UNIT 1:

I Can: (6.NS.1)

Recognize a fraction as a division problem and name the divisor, dividend and quotient.

Find the reciprocal of a fraction.

Compare and Compute quotients of fractions using models.

Evaluate a real-life mathematical situation involving fractions and solve word problems involving division of fractions.

Create a word problem involving division of fractions.

UNIT 1:

I Can: (6.G.1)

List and apply the formulas to find the area of various polygons.

Find the area of irregular polygons by composing and decomposing into rectangles and triangles and other shapes.

Determine the area of real-world shapes.

Discuss the area of triangles and special quadrilaterals in mathematical problems.

I Can: (6.G.4)

Give examples of 3-dimensional shapes.

Recognize that 3-dimensional shapes can be represented using nets.

Construct 3-dimensional figures using nets made up of rectangles and triangles.

Use nets to calculate surface area of figures in a given situation including the classroom.

Solve problems to determine the surface area of figures.

UNIT 1:

I Can: (6.NS.2)

Explain my understanding of place value when dividing a multi-digit number by another multi-digit number.

Apply the rules of division to solve multi-digit problems.

I Can: (6.NS.3)

Fluently add, subtract, multiply and divide multi-digit decimal numbers.

Recall estimation strategies for adding, subtracting, multiplying and dividing decimals.

UNIT 2:

I Can: (6.RP.1)

Identify a ratio.

Describe a ratio between quantities.

Explain a ratio by drawing a picture.

Use my classroom to develop a ratio.

Write a ratio in different forms (fraction, colon, word form).

Compare two quantities using a ratio.

UNIT 2:

I Can: (6.RP.2)

Explain that a ratio is a fraction which is also a division problem.

Write a ratio using letters a:b, a/b, a to b – where b is not equal to 0 according to the definition of ratio.

Define and explain in my own words with examples what a unit rate is.

Calculate a unit rate.

UNIT 2:

I Can: (6.RP.3)

Identify equivalent ratios.

Create a table and/or find missing values of a table using equivalent ratios.

Plot pairs of values on a coordinate plane.

Create and solve real-world ratio problems.

Create a tape diagram using a unit rate.

Interpret a rate from a tape diagram.

Solve for rate using real-world situations.

Explain how ratio and percent are related.

Explain that percent is out of 100.

Convert a rate to a percent.

Solve problems involving finding the whole, given a part and the percent.

Recall Customary and Metric units of measurement.

Convert units using multiplication and division in multiple ways (rates, multiplication, division and moving decimals)

Convert measurement units using ratio reasoning within customary units and within metric units.

Convert measurement units using ratio reasoning between customary units and metric units.

UNIT 2:

I Can: (6.EE.9)

Use variables to represent two quantities in a real-world situation that change in relationship to one another.

Distinguish between dependent and independent variables.

Write an equation to express one quantity (dependent variable) in terms of the other quantity (independent variable).

Relate the data between the dependent and independent variables using graphs and tables and relate these to the equation.

UNIT 3:

I Can: (6.NS.5)

Identify positive and negative numbers using a number line.

Label a number line with positive and negative numbers.

Understand the meaning of zero.

Use positive and negative numbers to represent quantities in the real world (ex. temperatures above and below zero).

UNIT 3:

I Can: (6.NS.6)

Locate a number and its opposite using a number line and a coordinate plane.

Demonstrate that the opposite of the opposite of a number is the number itself (ie. -(-4) = 4

Recognize that zero is its own opposite.

Choose and predict the quadrant for any ordered pair.

Justify that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.

Use the signs of numbers (positive, negative) to predict the quadrant of a reflection.

Use reflections to correctly plot ordered pairs and their opposites.

Plot all integers and other rational numbers on a number line (vertically ad horizontally) and coordinate plane.

Order rational numbers on a number line horizontally and vertically.

Find the position of integer pairs and other rational numbers on a coordinate plane.

UNIT 3:

I Can: (6.NS.7)

Compare negative and positive numbers.

Understand ordering of rational numbers.

Order rational numbers on a number line.

Write an inequality to show the relationship between rational numbers in real-world situations.

Explain in my own words how to compare rational numbers (written or spoken).

Define, identify and understand absolute value as the distance from zero on the number line. Absolute value deal only with distance from zero (regular whole numbers are their true values).

Recognize the symbol $|\ |$ as representing absolute value.

Apply absolute value to real-world situations.

UNIT 3:

I Can: (6.NS.8)

Graph points in all four quadrants of the coordinate plane.

Solve mathematical problems by graphing points in all four quadrants of a plane (maps, shapes, pictures).

Calculate distances between two points with the same first or second coordinates using absolute values, given only coordinates.

UNIT 3:

I Can: (6.G.3)

Draw polygons on a coordinate plane given coordinates for the vertices.

Determine the length of the sides of polygons in a coordinate plane give the same first or second coordinate.

Apply the technique of using coordinate planes to find the length of the side of polygons in real-world situations.

UNIT 4:

I Can: (6.EE.1)

Write and solve numerical expressions involving whole number exponents.

UNIT 4:

I Can: (6.EE.2)

Write numbers and variables to represent desired operations.

Know that an expression using variables is an algebraic expression.

Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient)

Identify one or more parts of an expression as a single term.

Write and evaluate algebraic expressions from real-world situations.

Apply order of operations to solve expressions and equations.

Substitute specific value for variables in order to evaluate the expression.

Evaluate expressions at specific values of their variables.

UNIT 4:

I Can: (6.EE.3)

Apply the properties of operations to generate equivalent expressions.

Identify the properties of operations.

Apply the distributive property to operations to create equivalent expressions.

Identify the distributive property.

UNIT 4:

I Can: (6.EE.4)

Identify when two expressions are equivalent.

UNIT 4:

I Can: (6.NS.4)

Determine the greatest common factor (GCF) of two numbers less than or equal to 100.

Determine the least common multiple (LCM) of two whole numbers less than or equal to 12.

Explain the difference between LCM and GCF.

Identify when to use the LCM and GCF of two whole numbers using math.

Prove that two whole numbers have a common factor based on the distributive property.

Identify the distributive property.

Use the distributive property to solve addition problems.

UNIT 5:

I Can: (6.EE.5)

Understand solving an equation or inequality as a process of answering a question.

Recognize that the correct answer to an equation or inequality makes it true.

Use substitution to check the answer or determine if a given number is a solution.

UNIT 5:

I Can: (6.EE.6)

Write an expression to represent a real-world mathematical situation.

Represent a number with a variable.

UNIT 5:

I Can: (6.EE.7)

Write and solve equations of the form x + p and px = q (in which p, q and x are non-negative rational numbers).

UNIT 5:

I Can: (6.EE.8)

Write an inequality to represent a real-world or mathematical situation.

Recognize and justify that inequalities have infinitely many solutions.

Represent solutions of inequalities on a number line (graph).

UNIT 6:

I Can: (6.G.1) – also in Unit 1

List and apply the formulas to find the area of various polygons.

Find the area of irregular polygons by composing and decomposing into rectangles and triangles and other shapes.

Determine the area of real-world shapes.

Discuss the area of triangles and special quadrilaterals in mathematical problems.

UNIT 6:

I Can: (6.G.2)

Recall the formula for finding the volume of a rectangular prism.

Use unit cubes to find volume.

Justify that the “modeled volume” is equal to the “formula volume”.

Calculate the volume of a right rectangular prism.

Apply volume formulas for right rectangular prisms to solve real-world problems.

Calculate the volume of a right rectangular prims with fractional edge lengths.

UNIT 6:

I Can: (6.G.4) – also in Unit 1

Give examples of 3-dimensional shapes.

Recognize that 3-dimensional shapes can be represented using nets.

Construct 3-dimensional figures using nets made up of rectangles and triangles.

Use nets to calculate surface area of figures in a given situation including the classroom.

Solve problems to determine the surface area of figures.

UNIT 7:

I Can: (6.SP.1)

Recognize variability.

Recognize a statistical question as one that anticipates variability.

UNIT 7:

I Can: (6.SP.2)

Use a histogram to answer a statistical question showing the distribution of its center, spread and overall shape.

Describe a set of data by its center, spread and overall shape.

Interpret data gathered from a survey.

UNIT 7:

I Can: (6.SP.3)

Use mean to describe data.

Understand that there is variation in data.

Distinguish between “measure of center” and “measure of variation”.

UNIT 7:

I Can: (6.SP.4)

Illustrate data using a variety of graph types (number line, dot plot, histogram & box plot).

UNIT 7:

I Can: (6.SP.5)

Summarize data sets in relation to their content.

Report the number of observations.

Describe the data collected including how it was measured and its unit of measurement.

Explain data in terms of measures of center and measures of variability.

Calculate quantitative measures of variance (ie. range, interquartile range, mean absolute deviation).

Identify outliers in data.

Understand the difference of the shape of the data when analyzing with mean or median.

UNIT 7:

I Can: (6.RP.3b) – also in Unit 2

Create a tape diagram using a unit rate.

Interpret a rate from a tape diagram.

Solve for rate using real-world situations.