
Grade 4 | Oklahoma Academic Standards for Mathematics 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*²®, 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* aha 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 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 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.

Mathematical Actions and Processes	Aligned Components of <i>Eureka Math</i>²
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

4.N.1 Compare and represent whole numbers up to 1,000,000 with an emphasis on place value and equality.

Oklahoma Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>4.N.1.1</p> <p>Read, write, discuss, and represent whole numbers up to 1,000,000. Representations may include numerals, words, pictures, number lines, and manipulatives.</p>	<p>4 M1 Lesson 5: Organize, count, and represent a collection of objects.</p> <p>4 M1 Lesson 7: Write numbers to 1,000,000 in unit form and expanded form by using place value structure.</p> <p>4 M1 Lesson 8: Write numbers to 1,000,000 in standard form and word form.</p> <p>4 M1 Lesson 10: Name numbers by using place value understanding.</p>
<p>4.N.1.2</p> <p>Use place value to describe whole numbers between 1,000 and 1,000,000 in terms of millions, hundred thousands, ten thousands, thousands, hundreds, tens, and ones with written, standard, and expanded forms.</p>	<p>4 M1 Lesson 5: Organize, count, and represent a collection of objects.</p> <p>4 M1 Lesson 7: Write numbers to 1,000,000 in unit form and expanded form by using place value structure.</p> <p>4 M1 Lesson 8: Write numbers to 1,000,000 in standard form and word form.</p> <p>4 M1 Lesson 9: Compare numbers within 1,000,000 by using $>$, $=$, and $<$.</p> <p>4 M1 Lesson 10: Name numbers by using place value understanding.</p>
<p>4.N.1.3</p> <p>Applying knowledge of place value, use mental strategies (no written computations) to multiply or divide a number by 10, 100 and 1,000.</p>	<p>4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right.</p> <p><i>Supplemental material is necessary to address dividing a number by 10, 100, and 1,000.</i></p>
<p>4.N.1.4</p> <p>Use place value to compare and order whole numbers up to 1,000,000, using comparative language, numbers, and symbols.</p>	<p>4 M1 Lesson 9: Compare numbers within 1,000,000 by using $>$, $=$, and $<$.</p>

Numbers & Operations

4.N.2 Solve real-world and mathematical problems using multiplication and division.

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<p>4.N.2.1</p> <p>Demonstrate fluency with multiplication and division facts with factors up to 12.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>
<p>4.N.2.2</p> <p>Multiply 3-digit by 1-digit and 2-digit by 2-digit whole numbers, using various strategies, including but not limited to standard algorithms.</p>	<p>4 M3 Lesson 2: Multiply by multiples of 100 and 1,000.</p> <p>4 M3 Lesson 3: Multiply a two-digit multiple of 10 by a two-digit multiple of 10.</p> <p>4 M3 Lesson 9: Apply place value strategies to multiply three-digit numbers by one-digit numbers.</p> <p>4 M3 Lesson 11: Represent multiplication by using partial products.</p> <p>4 M3 Lesson 12: Multiply by using various recording methods in vertical form.</p> <p>4 M3 Topic D: Multiplication of Two-Digit Numbers by Two-Digit Numbers</p>
<p>4.N.2.3</p> <p>Estimate products of 3-digit by 1-digit and 2-digit by 2-digit whole number factors using a variety of strategies (e.g., rounding, front end estimation, adjusting, compatible numbers) to assess the reasonableness of results. Explore larger numbers using technology to investigate patterns.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p> <p><i>Supplemental material is necessary to address exploring larger numbers by using technology.</i></p>

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<p>4.N.2.4</p> <p>Apply and analyze models to solve multi-step problems requiring the use of addition, subtraction, and multiplication of multi-digit whole numbers. Use various strategies, including the relationship between operations, the use of appropriate technology, and the context of the problem to assess the reasonableness of results.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p>
<p>4.N.2.5</p> <p>Use strategies and algorithms (e.g., mental strategies, standard algorithms, partial quotients, repeated subtraction, the commutative, associative, and distributive properties) based on knowledge of place value, equality, and properties of operations to divide a 3-digit dividend by a 1-digit whole number divisor, with and without remainders.</p>	<p>4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers.</p> <p>4 M2 Topic C: Division of Tens and Ones by One-Digit Numbers</p> <p>4 M3 Lesson 1: Divide multiples of 100 and 1,000.</p> <p>4 M3 Lesson 4: Apply place value strategies to divide hundreds, tens, and ones.</p> <p>4 M3 Lesson 6: Connect pictorial representations of division to long division.</p> <p>4 M3 Lesson 7: Represent division by using partial quotients.</p> <p>4 M3 Lesson 8: Choose and apply a method to divide multi-digit numbers.</p> <p>4 M3 Lesson 21: Find whole-number quotients and remainders.</p> <p>4 M3 Lesson 22: Represent, estimate, and solve division word problems.</p>

Numbers & Operations

4.N.3 Represent and compare fractions and decimals in real-world and mathematical situations; use place value to understand decimal quantities.

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<p>4.N.3.1</p> <p>Represent and rename equivalent fractions using fraction models (e.g., parts of a set, area models, fraction strips, number lines).</p>	<p>4 M4 Lesson 8: Generate equivalent fractions with smaller units for unit fractions.</p> <p>4 M4 Lesson 9: Generate equivalent fractions with smaller units for non-unit fractions.</p> <p>4 M4 Lesson 10: Generate equivalent fractions with larger units.</p> <p>4 M4 Lesson 11: Represent equivalent fractions by using tape diagrams, number lines, and multiplication or division.</p> <p>4 M4 Lesson 12: Generate equivalent fractions for fractions greater than 1 and generate equivalent mixed numbers.</p>
<p>4.N.3.2</p> <p>Use benchmark fractions $(0, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}, 1)$ to locate additional fractions with denominators up to twelfths on a number line.</p>	<p>4 M4 Topic A: Fraction Decomposition and Equivalence</p> <p>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.</p> <p>4 M4 Lesson 11: Represent equivalent fractions by using tape diagrams, number lines, and multiplication or division.</p> <p>4 M4 Lesson 12: Generate equivalent fractions for fractions greater than 1 and generate equivalent mixed numbers.</p>
<p>4.N.3.3</p> <p>Use models to order and compare whole numbers and fractions less than and greater than one, using comparative language and symbols.</p>	<p>4 M4 Topic C: Compare Fractions</p>

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<p>4.N.3.4</p> <p>Decompose a fraction into a sum of fractions with the same denominator in more than one way, using concrete and pictorial models and recording results with numerical representations (e.g., $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ and $\frac{3}{4} = \frac{2}{4} + \frac{1}{4}$).</p>	<p>4 M4 Topic A: Fraction Decomposition and Equivalence</p> <p>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.</p> <p>4 M4 Topic D: Add and Subtract Fractions</p>
<p>4.N.3.5</p> <p>Use models to add and subtract fractions with like denominators.</p>	<p>4 M4 Topic A: Fraction Decomposition and Equivalence</p> <p>4 M4 Lesson 7: Rename fractions as a sum of equivalent smaller unit fractions.</p> <p>4 M4 Topic D: Add and Subtract Fractions</p>
<p>4.N.3.6</p> <p>Represent tenths and hundredths with concrete and pictorial models, making connections between fractions and decimals.</p>	<p>4 M5 Topic B: Tenths and Hundredths</p> <p>4 M5 Topic D: Addition of Tenths and Hundredths</p>
<p>4.N.3.7</p> <p>Read and write decimals in standard, word, and expanded form up to at least the hundredths place in a variety of contexts, including money.</p>	<p>4 M5 Topic A: Exploration of Tenths</p> <p>4 M5 Topic B: Tenths and Hundredths</p>
<p>4.N.3.8</p> <p>Compare and order decimals and whole numbers using place value and various models including but not limited to grids, number lines, and base 10 blocks.</p>	<p>4 M5 Topic C: Comparison of Decimal Numbers</p>

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<p>4.N.3.9</p> <p>Compare and order benchmark fractions $(0, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}, 1)$ and decimals $(0, 0.25, 0.50, 0.75, 1.00)$ in a variety of representations.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>
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Numbers & Operations

4.N.4 Determine the value of bills and coins in order to solve monetary transactions.

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<p>4.N.4.1</p> <p>Select the fewest number of coins for a given amount of money up to one dollar.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>
<p>4.N.4.2</p> <p>Given a total cost (dollars and coins up to twenty dollars) and amount paid (dollars and coins up to twenty dollars), find the change required in a variety of ways.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>

Algebraic Reasoning & Algebra

4.A.1 Describe, create, and analyze multiple representations of patterns to solve real-world and mathematical problems.

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4.A.1.1 Create an input/output chart or table to represent or extend a numerical pattern.	<i>Supplemental material is necessary to address this objective.</i>
4.A.1.2 Describe the single operation rule for a pattern from an input/output table or function machine involving any operation of a whole number.	<i>Supplemental material is necessary to address this objective.</i>
4.A.1.3 Construct models to show growth patterns involving geometric shapes and define the single operation rule of the pattern.	4 M2 Lesson 26: Use relationships within a pattern to find an unknown term in the sequence.

Algebraic Reasoning & Algebra

4.A.2 Use multiplication and division with variables to create number sentences representing a given mathematical situation.

Oklahoma Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>4.A.2.1</p> <p>Use the relationships between multiplication and division with the properties of multiplication to solve problems and find values for variables that make number sentences true.</p>	<p>4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers.</p> <p>4 M2 Lesson 9: Solve multiplication word problems.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p>
<p>4.A.2.2</p> <p>Solve for a variable in an equation involving addition, subtraction, multiplication, or division with whole numbers. Analyze models to represent number sentences and vice versa.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M2 Lesson 2: Divide two- and three-digit multiples of 10 by one-digit numbers.</p> <p>4 M2 Lesson 9: Solve multiplication word problems.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p> <p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p>

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<p>4.A.2.3</p> <p>Determine the unknown addend or factor in equivalent and non-equivalent expressions (e.g., $5 + 6 = 4 + \square$, $3 \cdot 8 < 3 \cdot \square$).</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p> <p><i>Supplemental material is necessary to address non-equivalent expressions.</i></p>
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Geometry & Measurement

4.GM.1 Name, describe, classify, and construct polygons and three-dimensional figures based on their attributes; recognize polygons and three-dimensional figures in real-life and mathematical situations.

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<p>4.GM.1.1</p> <p>Identify points, lines, line segments, rays, angles, endpoints, and parallel and perpendicular lines in various models.</p>	<p>4 M6 Topic A: Lines and Angles</p> <p>4 M6 Lesson 10: Use 180° protractors to measure angles.</p> <p>4 M6 Lesson 11: Estimate and measure angles with a 180° protractor.</p> <p>4 M6 Lesson 12: Use a protractor to draw angles up to 180°.</p> <p>4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both.</p> <p>4 M6 Lesson 19: Construct and classify triangles based on given attributes.</p> <p>4 M6 Lesson 20: Sort polygons based on a given rule.</p>
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Oklahoma Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>4.GM.1.2</p> <p>Describe, classify, and construct quadrilaterals, including squares, rectangles, trapezoids, rhombuses, parallelograms, and kites. Recognize quadrilaterals in various models.</p>	<p>4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both.</p> <p>4 M6 Lesson 19: Construct and classify triangles based on given attributes.</p> <p>4 M6 Lesson 20: Sort polygons based on a given rule.</p>
<p>4.GM.1.3</p> <p>Given two three-dimensional shapes, identify each shape. Compare and contrast their similarities and differences based on their attributes.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>

Geometry & Measurement

4.GM.2 Recognize and measure attributes in real-world and mathematical situations using various tools.

Oklahoma Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>4.GM.2.1</p> <p>Measure angles in geometric figures and real-world objects with a protractor or angle ruler.</p>	<p>4 M6 Lesson 8: Use a circular protractor to recognize a 1° angle as a turn through $\frac{1}{360}$ of a circle.</p> <p>4 M6 Lesson 10: Use 180° protractors to measure angles.</p> <p>4 M6 Lesson 11: Estimate and measure angles with a 180° protractor.</p> <p>4 M6 Lesson 12: Use a protractor to draw angles up to 180°.</p>

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<p>4.GM.2.2</p> <p>Find the area of polygons by determining if they can be decomposed into rectangles.</p>	<p>4 M2 Lesson 3: Investigate and use a formula for the area of a rectangle.</p> <p>4 M2 Lesson 7: Multiply by using an area model and the distributive property.</p> <p>4 M2 Lesson 18: Investigate and use formulas for the perimeter of a rectangle.</p> <p>4 M2 Lesson 19: Apply area and perimeter formulas to solve problems.</p> <p>4 M2 Lesson 20: Solve word problems involving additive and multiplicative comparisons.</p>
<p>4.GM.2.3</p> <p>Develop the concept that the volume of rectangular prisms with whole-number edge lengths can be found by counting the total number of same-sized unit cubes that fill a shape without gaps or overlaps. Use a variety of tools and create models to determine the volume using appropriate measurements (e.g., cm³).</p>	<p>5 M5 Topic C: Volume Concepts</p>
<p>4.GM.2.4</p> <p>Choose an appropriate instrument to measure the length of an object to the nearest whole centimeter or quarter inch.</p>	<p>3 M5 Lesson 15: Identify fractions on a ruler as numbers on a number line.</p> <p>3 M5 Lesson 16: Measure lengths and record data on a line plot.</p> <p><i>Supplemental material is necessary to address choosing an appropriate instrument to measure the length of an object to the nearest whole centimeter.</i></p>
<p>4.GM.2.5</p> <p>Recognize and use the relationship between inches, feet, and yards to measure and compare objects.</p>	<p>4 M2 Lesson 17: Express measurements of length in terms of smaller units.</p>

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<p>4.GM.2.6</p> <p>Recognize and use the relationship between millimeters, centimeters, and meters to measure and compare objects.</p>	<p>4 M1 Lesson 3: Describe relationships between measurements by using multiplicative comparison.</p> <p>4 M1 Lesson 23: Express metric measurement of length in terms of smaller units.</p>
<p>4.GM.2.7</p> <p>Determine and justify the best use of customary and metric measurements in a variety of situations (liquid volumes, mass vs. weight, temperatures above 0 (zero) degrees, and length).</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>

Geometry & Measurement

4.GM.3 Determine elapsed time and convert between units of time.

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<p>4.GM.3.1</p> <p>Determine elapsed time.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>
<p>4.GM.3.2</p> <p>Convert one measure of time to another including seconds to minutes, minutes to hours, hours to days, and vice versa, using various models.</p>	<p>4 M3 Lesson 18: Express units of time in terms of smaller units.</p> <p><i>Supplemental material is necessary to address converting units of time from smaller to larger units.</i></p>

Data & Probability

4.D.1 Summarize, construct, and analyze data.

Oklahoma Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>4.D.1.1</p> <p>Create and organize data on a frequency table or line plot marked with whole numbers and fractions using appropriate titles, labels, and units.</p>	<p>4 M4 Lesson 29: Solve problems by using data from a line plot.</p> <p>4 M4 Lesson 30: Represent data on a line plot.</p>
<p>4.D.1.2</p> <p>Organize data sets to create tables, bar graphs, timelines, and Venn diagrams. The data may include benchmark fractions or decimals $(0, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}, 0.25, 0.50, 0.75)$.</p>	<p><i>Supplemental material is necessary to address this objective.</i></p>
<p>4.D.1.3</p> <p>Solve one- and two-step problems by analyzing data in whole number, decimal, or fraction form in a frequency table and line plot.</p>	<p>4 M4 Lesson 29: Solve problems by using data from a line plot.</p> <p>4 M4 Lesson 30: Represent data on a line plot.</p>