

ABOUT EUREKA MATH

Created by the nonprofit Great Minds, *Eureka Math* helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students’ mastery of math.

Teachers and students using *Eureka Math* find the trademark “Aha!” moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

ALIGNED

Eureka Math is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

DATA

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

FULL SUITE OF RESOURCES

As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:





- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

Oklahoma Academic Standards for Mathematics Correlation to *Eureka Math*[™]

GRADE 6 MATHEMATICS

Many of the Grade 6 Oklahoma Academic Standards for Mathematics will require the use of *Eureka Math* content from other grade levels or supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, *Eureka Math* can ensure students are successful in achieving the proficiencies of the Oklahoma Academic Standards for Mathematics while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

-  Green indicates that the Oklahoma standard is fully addressed in *Eureka Math*.
-  Yellow indicates that the Oklahoma standard may not be completely addressed in *Eureka Math*.
-  Red indicates that the Oklahoma standard is not addressed in *Eureka Math*.
-  Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Oklahoma standards and in *Eureka Math*.

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop a Deep and Flexible Conceptual Understanding

Demonstrate a deep and flexible conceptual understanding of mathematical concepts, operations, and relations while making mathematical and real-world connections. Students will develop an understanding of how and when to apply and use the mathematics they know to solve problems.

Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1 and 2, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Develop Accurate and Appropriate Procedural Fluency

Learn efficient procedures and algorithms for computations and repeated processes based on a strong sense of numbers. Develop fluency in addition, subtraction, multiplication, and division of numbers and expressions. Students will generate a sophisticated understanding of the development and application of algorithms and procedures.

Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 7 and 8, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop Strategies for Problem Solving

Analyze the parts of complex mathematical tasks and identify entry points to begin the search for a solution. Students will select from a variety of problem solving strategies and use corresponding multiple representations (verbal, physical, symbolic, pictorial, graphical, tabular) when appropriate. They will pursue solutions to various tasks from real-world situations and applications that are often interdisciplinary in nature. They will find methods to verify their answers in context and will always question the reasonableness of solutions.

Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 2, and 8, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Develop Mathematical Reasoning

Explore and communicate a variety of reasoning strategies to think through problems. Students will apply their logic to critique the thinking and strategies of others to develop and evaluate mathematical arguments, including making arguments and counterarguments and making connections to other contexts.

Lessons in every module engage students in modeling with mathematics as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules:

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop a Productive Mathematical Disposition

Hold the belief that mathematics is sensible, useful and worthwhile. Students will develop the habit of looking for and making use of patterns and mathematical structures. They will persevere and become resilient, effective problem solvers.

Lessons in every module engage students in using appropriate tools strategically as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 1, 7, and 8, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop the Ability to Make Conjectures, Model, and Generalize

Make predictions and conjectures and draw conclusions throughout the problem solving process based on patterns and the repeated structures in mathematics. Students will create, identify, and extend patterns as a strategy for solving and making sense of problems.

Lessons in every module engage students in attending to precision as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 4, 7, and 8, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Mathematical Actions and Processes

Aligned Components of *Eureka Math*

Develop the Ability to Communicate Mathematically

Students will discuss, write, read, interpret and translate ideas and concepts mathematically. As they progress, students' ability to communicate mathematically will include their increased use of mathematical language and terms and analysis of mathematical definitions.

Lessons in every module engage students in looking for and making use of structure as required by this standard. This Mathematical Action and Process is analogous to the CCSSM Standards for Mathematical Practice 3 and 6, which are specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

G6 M2: Arithmetic Operations Including Division of Fractions

G6 M3: Rational Numbers

G6 M4: Expressions and Equations

G6 M5: Area, Surface Area, and Volume Problems

G6 M6: Statistics

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
Number & Operations	<p>Standard: Read, write, and represent integers and rational numbers expressed as fractions, decimals, percents, and ratios; write positive integers as products of factors; use these representations in real-world and mathematical situations.</p>	
	<p>6.N.1.1 Represent integers with counters and on a number line and rational numbers on a number line, recognizing the concepts of opposites, direction, and magnitude; use integers and rational numbers in real-world and mathematical situations, explaining the meaning of 0 in each situation.</p>	<p>G6 M3: Rational Numbers</p> <p>Note: Supplemental material is necessary to incorporate counters.</p>
	<p>6.N.1.2 Compare and order positive rational numbers, represented in various forms, or integers using the symbols $<$, $>$, and $=$.</p>	<p>G6 M3 Lesson 11: Absolute Value—Magnitude and Distance</p> <p>G6 M3 Lesson 12: The Relationship Between Absolute Value and Order</p> <p>G6 M3 Lesson 13: Statements of Order in the Real World</p>
	<p>6.N.1.3 Explain that a percent represents parts “out of 100” and ratios “to 100.”</p>	<p>G6 M1 Topic D: Percent</p>
	<p>6.N.1.4 Determine equivalencies among fractions, decimals, and percents. Select among these representations to solve problems.</p>	<p>G6 M1 Topic D: Percent</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>6.N.1.5 Factor whole numbers and express prime and composite numbers as a product of prime factors with exponents.</p>	<p><i>Eureka Math</i> does not include work with prime factors.</p>
	<p>6.N.1.6 Determine the greatest common factors and least common multiples. Use common factors and multiples to calculate with fractions, find equivalent fractions, and express the sum of two-digit numbers with a common factor using the distributive property.</p>	<p>G6 M2 Topic D: Number Theory—Thinking Logically About Multiplicative Arithmetic</p> <p>G6 M4 Lesson 11: Factoring Expressions</p> <p>G6 M4 Lesson 12: Distributing Expressions</p>
	<p>Standard: Add and subtract integers in order to solve real-world and mathematical problems.</p>	
	<p>6.N.2.1 Estimate solutions to addition and subtraction of integers problems in order to assess the reasonableness of results.</p>	<p><i>Eureka Math</i> does not explicitly teach estimation with addition and subtraction of integers.</p>
	<p>6.N.2.2 Illustrate addition and subtraction of integers using a variety of representations.</p>	<p>G7 M2 Topic A: Addition and Subtraction of Integers and Rational Numbers</p>
	<p>6.N.2.3 Add and subtract integers; use efficient and generalizable procedures including but not limited to standard algorithms.</p>	<p>G7 M2 Topic A: Addition and Subtraction of Integers and Rational Numbers</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Understand the concept of ratio and its relationship to fractions and percents and to the multiplication and division of whole numbers. Use ratios to solve real-world and mathematical problems.</p>	
	<p>6.N.3.1 Identify and use ratios to compare quantities. Recognize that multiplicative comparison and additive comparison are different.</p>	G6 M1: Ratios and Unit Rates
	<p>6.N.3.2 Determine the unit rate for ratios.</p>	G6 M1 Topic C: Unit Rates
	<p>6.N.3.3 Apply the relationship between ratios, equivalent fractions and percents to solve problems in various contexts, including those involving mixture and concentrations.</p>	G6 M1: Ratios and Unit Rates G7 M4: Percent and Proportional Relationships
	<p>6.N.3.4 Use multiplicative reasoning and representations to solve ratio and unit rate problems.</p>	G6 M1 Topic C: Unit Rates

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Multiply and divide decimals, fractions, and mixed numbers; solve real-world and mathematical problems with rational numbers.</p>	
	<p>6.N.4.1 Estimate solutions to problems with whole numbers, decimals, fractions, and mixed numbers and use the estimates to assess the reasonableness of results in the context of the problem.</p>	<p>G3 M2 Lesson 17: Estimate sums by rounding and apply to solve measurement word problems.</p> <p>G3 M2 Topic E: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm</p> <p>G5 M2: Multi-Digit Whole Number and Decimal Fraction Operations</p> <p>G6 M2 Lesson 11: Fraction Multiplication and the Products of Decimals</p> <p>G6 M2 Topic C: Dividing Whole Numbers and Decimals</p>
	<p>6.N.4.2 Illustrate multiplication and division of fractions and decimals to show connections to fractions, whole number multiplication, and inverse relationships.</p>	<p>G5 M1 Topic E: Multiplying Decimals</p> <p>G5 M1 Topic F: Dividing Decimals</p> <p>G5 M2: Multi-Digit Whole Number and Decimal Fraction Operations</p> <p>G5 M4: Multiplication and Division of Fractions and Decimal Fractions</p> <p>G6 M2: Arithmetic Operations Including Division of Fractions</p> <p>G6 M4 Topic A: Relationships of the Operations</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>6.N.4.3 Multiply and divide fractions and decimals using efficient and generalizable procedures.</p>	<p>G5 M1 Topic E: Multiplying Decimals G5 M1 Topic F: Dividing Decimals G5 M4: Multiplication and Division of Fractions and Decimal Fractions G6 M2: Arithmetic Operations Including Division of Fractions</p>
	<p>6.N.4.4 Solve and interpret real-world and mathematical problems including those involving money, measurement, geometry, and data requiring arithmetic with decimals, fractions and mixed numbers.</p>	<p>G6 M2: Arithmetic Operations Including Division of Fractions</p>
<p>Algebraic Reasoning & Algebra</p>	<p>Standard: Recognize and represent relationships between varying quantities; translate from one representation to another; use patterns, tables, graphs and rules to solve real-world and mathematical problems.</p>	
	<p>6.A.1.1 Plot integer- and rational-valued (limited to halves and fourths) ordered-pairs as coordinates in all four quadrants and recognize the reflective relationships among coordinates that differ only by their signs.</p>	<p>G6 M3 Topic C: Rational Numbers and the Coordinate Plane</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>6.A.1.2 Represent relationships between two varying quantities involving no more than two operations with rules, graphs, and tables; translate between any two of these representations.</p>	<p>G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions</p> <p>G6 M4 Topic E: Expressing Operations in Algebraic Form</p> <p>G6 M4 Topic F: Writing and Evaluating Expressions and Formulas</p>
	<p>6.A.1.3 Use and evaluate variables in expressions, equations, and inequalities that arise from various contexts, including determining when or if, for a given value of the variable, an equation or inequality involving a variable is true or false.</p>	<p>G6 M4: Expressions and Equations</p>
<p>Standard: Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving positive rational numbers.</p>		
	<p>6.A.2.1 Generate equivalent expressions and evaluate expressions involving positive rational numbers by applying the commutative, associative, and distributive properties and order of operations to solve real-world and mathematical problems.</p>	<p>G6 M2 Lesson 10: The Distributive Property and the Products of Decimals</p> <p>G6 M4: Expressions and Equations</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Standard: Use equations and inequalities to represent real-world and mathematical problems and use the idea of maintaining equality to solve equations. Interpret solutions in the original context.</p>	
	<p>6.A.3.1 Represent real-world or mathematical situations using expressions, equations and inequalities involving variables and rational numbers.</p>	<p>G6 M4: Expressions and Equations G7 M2 Topic C: Applying Operations with Rational Numbers to Expressions and Equations G7 M3: Expressions and Equations</p>
	<p>6.A.3.2 Use number sense and properties of operations and equality to solve real-world and mathematical problems involving equations in the form $x + p = q$ and $px = q$, where x, p, and q are nonnegative rational numbers. Graph the solution on a number line, interpret the solution in the original context, and assess the reasonableness of the solution.</p>	<p>G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations</p>
<p>Geometry & Measurement</p>	<p>Standard: Calculate area of squares, parallelograms, and triangles to solve real-world and mathematical problems.</p>	
	<p>6.GM.1.1 Develop and use formulas for the area of squares and parallelograms using a variety of methods including but not limited to the standard algorithm.</p>	<p>G6 M5: Area, Surface Area, and Volume Problems</p>
	<p>6.GM.1.2 Develop and use formulas to determine the area of triangles.</p>	<p>G6 M5 Topic A: Area of Triangles, Quadrilaterals and Polygons</p>

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>6.GM.1.3 Find the area of right triangles, other triangles, special quadrilaterals, and polygons that can be decomposed into triangles and other shapes to solve real-world and mathematical problems.</p>	G6 M5: Area, Surface Area, and Volume Problems
Standard: Understand and use relationships between angles in geometric figures.		
	<p>6.GM.2.1 Solve problems using the relationships between the angles (vertical, complementary, and supplementary) formed by intersecting lines.</p>	G7 M3 Lessons 10–11: Angle Problems and Solving Equations G7 M6 Topic A: Unknown Angles
	<p>6.GM.2.2 Develop and use the fact that the sum of the interior angles of a triangle is 180° to determine missing angle measures in a triangle.</p>	G7 M6 Lesson 12: Unique Triangles—Two Sides and a Non-Included Angle G8 M2 Topic C: Congruence and Angle Relationships

Strand**Objectives for Mathematical Content****Aligned Components of *Eureka Math***

	Standard: Choose appropriate units of measurement and use ratios to convert within measurement systems to solve real-world and mathematical problems.	
	<p>6.GM.3.1 Estimate weights, capacities and geometric measurements using benchmarks in customary and metric measurement systems with appropriate units.</p>	<p>G3 M2 Lesson 7: Develop estimation strategies by reasoning about the weight in kilograms of a series of familiar objects to establish mental benchmark measures.</p> <p>G3 M2 Lesson 10: Estimate and measure liquid volume in liters and milliliters using the vertical number line.</p> <p>G3 M2 Lesson 17: Estimate sums by rounding and apply to solve measurement word problems.</p> <p>G3 M2 Topic E: Two- and Three-Dimensional Measurement Subtraction Using the Standard Algorithm</p>
	<p>6.GM.3.2 Solve problems in various real-world and mathematical contexts that require the conversion of weights, capacities, geometric measurements, and time within the same measurement systems using appropriate units.</p>	<p>G4 M2: Unit Conversions and Problem Solving with Metric Measurement</p> <p>G5 M1 Lesson 4: Use exponents to denote powers of 10 with application to metric conversions.</p> <p>G5 M2 Topic D: Measurement Word Problems with Whole Number and Decimal Multiplication</p> <p>G5 M4 Topic C: Multiplication of a Whole Number by a Fraction</p> <p>G5 M4 Lesson 19: Convert measures involving whole numbers, and solve multi-step word problems.</p> <p>G5 M4 Lesson 20: Convert mixed unit measurements, and solve multi-step word problems.</p>

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	Standard: Use translations, reflections, and rotations to establish congruency and understand symmetries.	
	6.GM.4.1 Predict, describe, and apply translations (slides), reflections (flips), and rotations (turns) to a two-dimensional figure.	G8 M2: The Concept of Congruence
	6.GM.4.2 Recognize that translations, reflections, and rotations preserve congruency and use them to show that two figures are congruent.	G8 M2: The Concept of Congruence
	6.GM.4.3 Use distances between two points that are either vertical or horizontal to each other (not requiring the distance formula) to solve real-world and mathematical problems about congruent two-dimensional figures.	G6 M3 Topic C: Rational Numbers and the Coordinate Plane G6 M5 Topic B: Polygons on the Coordinate Plane
	6.GM.4.4 Identify and describe the line(s) of symmetry in two-dimensional shapes.	G4 M4 Topic D: Two-Dimensional Figures and Symmetry

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
Data & Probability	Standard: Display and analyze data.	
	6.D.1.1 Calculate the mean, median, and mode for a set of real-world data.	G6 M6: Statistics Note: Supplemental material is necessary to address mode.
	6.D.1.2 Explain and justify which measure of central tendency (mean, median, or mode) would provide the most descriptive information for a given set of data.	G6 M6: Statistics Note: Supplemental material is necessary to address mode.
	6.D.1.3 Create and analyze box and whisker plots observing how each segment contains one quarter of the data.	G6 M6 Topic C: Summarizing a Distribution That Is Skewed Using the Median and the Interquartile Range
	Standard: Use probability to solve real-world and mathematical problems; represent probabilities using fractions and decimals.	
	6.D.2.1 Represent possible outcomes using a probability continuum from impossible to certain.	G7 M5 Lesson 1: Chance Experiments

Strand	Objectives for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>6.D.2.2</p> <p>Determine the sample space for a given experiment and determine which members of the sample space are related to certain events. Sample space may be determined by the use of tree diagrams, tables or pictorial representations.</p>	<p>G7 M5 Topic A: Calculating and Interpreting Probabilities</p> <p>G7 M5 Lessons 10–11: Conducting a Simulation to Estimate the Probability of an Event</p>
	<p>6.D.2.3</p> <p>Demonstrate simple experiments in which the probabilities are known and compare the resulting relative frequencies with the known probabilities, recognizing that there may be differences between the two results.</p>	<p>G7 M5 Topic B: Estimating Probabilities</p>