Grade 5 | Oklahoma Academic Standards for Mathematics (2022) Correlation to *Eureka Math²® (2027)*

Eureka Math² is a research-proven math curriculum that empowers teachers to center instructional techniques on student success. Teachers can foster more "aha!" learning moments by providing the support needed for all learners to build a more confident math mindset.

This *Eureka Math²* edition builds on a strong foundation of effective instruction. It provides teachers with guidance on delivering rigorous instruction that honors student choice and encourages confident problem-solving.

Eureka Math² carefully sequences mathematical content to maximize vertical alignment from kindergarten through high school. This kind of sequencing has proven to be essential in students' mastery of math.

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 into the teacher materials.

Accessibility

Eureka Math² incorporates Universal Design for Learning (UDL) principles so all learners can access the mathematics and take on challenging math concepts. UDL, Differentiation, and Multilingual Learner supports are built into the instructional design and are clearly identified in the *Teach* book.

The curriculum also carries a focus on readability. By eliminating unnecessary words and using 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.

Math Confidence

Eureka Math² fosters a classroom culture of learning by encouraging student-led discourse and cognitive engagement that results in confident learners. By leveraging consistent models, routines, and progressions, teachers can remove barriers and allow all students an avenue to success. Within the digital platform, each grade includes wordless videos and digital interactives that spark students' curiosity and help them make conceptual connections. Using the *Learn* books, students wonder, explore, and make sense of mathematics, which helps them develop a strong, positive mathematical identity.

Mathematical Actions and Processes	Aligned Components of *Eureka Math²*
Develop a Deep and Flexible Conceptual Understanding	Lessons in every module engage students in mathematical actions and processes.
Develop Accurate and Appropriate Procedural Fluency	Lessons in every module engage students in mathematical actions and processes.
Develop Strategies for Problem Solving	Lessons in every module engage students in mathematical actions and processes.
Develop Mathematical Reasoning	Lessons in every module engage students in mathematical actions and processes.
Develop a Productive Mathematical Disposition	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Make Conjectures, Model, and Generalize	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Communicate Mathematically	Lessons in every module engage students in mathematical actions and processes.

Numbers & Operations

5.N.1 Read, write, represent, and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.1.1 Represent decimal fractions (e.g., $\frac{1}{10}$, $\frac{1}{100}$) using a variety of models (e.g., 10 by 10 grids, base-ten blocks, meter stick) and show the rational number relationships among fractions, decimals and whole numbers.	4 M5 Lesson 1: Organize, count, and represent a collection of money. 4 M5 Lesson 2: Decompose 1 one and express tenths in fraction form and decimal form. 4 M5 Lesson 3: Represent tenths as a place value unit. 4 M5 Lesson 4: Write mixed numbers in decimal form with tenths. 4 M5 Lesson 5: Decompose 1 one and express hundredths in fraction form and decimal form. 4 M5 Lesson 6: Represent hundredths as a place value unit. 4 M5 Lesson 7: Write mixed numbers in decimal form with hundredths. 4 M5 Lesson 8: Represent decimal numbers in expanded form.
5.N.1.2 Read, write, and represent decimals using place value to describe decimal numbers including fractional numbers as small as thousandths and whole numbers up to seven digits.	4 M1 Lesson 7: Write numbers to $1{,}000{,}000$ in unit form and expanded form by using place value structure. 4 M1 Lesson 8: Write numbers to $1{,}000{,}000$ in standard form and word form. 4 M1 Lesson 10: Name numbers by using place value understanding. 5 M4 Lesson 1: Model and relate decimal place value units to thousandths. 5 M4 Lesson 2: Represent thousandths as a place value unit. 5 M4 Lesson 3: Represent decimal numbers to the thousandths place in different forms.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.1.3 Compare and order decimals and fractions, including mixed numbers and fractions less than one, and locate on a number line.	4 M4 Lesson 13: Compare fractions by using the benchmarks, 0, $\frac{1}{2}$, and 1. 4 M4 Lesson 14: Compare fractions with related denominators. 4 M4 Lesson 15: Compare fractions with related numerators. 4 M4 Lesson 16: Generate a common numerator or denominator to compare fractions. 4 M4 Lesson 17: Apply fraction comparison strategies to compare fractions greater than 1. 4 M5 Lesson 11: Compare and order decimal numbers. 5 M4 Lesson 6: Compare decimal numbers to the thousandths place.
5.N.1.4 Recognize and generate equivalent terminating decimals, fractions, mixed numbers, and fractions in various models.	4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions. 4 M4 Lesson 8: Generate equivalent fractions with smaller units for unit fractions. 4 M4 Lesson 9: Generate equivalent fractions with smaller units for non-unit fractions. 4 M4 Lesson 10: Generate equivalent fractions with larger units. 4 M4 Lesson 11: Represent equivalent fractions by using tape diagrams, number lines, and multiplication or division. 4 M4 Lesson 12: Generate equivalent fractions for fractions greater than 1 and generate equivalent mixed numbers. 4 M5 Lesson 5: Decompose 1 one and express hundredths in fraction form and decimal form. 4 M5 Lesson 6:Represent hundredths as a place value unit. 4 M5 Lesson 7: Write mixed numbers in decimal form with hundredths. 4 M5 Lesson 8: Represent decimal numbers in expanded form.

Numbers & Operations

5.N.2 Divide multi-digit numbers and solve real-world and mathematical problems using arithmetic.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.2.1 Estimate solutions to division problems to assess the reasonableness of results.	5 M1 Lesson 12: Divide two- and three-digit numbers by multiples of 10. 5 M1 Lesson 13: Divide two-digit numbers by two-digit numbers resulting in one-digit quotients. 5 M1 Lesson 16: Divide four-digit numbers by two-digit numbers.
5.N.2.2 Divide multi-digit numbers, by one- and two-digit divisors, based on knowledge of place value, including but not limited to standard algorithms.	4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers. 4 M2 Lesson 11: Divide by using familiar strategies. 4 M2 Lesson 12: Divide two-digit numbers by one-digit numbers by using an area model. 4 M2 Lesson 13: Divide three-digit numbers by one-digit numbers by using an area model. 4 M2 Lesson 14: Divide two-digit numbers by one-digit numbers by using place value strategies. 4 M2 Lesson 15: Divide three-digit numbers by one-digit numbers by using place value strategies. 4 M2 Lesson 16: Divide by using the break apart and distribute strategy. 4 M3 Lesson 1: Divide multiples of 100 and 1,000. 4 M3 Lesson 4: Apply place value strategies to divide hundreds, tens, and ones. 4 M3 Lesson 5: Apply place value strategies to divide thousands, hundreds, tens, and ones. 4 M3 Lesson 6: Connect pictorial representations of division to long division. 4 M3 Lesson 7: Represent division by using partial quotients. 4 M3 Lesson 8: Choose and apply a method to divide multi-digit numbers. 4 M3 Lesson 21: Find whole-number quotients and remainders. 4 M3 Lesson 22: Represent, estimate, and solve division word problems. 5 M1 Lesson 12: Divide two- and three-digit numbers by multiples of 10. 5 M1 Lesson 13: Divide two-digit numbers by two-digit numbers in problems that result in one-digit quotients.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.2.2 ***continued***	5 M1 Lesson 14: Divide three-digit numbers by two-digit numbers in problems that result in one-digit quotients. 5 M1 Lesson 15: Divide three-digit numbers by two-digit numbers in problems that result in two-digit quotients. 5 M1 Lesson 16: Divide four-digit numbers by two-digit numbers.
5.N.2.3 Recognize that remainders can be represented in a variety of ways, including a whole number, fraction, or decimal. Determine the most meaningful form of a remainder based on the context of the problem.	5 M1 Lesson 2: Interpret a fraction as division by writing remainders as fractions. 6 M2 Lesson 17: Partial Quotients 6 M2 Lesson 18: The Standard Division Algorithm 6 M2 Lesson 19: Expressing Quotients as Decimals 6 M2 Lesson 20: Real-World Division Problems
5.N.2.4 Construct models to solve multi-digit whole number problems requiring addition, subtraction, multiplication, and division using various representations, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.	4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm. 4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction. 4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction. 4 M3 Lesson 21: Find whole-number quotients and remainders. 4 M3 Lesson 22: Represent, estimate, and solve division word problems. 4 M3 Lesson 23: Solve multi-step word problems and interpret remainders. 4 M3 Lesson 24: Solve multi-step word problems and assess the reasonableness of solutions. 5 M1 Lesson 4: Estimate products and quotients by using powers of 10 and their multiples. 5 M1 Lesson 17: Write, interpret, and compare numerical expressions. 5 M1 Lesson 18: Create and solve real-world problems for given numerical expressions. 5 M1 Lesson 19: Solve multi-step word problems involving multiplication and division. 5 M1 Lesson 20: Solve multi-step word problems involving the four operations. 5 M1 Lesson 21: Express a composite number to 50 as a product of its prime factors.

Numbers & Operations

5.N.3 Add and subtract fractions with like and unlike denominators, mixed numbers, and decimals to solve real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.3.1 Estimate sums and differences of fractions with like and unlike denominators, mixed numbers, and decimals to assess the reasonableness of the results.	5 M2 Lesson 10: Add whole numbers and mixed numbers and add mixed numbers with related units. 5 M2 Lesson 12: Subtract whole numbers from mixed numbers and mixed numbers from whole numbers. 5 M2 Lesson 13: Subtract mixed numbers from mixed numbers with related units. 5 M4 Lesson 9: Add decimal numbers by using different methods. 5 M4 Lesson 12: Subtract decimal numbers by using place value understanding.
5.N.3.2 Illustrate addition and subtraction of fractions with like and unlike denominators, mixed numbers, and decimals using a variety of mathematical models (e.g., fraction strips, area models, number lines, fraction rods).	4 M4 Lesson 18: Estimate sums and differences of fractions by using benchmarks. 4 M4 Lesson 19: Add and subtract fractions with like units. 4 M4 Lesson 20: Subtract a fraction from a whole number. 4 M4 Lesson 21: Solve addition and subtraction word problems and estimate the reasonableness of the answers. 4 M4 Lesson 22: Add two fractions with related units. 4 M4 Lesson 23: Add a fraction to a mixed number. 4 M4 Lesson 24: Add a mixed number to a mixed number. 4 M4 Lesson 25: Subtract a fraction from a mixed number, part 1. 4 M4 Lesson 26: Subtract a fraction from a mixed number, part 2. 4 M4 Lesson 27: Subtract a mixed number from a mixed number. 5 M2 Lesson 7: Add and subtract fractions with related units by finding equivalent fractions numerically. 5 M2 Lesson 8: Add and subtract fractions with unrelated units by finding equivalent fractions pictorially.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.N.3.2 ***continued***	5 M2 Lesson 9: Add and subtract fractions with unrelated units by finding equivalent fractions numerically. 5 M2 Lesson 10: Add whole numbers and mixed numbers and add mixed numbers with related units. 5 M2 Lesson 11: Add mixed numbers with unrelated units. 5 M2 Lesson 12: Subtract whole numbers from mixed numbers and mixed numbers from whole numbers. 5 M2 Lesson 13: Subtract mixed numbers from mixed numbers with related units. 5 M2 Lesson 14: Subtract mixed numbers from mixed numbers with unrelated units.
5.N.3.3 Add and subtract fractions with like and unlike denominators, mixed numbers, and decimals, involving money, measurement, geometry, and data. Use various models and efficient strategies, including but not limited to standard algorithms.	5 M2 Lesson 11: Add mixed numbers with unrelated units. 5 M2 Lesson 14: Subtract mixed numbers from mixed numbers with unrelated units.
5.N.3.4 Apply mental math and knowledge of place value (no written computations) to find 0.1 more or 0.1 less than a number, 0.01 more or 0.01 less than a number, and 0.001 more or 0.001 less than a number.	*Supplemental material is necessary to address this objective.*

Algebraic Reasoning & Algebra

5.A.1 Describe and graph patterns of change created through numerical patterns.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.A.1.1 Use tables and rules with up to two operations to describe patterns of change and make predictions and generalizations about various mathematical situations.	5 M6 Lesson 7: Generate number patterns to form ordered pairs. 5 M6 Lesson 8: Identify addition and subtraction relationships between corresponding terms in number patterns. 5 M6 Lesson 9: Identify multiplication and division relationships between corresponding terms in number patterns. 5 M6 Lesson 11: Draw lines in the coordinate plane and identify points on the lines. 5 M6 Lesson 20: Reason about patterns in real-world situations.
5.A.1.2 Use a rule or table to represent ordered pairs of whole numbers and graph these ordered pairs on a coordinate plane, identifying the origin and axes in relation to the coordinates.	5 M6 Lesson 7: Generate number patterns to form ordered pairs. 5 M6 Lesson 8: Identify addition and subtraction relationships between corresponding terms in number patterns. 5 M6 Lesson 9: Identify multiplication and division relationships between corresponding terms in number patterns. 5 M6 Lesson 11: Draw lines in the coordinate plane and identify points on the lines. 5 M6 Lesson 20: Reason about patterns in real-world situations.

Algebraic Reasoning & Algebra

5.A.2 Understand and interpret expressions, equations, and inequalities involving variables and whole numbers, and use them to represent and evaluate real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.A.2.1 Generate equivalent numerical expressions and solve problems using number sense involving whole numbers by applying the commutative property, associative property, distributive property, and order of operations (excluding exponents).	5 M1 Lesson 7: Multiply by using familiar methods. 5 M1 Lesson 8: Multiply two- and three-digit numbers by two-digit numbers by using the distributive property. 5 M1 Lesson 17: Write, interpret, and compare numerical expressions. 5 M1 Lesson 18: Create and solve real-world problems for given numerical expressions. 5 M1 Lesson 19: Solve multi-step word problems involving multiplication and division. 5 M1 Lesson 20: Solve multi-step word problems involving the four operations. 5 M1 Lesson 21: Express a composite number to 50 as a product of its prime factors. 5 M3 Lesson 18: Compare and evaluate expressions with parentheses. 5 M3 Lesson 22: Evaluate expressions involving nested grouping symbols. 5 M4 Lesson 29: Interpret, evaluate, and compare numerical expressions involving decimals. 5 M4 Lesson 30: Create and solve real-world problems for given numerical expressions involving decimals.
5.A.2.2 Determine whether an equation or inequality involving a variable is true or false for a given value of the variable.	6 M4 Lesson 17: Equations and Solutions 6 M4 Lesson 18: Inequalities and Solutions
5.A.2.3 Evaluate expressions involving variables when values for the variables are given.	6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division 6 M4 Lesson 12: Applying Properties to Multiplication and Division Expressions 6 M4 Lesson 17: Equations and Solutions

Geometry & Measurement

5.GM.1 Describe, identify, classify, and construct two- and three-dimensional figures using their geometric attributes.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.GM.1.1 Describe, identify, classify, and construct triangles (equilateral, right, scalene, isosceles) by their attributes using various mathematical models.	4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both. 4 M6 Lesson 19: Construct and classify triangles based on given attributes.
5.GM.1.2 Describe, identify, and classify three-dimensional figures (cubes, rectangular prisms, and pyramids) and their attributes (number of edges, faces, vertices, shapes of faces), given various mathematical models.	*Supplemental material is necessary to address this objective.*
5.GM.1.3 Recognize and draw a net for a three-dimensional figure (cube, rectangular prism, pyramid).	6 M5 Lesson 9: Properties of Solids 6 M5 Lesson 10: Discovering Nets of Solids 6 M5 Lesson 11: Constructing Nets of Solids 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

Geometry & Measurement

5.GM.2 Determine volume using the object's dimensions. Compare and analyze rectangular prisms with equivalent volume to recognize their different dimensions.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.GM.2.1 Determine the volume of rectangular prisms by the number of unit cubes (n) used to construct the shape and by the product of the dimensions of the prism $a \cdot b \cdot c = n$. Understand rectangular prisms of different dimensions (p, q, and r) can have the same volume if $a \cdot b \cdot c = p \cdot q \cdot r = n$.	5 M5 Lesson 22: Find the volumes of right rectangular prisms by using the area of the base. 5 M5 Lesson 23: Find the volumes of right rectangular prisms by multiplying the edge lengths.
5.GM.2.2 Estimate the perimeter of polygons and create arguments for reasonable perimeter values of shapes that may include curves.	*Supplemental material is necessary to address this objective.*

Geometry & Measurement

5.GM.3 Understand angle, length, weight, and capacity as measurable attributes of real-world and mathematical objects, using various tools to measure them. Solve real-world problems of length.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.GM.3.1 Measure and compare angles according to size using various tools.	4 M6 Lesson 7: Explore angles as fractional turns through a circle. 4 M6 Lesson 8: Use a circular protractor to recognize a $1°$ angle as a turn through $\frac{1}{360}$ of a circle. 4 M6 Lesson 9: Identify and measure angles as turns and recognize them in various contexts. 4 M6 Lesson 10: Use $180°$ protractors to measure angles. 4 M6 Lesson 11: Estimate and measure angles with a $180°$ protractor. 4 M6 Lesson 12: Use a protractor to draw angles up to $180°$.
5.GM.3.2 Measure the length of an object to the nearest whole centimeter or up to $\frac{1}{16}$ inch using an appropriate instrument.	*Supplemental material is necessary to address this objective.*
5.GM.3.3 Apply the relationship between inches, feet, and yards to measure, convert, and compare objects to solve problems.	5 M3 Lesson 5: Convert larger customary measurement units to smaller measurement units. 5 M3 Lesson 6: Convert smaller customary measurement units to larger measurement units. 5 M4 Lesson 28: Convert customary measurements involving decimals.
5.GM.3.4 Apply the relationship between millimeters, centimeters, and meters to measure, convert, and compare objects to solve problems.	5 M1 Lesson 5: Convert measurements and describe relationships between metric units. 5 M1 Lesson 6: Solve multi-step word problems by using metric measurement conversion. 5 M4 Lesson 26: Solve a real-world problem involving metric measurements. 5 M4 Lesson 27: Convert metric measurements involving decimals.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.GM.3.5 Estimate lengths and geometric measurements to the nearest whole unit, using benchmarks in customary and metric measurement systems.	*Supplemental material is necessary to address this objective.*

Data & Probability

5.D.1 Create and analyze data to find the range and measures of central tendency (mean, median, mode).

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
5.D.1.1 Find the measures of central tendency (i.e., mean, median, mode) and range of a set of data. Understand that the mean is a "leveling out" or central balance point of the data.	6 M6 Lesson 7: Using the Mean to Describe the Center 6 M6 Lesson 8: The Mean as a Balance Point 6 M6 Lesson 12: Using the Median to Describe the Center 6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures
5.D.1.2 Create and analyze line and double-bar graphs with increments of whole numbers, fractions, and decimals.	4 Data Talk: Missed Field Goals in Basketball 4 Data Investigation: Weather Forecasts 5 Data Talk: A Walk in the Park 5 Data Talk: Astronauts in Space 5 Data Investigation: Wind-Power Capacity 6 Data Talk: Monarchs on the Move 6 Data Investigation: Drinking Water Violations 5 M6 Lesson 18: Interpret line graphs. *Supplemental material is necessary to address line and double-bar graphs with increments of fractions and decimals.*