, describes, constructs, and classifies polygons based on side attributes (e.g., parallel, perpendicular, regular/irregular).<br/>- Sorts, describes, classifies 2-D shapes based on their geometric properties (e.g., side lengths, angles, diagonals).<br/>- Classifies 2-D shapes within a hierarchy based on their properties</p>                                                                                                                                                      |

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|  |  | <p>(e.g., rectangles are a subset of parallelograms).</p> <p><b>Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition</b></p> <ul style="list-style-type: none"> <li>- Identifies types of lines in 2-D images (e.g., parallel, intersecting, perpendicular).</li> <li>- Investigates 2-D shapes that do or do not have parallel and perpendicular lines.</li> </ul> |
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Shape and Space: Transformations)

| Curriculum Expectations                                                                                                                                                                                                                    | Grade 5 Mathology.ca                                                                                                                                                      | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                              |
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| <b>General Outcome</b><br>Describe and analyze position and motion of objects and shapes.<br><b>Specific Outcomes</b><br>8. Identify and describe a single transformation, including a translation, rotation and reflection of 2-D shapes. | <b>Geometry Unit 2A: Transformations</b><br>5: Investigating Translations<br>6: Investigating Reflections<br>7: Investigating Rotations<br>8: Identifying Transformations | <b>Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b><br><b>Exploring 2-D shapes and 3-D solids by applying and visualizing transformations</b><br>- Identifies, describes, and performs single transformations (i.e., translation, reflection, rotation) on 2-D shapes. |
| 9. Perform, concretely, a single transformation (translation, rotation or reflection) of a 2-D shape, and draw the image.                                                                                                                  | <b>Geometry Unit 2A: Transformations</b><br>5: Investigating Translations<br>6: Investigating Reflections<br>7: Investigating Rotations<br>8: Identifying Transformations | <b>Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b><br><b>Exploring 2-D shapes and 3-D solids by applying and visualizing transformations</b><br>- Identifies, describes, and performs single transformations (i.e., translation, reflection, rotation) on 2-D shapes. |



## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Statistics and Probability: Data Analysis)

| Curriculum Expectations                                                                                                                                                 | Grade 5 Mathology.ca                                                                                                                | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>General Outcome</b><br>Collect, display and analyze data to solve problems.<br><b>Specific Outcomes</b><br>1. Differentiate between first-hand and second-hand data. | <b>Data Management Unit 1A:</b><br><b>Data Management</b><br>1: Exploring First-Hand and Second-Hand Data                           | <b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b><br><b>Collecting data and organizing it into categories</b><br>- Differentiates between primary (i.e., first-hand) and secondary (i.e., second-hand) data sources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2. Construct and interpret double bar graphs to draw conclusions.                                                                                                       | <b>Data Management Unit 1A:</b><br><b>Data Management</b><br>2: Constructing Double-Bar Graphs<br>3: Interpreting Double-Bar Graphs | <b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b><br><b>Creating graphical displays of collected data</b><br>- Represents data graphically using many-to-one correspondence with appropriate scales and intervals (e.g., each symbol on pictograph represents 10 people).<br>- Visually represents two or more data sets (e.g., double bar chart, stacked bar graph, multi-line graph, multi-column table).<br><b>Reading and interpreting data displays and analyzing variability</b><br>- Reads and interprets data displays using many-to-one correspondence.<br><b>Drawing conclusions by making inferences and justifying decisions based on data collected.</b><br>- Draws conclusions based on data presented. |

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|  |  | - Interprets the results of data presented graphically from primary (e.g., class survey) and secondary (e.g., online news reports) sources. |
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 5 (Statistics and Probability: Chance and Uncertainty)

| Curriculum Expectations                                                                                                                                                                                                                                                                                                                          | Grade 5 Mathology.ca                                                                                                              | Pearson Canada Grades 4-6 Mathematics Learning Progression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p><b>General Outcome</b><br/>Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.</p> <p><b>Specific Outcomes</b><br/>3. Describe the likelihood of a single outcome, using words such as:</p> <ul style="list-style-type: none"> <li>impossible</li> <li>possible</li> <li>certain.</li> </ul> | <p><b>Data Management Unit 2: Probability (National)</b><br/>5: Describing Likelihood of Events</p>                               | <p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p><b>Using the language and tools of chance to describe and predict events</b><br/>- Locates the likelihood of outcomes on a vocabulary-based probability continuum (e.g., impossible, unlikely, likely, certain).</p>                                                                                                                                                                                                                                                                                                                                                |
| <p>4. Compare the likelihoods of two possible outcomes, using words such as:</p> <ul style="list-style-type: none"> <li>less likely</li> <li>equally likely</li> <li>more likely.</li> </ul>                                                                                                                                                     | <p><b>Data Management Unit 2: Probability (National)</b><br/>5: Describing Likelihood of Events<br/>6: Conducting Experiments</p> | <p><b>Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphical displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.</b></p> <p><b>Using the language and tools of chance to describe and predict events</b><br/>- Distinguishes between equally likely events (e.g., heads or tails on a fair coin) and unequally likely events (e.g., spinner with differently sized sections).<br/>- Identifies the sample space of independent events in an experiment (e.g., flipping a cup, drawing a coloured cube from a bag).<br/>- Investigates and calculates the experimental probability (i.e., relative frequency) of simple events (e.g., 3 heads in 5 coin tosses is <math>\frac{3}{5}</math>).</p> |