



## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Number)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Develop number sense.			
<b>Specific Outcomes</b> 1. Represent and describe whole numbers to 10 000, pictorially and symbolically.	<b>Number Unit 1: Number Relationships and Place Value</b> 1: Representing Numbers to 10 000 2: Composing and Decomposing Larger Numbers 6: Consolidation of Number Relationships and Place Value	Unit 2 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 15 (pp. 8-11, 13)	<b>Big Idea: Numbers are related in many ways.</b> <b>Decomposing and composing numbers to investigate equivalencies</b> - Composes and decomposes whole numbers using standard and non-standard partitioning (e.g., 1000 is 10 hundreds or 100 tens). <b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b> <b>Unitizing quantities into base-ten units</b> - Writes and reads whole numbers in multiple forms (e.g., 1358; one thousand three hundred fifty-eight; $1000 + 300 + 50 + 8$ ). - Understands that the value of a digit is ten times the value of the digit one place to the right.
2. Compare and order numbers to 10 000.	<b>Number Unit 1: Number Relationships and Place Value</b> 4: Comparing and Ordering Numbers 6: Consolidation of Number Relationships and Place Value	Unit 2 Questions 10, 11, 12, 16 (pp. 11-13)	<b>Big Idea: Numbers are related in many ways.</b> <b>Comparing and ordering quantities (multitude or magnitude)</b> - Compares, orders, and locates whole numbers based on place-value understanding and records using $<$ , $=$ , $>$ symbols.

<p>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:</p> <ul style="list-style-type: none"> <li>• using personal strategies for adding and subtracting</li> <li>• estimating sums and differences</li> <li>• solving problems involving addition and subtraction.</li> </ul>	<p><b>Number Unit 2: Fluency with Addition and Subtraction</b></p> <p>7: Estimating Sums and Differences        8: Modelling Addition and Subtraction        9: Adding and Subtracting Larger Numbers        10: Using Mental Math to Add and Subtract        11: Creating and Solving Problems        12: Consolidation of Fluency with Addition and Subtraction</p>	<p>Unit 3 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (pp. 14-20)</p> <p>Unit 14 Questions 2, 9 (pp. 91, 95)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b></p> <p><b>Investigating number and arithmetic properties</b></p> <ul style="list-style-type: none"> <li>- Recognizes and generates equivalent numerical expressions using commutative and associative properties.</li> <li>- Understands operation relationships (e.g., inverse relationship between multiplication/division, addition/subtraction).</li> <li>- Understands the identity of operations (e.g., <math>5 + 0 = 5</math>; <math>7 \times 1 = 7</math>).</li> </ul> <p><b>Developing conceptual meaning of operations</b></p> <ul style="list-style-type: none"> <li>- Models and develops meaning for whole number computation to four digits.</li> </ul> <p><b>Developing fluency of operations</b></p> <ul style="list-style-type: none"> <li>- 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?).</li> <li>- 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).</li> </ul>
<p>4. Apply the properties of 0 and 1 for multiplication and the property of 1 for division.</p>	<p><b>Number Unit 5: Fluency with Multiplication and Division Facts</b></p> <p>24: Strategies for Multiplication        27: Strategies for Division        29: Consolidation of Fluency with Multiplication and Division Facts</p>	<p>Unit 15 Questions 1, 11 (pp. 99, 103)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b></p> <p><b>Investigating number and arithmetic properties</b></p> <ul style="list-style-type: none"> <li>- Understands the identity of operations (e.g., <math>5 + 0 = 5</math>; <math>7 \times 1 = 7</math>).</li> </ul>

<p>5. Describe and apply mental mathematics strategies to determine basic multiplication facts to <math>9 \times 9</math> and related division facts.</p>	<p><b>Number Unit 5: Fluency with Multiplication and Division Facts</b>  24: Strategies for Multiplication  25: Solving Multiplication Problems  26: Relating Multiplication and Division  27: Strategies for Division  29: Consolidation of Fluency with Multiplication and Division Facts</p> <p><b>Patterning Unit 1: Patterns and Relations</b>  4: Investigating Number Relationships</p>	<p>Unit 15 Questions 1, 2, 3, 4, 11 (pp. 99-100, 103)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b>  <b>Investigating number and arithmetic properties</b>  - Recognizes and generates equivalent numerical expressions using commutative and associative properties.  - Understands operational relationships (e.g., inverse relationship between multiplication/division, addition/subtraction).  <b>Developing fluency of operations</b>  - Fluently recalls multiplication and division facts to 100.</p>
<p>6. Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by:</p> <ul style="list-style-type: none"> <li>• using personal strategies for multiplication with and without concrete materials</li> <li>• using arrays to represent multiplication</li> <li>• connecting concrete representations to symbolic representations</li> <li>• estimating products</li> <li>• applying the distributive property.</li> </ul>	<p><b>Number Unit 6: Multiplying and Dividing Larger Numbers</b>  30: Exploring Strategies for Multiplying  31: Estimating Products  35: Consolidation of Multiplying and Dividing Larger Numbers</p>	<p>Unit 18 Questions 1, 3, 4, 5, 7, 9, 10 (pp. 117-120)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b>  <b>Developing conceptual meaning of operations</b>  - Models and develops meaning for whole number computation to four digits.  <b>Developing fluency of operations</b>  - 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?).  - 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>7. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:</p> <ul style="list-style-type: none"> <li>• using personal strategies for dividing with and without concrete materials</li> <li>• estimating quotients</li> <li>• relating division to multiplication.</li> </ul>	<p><b>Number Unit 5: Fluency with Multiplication and Division Facts</b>  26: Relating Multiplication and Division  27: Strategies for Division  29: Consolidation of Fluency with Multiplication and Division Facts</p> <p><b>Number Unit 6: Multiplying and Dividing Larger Numbers</b>  32: Exploring Strategies for Dividing  33: Estimating Quotients  34: Dividing with Remainders  35: Consolidation of Multiplying and Dividing Larger Numbers</p>	<p>Unit 18 Questions 1, 4, 5, 8, 9, 11, 12, 13, 14 (pp. 117-122)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b>  <b>Developing conceptual meaning of operations</b>  - Models and develops meaning for whole number computation to four digits.  <b>Developing fluency of operations</b>  - Estimates the results of whole number operations using contextually relevant strategies (e.g., How many buses are needed to take the Grade 8 classes to the museum?).  - 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>8. Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to:</p> <ul style="list-style-type: none"> <li>• name and record fractions for the parts of a whole or a set</li> <li>• compare and order fractions</li> <li>• model and explain that for different wholes, two identical fractions may not represent the same quantity</li> <li>• provide examples of where fractions are used.</li> </ul>	<p><b>Number Unit 3: Fractions</b>  13: What Are Fractions?  14: Counting by Unit Fractions  15: Exploring Different Representations of Fractions  17: Exploring Equivalence in Fractions  18: Comparing and Ordering Fractions  19: Consolidation of Fractions</p>	<p>Unit 8 Questions 1, 2, 8, 9, 10, 11, 12, 13 (pp. 50-51, 53-55)</p>	<p><b>Big Idea: Numbers are related in many ways.</b>  <b>Comparing and ordering quantities (multitude or magnitude)</b>  - Compares, orders, and locates fractions with the same numerator or denominator using reasoning (e.g., <math>\frac{3}{5} &gt; \frac{3}{6}</math> because fifths are larger parts).  <b>Estimating quantities and numbers</b>  - Estimates the size and magnitude of fractions by comparing to benchmarks.  <b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b>  <b>Partitioning quantities to form fractions</b>  - Partitions fractional parts into smaller fractional parts (e.g., partitions halves into thirds to create sixths).  - Uses models to describe, name, and count forward and backward by unit fractions.</p>

			<ul style="list-style-type: none"> <li>- Explains that two equivalent fractions represent the same part of a whole, but not necessarily equal quantities (e.g., <math>\frac{1}{2}</math> of a set of 12 and <math>\frac{1}{2}</math> of a set of 6 are equal fractions, but unequal quantities).</li> </ul>
<p>9. Represent and describe decimals (tenths and hundredths), concretely, pictorially and symbolically.</p>	<p><b>Number Unit 4: Decimals</b>  20: Exploring Tenths  21: Exploring Hundredths  23: Consolidation of Decimals</p>	<p>Unit 9 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 18 (pp. 56-60, 62)</p>	<p><b>Big Idea: The set of real numbers is infinite. Extending whole number understanding to the set of real numbers</b></p> <ul style="list-style-type: none"> <li>- Explores decimal fractions to tenths (e.g., 0.1, 0.5, 0.8) and hundredths (e.g., 0.42, 0.05, 0.90).</li> </ul> <p><b>Big Idea: Numbers are related in many ways.</b></p> <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>- 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>- Counts forwards and backwards by decimal units (e.g., 0.1, 0.2, ... 0.9, 1.0).</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 (e.g., numerals, number names, expanded form).</li> </ul>

<p>10. Relate decimals to fractions and fractions to decimals (to hundredths).</p>	<p><b>Number Unit 4: Decimals</b>  20: Exploring Tenths  21: Exploring Hundredths  23: Consolidation of Decimals</p>	<p>Unit 9 Questions 2, 3, 15, 18 (fractions and decimals only) (pp. 57, 61-62)</p>	<p><b>Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units.</b>  <b>Unitizing quantities into base-ten units</b>  - 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).</p>
<p>11. Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by:</p> <ul style="list-style-type: none"> <li>• using personal strategies to determine sums and differences</li> <li>• estimating sums and differences</li> <li>• using mental math strategies to solve problems.</li> </ul>	<p><b>Number Unit 7: Operations with Fractions and Decimals</b>  36: Estimating Sums and Differences with Decimals  37: Adding and Subtracting Decimals  38: Using Mental Math to Add and Subtract Decimals  39: Consolidation of Operations with Fractions and Decimals</p>	<p>Unit 11 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 12 (pp. 69-74)</p> <p>Unit 14 Questions 1, 9 (pp. 90-91, 95)</p>	<p><b>Big Idea: Quantities and numbers can be operated on to determine how many and how much.</b>  <b>Developing conceptual meaning of operations</b>  - Demonstrates an understanding of decimal number computation through modelling and flexible strategies.  <b>Developing fluency of operations</b>  - Estimates sums and differences of decimal numbers (e.g., calculating cost of transactions involving dollars and cents).  - Solves decimal number computation using efficient strategies.</p>



## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Patterns and Relations: Patterns)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Use patterns to describe the world and to solve problems.			
<b>Specific Outcomes</b> 1. Identify and describe patterns found in tables and charts.	<b>Patterning Unit 1: Patterns and Relations</b> 2: Investigating Increasing and Decreasing Patterns 3: Representing Patterns 4: Investigating Number Relationships 6: Consolidation of Patterns and Relations	Unit 1 Questions 1, 3, 4, 12 (pp. 2-4, 7)	<b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b> <b>Representing patterns, relations, and functions</b> - Describes, generates, extends, translates, and corrects number and shape patterns that follow a predetermined rule. <b>Generalizing and analyzing patterns, relations, and functions</b> - 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). - Describes numeric and shape patterns using words and numbers.
2. Translate among different representations of a pattern, such as a table, a chart or concrete materials.	<b>Patterning Unit 1: Patterns and Relations</b> 3: Representing Patterns 6: Consolidation of Patterns and Relations	Unit 1 Questions 1, 4 (pp. 2, 4)	<b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b> <b>Representing patterns, relations, and functions</b> - Describes, generates, extends, translates, and corrects number and shape patterns that follow a predetermined rule. - Uses multiple approaches to model situations involving repetition (i.e., repeating patterns) and change (i.e., increasing/decreasing patterns) (e.g.,

			<p>using objects, tables, graphs, symbols, loops and nested loops in coding).</p> <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> </ul>
<p>3. Represent, describe and extend patterns and relationships, using charts and tables, to solve problems.</p>	<p><b>Patterning Unit 1: Patterns and Relations</b></p> <p>2: Investigating Increasing and Decreasing Patterns</p> <p>3: Representing Patterns</p> <p>6: Consolidation of Patterns and Relations</p>	<p>Unit 1 Questions 1, 5, 12 (pp. 2, 4, 7)</p>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p><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> </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> </ul>
<p>4. Identify and explain mathematical relationships, using charts and diagrams, to solve problems.</p>	<p><b>Pattern Unit 1: Patterns and Relations</b></p> <p>4: Investigating Number Relationships</p> <p>5: Sorting in Venn Diagrams and Carroll Diagrams</p> <p>6: Consolidation of Patterns and Relations</p>	<p>Unit 1 Questions 6, 7, 8 (p. 5)</p>	<p><b>Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.</b></p> <p><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> </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> </ul>





## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Patterns and Relations: Variables and Equations)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Represent algebraic expressions in multiple ways.			
<b>Specific Outcomes</b> 5. Express a given problem as an equation in which a symbol is used to represent an unknown number.	<b>Patterning Unit 2: Variables and Equations</b> 7: Using Symbols 8: Solving Equations Concretely 9: Solving Addition and Subtraction Equations 11: Solving Multiplication and Division Equations 12: Using Equations to Solve Problems 13: Consolidation of Variables and Equations	Unit 17 Questions 1, 3, 4, 5, 6, 11 (pp. 111-114, 116)	<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> - 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: $\square - 4 = 7$ ). <b>Using variables, algebraic expressions, and equations to represent mathematical relations</b> - Understands an unknown quantity (i.e., variable) may be represented by a symbol or letter (e.g., $13 - \square = 8$ ; $4n = 12$ ). - Flexibly uses symbols and letters to represent unknown quantities in equations (e.g., knows that $4 + \square = 7$ ; $4 + x = 7$ ; and $4 + y = 7$ all represent the same equation with $\square$ , $x$ , and $y$ representing the same value). - Interprets and writes algebraic expressions (e.g., $2n$ means two times a number; subtracting a number from 7 can be written as $7 - n$ ). - Understands a variable as a changing quantity (e.g., $5s$ , where $s$ can be any value).

<p>6. Solve one-step equations involving a symbol to represent an unknown number.</p>	<p><b>Patterning Unit 2: Variables and Equations</b>        8: Solving Equations Concretely        9: Solving Addition and Subtraction Equations        11: Solving Multiplication and Division Equations        12: Using Equations to Solve Problems        13: Consolidation of Variables and Equations</p>	<p>Unit 17 Questions 3, 4, 5, 6, 7, 11 (pp. 113-114, 116)</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> <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>
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Shape and Space: Measurement)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Use direct and indirect measurement to solve problems.			
<b>Specific Outcomes</b> 1. Read and record time, using digital and analog clocks, including 24-hour clocks.	<b>Measurement Unit 3: Time</b> 12: Exploring Time 13: Telling Time in One- and Five-Minute Intervals 14: Telling Time on a 24-Hour Clock 18: Consolidation of Time	Unit 10 Questions 1, 2, 3, 4, 5, 6, 13 (pp. 63-65, 68)	<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> - Reads and records time (i.e., digital and analogue) and calendar dates. <b>Understanding relationships among measured units</b> - Understands relationship among different measures of time (e.g., seconds, minutes, hours, days, decades).
2. Read and record calendar dates in a variety of formats.	<b>Measurement Unit 3: Time</b> 17: Exploring Calendar Dates 18: Consolidation of Time	N/A	<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> - Reads and records time (i.e., digital and analogue) and calendar dates. <b>Understanding relationships among measured units</b> - Understands relationship among different measures of time (e.g., seconds, minutes, hours, days, decades).

<p>3. Demonstrate an understanding of area of regular and irregular 2-D shapes by:</p> <ul style="list-style-type: none"> <li>• recognizing that area is measured in square units</li> <li>• selecting and justifying referents for the units <math>\text{cm}^2</math> or <math>\text{m}^2</math></li> <li>• estimating area, using referents for <math>\text{cm}^2</math> or <math>\text{m}^2</math></li> <li>• determining and recording area (<math>\text{cm}^2</math> or <math>\text{m}^2</math>)</li> <li>• constructing different rectangles for a given area (<math>\text{cm}^2</math> or <math>\text{m}^2</math>) in order to demonstrate that many different rectangles may have the same area.</li> </ul>	<p><b>Measurement Unit 1: Length, Perimeter, and Area</b></p> <p>4: Estimating and Measuring Area in Square Metres</p> <p>5: Estimating and Measuring Area in Square Centimetres</p> <p>6: Exploring the Area of Rectangles</p> <p>7: Consolidation of Length, Perimeter, and Area</p>	<p>Unit 16 Questions 5, 6, 7, 8, 9, 10, 11 (pp. 106-110)</p>	<p><b>Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.</b></p> <p><b>Understanding attributes that can be measured, compared, and ordered</b></p> <ul style="list-style-type: none"> <li>- Understands area as an attribute of 2-D shapes that can be measured and compared.</li> </ul> <p><b>Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.</b></p> <p><b>Selecting and using units to estimate, measure, construct, and make comparisons</b></p> <ul style="list-style-type: none"> <li>- Develops understanding of square units (e.g., square unit, square cm, square m) to measure area of 2-D shapes.</li> </ul>
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## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Shape and Space: 3-D Objects and 2-D Shapes)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.			
<b>Specific Outcomes</b> 4. Describe and construct right rectangular and right triangular prisms.	<b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b> 2: Identifying and Describing Prisms 3: Constructing Models of Prisms 5: Consolidation of 2-D Shapes and 3-D Solids	Unit 5 Questions 3, 4, 14 (pp. 28-29, 34)	<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> - Sorts, describes, constructs, and classifies 3-D objects based on edges, faces, vertices, and angles (e.g., prisms, pyramids). <b>Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition</b> - Identifies and constructs nets for 3-D objects made from triangles and rectangles.



## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Shape and Space: Transformations)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Describe and analyze position and motion of objects and shapes.			
<b>Specific Outcomes</b> 5. Describe an understanding of congruency, concretely and pictorially.	<b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b> 1: Exploring Congruence  5: Consolidation of 2-D Shapes and 3-D Solids	Unit 5 Questions 1, 2, 14 (pp. 27, 34)	<b>Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b> <b>Exploring 2-D shapes and 3-D solids by applying and visualizing transformations</b> - Demonstrates an understanding of congruency (i.e., same side lengths and angles).
6. Demonstrate an understanding of line symmetry by: <ul style="list-style-type: none"> <li>• identifying symmetrical 2-D shapes</li> <li>• creating symmetrical 2-D shapes</li> <li>• drawing one or more lines of symmetry in a 2-D shape.</li> </ul>	<b>Geometry Unit 1A: 2-D Shapes and 3-D Solids</b> 4: Understanding Line Symmetry  5: Consolidation of 2-D Shapes and 3-D Solids	Unit 5 Questions 5, 6, 7, 14 (pp. 29-30, 34)	<b>Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change.</b> <b>Exploring symmetry to analyze 2-D shapes and 3-D solids</b> - Draws and identifies lines of symmetry (i.e., vertical, horizontal, diagonal, oblique) in 2-D shapes and designs.



## Correlation of Northwest Territories Program of Studies with Mathology Grade 4 (Statistics and Probability: Data Analysis)

Curriculum Expectations	Grade 4 Mathology.ca	Mathology Practice Workbook 4	Pearson Canada Grades 4-6 Mathematics Learning Progression
<b>General Outcome</b> Collect, display and analyze data to solve problems.			
<b>Specific Outcomes</b> 1. Demonstrate an understanding of many-to-one correspondence.	<b>Data Management Unit 1A: Data Management</b> 1: Interpreting and Drawing Pictographs 2: Interpreting and Drawing Bar Graphs 3: Comparing Graphs 4: Consolidation of Data Management	Unit 12 Questions 1, 2, 3, 9 (pp. 77-79, 83)	<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> <b>Reading and interpreting data displays and analyzing variability</b> - Reads and interprets data displays using many-to-one correspondence.
2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.	<b>Data Management Unit 1A: Data Management</b> 1: Interpreting and Drawing Pictographs 2: Interpreting and Drawing Bar Graphs 3: Comparing Graphs 4: Consolidation of Data Management	Unit 12 Questions 1, 2, 3, 9 (pp. 77-79, 83)	<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> <b>Creating graphical displays of collected data</b> - Represents data graphically using many-to-one correspondence with appropriate scales and intervals (e.g., each symbol on pictograph represents 10 people). <b>Reading and interpreting data displays and analyzing variability</b> - Reads and interprets data displays using many-to-one correspondence. <b>Drawing conclusions by making inferences and justifying decisions based on data collected.</b> - Draws conclusions based on data presented.

**Unit 7: Coding** Not required, but recommended

**Unit 14: Financial Literacy** Not required, but recommended