

Map: **Math Grade 6** Grade Level: **6**District: **Island Trees**Created: **12/04/2007** Last Updated: **12/04/2007**

	Essential Questions	Content	Skills	Standards/PIs
Unit 1	<p>How do we apply the basic properties and rules of real numbers?</p> <p>How do the commutative, associative, and distributive properties facilitate mathematical communication?</p> <p>How is algebra used to communicate mathematically?</p> <p>How do we use the metric system to describe capacity?</p> <p>How do we use a coordinate plane to describe 2 dimensional objects?</p>	<p>Whole Numbers - read & write to trillions</p> <p>Exponents - understand powers of 1, 2, or 3</p> <p>Order of Operations - parentheses, multiplication, division, addition, subtraction</p> <p>Number Line - order positive and negative whole numbers, decimals and fractions</p> <p>Vocabulary for properties - commutative, associative, distributive</p> <p>algebraic expressions - translate verbal to algebra</p> <p>Temperature</p>	<p>identifies place value of whole numbers to trillions</p> <p>reads and writes whole numbers to trillions</p> <p>*****</p> <p>writes repeated multiplication in exponential form</p> <p>evaluates an expression written in exponential form, using exponents of 1, 2 or 3</p> <p>*****</p> <p><i>review 5th(5A3): substitute assigned values into variable expressions and evaluate using order of operations</i></p> <p>evaluate a numerical expression which includes both addition and subtraction or both multiplication and division</p> <p>evaluate a numerical expression which includes addition, subtraction, multiplication and division</p> <p>evaluate a numerical expression which includes addition, subtraction, multiplication, division, and exponents</p> <p>*****</p> <p>locates positive and negative integers on a number line</p> <p>*****</p> <p>defines commutative property of addition and multiplication</p> <p>defines associative property of addition and</p>	<p>MST3-6.N.1</p> <p>MST3-6.N.23</p> <p>MST3-6.N.24</p> <p>MST3-6.N.22</p> <p>MST3-6.A.2</p> <p>MST3-6.N.14</p> <p>MST3-6.N.15</p> <p>MST3-6.N.2</p> <p>MST3-6.N.3</p> <p>MST3-6.N.4</p> <p>MST3-6.N.5</p> <p>MST3-6.N.25</p> <p>MST3-6.A.1</p> <p>MST3-6.A.2</p> <p>MST3-6.M.4</p> <p>MST3-6.M.5</p> <p>MST3-6.N.13</p> <p>MST3-6.M.6</p>

	<p>Conversion formula</p> <p>Capacity: Measurement, the metric system</p> <p>Absolute Value - determine the value</p> <p>Geometry - Coordinate plane, ordered pairs</p>	<p>multiplication</p> <p>defines distributive property of multiplication over addition</p> <p>defines identity property of addition ($a+0=a$)</p> <p>defines identity property of multiplication ($a \times 1 =a$)</p> <p>identifies the inverse property of addition ($a - a = 0$)</p> <p>identifies inverse property of multiplication ($a \times 1/a = 1$)</p> <p>defines and identifies the zero property of multiplication</p> <p>*****</p> <p>review 5th(5A2): recalls how to translate simple verbal expressions into algebraic expressions</p> <p>translates two-step verbal expressions into algebraic expressions</p> <p>review 5th: (5A4)solve simple one-step equations using basic whole-number facts; (5A5)solve and explain simple one-step equations using inverse operations involving whole numbers</p> <p>substitute values to convert from Fahrenheit to Celsius and Celsius to Fahrenheit using formulas: $C=5/9(F-32)$ and $F=9/5(C+32)$</p> <p>*****</p> <p>identifies metric units of capacity(liter, milliliter)</p> <p>state operation used to convert equivalent units of capacity for metric units</p> <p>practice converting equivalent units of capacity for metric system</p> <p>*****</p>		
--	---	--	--	--

			<p>defines the absolute value of a number</p> <p>determine the absolute value of both positive and negative numbers</p> <p>*****</p> <p>review 5th: (5G12) identify and plot points in the first quadrant</p> <p>review 5th (5G13) plot points to form basic geometric shapes; 5G14 calculate perimeter of basic geometric shapes drawn on a coordinate plane (rectangles and shapes composed of rectangles having sides with integer lengths and parallel to the axes)</p> <p>*****</p>	
Unit 2	<p>How do we apply the basic properties and rules of rational numbers?</p> <p>How do we use numbers to represent parts of a whole?</p> <p>How does fraction arithmetic help to solve real world problems?</p> <p>How do we measure the capacity of real world 3 dimensional objects?</p>	<p>Fractions Arithmetic - addition, subtraction, multiplication, division with like and unlike denominators</p> <p>Mixed Numbers Arithmetic - addition, subtraction, multiplication, division with like and unlike denominators</p> <p>Estimation of Rational Numbers - Round</p>	<p>review 5th (5N12,5N15,5N19) prime numbers, greatest common factor, simplifying fractions to lowest terms</p> <p>convert fractions to equivalent fractions</p> <p>find common denominators for a given list of fractions</p> <p>add and subtract fractions with unlike denominators</p> <p>apply estimation to determine whether the result of fraction addition or subtraction is reasonable</p> <p>perform addition and subtraction of mixed numbers</p> <p>perform multiplication of fractions</p>	<p>MST3-6.N.15</p> <p>MST3-6.N.16</p> <p>MST3-6.N.17</p> <p>MST3-6.N.18</p> <p>MST3-6.N.19</p> <p>MST3-6.N.20</p> <p>MST3-6.N.27</p> <p>MST3-6.M.2</p> <p>MST3-6.M.3</p> <p>MST3-6.M.9</p> <p>MST3-6.G.2</p> <p>MST3-6.G.3</p>

How do we use geometric concepts to find measurements of circles?	Fractions and Mixed Numbers	convert mixed numbers to improper fractions perform multiplication of mixed numbers	MST3-6.G.5
	Estimation - Fraction and Mixed Number arithmetic	identify the reciprocal of a number perform division of fractions and mixed number	MST3-6.G.6 MST3-6.G.7
	Capacity - Measurement of customary units	assesses the reasonableness of the answer by using estimation *****	MST3-6.G.9 MST3-6.M.8
	Circles - vocabulary, circumference, area	identifies customary units of capacity (cups, pints, quarts, gallons)	MST3-6.G.8
		state operation used to convert equivalent units of capacity for customary units	MST3-6.M.6
		practice converting equivalent units of capacity for customary units *****	
		use proper vocabulary to describe a circle: radius, diameter, chord, central angle	
		explore the relationships between radius and diameter and between diameter and circumference	
		calculate the area and circumference of a circle, using the appropriate formula	
		define central angle of a circle	
		calculate the area of a sector of a circle, given the measure of a central angle and the radius of the circle	
		assess the reasonableness of the answer, using estimation	

Unit 3	<p>How can we use visual models to represent data?</p> <p>How can we interpret and analyze a set of data?</p> <p>How can we compare the values of fractions and decimals?</p>	<p>Bar Graph - create and interpret</p> <p>Line Graph - create and interpret</p> <p>Circle Graph - create and interpret</p> <p>Vocabulary: mean, median, mode, range</p> <p>Fraction to Decimal conversion</p> <p>Number Line - fractions and decimals on the same line</p>	<p>construct a bar graph from a given set of data</p> <p>construct a line graph from a given set of data</p> <p>construct a circle graph from a given set of data</p> <p>determine the best graph to use to provide a visual representation for a given set of data</p> <p>*****</p> <p>define mean, median, mode, and range for a given set of data</p> <p>calculate the mean, median, mode, and range for a given set of data</p> <p>justify predictions made from data</p> <p>*****</p> <p>converts fraction to decimal, using division</p> <p>identifies positive and negative fractions and decimals on a number line</p> <p>order fractions and decimals on the same number line</p> <p>*****</p>	<p>MST3-6.N.14</p> <p>MST3-6.S.5</p> <p>MST3-6.S.6</p> <p>MST3-6.S.7</p> <p>MST3-6.S.8</p> <p>MST3-6.N.20</p>

|--|--|--|--|--|--|--|

	Essential Questions	Content	Skills	Standards/PIs
Unit 4	<p>How can we use ratios, proportions, and percentages to model real world situations?</p> <p>How are ratios and proportions related to fractions?</p> <p>How can similar triangles be compared, using proportional reasoning?</p>	<p>Ratio - create and interpret</p> <p>Rate - use in problem solving</p> <p>Distance formula</p> <p>Proportion - solve problems</p> <p>Similar triangles - compare, using proportional reasoning</p>	<p>define ratio as a relationship between two numbers</p> <p>review 5th Probability (5S5,5S6,5S7)</p> <p><i>list the possible outcomes for a single-event experiment;</i></p> <p><i>record experiment results using fractions/ratios;</i></p> <p><i>create a sample space and determine the probability of a single event, given a simple experiment (e.g. rolling a number cube)</i></p> <p>read and write a ratio using a colon, a fraction, and words</p> <p>*****</p> <p>define a rate as a ratio that compares two different units</p> <p>solve problems using unit rate</p> <p>solve problems using the distance formula (rate x time = distance)</p> <p>*****</p> <p>define a proportion as equivalent ratios</p> <p>solve proportions by using cross products</p> <p>*****</p> <p>recognize, describe, and create similar triangles</p>	<p>MST3-6.N.6</p> <p>MST3-6.N.7</p> <p>MST3-6.N.8</p> <p>MST3-6.N.9</p> <p>MST3-6.N.10</p> <p>MST3-6.G.1</p> <p>MST3-6.A.5</p>

			<p>identify corresponding sides of similar triangles</p> <p>calculate the length of corresponding sides of similar triangles, using proportional reasoning (<i>solve simple proportions within context</i>)</p> <p>*****</p>	
Unit 5	<p>How can we use percentages and rates to model real world situations?</p> <p>How can we use percents to solve real world applications?</p>	<p>Fraction, Decimal, Percent Equivalence</p> <p>Modeling Percents</p> <p>Percents - use in problem solving</p> <p>Sales Tax formula</p> <p>Interest formula</p>	<p><i>review 5th (5N23) - use a variety of strategies to add, subtract, multiply, and divide decimals to thousandths</i></p> <p>determine the equivalency of a number in fractional/decimal/percent form</p> <p>expresses sales tax rate as a percent and as a decimal</p> <p>solve sales tax and total cost problems (tax rate x price = tax)</p> <p>solve problems using the interest formula (interest = principal x rate x time)</p> <p>*****</p>	<p>MST3-6.N.6</p> <p>MST3-6.N.11</p> <p>MST3-6.N.12</p> <p>MST3-6.N.21</p> <p>MST3-6.N.26</p>

Unit 6	<p>How do we measure the capacity of real world 3 dimensional objects?</p> <p>How do we use geometric concepts to find measurements?</p>	<p>Area of Quadrilaterals</p> <p>Area of Triangles</p> <p>Area of irregular polygons</p> <p>Area of circles and sectors of circles</p> <p>Volume of Rectangular Prism</p>	<p><i>review 5th: (5G12)identify and plot points in the first quadrant;(5G13) plot points to form basic geometric shapes</i></p> <p>calculate the area of a circle</p> <p>calculate the area of a sector of a circle, given a central angle</p> <p>explore the volume of a rectangular prism, using centimeter cubes</p> <p><i>review 5th: (5G14)calculate perimeter of basic geometric shapes drawn on a coordinate plane (rectangles and shapes composed of rectangles having sides with integer lengths and parallel to the axes)</i></p> <p>explore finding the area of polygons, using graph paper</p> <p>develop formulas for the area of specific polygons (triangles, squares, rectangles, rhombi, trapezoids)</p> <p>calculate the area of specific polygons, using</p>	<p>MST3-6.M.7</p> <p>MST3-6.M.8</p> <p>MST3-6.G.2</p> <p>MST3-6.G.3</p> <p>MST3-6.G.4</p> <p>MST3-6.M.2</p> <p>MST3-6.A.6</p> <p>MST3-6.M.1</p> <p>MST3-6.G.7</p> <p>MST3-6.G.8</p>

			<p>formulas</p> <p>develop the formula for the volume of a rectangular prism</p> <p>calculate the volume of a rectangular prism, using the formula</p> <p>assess the reasonableness of the answer, using estimation</p> <p>*****</p>		
--	--	--	--	--	--

	Essential Questions	Content	Skills
Unit 7	<p>How can we use coordinate geometry to describe and measure two dimensional shapes?</p> <p>How can variables, expressions and equations be used to simplify and solve actual daily problems?</p>	<p>Review for State Test</p> <p>Coordinate Geometry - plot polygons, determine perimeter and area</p> <p>Algebra - use formulas to evaluate variables</p>	<p>define x-axis, y-axis, origin, quadrant</p> <p>identify points in all four quadrants</p> <p>identify coordinate plane</p> <p>plot points on a coordinate plane in all four quadrants</p> <p>graph polygons on a coordinate plane, using coordinate points</p> <p>determine the individual segment length of polygons on a coordinate plane</p> <p>calculate the area of basic polygons drawn on a coordinate plane</p> <p>Create and evaluate algebraic expressions for determining the area of basic polygons</p> <p>*****</p>
Unit 8	<p>How can we use visual and algebraic models to analyze and represent data?</p>	<p>Statistics and Probability - Collection of Data</p> <p>Statistics and Probability - Organization and Display of Data</p>	<p>develop concept of sampling when collecting data from a population</p> <p>decide best method to collect data for a particular question</p> <p>make and interpret frequency tables</p> <p>construct Venn diagrams to sort data</p> <p>determine the most appropriate graph to display a given set of data (pictograph, bar graph, line graph, histogram, circle graph)</p> <p>justify the choice of most appropriate graph to display a given set of data</p>

Standards/PIs
<p>MST3-6.G.10</p> <p>MST3-6.G.11</p> <p>MST3-6.A.2</p>
<p>MST3-6.S.1</p> <p>MST3-6.S.2</p> <p>MST3-6.S.3</p> <p>MST3-6.S.4</p>

Unit 9	<p>How can we use visual and algebraic models to analyze and represent data? (continued)</p> <p>What is theoretical probability and how does it relate to actual probability of specific events?</p>	<p>Statistics and Probability - Probability: compound events, dependent events</p> <p>Algebra - equations and inequalities</p>	<p>define outcomes</p> <p>list sample space for outcomes using lists and tree diagrams</p> <p>create sample space for compound events</p> <p>determine the probability of dependent events</p> <p>explain fundamental counting principle using a tree diagram (ie multiply the number of possible choices for each outcome)</p> <p>determine the number of possible outcomes for a compound event using the fundamental counting principle</p> <p>determine the probability of events when the outcomes have equal probability</p> <p>*****</p> <p>translate two-step verbal sentences into algebraic equations</p> <p>recall inverse operations and create algebraic expressions using inverse operations</p> <p>solve addition equations</p> <p>solve subtraction equations</p> <p>solve multiplication equations</p> <p>solve two-step equations, using whole numbers and inverse operations</p>	<p>MST3-6.S.9</p> <p>MST3-6.S.10</p> <p>MST3-6.S.11</p> <p>MST3-6.A.2</p> <p>MST3-6.A.3</p> <p>MST3-6.A.4</p>

			<p>preview 7th(7A5): <i>Introduce inequalities - recognize and graph an inequality on a number line</i></p> <p>*****</p>		
--	--	--	---	--	--

	Essential Questions	Content	Skills	Standards/PIs
Unit 10	<p>How can we use algebra to solve problems?</p> <p>What have I learned about using math in the real world this year?</p>	<p>Algebra - Proportion problems</p> <p>Review Topics of the past year</p>	<p>recall proportions as equivalent ratios</p> <p>solve simple proportion word problems</p> <p><i>preview 7th: Introduce integer arithmetic: rules for addition, subtraction, multiplication, division of positive and negative numbers</i></p> <p>*****</p>	<p>MST3-6.A.4</p> <p>MST3-6.A.5</p>

Key to Standards used in this Map

MST3-6.N.1 [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.1 - read and write whole numbers to trillions [Grade 6]

MST3-6.N.2 [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.2 - define and identify the commutative and associative properties of addition and multiplication [Grade 6]

MST3-6.N.3 [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.3 - define and identify the distributive property of multiplication over addition [Grade 6]

- MST3-6.N.4** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.4 - define and identify the identity and inverse properties of addition and multiplication [Grade 6]
- MST3-6.N.5** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.5 - define and identify the zero property of multiplication [Grade 6]
- MST3-6.N.6** [2 occurrences] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.6 - understand the concept of ratio [Grade 6]
- MST3-6.N.7** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.7 - express equivalent ratios as a proportion [Grade 6]
- MST3-6.N.8** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.8 - distinguish the difference between rate and ratio [Grade 6]
- MST3-6.N.9** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.9 - solve proportions using equivalent fractions [Grade 6]
- MST3-6.N.10** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.10 - verify the proportionality using the product of the means equals the product of the extremes [Grade 6]
- MST3-6.N.11** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.11 - read, write, and identify percents of a whole (0% to 100%) [Grade 6]
- MST3-6.N.12** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.12 - solve percent problems involving percent, rate, and base [Grade 6]
- MST3-6.N.13** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.13 - define absolute value and determine the absolute value of rational numbers (including positive and negative) [Grade 6]
- MST3-6.N.14** [2 occurrences] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.14 - locate rational numbers on a number line (including positive and negative) [Grade 6]
- MST3-6.N.15** [2 occurrences] - MST Standard 3 - Number Sense and Operations Strand - Students will understand numbers, multiple ways of representing numbers, relationships among numbers, and number systems. [Number Systems] - Performance Indicator 6.N.15 - order rational numbers (including positive and negative) [Grade 6]
- MST3-6.N.16** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.16 - add and subtract fractions with unlike denominators [Grade 6]
- MST3-6.N.17** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.17 - add, subtract, multiply, and divide fractions with unlike denominators. [Grade 6]
- MST3-6.N.18** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.18 - multiply and divide mixed numbers with unlike denominators [Grade 6]
- MST3-6.N.19** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.19 - identify the multiplicative inverse (reciprocal) of a number [Grade 6]
- MST3-6.N.20** [2 occurrences] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.20 - represent fractions as terminating or repeating decimals [Grade 6]
- MST3-6.N.21** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.21 - find multiple representations of rational numbers (fractions, decimals, and percents 0 to 100) [Grade 6]
- MST3-6.N.22** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.22 - evaluate numerical expressions using order of operations (may include exponents of two and three) [Grade 6]
- MST3-6.N.23** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.23 - represent repeated multiplication in exponential form [Grade 6]
- MST3-6.N.24** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate to one another. [Operations] - Performance Indicator 6.N.24 - represent exponential form as repeated multiplication [Grade 6]
- MST3-6.N.25** [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will understand meanings of operations and procedures, and how they relate

to one another. [Operations] - Performance Indicator 6.N.25 - evaluate expressions having exponents where the power is an exponent of one, two, or three [Grade 6]

MST3-6.N.26 [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will compute accurately and make reasonable estimates. [Estimation] - Performance Indicator 6.N.26 - estimate a percent of quantity (0% to 100%) [Grade 6]

MST3-6.N.27 [1 occurrence] - MST Standard 3 - Number Sense and Operations Strand - Students will compute accurately and make reasonable estimates. [Estimation] - Performance Indicator 6.N.27 - justify the reasonableness of answers using estimation (including rounding) [Grade 6]

MST3-6.A.1 [1 occurrence] - MST Standard 3 - Algebra Strand - Students will represent and analyze algebraically a wide variety of problem solving situations. [Variables and Expressions] - Performance Indicator 6.A.1 - translate two-step verbal expressions into algebraic expressions [Grade 6]

MST3-6.A.2 [4 occurrences] - MST Standard 3 - Algebra Strand - Students will perform algebraic procedures accurately. [Variables and Expressions] - Performance Indicator 6.A.2 - use substitution to evaluate algebraic expressions (may include exponents of one, two and three) [Grade 6]

MST3-6.A.3 [1 occurrence] - MST Standard 3 - Algebra Strand - Students will perform algebraic procedures accurately. [Equations and Inequalities] - Performance Indicator 6.A.3 - translate two-step verbal sentences into algebraic equations [Grade 6]

MST3-6.A.4 [2 occurrences] - MST Standard 3 - Algebra Strand - Students will perform algebraic procedures accurately. [Equations and Inequalities] - Performance Indicator 6.A.4 - solve and explain two-step equations involving whole numbers using inverse operations [Grade 6]

MST3-6.A.5 [2 occurrences] - MST Standard 3 - Algebra Strand - Students will perform algebraic procedures accurately. [Equations and Inequalities] - Performance Indicator 6.A.5 - solve simple proportions within context [Grade 6]

MST3-6.A.6 [1 occurrence] - MST Standard 3 - Algebra Strand - Students will perform algebraic procedures accurately. [Equations and Inequalities] - Performance Indicator 6.A.6 - evaluate formulas for given input values (circumference, area, volume, distance, temperature, interest, etc.) [Grade 6]

MST3-6.G.1 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.1 - calculate the length of corresponding sides of similar triangles, using proportional reasoning [Grade 6]

MST3-6.G.2 [2 occurrences] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.2 - determine the area of triangles and quadrilaterals (squares, rectangles, rhombi, and trapezoids) and develop formulas [Grade 6]

MST3-6.G.3 [2 occurrences] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.3 - use a variety of strategies to find the area of regular and irregular polygons [Grade 6]

MST3-6.G.4 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.4 - determine the volume of rectangular prisms by counting cubes and develop the formula [Grade 6]

MST3-6.G.5 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.5 - identify radius, diameter, chords and central angles of a circle [Grade 6]

MST3-6.G.6 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.6 - understand the relationship between the diameter and radius of a circle [Grade 6]

MST3-6.G.7 [2 occurrences] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.7 - determine the area and circumference of a circle, using the appropriate formula [Grade 6]

MST3-6.G.8 [2 occurrences] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.8 - calculate the area of a sector of a circle, given the measure of a central angle and the radius of the circle [Grade 6]

MST3-6.G.9 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will use visualization and spatial reasoning to analyze characteristics and properties of geometric shapes. [Shapes] - Performance Indicator 6.G.9 - understand the relationship between the circumference and the diameter of a circle [Grade 6]

MST3-6.G.10 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will apply coordinate geometry to analyze problem solving situations. [Coordinate Geometry] - Performance Indicator 6.G.10 - identify and plot points in all four quadrants [Grade 6]

MST3-6.G.11 [1 occurrence] - MST Standard 3 - Geometry Strand - Students will apply coordinate geometry to analyze problem solving situations. [Coordinate Geometry] - Performance Indicator 6.G.11 - calculate the area of basic polygons drawn on a coordinate plane (rectangles and shapes composed of rectangles having sides with integer lengths) [Grade 6]

MST3-6.M.1 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas. [Units of Measurement] - Performance Indicator 6.M.1 - measure capacity and calculate volume of a rectangular prism [Grade 6]

MST3-6.M.2 [2 occurrences] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas. [Units of Measurement] - Performance Indicator 6.M.2 - identify customary units of capacity (cups, pints, quarts, and gallons) [Grade 6]

MST3-6.M.3 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas. [Units of Measurement] - Performance Indicator 6.M.3 - identify equivalent customary units of capacity (cups to pints, pints to quarts, and quarts to gallons) [Grade 6]

MST3-6.M.4 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas.

[Units of Measurement] - Performance Indicator 6.M.4 - identify metric units of capacity (liter and milliliter) [Grade 6]

MST3-6.M.5 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas.

[Units of Measurement] - Performance Indicator 6.M.5 - identify equivalent metric units of capacity (milliliter to liter and liter to milliliter) [Grade 6]

MST3-6.M.6 [2 occurrences] - MST Standard 3 - Measurement Strand - Students will determine what can be measured and how, using appropriate methods and formulas.

[Tools and Methods] - Performance Indicator 6.M.6 - determine the tool and technique to measure with an appropriate level of precision: capacity [Grade 6]

MST3-6.M.7 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will develop strategies for estimating measurements. [Estimation] - Performance Indicator 6.M.7 - estimate volume, area, and circumference (see figures identified in geometry strand) [Grade 6]

MST3-6.M.8 [2 occurrences] - MST Standard 3 - Measurement Strand - Students will develop strategies for estimating measurements. [Estimation] - Performance Indicator 6.M.8 - justify the reasonableness of estimates [Grade 6]

MST3-6.M.9 [1 occurrence] - MST Standard 3 - Measurement Strand - Students will develop strategies for estimating measurements. [Estimation] - Performance Indicator 6.M.9 - determine personal references for capacity [Grade 6]

MST3-6.S.1 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Collection of Data] - Performance Indicator 6.S.1 - develop the concept of sampling when collecting data from a population and decide the best method to collect data for a particular question [Grade 6]

MST3-6.S.2 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Organization and Display of Data] - Performance Indicator 6.S.2 - record data in a frequency table [Grade 6]

MST3-6.S.3 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Organization and Display of Data] - Performance Indicator 6.S.3 - construct venn diagrams to sort data [Grade 6]

MST3-6.S.4 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Organization and Display of Data] - Performance Indicator 6.S.4 - determine and justify the most appropriate graph to display a given set of data [Grade 6]

MST3-6.S.5 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Analysis of Data] - Performance Indicator 6.S.5 - determine the mean, mode and median for a given set of data [Grade 6]

MST3-6.S.6 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Analysis of Data] - Performance Indicator 6.S.6 - determine the range for a given set of data [Grade 6]

MST3-6.S.7 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will collect, organize, display, and analyze data. [Analysis of Data] - Performance Indicator 6.S.7 - read and interpret graphs [Grade 6]

MST3-6.S.8 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will make predictions that are based upon data analysis. [Predictions from Data] - Performance Indicator 6.S.8 - justify predictions made from data [Grade 6]

MST3-6.S.9 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will understand and apply concepts of probability. [Probability] - Performance Indicator 6.S.9 - list possible outcomes for compound events [Grade 6]

MST3-6.S.10 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will understand and apply concepts of probability. [Probability] - Performance Indicator 6.S.10 - determine the probability of dependent events [Grade 6]

MST3-6.S.11 [1 occurrence] - MST Standard 3 - Statistics and Probability Strand - Students will understand and apply concepts of probability. [Probability] - Performance Indicator 6.S.11 - determine the number of possible outcomes for a compound event by using the fundamental counting principle and use this to determine the probabilities of events when the outcomes have equal probability [Grade 6]