EUREKA MATH²...

Grade 6 | Kansas College & Career Ready Standards Correlation to Eureka Math^{2™}

When the original *Eureka Math*[®] curriculum was released, it quickly became the most widely used K-5 mathematics curriculum in the country. Now, the Great Minds[®] teacher-writers have created *Eureka Math*^{2TM}, a groundbreaking new curriculum that helps teachers deliver exponentially better math instruction while still providing students with the same deep understanding of and fluency in math. *Eureka Math*² carefully sequences mathematical content to maximize vertical alignment-a principle tested and proven to be essential in students' mastery of math-from kindergarten through high school.

While this innovative new curriculum includes all the trademark *Eureka Math* and moments that have been delighting students and teachers for years, it also boasts these exciting new features:

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering highquality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built right into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the *Teach* book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, clear sentences, the *Eureka Math*² teacher-writers have created one of the most readable mathematics curricula on the market. The curriculum's readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Digital Engagement

The digital elements of *Eureka Math*² add to students' engagement with the math. The curriculum provides teachers with digital slides for each lesson. In addition, each grade level includes wordless videos that spark students' interest and curiosity. Students at all levels work through mathematical explorations that help lead to their own mathematical discoveries. Digital lessons and videos provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

Standards for Mathematical Practice	Aligned Components of <i>Eureka Math²</i>
MP.1	Lessons in every module engage students in mathematical practices.
Make sense of problems and persevere in solving them.	These are indicated in margin notes included with every lesson.
MP.2	Lessons in every module engage students in mathematical practices.
Reason abstractly and quantitatively.	These are indicated in margin notes included with every lesson.
MP.3	Lessons in every module engage students in mathematical practices.
Construct viable arguments and critique the reasoning of others.	These are indicated in margin notes included with every lesson.
MP.4	Lessons in every module engage students in mathematical practices.
Model with mathematics.	These are indicated in margin notes included with every lesson.
MP.5	Lessons in every module engage students in mathematical practices.
Use appropriate tools strategically.	These are indicated in margin notes included with every lesson.
MP.6	Lessons in every module engage students in mathematical practices.
Attend to precision.	These are indicated in margin notes included with every lesson.
MP.7	Lessons in every module engage students in mathematical practices.
Look for and make use of structure.	These are indicated in margin notes included with every lesson.
MP.8	Lessons in every module engage students in mathematical practices.
Look for and express regularity in repeated reasoning.	These are indicated in margin notes included with every lesson.

Ratios and Proportional Relationships

Understand ratio concepts and use ratio reasoning to solve problems.

Kansas College & Career Ready Standards

6.RP.1 Use ratio language to describe a relationship between two quantities. Distinguish between part-to-part and part-to-whole relationships.	 6 M1 Lesson 2: Introduction to Ratios 6 M1 Lesson 3: Ratios and Tape Diagrams 6 M1 Lesson 4: Exploring Ratios by Making Batches 6 M1 Lesson 5: Equivalent Ratios 6 M1 Lesson 8: Addition Patterns in Ratio Relationships 6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships 6 M1 Lesson 11: Applications of Ratio Reasoning
6.RP.2 Use unit rate language ("for each one", "for every one" and "per") and unit rate notation to demonstrate understanding the concept of a unit rate $\frac{a}{b}$ associated with a ratio $a:b$ with $b \neq 0$.	 6 M1 Lesson 15: The Value of the Ratio 6 M1 Lesson 16: Speed 6 M1 Lesson 17: Rates 6 M1 Lesson 18: Comparing Rates 6 M1 Lesson 19: Using Rates to Convert Units 6 M1 Lesson 20: Solving Rate Problems
6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagram, or using calculations).	 6 M1 Lesson 1: Jars of Jelly Beans 6 M1 Lesson 3: Ratios and Tape Diagrams 6 M1 Lesson 4: Exploring Ratios by Making Batches 6 M1 Lesson 5: Equivalent Ratios 6 M1 Lesson 6: Ratio Tables and Double Number Lines 6 M1 Lesson 8: Addition Patterns in Ratio Relationships 6 M1 Lesson 9: Multiplication Patterns in Ratio Relationships 6 M1 Lesson 10: Multiplicative Reasoning in Ratio Relationships

Standards	Aligned Components of <i>Eureka Math</i> ²
6.RP.3 continued	6 M1 Lesson 11: Applications of Ratio Reasoning 6 M4 Lesson 22: Relationship Between Two Variables 6 M4 Lesson 23: Graphs of Ratio Relationships
6.RP.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find the missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. Solve unit rate problems including those involving unit pricing and constant speed.	 6 M1 Topic B: Collections of Equivalent Ratios 6 M1 Topic C: Comparing Ratio Relationships 6 M1 Topic D: Rates 6 M5 Lesson 8: Areas of Composite Figures in Real-World Situations 6 M5 Lesson 13: Surface Area in Real-World Situations
6.RP.3b Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $\frac{30}{100}$ times the quantity); solve problems involving finding the whole, given a part and the percent.	6 M1 Topic E: Percents
6.RP.3c Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	6 M1 Lesson 19: Using Rates to Convert Units 6 M1 Lesson 20: Solving Rate Problems 6 M1 Lesson 21: Solving Multi-Step Rate Problems

Kansas College & Career Ready

The Number System

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Kansas College & Career Ready Aligned Components of Eureka Math² Standards Standards

6.NS.1	6 M2 Topic B: Dividing Fractions
Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, requiring multiple exposures connecting various concrete and abstract models.	6 M2 Topic C: Dividing Fractions Fluently

The Number System

Compute fluently (efficiently, accurately, and flexibly) with multi-digit numbers and find common factors and multiples.

Kansas College & Career Ready Standards

6.NS.2 Fluently (efficiently, accurately, and flexibly) divide multi-digit numbers using an efficient algorithm.	6 M2 Lesson 17: Partial Quotients 6 M2 Lesson 18: The Standard Division Algorithm 6 M2 Lesson 19: Expressing Quotients as Decimals
6.NS.3 Fluently (efficiently, accurately, and flexibly) add, subtract, multiply, and divide multi-digit decimals using an efficient algorithm for each operation.	 6 M2 Lesson 13: Decimal Addition and Subtraction 6 M2 Lesson 14: Patterns in Multiplying Decimals 6 M2 Lesson 15: Decimal Multiplication 6 M2 Topic F: Decimal Division

Standards	Aligned Components of <i>Eureka Math</i> ²
6.NS.4	6 M2 Topic A: Factors, Multiples, and Divisibility
Find the greatest common factor of two	6 M4 Lesson 13: The Distributive Property
whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	6 M4 Lesson 14: Using the Distributive Property to Factor Expressions
with a common factor as a multiple of a sum of two whole numbers with no common factor.	

Kansas College & Career Ready

The Number System

Apply and extend previous understandings of numbers to the system of rational numbers.

Kansas College & Career Ready Standards

6.NS.5 Understand positive and negative numbers to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge);	This standard is fully addressed by the lessons aligned to its subsections.
6.NS.5a Use positive and negative numbers to represent quantities in real-world contexts,	6 M3 Lesson 1: Positive and Negative Numbers 6 M3 Lesson 4: Rational Numbers in Real-World Situations

6.NS.5b Explaining the meaning of 0 in each situation.	6 M3 Lesson 1: Positive and Negative Numbers 6 M3 Lesson 4: Rational Numbers in Real-World Situations
6.NS.6 Understand a rational number as a point on the number line and a coordinate pair as a location on a coordinate plane.	This standard is fully addressed by the lessons aligned to its subsections.
6.NS.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., $-(-3) = 3$,) and that 0 is its own opposite.	6 M3 Lesson 2: Integers 6 M3 Lesson 3: Rational Numbers 6 M3 Lesson 4: Rational Numbers in Real-World Situations
6.NS.6b Recognize signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	6 M3 Lesson 10: The Four Quadrants of the Coordinate Plane 6 M3 Lesson 11: Plotting Points in the Coordinate Plane 6 M3 Lesson 12: Reflections in the Coordinate Plane 6 M3 Lesson 13: Constructing the Coordinate Plane

6.NS.6c	6 M3 Lesson 3: Rational Numbers
Find and position integers and other	6 M3 Lesson 11: Plotting Points in the Coordinate Plane
rational numbers on a horizontal	6 M3 Lesson 12: Reflections in the Coordinate Plane
and position pairs of integers and other	6 M3 Lesson 13: Constructing the Coordinate Plane
rational numbers on a coordinate plane.	6 M3 Topic D: Solving Problems in the Coordinate Plane
6.NS.7	This standard is fully addressed by the lessons aligned to its subsections.
Understand ordering and absolute value of rational numbers.	
6.NS.7a	6 M3 Lesson 5: Comparing Rational Numbers
Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.	6 M3 Lesson 6: Ordering Rational Numbers
6.NS.7b	6 M3 Lesson 5: Comparing Rational Numbers
Write, interpret, and explain statements of order for rational numbers in real-world contexts.	6 M3 Lesson 6: Ordering Rational Numbers
6.NS.7c	6 M3 Lesson 7: Absolute Value
Explain the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	

Aligned Components of Eureka Math²

6.NS.7d Distinguish comparisons of absolute value from statements about order.	6 M3 Lesson 8: Absolute Value and Order 6 M3 Lesson 9: Interpreting Order and Distance in Real-World Situations
6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	6 M3 Lesson 14: Modeling with the Coordinate Plane 6 M3 Topic D: Solving Problems in the Coordinate Plane 6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane

Expressions and Equations

Apply and extend previous understandings of arithmetic to algebraic expressions.

Kansas College & Career Ready Standards	Aligned Components of <i>Eureka Math</i> ²
6.EE.1	6 M4 Topic A: Numerical Expressions
Write and evaluate numerical expressions involving whole-number exponents.	
6.EE.2	This standard is fully addressed by the lessons aligned to its subsections.
Write, read, and evaluate expressions in which letters stand for numbers.	

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6.EE.2a Write expressions that record operations with numbers and with letters standing for numbers.	6 M4 Lesson 7: Algebraic Expressions with Addition and Subtraction 6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations
6.EE.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.	 6 M4 Lesson 7: Algebraic Expressions with Addition and Subtraction 6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations 6 M4 Lesson 11: Modeling Real-World Situations with Expressions
6.EE.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	 6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 11: Modeling Real-World Situations with Expressions 6 M4 Lesson 12: Applying Properties to Multiplication and Division Expressions 6 M4 Lesson 17: Equations and Solutions 6 M5 Lesson 1: The Area of a Parallelogram 6 M5 Lesson 3: The Area of a Triangle 6 M5 Lesson 12: From Nets to Surface Area 6 M5 Lesson 13: Surface Area in Real-World Situations 6 M5 Lesson 14: Designing a Box 6 M5 Lesson 16: Applying Volume Formulas

Kansas College & Career Ready Standards	Aligned Components of <i>Eureka Math</i> ²
6.EE.3	6 M4 Topic C: Equivalent Expressions Using the Properties of Operations
Apply the properties of operations and combine like terms, with the conventions of algebraic notation, to identify and generate equivalent expressions.	6 M5 Lesson 4: Areas of Triangles in Real-World Situations
	6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane
	6 M5 Lesson 7: Area of Trapezoids and Other Polygons
	6 M5 Lesson 12: From Nets to Surface Area
	6 M5 Lesson 17: Problem Solving with Volume

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Expressions and Equations

Reason about and solve one-variable equations and inequalities.

Kansas College & Career Ready Standards

6.EE.4	6 M4 Lesson 17: Equations and Solutions
Understand solving an equation	6 M4 Lesson 18: Inequalities and Solutions
or inequality as a process of answering a question: which values from a specified set, if any, make the equation	6 M4 Lesson 19: Solving Equations with Addition and Subtraction 6 M4 Lesson 20: Solving Equations with Multiplication and Division
to determine whether a given number in a specified set makes an equation or inequality true.	

Kansas College & Career Ready Standards	Aligned Components of <i>Eureka Math</i> ²
6.EE.5	6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations
Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	6 M4 Lesson 10: Multiplication and Division Expressions from Real-World Situations 6 M4 Lesson 11: Modeling Real-World Situations with Expressions 6 M4 Lesson 16: Equivalent Algebraic Expressions
6.EE.6 Write and solve one-step equations involving non-negative rational numbers using addition, subtraction, multiplication and division.	 6 M4 Lesson 17: Equations and Solutions 6 M4 Lesson 19: Solving Equations with Addition and Subtraction 6 M4 Lesson 20: Solving Equations with Multiplication and Division 6 M4 Lesson 21: Solving Problems with Equations 6 M5 Lesson 2: The Area of a Right Triangle
6.EE.7 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	6 M4 Lesson 18: Inequalities and Solutions

Expressions and Equations

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Represent and analyze quantitative relationships between dependent and independent variables.

Kansas College & Career Ready Standards	Aligned Components of Eureka Math ²

6.EE.8	This standard is fully addressed by the lessons aligned to its subsections.
Use variables to represent two quantities in a real-world problem that change in relationship to one another.	
6.EE.8a Identify the independent and dependent variable.	6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations
6.EE.8b Write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable.	6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations
6.EE.8c Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	6 M4 Topic E: Relating Variables by Using Tables, Graphs, and Equations

6 | Kansas College & Career Ready Standards Correlation to Eureka Math²

Geometry

Solve real-world and mathematical problems involving area, surface area, and volume.

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6.G.1 Find the area of all triangles, special quadrilaterals (including parallelograms, kites and trapezoids), and polygons whose edges meet at right angles (rectilinear figure polygons) by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	6 M5 Topic A: Areas of Polygons 6 M5 Topic B: Problem Solving with Area
6.G.2 Find the volume of a right rectangular prism with fractional edge lengths by applying the formulas $V = lwh$ and $V = Bh$ (<i>B</i> is the area of the base and <i>h</i> is the height) to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. (Builds on the 5th grade concept of packing unit cubes to find the volume of a rectangular prism with whole number edge lengths.)	6 M5 Topic D: Volumes of Right Rectangular Prisms

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Standards	Aligned Components of <i>Eureka Math</i> ²
6.G.3	6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane
Draw polygons whose edges meet at right angles (rectilinear figure polygons) in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane
6.G.4	6 M5 Topic C: Nets and Surface Area
Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	6 M5 Lesson 19: Volume and Surface Area in Real-World Situations

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Statistics and Probability

Develop concepts of statistical measures of center and variability and an informal understanding of outlier.

Kansas College & Career Ready Standards	Aligned Components of <i>Eureka Math</i> ²
6.SP.1 Recognize and generate a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	6 M6 Lesson 1: Posing Statistical Questions 6 M6 Lesson 6: Selecting a Data Display 6 M6 Lesson 17: Developing a Statistical Project
6.SP.2 Analyze a set of data collected to answer a statistical question with a distribution which can be described by its center (mean, median and/or mode), spread (range and/or interquartile range), and overall shape (cluster, peak, gap, symmetry, skew (data) and/or outlier).	 6 M6 Lesson 2: Describing a Data Distribution 6 M6 Lesson 3: Creating a Dot Plot 6 M6 Lesson 4: Creating a Histogram 6 M6 Lesson 9: Variability in a Data Distribution 6 M6 Lesson 14: Using a Box Plot to Summarize a Distribution 6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures <i>Supplemental material is necessary to address outliers.</i>
6.SP.3 Recognize that a measure of center (mean, median and/or mode) for a numerical data set summarizes all of its values with a single number, while a measure of variation (range and/or interquartile range) describes how its values vary with a single number.	 6 M6 Topic B: Mean and Mean Absolute Deviation 6 M6 Lesson 12: Using the Median to Describe the Center 6 M6 Lesson 13: Using the Interquartile Range to Describe Variability 6 M6 Lesson 15: More Practice with Box Plots 6 M6 Lesson 16: Interpreting Box Plots 6 M6 Lesson 19: Comparing Data Distributions 6 M6 Lesson 22: Presenting Statistical Projects

Statistics and Probability

Summarize and describe distributions.

Kansas College & Career Ready Standards

6.SP.4 Display numerical data on dot plots, histograms, stem-and-leaf plots, and box plots.	 6 M6 Lesson 3: Creating a Dot Plot 6 M6 Lesson 4: Creating a Histogram 6 M6 Lesson 5: Comparing Data Displays 6 M6 Lesson 6: Selecting a Data Display 6 M6 Lesson 14: Using a Box Plot to Summarize a Distribution 6 M6 Lesson 15: More Practice with Box Plots 6 M6 Lesson 16: Interpreting Box Plots 6 M6 Lesson 19: Comparing Data Distributions 6 M6 Lesson 22: Presenting Statistical Projects Supplemental material is necessary to address stem-and-leaf plots.
6.SP.5 Summarize numerical data sets in relation to their context, such as by:	This standard is fully addressed by the lessons aligned to its subsections.
6.SP.5α Reporting the number of observations.	6 M6 Lesson 2: Describing a Data Distribution
6.SP.5b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	6 M6 Lesson 1: Posing Statistical Questions 6 M6 Lesson 5: Comparing Data Displays 6 M6 Lesson 17: Developing a Statistical Project 6 M6 Lesson 21: Comparing Measures of Variability

Standards	Aligned Components of <i>Eureka Math²</i>
6.SP.5c	6 M6 Lesson 7: Using the Mean to Describe the Center
Giving quantitative measures of center	6 M6 Lesson 8: The Mean as a Balance Point
(mean, median and/or mode) and variability (range and/or interquartile ranae), as well as describing any overall	6 M6 Lesson 12: Using the Median to Describe the Center
	6 M6 Lesson 13: Using the Interquartile Range to Describe Variability
pattern and any striking deviations from	6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures
the overall pattern with reference to the context in which the data were aathered.	6 M6 Lesson 21: Comparing Measures of Variability
	Supplemental material is necessary to address mode.
6.SP.5d	6 M6 Lesson 20: Choosing a Measure of Center
Relating the choice of measures of center and variability to the distribution of the data.	

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