## math logy

## Correlation of Nunavut Program of Studies with Mathology Grade 5 <br> (Number)

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome Develop number sense. |  |  |  |
| Specific Outcomes <br> 1. Represent and describe whole numbers to 1000000. | Number Unit 1: Number <br> Relationships and Place Value <br> 1: Representing Larger Numbers <br> 2: Comparing Larger Numbers <br> 4: Consolidation of Number <br> Relationships and Place Value | Unit 2 Questions 1, 2, 3, 4, 6, 7, 8, $9,10,11,15$ (pp. 8-11, 13) | Big Idea: The set of real numbers is infinite. Extending whole number understanding to the set of real numbers <br> - Extends whole number understanding to 1 000000. <br> Big Idea: Numbers are related in many ways. Comparing and ordering quantities (multitude or magnitude) <br> - Compares, orders, and locates whole numbers based on place-value understanding and records using <, $=$, > symbols. <br> Estimating quantities and numbers <br> - Rounds whole numbers using place-value understanding (e.g., 4736 can be rounded to 5000, 4700, 4740). <br> Decomposing and composing numbers to investigate equivalencies <br> - Composes and decomposes whole numbers using standard and non-standard partitioning (e.g., 1000 is 10 hundreds or 100 tens). <br> Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. <br> Unitizing quantities into base-ten units |


|  |  |  | - 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. |
| :---: | :---: | :---: | :---: |
| 2. Use estimation strategies in problem-solving contexts. | Number Unit 1: Number <br> Relationships and Place Value <br> 3: Estimating to Solve Problems <br> Number Unit 2: Fluency with Addition and Subtraction <br> 5: Estimating Sums and Differences <br> Number Unit 4: Fluency with Multiplication and Division 20: Using Estimation for Multiplication and Division | Unit 2 Questions 5, 12, 13, 14 (pp. 9, 12) <br> Unit 3 Questions 1, 2, 3, 5 (pp. 14-15, 17) <br> Unit 9 Questions 1, 2, 3, 4, 5, 12 (pp. 52-54, 57) <br> Unit 12 Question 4 (p. 73) <br> Unit 13 Question 3 (p. 81) | Big Idea: Numbers are related in many ways. Comparing and ordering quantities (multitude or magnitude) <br> - Compares, orders, and locates whole numbers based on place-value understanding and records using <, =, > symbols. <br> Estimating quantities and numbers <br> - Rounds whole numbers using place-value understanding (e.g., 4736 can be rounded to 5000, 4700, 4740). <br> Big Idea: Quantities and numbers can be operated on to determine how many and how much. <br> Developing conceptual meaning of operations <br> - Extends whole number computation models to larger numbers. <br> Developing fluency of operations <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). |
| 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. | Number Unit 4: Fluency with Multiplication and Division 19: Relating Multiplication and Division Facts <br> 25: Consolidation of Fluency with Multiplication and Division | Unit 13 Questions 1, 2 (pp. 80-81) | Big Idea: Quantities and numbers can be operated on to determine how many and how much. Investigating number and arithmetic properties <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., $5+0=5 ; 7 \times 1=7)$ <br> Developing fluency of operations <br> - Fluently recalls multiplication and division facts to 100. |
| :---: | :---: | :---: | :---: |
| 4. Apply mental mathematics strategies for multiplication. | Number Unit 4: Fluency with Multiplication and Division <br> 20: Using Estimation for <br> Multiplication and Division <br> 21: Strategies for Multiplying <br> Larger Numbers <br> 25: Consolidation of Fluency with Multiplication and Division | Unit 13 Questions 5, 9, 13 (pp. 81, 83, 85) | Big Idea: Quantities and numbers can be operated on to determine how many and how much. <br> Developing conceptual meaning of operations <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. | Number Unit 4: Fluency with Multiplication and Division <br> 22: Multiplying Whole Numbers <br> 25: Consolidation of Fluency with Multiplication and Division | Unit 13 Questions 3, 4, 5, 7, 8, 9 , 13 (pp. 81-83, 85) | Big Idea: Quantities and numbers can be operated on to determine how many and how much. <br> Developing conceptual meaning of operations <br> - Extends whole number computation models to larger numbers. <br> Developing fluency of operations <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. | Number Unit 4: Fluency with Multiplication and Division <br> 23: Dividing Larger Numbers <br> 25: Consolidation of Fluency with Multiplication and Division | Unit 13 Questions 3, 6, 7, 9, 14 (pp. 81-83, 85) | Big Idea: Quantities and numbers can be operated on to determine how many and how much. <br> Developing conceptual meaning of operations <br> - Extends whole number computation models to larger numbers. <br> Developing fluency of operations <br> - Solves whole number computation using efficient strategies (e.g., mental computation, |

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|  |  |  | 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: <br> - create sets of equivalent fractions <br> - compare fractions with like and unlike denominators. | Number Unit 3: Fractions and Decimals <br> 10: Equivalent Fractions <br> 12: Comparing and Ordering Fractions <br> 18: Consolidation of Fractions and Decimals | Unit 7 Questions 1, 2, 3, 4, 8, 9, 12 (pp. 42-43, 45, 47) | Big Idea: Numbers are related in many ways. Comparing and ordering quantities (multitude or magnitude) <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> Estimating quantities and numbers <br> - Estimates the location of decimals and fractions on a number line. <br> - Estimates the size and magnitude of fractions by comparing to benchmarks. <br> Decomposing and composing numbers to investigate equivalencies <br> - 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). <br> Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. <br> - Partitions fractional parts into smaller fractional units (e.g., partitions halves into thirds to create sixths). |
| 8. Describe and represent decimals (tenths, hundredths, thousandths), concretely, pictorially and symbolically. | Number Unit 3: Fractions and Decimals <br> 13: Representing Decimals <br> 18: Consolidation of Fractions and Decimals | Unit 7 Questions 5, 6, 7, 12 (pp. 44, 47) | Big Idea: The set of real numbers is infinite. Extending whole number understanding to the set of real numbers. <br> - Extends decimal number understanding to thousandths. <br> Big Idea: Numbers are related in many ways. Decomposing and composing numbers to |

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|  |  |  | investigate equivalencies <br> - Composes and decomposes decimal numbers using standard and non-standard partitioning (e.g., 1.6 is 16 tenths or 0.16 tens). <br> Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. <br> Unitizing quantities into base-ten units <br> - Understands that the value of a digit is ten times the value of the same digit one place to the right. <br> - Understands that the value of a digit is onetenth the value of the same digit one place to the left. <br> - Writes and reads decimal numbers in multiple forms (i.e., numerals, number names, expanded form). |
| :---: | :---: | :---: | :---: |
| 9. Relate decimals to fractions and fractions to decimals (to thousandths). | Number Unit 3: Fractions and Decimals <br> 13: Representing Decimals <br> 16: Relating Fractions and Decimals <br> 18: Consolidation of Fractions and Decimals | Unit 7 Questions 10, 12 (pp. 46-47) | Big Idea: Numbers are related in many ways. Decomposing and composing numbers to investigate equivalencies <br> - Models and explains the relationship between a fraction and its equivalent decimal form (e.g., $\frac{2}{5}=\frac{4}{10}=0.4$ ). <br> Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. <br> Unitizing quantities into base-ten units <br> - Uses fractions with denominators of 10 to develop decimal fraction understanding and notation (e.g., five-tenths is $\frac{5}{10}$ or 0.5 ). <br> - Understands that the value of a digit is ten times the value of the same digit one place to the right. <br> - Understands that the value of a digit is onetenth the value of the same digit one place to the left. <br> - Writes and reads decimal numbers in |


|  |  |  | multiple forms (i.e., numerals, number names, expanded form). |
| :---: | :---: | :---: | :---: |
| 10. Compare and order decimals (to thousandths) by using: <br> - benchmarks <br> - place value <br> - equivalent decimals. | Number Unit 3: Fractions and Decimals <br> 15: Comparing and Ordering Decimals <br> 18: Consolidation of Fractions and Decimals | Unit 7 Questions 8, 9, 12 (pp. 45, 47) | Big Idea: Numbers are related in many ways. Comparing and ordering quantities (multitude or magnitude) <br> - Compares, orders, and locates decimal numbers using place-value understanding. <br> Estimating quantities and numbers <br> - Estimates the location of decimals and fractions on a number line. <br> Big Idea: Quantities and numbers can be grouped by or partitioned into equal-sized units. <br> Unitizing quantities into base-ten units - Understands that the value of a digit is ten times the value of the same digit one place to the right. <br> - Understands that the value of a digit is onetenth the value of the same digit one place to the left. |
| 11. Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths). | Number Unit 5: Operations with Fractions and Decimals <br> 26: Estimating Sums and Differences with Decimals <br> 27: Adding with Decimal Numbers <br> 28: Subtracting with Decimal Numbers <br> 32: Consolidation of Operations with Fractions and Decimals | Unit 9 Question 1, 2, 3, 4, 5, 12 (pp. 52-54, 57) <br> Unit 12 Questions 1, 3, 4 (pp. 72-73) | Big Idea: Quantities and numbers can be operated on to determine how many and how much. <br> Developing conceptual meaning of operations <br> - Demonstrates an understanding of decimal number computation through modelling and flexible strategies. <br> Developing fluency of operations <br> - Estimates sums and differences of decimal numbers (e.g., calculating cost of transactions involving dollars and cents). <br> - Solves decimal number computation using efficient strategies. |

## mathology

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

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome <br> Use patterns to describe the world and to solve problems. |  |  |  |
| Specific Outcomes <br> 1. Determine the pattern rule to make predictions about subsequent elements. | Patterning Unit 1: Patterning <br> 1: Investigating Geometric <br> Patterns <br> 2: Investigating Number Patterns <br> 3: Using Pattern Rules to Solve <br> Problems <br> 4: Consolidation of Patterning | Unit 1 Questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (pp. 2-7) | Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically. <br> Representing patterns, relations, and functions <br> - Describes, generates, extends, translates, and corrects number and shape patterns that follow a predetermined rule. <br> - 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). <br> - Represents a numeric or shape pattern using a table of values by pairing the term value with a term number. <br> - Generates a visual model to represent a simple number pattern. <br> - Represents a mathematical context or problem with expressions and equations using variables to represent unknowns. <br> Generalizing and analyzing patterns, relations, and functions <br> - Explains the rule for numeric patterns including the starting point and change (e.g., |

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|  |  | given: $16,22,28,34, \ldots$. Start at 16 and add 6 <br> each time). <br> - Describes numeric and shape patterns using <br> words and numbers. <br> - Predicts the value of a given element in a <br> numeric or shape pattern using pattern rules. |
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## Correlation of Nunavut Program of Studies with Mathology Grade 5 (Patterns and Relations: Variables and Equations)

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome <br> Represent algebraic expressions in multiple ways. |  |  |  |
| Specific Outcomes <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). | Patterning Unit 2: Variables and Equations <br> 5: Using Variables <br> 6: Solving Addition and <br> Subtraction Equations <br> 7: Solving Multiplication and <br> Division Equations <br> 8: Using Equations to Solve <br> Problems <br> 10: Consolidation of Variables and Equations | Unit 16 Questions 2, 5, 6, 7, 8, 9 (pp. 99-102) | Big Idea: Patterns and relations can be represented with symbols, equations, and expressions. <br> Understanding equality and inequality, building on generalized properties of numbers and operations <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: $\square-4=7$ ). <br> Using variables, algebraic expressions, and equations to represent mathematical relations <br> - Understands an unknown quantity (i.e., variable) may be represented by a symbol or letter (e.g., $13-\square=8 ; 4 n=12$ ). <br> - 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). <br> - Interprets and writes algebraic expressions (e.g., $2 n$ means two times a number; subtracting a number from 7 can be written as $7-n$ ). |

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|  |  |  | - Understands a variable as a changing quantity (e.g., $5 s$, where $s$ can be any value). |
| :---: | :---: | :---: | :---: |
| 3. Solve problems involving single-variable, one-step equations with whole number coefficients and whole number solutions. | Patterning Unit 2: Variables and Equations <br> 5: Using Variables <br> 6: Solving Addition and <br> Subtraction Equations <br> 7: Solving Multiplication and Division Equations <br> 8: Using Equations to Solve Problems <br> 10: Consolidation of Variables and Equations | Unit 16 Questions 3a, 3c, 5, 7, 8, 9, 13 (pp. 100-102, 104) | Big Idea: Patterns and relations can be represented with symbols, equations, and expressions. <br> Understanding equality and inequality, building on generalized properties of numbers and operations <br> - Determines an unknown number in simple one-step equations using different strategies (e.g., $n \times 3=12 ; 13-\square=8$ ). <br> - Uses arithmetic properties to investigate and transform one-step addition and multiplication equations (e.g., $5+4=9$ and $5+a=9$ have the same structure and can be rearranged in similar ways to maintain equality: $4+5=9$ and $a+5=9$ ). <br> - Uses arithmetic properties to investigate and transform one-step subtraction and division equations (e.g., $12-5=7$ and $12-b$ $=7$ have the same structure and can be rearranged in similar ways to maintain equality: $12-7=5$ and $12-7=b$ ). <br> Using variables, algebraic expressions, and equations to represent mathematical relations <br> - Understands an unknown quantity (i.e., variable) may be represented by a symbol or letter (e.g., $13-\square=8 ; 4 n=12$ ). <br> - 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). <br> - Interprets and writes algebraic expressions (e.g., $2 n$ means two times a number; subtracting a number from 7 can be written as $7-n$ ). |


|  |  |  | Understands a variable as a changing <br> quantity (e.g., $5 s$, where $s$ can be any value). |
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## mâthôlogy

## Correlation of Nunavut Program of Studies with Mathology Grade 5 (Shape and Space: Measurement)

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\begin{array}{|l|l|l|l|}\hline \text { Curriculum Expectations } & \text { Grade 5 Mathology.ca } & \text { Mathology Practice Workbook 5 } & \begin{array}{l}\text { Pearson Canada Grades 4-6 Mathematics } \\
\text { Learning Progression }\end{array} \\
\hline \begin{array}{l}\text { General Outcome } \\
\text { Use direct and indirect measurement to solve problems. }\end{array} & \begin{array}{l}\text { Geometry Unit 1A: 2-D Shapes } \\
\text { and 3-D Solids } \\
\text { 2: Investigating Quadrilaterals } \\
\text { 4: Consolidation of 2-D Shapes and } \\
\text { 1. Identify } 90^{\circ} \text { angles. }\end{array} & \begin{array}{l}\text { Unit 4 Questions 1, 2, 5, 10 } \\
\text { (pp. 22-24, 27) } \\
\text { 3-D Solids }\end{array} & \begin{array}{l}\text { Unit 5 Questions 7, 9, 11 } \\
\text { (pp. 31-32, 34) } \\
\text { analyzed and classified in different ways by } \\
\text { their attributes. } \\
\text { Investigating geometric attributes and } \\
\text { properties of 2-D shapes and 3-D solids } \\
\text { - Understands angle as a geometric figure } \\
\text { formed from two rays or line segments } \\
\text { sharing a common endpoint. }\end{array} \\
\hline \begin{array}{l}\text { 2. Design and construct different } \\
\text { rectangles, given either perimeter } \\
\text { or area, or both (whole numbers), } \\
\text { and make generalizations. }\end{array} & \begin{array}{l}\text { Measurement Unit 1: Length, } \\
\text { Perimeter, and Area } \\
\text { 4: Relating the Perimeter and Area } \\
\text { of Rectangles } \\
\text { 6: Consolidation of Length, } \\
\text { Perimeter, and Area }\end{array} & \begin{array}{l}\text { Unit 14 Questions 5, 6, 7, 8, 9, 12 } \\
\text { (pp. 87-90, 92) }\end{array} & \begin{array}{l}\text { Big Idea: Assigning a unit to a continuous } \\
\text { attribute allows us to measure and make } \\
\text { comparisons. } \\
\text { Understanding relationships among }\end{array}
$$ <br>

measured units\end{array}\right]\)| - Develops and generalizes strategies to |
| :--- |
| compute area and perimeter of rectangles. |
| - Investigates the relationship between |
| perimeter and area in rectangles. |


| between mm and m units. | 6: Consolidation of Length, Perimeter, and Area |  | Understanding relationships among measured units <br> - Understands and applies the multiplicative relationship among metric units of length, mass, and capacity. |
| :---: | :---: | :---: | :---: |
| 4. Demonstrate an understanding of volume by: <br> - selecting and justifying referents for $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ units <br> - estimating volume, using referents for $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ <br> - measuring and recording volume ( $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$ ) <br> - constructing right rectangular prisms for a given volume. | Measurement Unit 2: Mass, Capacity, and Volume <br> 10: Investigating Volume <br> 11: Investigating Volume with Rectangular Prisms <br> 12: Consolidation of Mass, Capacity, and Volume | Unit 15 Questions 8, 9, 10, 11, 12, 13 (pp. 95-98) | Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared. Understanding attributes that can be measured, compared, and ordered <br> - Understands volume and capacity as attributes of 3-D objects that can be measured and compared. <br> Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons. <br> Selecting and using units to estimate, measure, construct, and make comparisons <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> Understanding relationships among measured units <br> - Understands and applies the multiplicative relationship among metric units of length, mass, and capacity. |
| 5. Demonstrate an understanding of capacity by: <br> - describing the relationship between mL and L | Measurement Unit 2: Mass, <br> Capacity, and Volume <br> 8: Investigating Capacity <br> 12: Consolidation of Mass, Capacity, and Volume | Unit 15 Questions 4, 5, 6, 7 (pp. 94-95) | Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared. Understanding attributes that can be measured, compared, and ordered - Understands volume and capacity as attributes of 3-D objects that can be |

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- selecting and justifying referents for mL or L units
- estimating capacity, using referents for mL or L
- measuring and recording capacity ( mL or L ).
measured and compared.
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
- Chooses the most appropriate unit to
measure a given attribute of an object (e.g., classroom area measured in square metres).


## Understanding relationships among

 measured units- Understands and applies the multiplicative relationship among metric units of length, mass, and capacity.


## mathology

## Correlation of Nunavut Program of Studies with Mathology Grade 5 (Shape and Space: 3-D Objects and 2-D Shapes)

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome <br> Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them. |  |  |  |
| Specific Outcomes <br> 6. Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are: <br> - parallel <br> - intersecting <br> - perpendicular <br> - vertical <br> - horizontal. | Geometry Unit 1A: 2-D Shapes and 3-D Solids <br> 1: Properties of 2-D Shapes and 3- <br> D Objects <br> 2: Investigating Quadrilaterals <br> 4: Consolidation of 2-D Shapes and <br> 3-D Solids | Unit 4 Questions 1, 2, 4, 9, 10 (pp. 22-24, 26-27) | Big Ideas: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes. <br> Investigating geometric attributes and properties of 2-D shapes and 3-D solids - Sorts, describes, constructs, and classifies polygons based on side attributes (e.g., parallel, perpendicular, regular/irregular). <br> - Sorts, describes, constructs, and classifies <br> 3-D objects based on edges, faces, vertices, and angles (e.g., prisms, pyramids). <br> Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition <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. |
| 7. Identify and sort quadrilaterals, including: <br> - rectangles <br> - squares <br> - trapezoids <br> - parallelograms | Geometry Unit 1A: 2-D Shapes and 3-D Solids <br> 2: Investigating Quadrilaterals <br> 4: Consolidation of 2-D Shapes and 3-D Solids | Unit 4 Questions 1, 2, 3, 4, 5, 10 (pp. 22-24, 27) | Big Ideas: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes. <br> Investigating geometric attributes and properties of 2-D shapes and 3-D solids |


| • rhombuses <br> according to their attributes. |  | - Identifies and draws parallel, intersecting, <br> and perpendicular lines. <br> - Sorts, describes, constructs, and classifies <br> polygons based on side attributes (e.g., <br> parallel, perpendicular, regular/irregular). <br> - Sorts, describes, classifies 2-D shapes <br> based on their geometric properties (e.g., <br> side lengths, angles, diagonals). <br> - Classifies 2-D shapes within a hierarchy <br> based on their properties (e.g., rectangles <br> are a subset of parallelograms). <br> Investigating 2-D shapes, 3-D solids, and <br> their attributes through composition and <br> decomposition |
| :--- | :--- | :--- | :--- |
| $-\quad$ Identifies types of lines in 2-D images (e.g., |  |  |
| parallel, intersecting, perpendicular). |  |  |
| - Investigates 2-D shapes that do or do not |  |  |
| have parallel and perpendicular lines. |  |  |

## math logy

## Correlation of Nunavut Program of Studies with Mathology Grade 5 <br> (Shape and Space: Transformations)

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome <br> Describe and analyze position and motion of objects and shapes. |  |  |  |
| Specific Outcomes <br> 8. Identify and describe a single transformation, including a translation, rotation and reflection of 2-D shapes. | Geometry Unit 2A: <br> Transformations <br> 5: Investigating Translations <br> 6: Investigating Reflections <br> 7: Investigating Rotations <br> 8: Identifying Transformations <br> 9: Consolidation of <br> Transformations | Unit 5 Questions 5, 7, 8, 10 (pp. 30-33) | Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change. <br> Exploring 2-D shapes and 3-D solids by applying and visualizing transformations - 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. | Geometry Unit 2A: <br> Transformations <br> 5: Investigating Translations <br> 6: Investigating Reflections <br> 7: Investigating Rotations <br> 8: Identifying Transformations <br> 9: Consolidation of <br> Transformations | Unit 5 Questions 4, 6, 9, 10 (pp. 30-33) | Big Ideas: 2-D shapes and 3-D solids can be transformed in many ways and analyzed for change. <br> Exploring 2-D shapes and 3-D solids by applying and visualizing transformations - Identifies, describes, and performs single transformations (i.e., translation, reflection, rotation) on 2-D shapes. |

## mathôlogy

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

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome <br> Collect, display and analyze data to solve problems. |  |  |  |
| Specific Outcomes <br> 1. Differentiate between first-hand and second-hand data. | Data Management Unit 1A: Data Management <br> 1: Exploring First-Hand and Second-Hand Data | Unit 10 Question 3 (p.61) | 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. <br> Collecting data and organizing it into categories <br> - Differentiates between primary (i.e., firsthand) and secondary (i.e., second-hand) data sources. |
| 2. Construct and interpret double bar graphs to draw conclusions. | Data Management Unit 1A: <br> Data Management <br> 2: Constructing Double-Bar Graphs <br> 3: Interpreting Double-Bar Graphs <br> 4: Consolidation of Data <br> Management | Unit 10 Questions 4, 8 (pp. 62, 65) | 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. <br> Creating graphical displays of collected data - Represents data graphically using many-toone correspondence with appropriate scales and intervals (e.g., each symbol on pictograph represents 10 people). <br> - Visually represents two or more data sets |

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$\left.\begin{array}{|l|l|l|l|}\hline & & & \begin{array}{l}\text { (e.g., double bar chart, stacked bar graph, } \\ \text { multi-line graph, multi-column table). } \\ \text { Reading and interpreting data displays and } \\ \text { analyzing variability } \\ \text { - Reads and interprets data displays using } \\ \text { many-to-one correspondence. } \\ \text { Drawing conclusions by making inferences } \\ \text { and justifying decisions based on data } \\ \text { collected. } \\ \text { - Draws conclusions based on data } \\ \text { presented. }\end{array} \\ \text { - Interprets the results of data presented } \\ \text { graphically from primary (e.g., class survey) } \\ \text { and secondary (e.g., online news reports) } \\ \text { sources. }\end{array}\right\}$

## mathology

## Correlation of Nunavut Program of Studies with Mathology Grade 5 (Statistics and Probability: Chance and Uncertainty)

| Curriculum Expectations | Grade 5 Mathology.ca | Mathology Practice Workbook 5 | Pearson Canada Grades 4-6 Mathematics Learning Progression |
| :---: | :---: | :---: | :---: |
| General Outcome |  |  |  |
| Specific Outcomes <br> 3. Describe the likelihood of a single outcome, using words such as: <br> - impossible <br> - possible <br> - certain. | Data Management Unit 2A: <br> Probability <br> 5: Describing Likelihood of Events <br> 6: Conducting Experiments <br> 7: Designing Experiments <br> 8: Consolidation of Probability | Unit 11 Questions 1, 2, 5, 6, 7, 8, 9 (pp. 66-71) | 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. <br> Using the language and tools of chance to describe and predict events <br> - Locates the likelihood of outcomes on a vocabulary-based probability continuum (e.g., impossible, unlikely, likely, certain). |
| 4. Compare the likelihoods of two possible outcomes, using words such as: <br> - less likely <br> - equally likely <br> - more likely. | Data Management Unit 2A: <br> Probability <br> 5: Describing Likelihood of Events <br> 6: Conducting Experiments <br> 7: Designing Experiments <br> 8: Consolidation of Probability | Unit 11 Questions 3, 4, 5, 7, 8, 9 (pp. 67-68, 70-71) | 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. <br> Using the language and tools of chance to describe and predict events <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 |

Pearson

|  |  |  | events in an experiment (e.g., flipping a cup, <br> drawing a coloured cube from a bag). <br> -nvestigates and calculates the <br> experimental probability (i.e., relative <br> frequency) of simple events (e.g., 3 heads in <br> 5 coin tosses is $\frac{3}{5}$ ). |
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Unit 6: Coding Not required, but recommended
Unit 12: Financial Literacy Not required, but recommended

