EUREKA MATH²™

GREAT MINDS™

Grade 6 | Arizona Mathematics Standards Correlation to *Eureka Math²*™

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 Math²*™, 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 Math²* 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* aha moments that have been delighting students and teachers for years, it also boasts these exciting new features:

Teachability

Eureka Math² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality 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 Math² 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 Math²* 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 Math²* 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 *Eureka Math²*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.2 Reason abstractly and quantitatively.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.3 Construct viable arguments and critique the reasoning of others.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.4 Model with mathematics.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.5 Use appropriate tools strategically.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.6 Attend to precision.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.7 Look for and make use of structure.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.8 Look for and express regularity in repeated reasoning.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.

Ratio and Proportion
6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.RP.A.1 Understand the concept of a ratio as comparing two quantities multiplicatively or joining/composing the two quantities in a way that preserves a multiplicative relationship. Use ratio language to describe a ratio relationship between two quantities.	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.A.2 Understand the concept of a unit rate $\frac{a}{b}$ associated with a ratio $a{:}b$ with $b \neq 0$, and use rate language (e.g., for every, for each, for each 1, per) in the context of a ratio relationship. (Complex fraction notation is not an expectation for unit rates in this grade level.)	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.A.3 Use ratio and rate reasoning to solve mathematical problems and problems in real-world context (e.g., by reasoning about data collected from measurements, tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).	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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.RP.A.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.A.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	6 M1 Topic B: Collections of Equivalent Ratios 6 M1 Topic C: Comparing Ratio Relationships 6 M1 Lesson 16: Speed 6 M1 Lesson 18: Comparing Rates
6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed.	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.A.3c 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 percent problems with the unknown in all positions of the equation.	6 M1 Topic E: Percents
6.RP.A.3d 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

The Number System

6.NS.A Apply and extend previous understanding of multiplication and division to divide fractions by fractions.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.A.1 Interpret and compute quotients of fractions to solve mathematical problems and problems in real-world context involving division of fractions by fractions using visual fraction models and equations to represent the problem.	6 M2 Topic B: Dividing Fractions 6 M2 Topic C: Dividing Fractions Fluently

The Number System

6.NS.B Compute fluently with multi-digit numbers and find common factors and multiples.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.B.2 Fluently divide multi-digit numbers using a standard 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.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using a standard 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
6.NS.B.4 Use previous understanding of factors to find the greatest common factor and the least common multiple.	6 M2 Topic A: Factors, Multiples, and Divisibility 6 M4 Lesson 13: The Distributive Property 6 M4 Lesson 14: Using the Distributive Property to Factor Expressions

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.B.4a Find the greatest common factor of two whole numbers less than or equal to 100.	6 M2 Topic A: Factors, Multiples, and Divisibility 6 M4 Lesson 13: The Distributive Property 6 M4 Lesson 14: Using the Distributive Property to Factor Expressions
6.NS.B.4b Find the least common multiple of two whole numbers less than or equal to 12.	6 M2 Topic A: Factors, Multiples, and Divisibility 6 M4 Lesson 13: The Distributive Property 6 M4 Lesson 14: Using the Distributive Property to Factor Expressions
6.NS.B.4c Use the distributive property to express a sum of two whole numbers 1 to 100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	6 M2 Topic A: Factors, Multiples, and Divisibility 6 M4 Lesson 13: The Distributive Property 6 M4 Lesson 14: Using the Distributive Property to Factor Expressions

The Number System
6.NS.C Apply and extend previous understanding of numbers to the system of rational numbers.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values. Use positive and negative numbers to represent quantities in real-world context, 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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.C.6 Understand a rational number can be represented as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	*This standard is fully addressed by the lessons aligned to its subsections.*
6.NS.C.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 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.C.6b Understand signs of numbers in ordered pairs as indicating 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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	6 M3 Lesson 3: Rational Numbers 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 M3 Topic D: Solving Problems in the Coordinate Plane
6.NS.C.7 Understand ordering and absolute value of rational numbers.	6 M3 Lesson 5: Comparing Rational Numbers 6 M3 Lesson 6: Ordering Rational Numbers 6 M3 Lesson 8: Absolute Value and Order
6.NS.C.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line.	6 M3 Lesson 5: Comparing Rational Numbers 6 M3 Lesson 6: Ordering Rational Numbers
6.NS.C.7b Write, interpret, and explain statements of order for rational numbers in real-world context.	6 M3 Lesson 5: Comparing Rational Numbers 6 M3 Lesson 6: Ordering Rational Numbers
6.NS.C.7c Understand 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 real-world context.	6 M3 Lesson 7: Absolute Value

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.NS.C.7d Distinguish comparisons of absolute value from statements about order in mathematical problems and problems in real-world context.	6 M3 Lesson 8: Absolute Value and Order 6 M3 Lesson 9: Interpreting Order and Distance in Real-World Situations
6.NS.C.8 Solve mathematical problems and problems in real-world context 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
6.EE.A Apply and extend previous understanding of arithmetic to algebraic expressions.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.	6 M4 Topic A: Numerical Expressions
6.EE.A.2 Write, read, and evaluate algebraic expressions.	*This standard is fully addressed by the lessons aligned to its subsections.*

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.A.2a Write expressions that record operations with numbers and variables.	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.A.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, and 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.A.2c Evaluate expressions given specific values of their variables. Include expressions that arise from formulas used to solve mathematical problems and problems in real-world context. 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
6.EE.A.3 Apply the properties of operations to generate equivalent expressions.	6 M4 Topic C: Equivalent Expressions Using the Properties of Operations 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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.A.4 Identify when two expressions are equivalent.	6 M4 Topic C: Equivalent Expressions Using the Properties of Operations 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

Expressions and Equations
6.EE.B Reason about and solve one-variable equations and inequalities.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.B.5 Understand solving an equation or inequality as a process of reasoning to find the value(s) of the variables that make that equation or inequality true. Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	6 M4 Lesson 17: Equations and Solutions 6 M4 Lesson 18: Inequalities and Solutions 6 M4 Lesson 19: Solving Equations with Addition and Subtraction 6 M4 Lesson 20: Solving Equations with Multiplication and Division
6.EE.B.6 Use variables to represent numbers and write expressions when solving mathematical problems and problems in real-world context; understand that a variable can represent an unknown number or any number in a specified set.	6 M4 Lesson 9: Addition and Subtraction Expressions from Real-World Situations 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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.B.7 Solve mathematical problems and problems in real-world context by writing and solving equations of the form $x + p = q$, $x - p = q$, $px = q$, and $\frac{x}{p} = q$ for cases in which p, q and x are all non-negative rational numbers.	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.B.8 Write an inequality of the form $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition to solve mathematical problems and problems in real-world context. Recognize that inequalities have infinitely many solutions; represent solutions of such inequalities on number lines.	6 M4 Lesson 18: Inequalities and Solutions

Expressions and Equations

6.EE.C Represent and analyze quantitative relationships between dependent and independent variables.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.EE.C.9 Use variables to represent two quantities that change in relationship to one another to solve mathematical problems and problems in real-world context. Write an equation to express one quantity (the dependent variable) in terms of the other quantity (the independent variable). 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

Geometry

6.G.A Solve mathematical problems and problems in real-world context involving area, surface area, and volume.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques to solve mathematical problems and problems in real-world context.	6 M5 Topic A: Areas of Polygons 6 M5 Topic B: Problem Solving with Area

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Understand and use the formula $V = B \cdot h$, where in this case, B is the area of the base ($B = l \times w$) to find volumes of right rectangular prisms with fractional edge lengths in mathematical problems and problems in real-world context.	6 M5 Topic D: Volumes of Right Rectangular Prisms
6.G.A.3 Draw 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 to solve mathematical problems and problems in a real-world context.	6 M5 Lesson 5: Perimeter and Area in the Coordinate Plane 6 M5 Lesson 6: Problem Solving with Area in the Coordinate Plane

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.G.A.4 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 to solve mathematical problems and problems in real-world context.	6 M5 Topic C: Nets and Surface Area 6 M5 Lesson 19: Volume and Surface Area in Real-World Situations

Statistics and Probability

6.SP.A Develop understanding of statistical variability.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for variability 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.A.2 Understand that a set of data collected to answer a statistical question has a distribution whose general characteristics can be described by its center, spread, and overall shape.	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

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation uses a single number to describe the spread of the data set.	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
6.SP.B Summarize and describe distributions.

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.SP.B.4 Display and interpret numerical data by creating plots on a number line including histograms, dot 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
6.SP.B.5 Summarize numerical data sets in relation to their context by:	*This standard is fully addressed by the lessons aligned to its subsections.*

Arizona Mathematics Standards	Aligned Components of *Eureka Math²*
6.SP.B.5a Reporting the number of observations.	6 M6 Lesson 2: Describing a Data Distribution
6.SP.B.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
6.SP.B.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	6 M6 Lesson 7: Using the Mean to Describe the Center 6 M6 Lesson 8: The Mean as a Balance Point 6 M6 Lesson 10: The Mean Absolute Deviation 6 M6 Lesson 11: Using the 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 18: Connecting Graphical Representations and Summary Measures 6 M6 Lesson 21: Comparing Measures of Variability
6.SP.B.5d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	6 M6 Lesson 20: Choosing a Measure of Center