Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
NUMBER **AT A GLANCE** **Add and subtract to 10 000; math facts to 9 (recall to 7); 3x1 digit multiplication with problem solving; 2-digit x 1-digit division with problem solving; fractions less than and equal to 1; decimals to the hundredths**			
	Quantity Operational Sense Relationships Representation Reasoning		
The Base Ten Numeration System is a scheme for recording numbers 0-9, groups of ten(s), and place value.	**1. Represent and describe whole numbers to 10 000, pictorially and symbolically. [C, CN, V]**		• **Look at animal populations within the area - get numbers from fish and wildlife; look at travelling from one point to another - track distance and time**
Numbers-the set of real numbers is infinite. Each real number can be associated with a unique point on the number line. (counting numbers, whole numbers, integers, fractions/rational numbers). Estimation-approximated numerical calculations using numbers/referents that are easier to compute with mentally.	2. Compare and order numbers to 10 000. [C, CN, V]		
Properties-for a given set of numbers there are relationships that are always true. These rules govern arithmetic and algebra (properties of operations, properties of equality) Basic Facts and Algorithms-operations with rational numbers	**3. Demonstrate an understanding of addition of numbers with answers to 10 000 and their corresponding subtractions (limited to 3- and 4-digit numerals) by:** • **using personal strategies for adding and subtracting** • **estimating sums and differences** • **solving problems involving addition and subtraction. [C, CN, ME, PS, R]** *Note: Students investigate a variety of strategies, including standard/traditional algorithms, to become proficient in at least one appropriate and efficient strategy that they understand.* *Note: Through this outcome, students have the opportunity to maintain and refine previously learned addition and subtraction number facts: Grade 3, Number SO 10 – Apply mental mathematics strategies and number properties in order to understand and recall basic addition facts and related subtraction facts to 18. [C, CN, ME, PS, R, V]*		• **Use topics from SS, Sci and land-based learning to address this ELO**
	4. Apply the properties of 0 and 1 for multiplication and the property of 1 for division. [C, CN, R]		

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Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
Properties-for a given set of numbers there are relationships that are always true. These rules govern arithmetic and algebra. (properties of operations, properties of equality) Basic Facts and Algorithms-operations with rational numbers.	**5. Describe and apply mental mathematics strategies to determine basic multiplication facts to 9 × 9 and related division facts. [C, CN, ME, R] Understand and apply strategies for multiplication and related division facts to 9x9. Recall multiplication and related division facts to 7x7.**		• **Shopping, estimating drive times, estimating weight**
	6. Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by: • **using personal strategies for multiplication with and without concrete materials** • **using arrays to represent multiplication** • **connecting concrete representations to symbolic representations** • **estimating products** • **applying the distributive property. C, CN, ME, PS, R, V]**		• **Infuse the Cree language - follow the math terms** • **Ask students to figure out how real life LBL camp activities: E.g. How many poles are needed to make 5 tipis?** • **Connections to beading work**
	7. Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by: • **using personal strategies for dividing with and without concrete materials** • **estimating quotients** • **relating division to multiplication. [C, CN, ME, PS, R, V]**		
	8. Demonstrate an understanding of fractions less than or equal to one by using concrete, pictorial and symbolic representations to: • **name and record fractions for the parts of a whole or a set** • **compare and order fractions** • **model and explain that for different wholes, two identical fractions may not represent the same quantity** • **provide examples of where fractions are used. [C, CN, PS, R, V]**		• **Dividing up bannock equally amongst students**
	9. Represent and describe decimals (tenths and hundredths), concretely, pictorially and symbolically. [C, CN, R, V]		
	10. Relate decimals to fractions and fractions to decimals (to hundredths). [C, CN, R, V]		
	11. Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths) by: • **using personal strategies to determine sums and differences** • **estimating sums and differences** • **using mental mathematics strategies to solve problems. [C, ME, PS, R, V]**		

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Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
PATTERNS AND RELATIONS AT A GLANCE Representing and describing patterns and relationships; identifying and explaining mathematical relationships; express a problem in an equation; solve one-step equations with a symbol			
Patterns Relationships Variables Expressions Equations			
Patterns-are relationships that can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. (numbers, geometry)	**1. Identify and describe patterns found in tables and charts.**	❄	• **Animal populations, finished bead work, diverse human populations**
	2. Translate among different representations of a pattern, such as a table, a chart or concrete materials.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations.	**3. Represent, describe and extend patterns and relationships, using charts and tables, to solve problems.**	❄	
	4. Identify and explain mathematical relationships, using charts and diagrams, to solve problems.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations. Equivalence/Equality-any number, measure, algebraic expression, or equation can be represented in an infinite number of ways that have the same value. (preserve the equality)	5. Express a given problem as an equation in which a symbol is used to represent an unknown number.		
Variable-mathematical structures can be translated and represented abstractly using variables, expressions and equations.	**6. Solve one-step equations involving a symbol to represent an unknown number.**	❄	

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Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
	SHAPE AND SPACE– MEASUREMENT **AT A GLANCE** **Understanding digital and analog time; understanding area of 2-D shapes**		
	Attributes Relationships Units		
Measurement: Some attributes of objects are measurable and can be quantified using unit amounts. (time, length, area, mass, volume, capacity, magnitude, perimeter, angles)	**1. Read and record time, using digital and analog clocks, including 24-hour clocks.**		
	2. Read and record calendar dates in a variety of formats.		
	3. Demonstrate an understanding of area of regular and irregular 2-D shapes by: • **recognizing that area is measured in square units** • **selecting and justifying referents for the units cm^2 or m^2** • **estimating area, using referents for cm^2 or m^2** • **determining and recording area (cm^2 or m^2)**		
	SHAPE AND SPACE– 3-D OBJECTS AND 2-D SHAPES AT A GLANCE Understanding digital and analog time; understanding area of 2-D shapes		
3-D Objects and 2-D Shapes: 2D and 3D objects can be constructed, described, classified, analyzed by their attributes.	**4. Describe and construct right rectangular and right triangular prisms.**		
	SHAPE AND SPACE – TRANSFORMATIONS AT A GLANCE Understand congruency; understand line or symmetry		
Transformations-objects in space can be transformed in an infinite number of ways. Transformations can be described and analyzed mathematically.	**5. Demonstrate an understanding of congruency, concretely and pictorially.**		
	6. Demonstrate an understanding of line symmetry by: identifying symmetrical 2-D shapes, creating symmetrical 2-D shapes, drawing one or more lines of symmetry in a -2D shape.		

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Big Idea, Major Concepts, GLOs	Specific Learning Outcomes ELOs are bold	Season	Nehiyaw Ways of Knowing
	STATISTICS AND PROBABILITY AT A GLANCE Many-to-one correspondence: Construct and interpret picto and bar graphs		
Data Collection-the question to be answered determines the data that needs to be collected and how best to collect it. Data Representation-data can be represented and interpreted visually using tables, charts, and graphs.	**1. Demonstrate an understanding of many-to-one correspondence.**		
	2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions.		