

Options EHS Basic Math 2-OR		Scope and Sequence
Unit	Lesson	Objectives
<b>Equations</b>		
Writing Equations to Find Unknowns		
		Differentiate between expressions and equations.
		Translate simple word problems into one-step equations.
		Use substitution to determine whether a given number is a solution of a one-step equation.
Solving One-Step Equations: Addition and Subtraction		
		Write and solve one-step addition equations.
		Write and solve one-step subtraction equations.
Solving One-Step Equations: Multiplication and Division		
		Write and solve one-step multiplication equations.
		Write and solve one-step division equations.
Modeling Real-World Problems with One-Step Equations		
		Write and solve one-step variable equations modeling real-world contexts involving addition, subtraction, multiplication, and division of nonnegative rational numbers.
Writing Inequalities		
		Write an inequality to represent a constraint or condition in a real-world or mathematical problem.
		Describe the set of numbers that make the inequality true.
		Write real-world scenarios given one-step inequalities.
Graphing Inequalities on a Number Line		
		Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions.

**Unit Lesson****Objectives**

Graph solutions of one-step inequalities on number line diagrams.

Unit Test

**The Rational Number System**

Negative Numbers in Real-World Contexts

Use positive and negative numbers to represent quantities in real-world contexts.

Describe the meaning of zero in real-world contexts.

Integers on the Number Line

Identify integers.

Graph integers on number lines.

Find the opposite of an integer.

Plotting Positive and Negative Fractions

Graph negative fractions on a number line.

Use a number line to compare and order positive and negative fractions.

Comparing Rational Numbers

Graph rational numbers on a number line.

Define rational numbers and classify numbers.

Use a number line to compare rational numbers in a real-world context.

Dividing a Fraction by a Fraction

Use models to divide a fraction by a fraction.

Ordering Rational Numbers

Order rational numbers using a number line.

**Unit Lesson****Objectives**

Write and interpret statements of comparison for rational numbers in real-world contexts.

## Absolute Value

Define absolute value.

Find the absolute value of an integer.

Compare and order magnitudes using absolute value.

Represent and compare real-world quantities using absolute value.

## Unit Test

**Two-Dimensional Geometry**

## Plotting Points in the Four Quadrants

Graph and name points in all four quadrants.

Identify the quadrant in which a point lies.

Describe the relationship between ordered pairs that differ only in sign.

## Distance between Two Points

Use a number line to find the distance between two points in the same quadrant that have the same x- or y-coordinate.

Use absolute value to find the distance between two points in different quadrants that have the same x- or y-coordinate.

## Polygons in the Coordinate Plane

Identify polygons on the coordinate plane given coordinates of the vertices.

Find lengths of sides for polygons drawn on the coordinate plane.

## Area of Triangles

Calculate the area of triangles using the formula  $A = \frac{1}{2}bh$ .

Solve real-world problems involving the area of triangles.

**Unit Lesson****Objectives**

Area of Special Quadrilaterals

Find the area of special quadrilaterals.

Solve real-world problems involving the area of special quadrilaterals.

Unit Test

**Three-Dimensional Geometry**

Surface Area of Prisms

Represent rectangular and triangular prisms using nets.

Use nets of rectangular and triangular prisms to find surface area.

Surface Area of Rectangular Pyramids

Represent square and rectangular pyramids using nets.

Calculate the surface area of square and rectangular pyramids using nets.

Application of Surface Area in Context

Solve real-world surface area problems using nets.

Exploring Volume of a Rectangular Prism

Calculate the volume of a right rectangular prism with whole number edge lengths.

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

Finding a Formula for the Volume of a Rectangular Prism

Use the formulas  $V = lwh$  and  $V = Bh$  to find the volumes of right rectangular prisms.

Solving Volume Problems with Formulas

Calculate the volume of a rectangular prism with one or more fraction or decimal side lengths using a formula.

Find the value of an unknown dimension of a rectangular prism, given the remaining dimensions and the

**Unit Lesson****Objectives**

volume.

Solving Surface Area and Volume Problems

Identify whether a problem requires the calculation of surface area or volume.

Solve real-world problems about surface area and volume.

Unit Test

**Variability, Distributions, and Relationships between Quantities: Part One**

Data Representation

Interpret different types of data displays.

Identify an appropriate representation for displaying different data sets.

Plotting Data on a Dot Plot

Distinguish between statistical and nonstatistical questions.

Display data on a dot plot.

Describing Data on Dot Plots

Describe a data set as shown on a dot plot, using the center, spread, and overall shape.

Representing Data Sets with Histograms

Display data on a histogram.

Describe a data set as shown on a histogram, using the center, spread, and overall shape.

Finding the Mean

Calculate the mean of a set of data.

Explain how the mean of a set of data is a balance point.

Find a missing value in a set of data given the mean.

**Unit Lesson****Objectives**

Comparing Mean and Median

Find the median of a set of data.

Describe the impact of outliers on the mean and median.

Choose the most appropriate measure of center to describe a set of data.

Range and Interquartile Range

Define and find the range of a set of data.

Define and find the interquartile range of a set of data.

Describe the impact of outliers on the range and interquartile range.

Unit Test

**Variability, Distributions, and Relationships between Quantities: Part Two**

Comparing Representations of Modeled Relationships

Create a graph to show a proportional relationship between two real-world quantities (using a table of values).

Compare multiple representations of the relationship between two real-world quantities.

Summarizing Data Sets with Statistics

Find the mean, median, range, and interquartile range of a data set.

Compare two data sets with the same measure of center but different measures of spread.

Box Plots

Interpret a box plot.

Create a box plot to represent a set of data, given the summary statistics.