Eureka Math² Year at a Glance

6: Ratios and Rates

Module 1

Ratios, Rates, and Percents

Topic A: Ratios

Lesson 1: Jars of Jelly Beans
- Use multiplicative reasoning to estimate the solution to a real-world problem.

6.RP.A.3, MP3, 6.Mod1.AD3

Lesson 2: Introduction to Ratios
- Write ratios that relate two quantities as an ordered pair of numbers.
- Use ratio language to compare two quantities.

6.RP.A.1, MP2, 6.Mod1.AD1

Lesson 3: Ratios and Tape Diagrams
- Write multiple ratios to describe the same situation.
- Represent ratios with tape diagrams.

6.RP.A.1, 6.RP.A.3, MP6, 6.Mod1.AD1, 6.Mod1.AD3

Lesson 4: Exploring Ratios by Making Batches
- Create ratios by making batches of different quantities.
- Use tape diagrams to determine unknown quantities in ratios.

Module 2

Operations with Fractions and Multi-Digit Numbers

Topic A: Factors, Multiples, and Divisibility

Lesson 1: Factors and Multiples
- Use visual models to determine common factors and common multiples of pairs of numbers.

6.NS.B.4, MP8, 6.Mod2.AD12, 6.Mod2.AD13

Lesson 2: Divisibility
- Determine whether numbers are divisible by other numbers.

6.NS.B.4, MP3, 6.Mod2.AD12, 6.Mod2.AD13

Lesson 3: The Greatest Common Factor
- Determine the greatest common factor of two whole numbers less than or equal to 100.

6.NS.B.4, MP7, 6.Mod2.AD12

Lesson 4: The Least Common Multiple
- Find the least common multiple of two whole numbers less than or equal to 12.

6.NS.B.4, MP6, 6.Mod2.AD13

Module 3

Rational Numbers

Topic A: Integers and Rational Numbers

Lesson 1: Positive and Negative Numbers
- Represent quantities in real-world situations by using positive and negative numbers.
- Plot positive numbers, negative numbers, and 0 on horizontal and vertical number lines.

6.NS.C.5, MP2, 6.Mod3.AD1

Lesson 2: Integers
- Plot integers and their opposites on horizontal and vertical number lines and identify 0 as its own opposite.
- Identify the opposite of the opposite of a number.

6.NS.C.6.a, MP7, 6.Mod3.AD2, 6.Mod3.AD3

Lesson 3: Rational Numbers
- Plot rational numbers on horizontal and vertical number lines.
- Identify the locations of rational numbers plotted on horizontal and vertical number lines.

Module 4

Expressions and One-Step Equations

Topic A: Numerical Expressions

Lesson 1: Expressions with Addition and Subtraction
- Evaluate expressions with addition and subtraction.

6.EE.A.1, MP6, 6.Mod4.AD3

Lesson 2: Expressions with Multiplication and Division
- Evaluate expressions with multiplication and division.

6.EE.A.1, MP7, 6.Mod4.AD3

Lesson 3: Exploring Exponents
- Write numerical expressions by using exponential notation.

6.EE.A.1, MP3, 6.Mod4.AD3

Lesson 4: Evaluating Expressions with Exponents
- Evaluate numerical expressions written in exponential notation.

6.EE.A.1, MP7, 6.Mod4.AD3

Module 5

Area, Surface Area, and Volume

Topic A: Areas of Polygons

Lesson 1: The Area of a Parallelogram
- Compose parallelograms into rectangles to derive the formula for the area of a parallelogram.
- Compute the area of a parallelogram by using the formula $A = bh$.

6.EE.A.2.c, 6.G.A.1, MP8, 6.Mod4.AD6, 6.Mod5.AD1

Lesson 2: The Area of a Right Triangle
- Compose two identical right triangles into a rectangle to derive the formula for the area of a right triangle.
- Compute the area of a right triangle by using the formula $A = \frac{1}{2}bh$.

6.EE.B.7, 6.G.A.1, MP3, 6.Mod4.AD13, 6.Mod5.AD1, 6.Mod5.AD2

Lesson 3: The Area of a Triangle
- Compose two identical triangles into a parallelogram to derive the formula for the area of a triangle.
- Compute the area of any triangle by using the formula $A = \frac{1}{2}bh$.

Module 6

Statistics

Topic A: Understanding Distributions

Lesson 1: Posing Statistical Questions
- Identify and write statistical questions.
- Identify the types of data that can be collected to answer a statistical question.

6.SP.A.1, 6.SP.B.5.b, MP6, 6.Mod6.AD1, 6.Mod6.AD6

Lesson 2: Describing a Data Distribution
- Given a dot plot, describe the center, spread, and other characteristics of the data distribution.

6.SP.A.2, 6.SP.B.5.a, MP2, 6.Mod6.AD2, 6.Mod6.AD5

Lesson 3: Creating a Dot Plot
- Create a dot plot and describe a data distribution.

6.SP.A.2, 6.SP.B.4, MP1, 6.Mod6.AD2, 6.Mod6.AD4

Module 1

6.RP.A.1, 6.RP.A.3, MP8, 6.Mod1.AD1, 6.Mod1.AD3

Lesson 5: Equivalent Ratios
- Find equivalent ratios by multiplying both numbers in a given ratio by the same nonzero number.
- Use equivalent ratios to find unknown quantities.

6.RP.A.1, 6.RP.A.3, MP2, 6.Mod1.AD1, 6.Mod1.AD3

Topic B: Collections of Equivalent Ratios

Lesson 6: Ratio Tables and Double Number Lines
- Represent equivalent ratios by using ratio tables and double number lines.
- Use representations of ratio relationships to solve problems.

6.RP.A.3, 6.RP.A.3.a, MP7, 6.Mod1.AD3, 6.Mod1.AD4

Lesson 7: Graphs of Ratio Relationships
- Plot points in the coordinate plane that each represent a ratio.
- Identify characteristics of graphs, tables, and double number lines representing ratio relationships.

6.RP.A.3.a, MP2, 6.Mod1.AD4

Lesson 8: Addition Patterns in Ratio Relationships
- Use addition patterns in tables and graphs of equivalent ratios to describe ratio relationships and find unknown quantities.

6.RP.A.1, 6.RP.A.3, 6.RP.A.3.a, MP7, 6.Mod1.AD1, 6.Mod1.AD3, 6.Mod1.AD4

Module 2

Lesson 5: The Euclidean Algorithm (Optional)
- Find the greatest common factor of large numbers by using the Euclidean algorithm.
- Find the least common multiple of large numbers by using the greatest common factor.

6.NS.B.4, MP7, 6.Mod2.AD12, 6.Mod2.AD13

Topic B: Dividing Fractions

Lesson 6: Dividing a Whole Number by a Fraction
- Divide a whole number by a fraction by using tape diagrams and reasoning about division.

6.NS.A.1, MP2, 6.Mod2.AD4, 6.Mod2.AD5, 6.Mod2.AD6

Lesson 7: Dividing a Fraction by a Whole Number
- Divide a fraction by a whole number.
- Divide a mixed number by a whole number.

6.NS.A.1, MP1, 6.Mod2.AD4, 6.Mod2.AD5, 6.Mod2.AD6

Lesson 8: Dividing Fractions by Making Common Denominators
- Divide a fraction by a fraction by using a common denominator.
- Divide a mixed number by a fraction by using a common denominator.

6.NS.A.1, MP7, 6.Mod2.AD3, 6.Mod2.AD4, 6.Mod2.AD6

Topic C: Dividing Fractions Fluently

Lesson 9: Dividing Fractions by Using Tape Diagrams

Module 3

6.NS.C.6.a, 6.NS.C.6.c, MP3, 6.Mod3.AD3, 6.Mod3.AD6

Lesson 4: Rational Numbers in Real-World Situations
- Represent opposite quantities in real-world situations by using rational numbers.

6.NS.C.5, 6.NS.C.6.a, MP6, 6.Mod3.AD1, 6.Mod3.AD2

Topic B: Ordering and Magnitude

Lesson 5: Comparing Rational Numbers
- Write and interpret statements of comparison about rational numbers.
- Compare rational numbers in real-world situations.

6.NS.C.7, 6.NS.C.7.a, 6.NS.C.7.b, MP3, 6.Mod3.AD8, 6.Mod3.AD9, 6.Mod3.AD10

Lesson 6: Ordering Rational Numbers
- Order rational numbers.
- Write, interpret, and explain statements of order for rational numbers in real-world situations.

6.NS.C.7, 6.NS.C.7.a, 6.NS.C.7.b, MP1, 6.Mod3.AD8, 6.Mod3.AD9, 6.Mod3.AD10

Lesson 7: Absolute Value
- Determine the absolute values of rational numbers.

6.NS.C.7.c, MP8, 6.Mod3.AD11, 6.Mod3.AD12

Lesson 8: Absolute Value and Order

Module 4

Lesson 5: Exploring Order of Operations
- Identify the relationships between operations and apply those relationships when evaluating expressions.

6.EE.A.1, MP6, 6.Mod4.AD3

Lesson 6: Order of Operations
- Evaluate numerical expressions with exponents by using the conventional order of operations.

6.EE.A.1, MP1, 6.Mod4.AD3

Topic B: Expressions and Real-World Problems

Lesson 7: Algebraic Expressions with Addition and Subtraction
- Write algebraic expressions to represent descriptions involving addition and subtraction.
- Write descriptions of algebraic expressions involving addition and subtraction.

6.EE.A.2.a, 6.EE.A.2.b, MP8, 6.Mod4.AD4, 6.Mod4.AD5

Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division
- Write algebraic expressions to represent descriptions involving addition, subtraction, multiplication, and division.
- Write descriptions of algebraic expressions involving addition, subtraction, multiplication, and division.

6.EE.A.2.a, 6.EE.A.2.b, 6.EE.A.2.c, MP6, 6.Mod4.AD4, 6.Mod4.AD5, 6.Mod4.AD6

Module 5

6.EE.A.2.c, 6.G.A.1, MP7, 6.Mod4.AD6, 6.Mod5.AD1

Lesson 4: Areas of Triangles in Real-World Situations
- Use composition or decomposition to write equivalent expressions that represent the area of a triangle.
- Solve real-world and mathematical problems involving the areas of triangles.

6.EE.A.3, 6.G.A.1, MP2, 6.Mod4.AD7, 6.Mod5.AD1, 6.Mod5.AD2

Topic B: Problem Solving with Area

Lesson 5: Perimeter and Area in the Coordinate Plane
- Determine the perimeters of rectangles and polygons graphed in the coordinate plane.
- Determine the areas of parallelograms, rectangles, and polygons graphed in the coordinate plane.

6.NS.C.8, 6.G.A.1, 6.G.A.3, MP7, 6.Mod3.AD14, 6.Mod5.AD1, 6.Mod5.AD5

Lesson 6: Problem Solving with Area in the Coordinate Plane
- Determine the areas of triangles graphed in the coordinate plane.
- Determine the areas of polygons composed of triangles and parallelograms graphed in the coordinate plane.

6.EE.A.3, 6.G.A.1, 6.G.A.3, MP1, 6.Mod4.AD7, 6.Mod5.AD1, 6.Mod5.AD5

Module 6

Lesson 4: Creating a Histogram
- Use a frequency table to construct a frequency histogram for a data distribution.

6.SP.A.2, 6.SP.B.4, MP2, 6.Mod6.AD2, 6.Mod6.AD4

Lesson 5: Comparing Data Displays
- Identify the differences between bar graphs and histograms.
- Construct relative frequency histograms.

6.SP.B.4, 6.SP.B.5.b, MP5, 6.Mod6.AD4, 6.Mod6.AD6

Lesson 6: Selecting a Data Display
- Display data by using a dot plot or a histogram and describe the data distribution.

6.SP.A.1, 6.SP.B.4, MP5, 6.Mod6.AD1, 6.Mod6.AD4

Topic B: Mean and Mean Absolute Deviation

Lesson 7: Using the Mean to Describe the Center
- Describe the center of a data distribution by using an equal share value called the mean.
- Connect the concept of equal shares with the mathematical formula for finding the mean.

6.SP.A.3, 6.SP.B.5.c, MP2, 6.Mod6.AD3, 6.Mod6.AD7

Lesson 8: The Mean as a Balance Point
- Describe the center of a distribution by using the mean and interpret the mean as a balance point.

6.SP.A.3, 6.SP.B.5.c, MP2, 6.Mod6.AD3, 6.Mod6.AD7

Module 1

Lesson 9: Multiplication Patterns in Ratio Relationships
- Use graphs and tables to explore multiplication patterns in ratio relationships.
- Use multiplication to complete ratio tables.

6.RP.A.3, 6.RP.A.3.a, MP7, 6.Mod1.AD3, 6.Mod1.AD4

Lesson 10: Multiplicative Reasoning in Ratio Relationships
- Write and use equivalent ratios when one of the numbers in the ratio is 1.

6.RP.A.1, 6.RP.A.3, 6.RP.A.3.a, MP8, 6.Mod1.AD1, 6.Mod1.AD3, 6.Mod1.AD4

Lesson 11: Applications of Ratio Reasoning
- Solve multi-step ratio problems by reasoning about equivalent ratios.

6.RP.A.1, 6.RP.A.3, 6.RP.A.3.a, MP1, 6.Mod1.AD1, 6.Mod1.AD3, 6.Mod1.AD4

Topic C: Comparing Ratio Relationships

Lesson 12: Multiple Ratio Relationships
- Compare ratio relationships by using graphs, tables, and double number lines.

6.RP.A.3.a, MP5, 6.Mod1.AD4, 6.Mod1.AD5

Lesson 13: Comparing Ratio Relationships, Part 1
- Compare ratio relationships by using ratio tables.

6.RP.A.3.a, MP7, 6.Mod1.AD5

Module 2

- Use a tape diagram to divide a fraction by a fraction.
- Relate division of a fraction by a fraction to an unknown factor problem.

6.NS.A.1, MP8, 6.Mod2.AD4, 6.Mod2.AD5, 6.Mod2.AD6

Lesson 10: Dividing Fractions by Using the Invert and Multiply Strategy
- Use the invert and multiply strategy to divide a fraction by a fraction.

6.NS.A.1, MP7, 6.Mod2.AD4, 6.Mod2.AD6

Lesson 11: Applications of Fraction Division
- Solve real-world problems by dividing fractions and mixed numbers.

6.NS.A.1, MP1, 6.Mod2.AD5

Lesson 12: Fraction Operations in a Real-World Situation
- Add, subtract, multiply, and divide fractions and mixed numbers to solve real-world problems.

6.NS.A.1, MP2, 6.Mod2.AD5

Topic D: Decimal Addition, Subtraction, and Multiplication

Lesson 13: Decimal Addition and Subtraction
- Add and subtract decimals by using the standard algorithms for each operation.

6.NS, 6.NS.B.3, MP5, 6.Mod2.AD2, 6.Mod2.AD9

Lesson 14: Patterns in Multiplying Decimals

Module 3

- Explain the relationship between the order of rational numbers and the order of their absolute values.
- Order and compare the absolute values of rational numbers and the magnitudes of real-world quantities.

6.NS.C.7, 6.NS.C.7.d, MP2, 6.Mod3.AD8, 6.Mod3.AD13

Lesson 9: Interpreting Order and Distance in Real-World Situations
- Distinguish between comparisons of absolute value and statements of order in real-world situations.
- Determine and interpret distance between rational numbers.

6.NS.C.7.d, MP1, 6.Mod3.AD13

Topic C: The Coordinate Plane

Lesson 10: The Four Quadrants of the Coordinate Plane
- Use ordered pairs to identify the locations of points in the coordinate plane.
- Relate the signs of x- and y-coordinates to each of the four quadrants of the coordinate plane.

6.NS.C.6.b, MP7, 6.Mod3.AD4

Lesson 11: Plotting Points in the Coordinate Plane
- Use ordered pairs to plot points in the coordinate plane.

6.NS.C.6.b, 6.NS.C.6.c, MP6, 6.Mod3.AD4, 6.Mod3.AD7

Lesson 12: Reflections in the Coordinate Plane
- Graph points and their reflections in the coordinate plane.

Module 4

Lesson 9: Addition and Subtraction Expressions from Real-World Situations
- Define variables precisely.
- Write algebraic expressions involving addition and subtraction to represent
- real-world situations.

6.EE.A.2.a, 6.EE.A.2.b, 6.EE.B.6, MP6, 6.Mod4.AD4, 6.Mod4.AD5, 6.Mod4.AD11

Lesson 10: Multiplication and Division Expressions from Real-World Situations
- Write and interpret algebraic expressions involving multiplication and division that represent real-world situations.

6.EE.B.6, MP2, 6.Mod4.AD11

Lesson 11: Modeling Real-World Situations with Expressions
- Write algebraic expressions with two terms to represent real-world situations
- involving addition and multiplication.

6.EE.A.2.b, 6.EE.A.2.c, 6.EE.B.6, MP2, 6.Mod4.AD5, 6.Mod4.AD6, 6.Mod4.AD11

Topic C: Equivalent Expressions Using the Properties of Operations

Lesson 12: Applying Properties to Multiplication and Division Expressions
- Write and identify equivalent algebraic expressions involving multiplication and division by using the properties of operations.
- Write algebraic expressions that represent real-world situations.

Module 5

Lesson 7: Areas of Trapezoids and Other Polygons
- Calculate the areas of trapezoids and other polygons by using composition and decomposition.
- Use composition or decomposition to write equivalent expressions for the areas of polygons.

6.EE.A.3, 6.EE.A.4, 6.G.A.1, MP3, 6.Mod4.AD7, 6.Mod4.AD8, 6.Mod5.AD1

Lesson 8: Areas of Composite Figures in Real-World Situations
- Determine the areas of real-world composite figures.
- Solve problems in real-world situations involving rates and areas.

6.RP.A.3.b, 6.G.A.1, MP4, 6.Mod1.AD6, 6.Mod5.AD1, 6.Mod5.AD2

Topic C: Nets and Surface Area

Lesson 9: Properties of Solids
- Identify the shapes of the faces of right prisms and pyramids.
- Name parallel and perpendicular edges and faces of solids.

6.G.A.4, MP6, 6.Mod5.AD6

Lesson 10: Discovering Nets of Solids
- Represent solids by using nets composed of triangles and rectangles.

6.G.A.4, MP6, 6.Mod5.AD6

Lesson 11: Constructing Nets of Solids
- Draw and label nets for three-dimensional objects.
- Determine the surface area of a solid by using its net.

Module 6

Lesson 9: Variability in a Data Distribution
- Describe a data distribution by using the mean and variability.

6.SP.A.2, 6.SP.A.3, MP2, 6.Mod6.AD2, 6.Mod6.AD3

Lesson 10: The Mean Absolute Deviation
- Calculate and interpret the mean absolute deviation for a data distribution.

6.SP.A.3, 6.SP.B.5.c, MP8, 6.Mod6.AD3, 6.Mod6.AD7

Lesson 11: Using the Mean and Mean Absolute Deviation
- Use the mean and mean absolute deviation to describe a data distribution.

6.SP.A.3, 6.SP.B.5.c, MP6, 6.Mod6.AD3, 6.Mod6.AD7

Topic C: Median, Interquartile Range, and Box Plots

Lesson 12: Using the Median to Describe the Center
- Calculate and interpret the median of a data distribution.

6.SP.A.3, 6.SP.B.5.c, MP6, 6.Mod6.AD3, 6.Mod6.AD7

Lesson 13: Using the Interquartile Range to Describe Variability
- Calculate quartiles of a data distribution and describe the variability by using the interquartile range.

6.SP.A.3, 6.SP.B.5.c, MP6, 6.Mod6.AD3, 6.Mod6.AD7

Module 1

Lesson 14: Comparing Ratio Relationships, Part 2
- Compare ratio relationships by creating equivalent ratios.

6.RP.A.3.a, MP3, 6.Mod1.AD5

Lesson 15: The Value of the Ratio
- Compare ratio relationships by using the value of the ratio.

6.RP.A.2, 6.RP.A.3.a, MP6, 6.Mod1.AD2, 6.Mod1.AD5

Topic D: Rates

Lesson 16: Speed
- Find distance and time corresponding to a given speed.
- Identify real-world examples of rates and interpret their meanings in context.

6.RP.A.2, 6.RP.A.3.a, 6.RP.A.3.b, MP2, 6.Mod1.AD2, 6.Mod1.AD4, 6.Mod1.AD6

Lesson 17: Rates
- Identify rates and unit rates.
- Calculate one quantity when given another quantity and a constant rate.

6.RP.A.2, 6.RP.A.3.b, MP2, 6.Mod1.AD2, 6.Mod1.AD6

Lesson 18: Comparing Rates
- Compare rates with like units of measurement by using unit rate.

6.RP.A.2, 6.RP.A.3.a, 6.RP.A.3.b, MP2,6.Mod1.AD2, 6.Mod1.AD5, 6.Mod1.AD6

Lesson 19: Using Rates to Convert Units
- Convert units of measurement by applying rate reasoning.

Module 2

- Recognize and apply patterns in factors when multiplying whole numbers and decimals.

6.NS.B.3, MP8, 6.Mod2.AD10

Lesson 15: Decimal Multiplication
- Multiply decimals by using the standard algorithm.

6.NS, 6.NS.B.3, MP6, 6.Mod2.AD2, 6.Mod2.AD10

Lesson 16: Applications of Decimal Operations
- Create a model of a building and use decimal operations to calculate cost, revenue, and profit or loss.

6.NS, MP4, 6.Mod2.AD2

Topic E: Division of Multi-Digit Numbers

Lesson 17: Partial Quotients
- Divide multi-digit whole numbers by using the partial quotients method, and express quotients as mixed numbers.

6.NS.B, 6.NS.B.2 MP8, 6.Mod2.AD7, 6.Mod2.AD8

Lesson 18: The Standard Division Algorithm
- Divide multi-digit whole numbers by using the standard algorithm.

6.NS.B.2, MP7, 6.Mod2.AD8

Lesson 19: Expressing Quotients as Decimals
- Divide multi-digit whole numbers by using the standard algorithm, and express quotients as decimals.

6.NS.B.2, MP6, 6.Mod2.AD8

Lesson 20: Real-World Division Problems

Module 3

- Recognize that when two ordered pairs differ only by the sign of one or both coordinates, the locations of the points are related by reflections across one or both axes.

6.NS.C.6.b, 6.NS.C.6.c, MP8, 6.Mod3.AD4, 6.Mod3.AD5, 6.Mod3.AD7

Lesson 13: Constructing the Coordinate Plane
- Draw and label a coordinate plane, choosing a reasonable scale for a given set of points. Plot points and describe how a graph changes when the scale changes.

6.NS.C.6.b, 6.NS.C.6.c, MP5, 6.Mod3.AD4, 6.Mod3.AD7

Lesson 14: Modeling with the Coordinate Plane
- Create time graphs in the coordinate plane.
- Solve real-world problems by using time graphs.

6.NS.C.8, MP4, 6.Mod3.AD14

Topic D: Solving Problems in the Coordinate Plane

Lesson 15: Distance in the Coordinate Plane
- Find the lengths of horizontal and vertical line segments with rational number coordinates as endpoints in the coordinate plane by counting the number of units between endpoints and by using absolute value.

6.NS.C.6.c, 6.NS.C.8, MP8, 6.Mod3.AD7, 6.Mod3.AD14

Lesson 16: Figures in the Coordinate Plane

Module 4

6.EE.A.2.c, 6.EE.A.3, 6.EE.A.4, MP3, 6.Mod4.AD6, 6.Mod4.AD7, 6.Mod4.AD8

Lesson 13: The Distributive Property
- Use the distributive property to write the product of two factors as a sum or difference.

6.NS.B.4, 6.EE.A.3, 6.EE.A.4, MP7, 6.Mod4.AD2, 6.Mod4.AD7, 6.Mod4.AD8

Lesson 14: Using the Distributive Property to Factor Expressions
- Use the distributive property to write a sum or difference as the product of two factors.

6.NS.B.4, 6.EE.A.3, 6.EE.A.4, MP7, 6.Mod4.AD2, 6.Mod4.AD7, 6.Mod4.AD8

Lesson 15: Combining Like Terms by Using the Distributive Property
- Add and subtract like terms by using the distributive property.
- Write an algebraic expression that represents a geometric situation.

6.EE.A.3, 6.EE.A.4, MP7, 6.Mod4.AD7, 6.Mod4.AD8

Lesson 16: Equivalent Algebraic Expressions
- Write equivalent expressions by using the properties of operations and combining like terms.
- Write algebraic expressions that represent real-world situations.

6.EE.A.3, 6.EE.A.4, 6.EE.B.6, MP2, 6.Mod4.AD7, 6.Mod4.AD8, 6.Mod4.AD11

Module 5

6.G.A.4, MP7, 6.Mod5.AD6, 6.Mod5.AD7

Lesson 12: From Nets to Surface Area
- Determine the surface area of a solid.
- Develop the surface area formula for right rectangular prisms and use it to calculate surface area.

6.EE.A.2.c, 6.EE.A.4, 6.G.A.4, MP8, 6.Mod4.AD6, 6.Mod4.AD8, 6.Mod5.AD6

Lesson 13: Surface Area in Real-World Situations
- Solve real-world problems involving rates and surface area of right prisms and pyramids.

6.RP.A.3.b, 6.EE.A.2.c, 6.G.A.4, MP1, 6.Mod1.AD6, 6.Mod4.AD6, 6.Mod5.AD7

Lesson 14: Designing a Box
- Design different boxes for a product and calculate each box's surface area.

6.EE.A.2.c, 6.G.A.4, MP4, 6.Mod4.AD6, 6.Mod5.AD7

Topic D: Volumes of Right Rectangular Prisms

Lesson 15: Exploring Volume
- Find the volumes of right rectangular prisms that have fractional edge lengths by packing with cubes that have fractional edge lengths.

6.G.A.2, MP7, 6.Mod5.AD3

Lesson 16: Applying Volume Formulas
- Solve real-world and mathematical problems by applying the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths.

Module 6

Lesson 14: Using a Box Plot to Summarize a Distribution
- Describe a data distribution by using the five-number summary and the interquartile range.
- Construct and interpret a box plot from a five-number summary.

6.SP.A.2, 6.SP.B.4, MP7, 6.Mod6.AD2, 6.Mod6.AD4

Lesson 15: More Practice with Box Plots
- Construct and use box plots to analyze data distributions.

6.SP.A.3, 6.SP.B.4, MP7, 6.Mod6.AD3, 6.Mod6.AD4

Lesson 16: Interpreting Box Plots
- Summarize a data distribution by using a box plot, the median, and the interquartile range.
- Use box plots to compare two data distributions.

6.SP.A.3, 6.SP.B.4, MP7, 6.Mod6.AD3, 6.Mod6.AD4

Topic D: Answering Statistical Questions by Analyzing Data

Lesson 17: Developing a Statistical Project
- Develop a statistical question to guide data collection.
- Develop a plan to collect a data set to answer a proposed statistical question.

6.SP.A.1, 6.SP.B.5.b, MP4, 6.Mod6.AD1, 6.Mod6.AD6

Lesson 18: Connecting Graphical Representations and Summary Measures

Module 1

6.RP.A.2, 6.RP.A.3.b, 6.RP.A.3.d, MP6, 6.Mod1.AD2, 6.Mod1.AD6, 6.Mod1.AD9

Lesson 20: Solving Rate Problems
- Apply rate reasoning to solve real-world ratio problems involving speed, unit pricing, and unit conversions.
- Find an unknown quantity when given a rate and a known quantity.

6.RP.A.2, 6.RP.A.3.b, 6.RP.A.3.d, MP1, 6.Mod1.AD2, 6.Mod1.AD6, 6.Mod1.AD9

Topic E: Percents

Lesson 21: Solving Multi-Step Rate Problems
- Solve problems involving multiple constant rates.

6.RP.A.3.b, 6.RP.A.3.d, MP4, 6.Mod1.AD6, 6.Mod1.AD9

Lesson 22: Introduction to Percents
- Relate percents to a part-to-whole relationship where the whole is 100.
- Model percents and write percents in fraction and decimal forms.

6.RP.A.3.c, MP8, 6.Mod1.AD7

Lesson 23: Finding the Percent
- Calculate a percent when given a part and the whole.
- Discover that if multiple parts make a whole, then the percent representing each of the parts should total 100%.

6.RP.A.3.c, MP8, 6.Mod1.AD7, 6.Mod1.AD8

Lesson 24: Finding a Part
- Calculate a part when given the whole and a percent.

6.RP.A.3.c, MP3, 6.Mod1.AD8

Module 2

- Create and solve real-world division problems.

6.NS, MP2, 6.Mod2.AD1

Topic F: Decimal Division

Lesson 21: Dividing a Decimal by a Whole Number
- Divide a decimal by a multi-digit whole number by using the standard division algorithm.

6.NS.B.3, MP6, 6.Mod2.AD11

Lesson 22: Dividing a Decimal by a Decimal Greater Than 1
- Divide a decimal by a decimal greater than 1 by using the standard algorithm.

6.NS.B.3, MP3, 6.Mod2.AD11

Lesson 23: Dividing a Decimal by a Decimal Less Than 1
- Divide a decimal by a decimal less than 1 by using the standard algorithm.
- Solve real-world problems by dividing a decimal by a decimal.

6.NS.B.3, MP1, 6.Mod2.AD11

Lesson 24: Living on Mars
- Solve real-world problems by performing operations with decimals.

6.NS.B.3, MP1, 6.Mod2.AD2, 6.Mod2.AD11

Module 3

- Graph geometric figures in all four quadrants of the coordinate plane.
- Use distance and symmetry to solve geometric problems in the coordinate plane.

6.NS.C.6.c, 6.NS.C.8, MP7, 6.Mod3.AD7, 6.Mod3.AD14

Lesson 17: Problem Solving with the Coordinate Plane
- Solve geometric and real-world problems by using the coordinate plane.

6.NS.C.6.c, 6.NS.C.8, MP1, 6.Mod3.AD7, 6.Mod3.AD14

Module 4

Topic D: Equations and Inequalities

Lesson 17: Equations and Solutions
- Determine whether a number sentence is true.
- Determine whether a number is a solution to an equation by using substitution.

6.EE.A.2.c, 6.EE.B.5, 6.EE.B.7, MP2, 6.Mod4.AD6, 6.Mod4.AD9, 6.Mod4.AD13

Lesson 18: Inequalities and Solutions
- Represent solutions to inequalities on number lines.
- Identify whether a number is a solution to an inequality by using substitution.

6.EE.B.5, 6.EE.B.8, MP2, 6.Mod4.AD10, 6.Mod4.AD14, 6.Mod4.AD15

Lesson 19: Solving Equations with Addition and Subtraction
- Solve addition and subtraction equations by using tape diagrams and algebraic reasoning.

6.EE.B.5, 6.EE.B.7, MP7, 6.Mod4.AD9, 6.Mod4.AD12

Lesson 20: Solving Equations with Multiplication and Division
- Solve multiplication and division equations by using tape diagrams and algebraic reasoning.

6.EE.B.5. 6.EE.B.7, MP6, 6.Mod4.AD9, 6.Mod4.AD12

Lesson 21: Solving Problems with Equations
- Solve problems by writing and solving equations.

Module 5

6.EE.A.2.c, 6.G.A.2, MP3, 6.Mod4.AD6, 6.Mod5.AD3, 6.Mod5.AD4

Lesson 17: Problem Solving with Volume
- Solve real-world and mathematical problems by applying ratio reasoning to find volumes of right rectangular prisms.

6.EE.A.4, 6.G.A.2, MP8, 6.Mod4.AD8, 6.Mod5.AD4

Lesson 18: Volumes of Composite Solids
- Determine the volumes of solids composed of right rectangular prisms.

6.G.A.2, MP5, 6.Mod5.AD4

Lesson 19: Volume and Surface Area in Real-World Situations
- Solve real-world problems that involve surface area and volume.

6.G.A.2. 6.G.A.4, MP2, 6.Mod5.AD4, 6.Mod5.AD7

Module 6

- Find exact and approximate features of data distributions from data displays.
- Compare the effectiveness of data displays at communicating different features of data distributions.

6.SP.A.2, 6.SP.B.5.c, MP3, 6.Mod6.AD2, 6.Mod6.AD7

Lesson 19: Comparing Data Distributions
- Compare data distributions by using relative frequency histograms and box plots.

6.SP.A.3, 6.SP.B.4, MP7, 6.Mod6.AD3, 6.Mod6.AD4

Lesson 20: Choosing a Measure of Center
- Choose a measure of center for a data distribution.
- Justify the choice of a measure of center based on the shape of the distribution and the context.

6.SP.B.5.d, MD7, 6.Mod6.AD8

Lesson 21: Comparing Measures of Variability
- Recognize measurement variability and its causes.
- Assess variability visually and by using the range, mean absolute deviation, and interquartile range.

6.SP.B.5.b, 6.SP.B.5.c, MP6, 6.Mod6.AD6, 6.Mod6.AD7

Lesson 22: Presenting Statistical Projects
- Present statistical projects that use the investigative process and critique the work of others by using the tools learned in this module.

6.SP.A.3, 6.SP.B.4, MP4, 6.Mod6.AD3, 6.Mod6.AD4

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6
Lesson 25: Finding the Whole • Calculate the whole when given a part and a percent. **6.RP.A.3.c, MP1, 6.Mod1.AD8** **Lesson 26:** Solving Percent Problems • Solve multi-step percent problems. **6.RP.A.3.c, MP1, 6.Mod1.AD7, 6.Mod1.AD8**			**6.EE.B.7, MP1, 6.Mod4.AD12, 6.Mod4.AD13** **Topic E: Relating Variables by Using Tables, Graphs, and Equations** **Lesson 22:** Relationship Between Two Variables • Represent a ratio relationship with a table and two-variable equation. • Identify the independent and dependent variables in a real-world or mathematical situation. **6.RP.A.3, 6.EE.C.9, MP3, 6.Mod4.AD1, 6.Mod4.AD16, 6.Mod4.AD17** **Lesson 23:** Graphs of Ratio Relationships • Analyze the relationship between the independent and dependent variables in the graph of a ratio relationship. • Represent a ratio relationship with a table, graph, and two-variable equation. **6.RP.A.3, 6.EE.C.9, MP5, 6.Mod4.AD1, 6.Mod4.AD16, 6.Mod4.AD17** **Lesson 24:** Graphs of Non–Ratio Relationships • Represent a real-world situation with a table, graph, and two-variable equation. • Analyze the relationship between the variables in a real-world situation. **6.EE.C.9, MP2, 6.Mod4.AD16, 6.Mod4.AD17** **Lesson 25:** The Statue of Liberty • Use tables, graphs, and equations to estimate the solution to a real-world problem. **6.EE.C.9, MP4, 6.Mod1.AD16**		

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6