

Grade 3 | Oregon Mathematics Standards Correlation to *Eureka Math*²®

When the original *Eureka Math*[®] curriculum was released, it quickly became the most widely used K–5 mathematics curriculum in the country. Now, the Great Minds[®] teacher–writers have created *Eureka Math*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.

Algebraic Reasoning: Operations

3.OA.A Represent and solve problems involving addition and subtraction.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.OA.A.1</p> <p>Represent and interpret multiplication of two factors as repeated addition of equal groups.</p>	<p>M1 L2: Interpret equal groups as multiplication.</p> <p>M1 L3: Relate multiplication to the array model.</p> <p>M1 L4: Interpret the meaning of factors as number of groups or number in each group.</p> <p>M1 L10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model.</p> <p>M1 L11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model.</p> <p>M1 L13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model.</p> <p>M3 L15: Reason about and explain patterns of multiplication and division with units of 1 and 0.</p> <p>M3 L18: Create multiplication and division word problems.</p>
<p>3.OA.A.2</p> <p>Represent and interpret whole-number quotients as dividing an amount into equal sized groups.</p>	<p>M1 L6: Explore measurement and partitive division by modeling concretely and drawing.</p> <p>M1 L7: Model measurement and partitive division by drawing equal groups.</p> <p>M1 L8: Model measurement and partitive division by drawing arrays.</p> <p>M1 L9: Represent and solve division word problems using drawings and equations.</p> <p>M1 L15: Model division as an unknown factor problem.</p> <p>M1 L16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10.</p> <p>M1 L17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10.</p> <p>M1 L18: Represent and solve measurement and partitive division word problems.</p> <p>M3 L15: Reason about and explain patterns of multiplication and division with units of 1 and 0.</p> <p>M3 L18: Create multiplication and division word problems.</p>

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<p>3.OA.A.3</p> <p>Use multiplication and division within 100 to solve problems in authentic contexts involving equal groups, arrays, and/or measurement quantities.</p>	<p>M1 L5: Represent and solve multiplication word problems by using drawings and equations.</p> <p>M1 L8: Model measurement and partitive division by drawing arrays.</p> <p>M1 L9: Represent and solve division word problems using drawings and equations.</p> <p>M1 L16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10.</p> <p>M1 L17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10.</p> <p>M1 L18: Represent and solve measurement and partitive division word problems.</p> <p>M1 L22: Represent and solve two-step word problems using the properties of multiplication.</p> <p>M1 L23: Represent and solve two-step word problems using drawings and equations.</p> <p>M3 L2: Count by units of 6 to multiply and divide by using arrays.</p> <p>M3 L7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.</p> <p>M3 L8: Use the break apart and distribute strategy to multiply with units of 7.</p> <p>M3 L12: Solve one-step word problems involving multiplication and division.</p> <p>M3 L25: Apply multiplication and division concepts to complete a multi-part task.</p>
<p>3.OA.A.4</p> <p>Determine the unknown number in a multiplication or division equation relating three whole numbers by applying the understanding of the inverse relationship of multiplication and division.</p>	<p>M1 L15: Model division as an unknown factor problem.</p> <p>M1 L16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10.</p> <p>M1 L17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10.</p> <p>M3 L2: Count by units of 6 to multiply and divide by using arrays.</p> <p>M3 L3: Count by units of 8 to multiply and divide by using arrays.</p> <p>M3 L7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.</p>

Algebraic Reasoning: Operations

3.OA.B Understand properties of multiplication and the relationship between multiplication and division.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.OA.B.5</p> <p>Apply properties of operations as strategies to multiply and divide.</p>	<p>M1 L10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model.</p> <p>M1 L11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model.</p> <p>M1 L12: Demonstrate the distributive property using a unit of 4.</p> <p>M1 L13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model.</p> <p>M1 L14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10.</p> <p>M1 L19: Use the distributive property to break apart multiplication problems into known facts.</p> <p>M3 L1: Organize, count, and represent a collection of objects.</p> <p>M3 L3: Count by units of 8 to multiply and divide by using arrays.</p> <p>M3 L4: Decompose pictorial arrays to create expressions with three factors.</p> <p>M3 L5: Use the break apart and distribute strategy to multiply with units of 6 and 8.</p> <p>M3 L6: Use the break apart and distribute strategy to divide with units of 6 and 8.</p> <p>M3 L8: Use the break apart and distribute strategy to multiply with units of 7.</p> <p>M3 L9: Model the associative property as a strategy to multiply.</p> <p>M3 L10: Use parentheses in expressions with different operations.</p> <p>M3 L11: Use the break apart and distribute strategy to divide with units of 7.</p> <p>M3 L14: Apply strategies and identify patterns to multiply with units of 9.</p> <p>M3 L21: Multiply by multiples of 10 by using place value strategies and the associative property.</p> <p>M3 L23: Identify patterns and apply strategies to multiply with units of 11 and 12.</p> <p>M3 L24: Organize, count, and represent a collection of objects.</p>

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<p>3.OA.B.6</p> <p>Understand division as an unknown-factor in a multiplication problem.</p>	<p>M1 L15: Model division as an unknown factor problem.</p> <p>M1 L16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10.</p> <p>M1 L17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10.</p> <p>M1 L20: Use the distributive property to break apart division problems into known facts.</p> <p>M3 L2: Count by units of 6 to multiply and divide by using arrays.</p> <p>M3 L7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.</p>

Algebraic Reasoning: Operations
3.OA.C Multiply and divide within 100.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.OA.C.7</p> <p>Fluently multiply and divide within 100 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.</p>	<p>M1 L12: Demonstrate the distributive property using a unit of 4.</p> <p>M1 L14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10.</p> <p>M1 L19: Use the distributive property to break apart multiplication problems into known facts.</p> <p>M1 L20: Use the distributive property to break apart division problems into known facts.</p> <p>M1 L21: Compose and decompose arrays to create expressions with three factors.</p> <p>M1 L22: Represent and solve two-step word problems using the properties of multiplication.</p> <p>M1 L23: Represent and solve two-step word problems using drawings and equations.</p> <p>M3 L1: Organize, count, and represent a collection of objects.</p> <p>M3 L14: Apply strategies and identify patterns to multiply with units of 9.</p> <p>M3 L17: Identify and complete patterns with input-output tables.</p> <p>M3 L24: Organize, count, and represent a collection of objects.</p> <p>M6 L26: Fluently multiply and divide within 100 and add and subtract within 1,000.</p>

Algebraic Reasoning: Operations

3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.OA.D.8</p> <p>Solve two-step problems in authentic contexts that use addition, subtraction, multiplication, and division in equations with a letter standing for the unknown quantity.</p>	<p>M1 L22: Represent and solve two-step word problems using the properties of multiplication.</p> <p>M1 L23: Represent and solve two-step word problems using drawings and equations.</p> <p>M2 L25: Solve two-step word problems.</p> <p>M3 L19: Solve two-step word problems by using the four operations and assess the reasonableness of solutions.</p> <p>M3 L22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10.</p> <p>M3 L25: Apply multiplication and division concepts to complete a multi-part task.</p> <p>M6 L7: Count coins and create money word problems.</p>
<p>3.OA.D.9</p> <p>Identify and explain arithmetic patterns using properties of operations, including patterns in the addition table or multiplication table.</p>	<p>M3 L13: Count by units of 9 to multiply.</p> <p>M3 L14: Apply strategies and identify patterns to multiply with units of 9.</p> <p>M3 L15: Reason about and explain patterns of multiplication and division with units of 1 and 0.</p> <p>M3 L16: Identify patterns by using the multiplication table.</p> <p>M3 L17: Identify and complete patterns with input-output tables.</p> <p>M3 L23: Identify patterns and apply strategies to multiply with units of 11 and 12.</p>

Numeric Reasoning: Base Ten Arithmetic

3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.NBT.A.1</p> <p>Use place value understanding to round whole numbers within 1,000 to the nearest 10 or 100.</p>	<p>M2 L8: Read temperatures on a thermometer using number line concepts.</p> <p>M2 L9: Round two-digit numbers to the nearest ten on the vertical number line.</p> <p>M2 L10: Round two- and three-digit numbers to the nearest ten on the vertical number line.</p> <p>M2 L11: Round to the nearest hundred on the vertical number line.</p> <p>M2 L12: Estimate sums and differences by rounding.</p>
<p>3.NBT.A.2</p> <p>Fluently add and subtract within 1,000 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.</p>	<p>M2 L12: Estimate sums and differences by rounding.</p> <p>M2 L14: Use place value understanding to add and subtract like units.</p> <p>M2 L15: Use the associative property to make the next ten to add.</p> <p>M2 L16: Use compensation to add.</p> <p>M2 L17: Use place value understanding to subtract efficiently using take from a ten.</p> <p>M2 L18: Use place value understanding to subtract efficiently using take from a hundred.</p> <p>M2 L19: Use compensation to subtract.</p> <p>M2 L20: Add measurements using the standard algorithm to compose larger units once.</p> <p>M2 L21: Add measurements using the standard algorithm to compose larger units twice.</p> <p>M2 L22: Subtract measurements using the standard algorithm to decompose larger units once.</p> <p>M2 L23: Subtract measurements using the standard algorithm to decompose larger units twice.</p> <p>M2 L24: Subtract measurements using the standard algorithm to decompose larger units across two place values.</p> <p>M6 L26: Fluently multiply and divide within 100 and add and subtract within 1,000.</p>

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<p>3.NBT.A.3</p> <p>Find the product of one-digit whole numbers by multiples of 10 in the range 10–90, such as 9×80. Students use a range of strategies and algorithms based on place value and properties of operations.</p>	<p>M3 L20: Multiply by multiples of 10 by using the place value chart.</p> <p>M3 L21: Multiply by multiples of 10 by using place value strategies and the associative property.</p> <p>M3 L22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10.</p>

Numeric Reasoning: Fractions

3.NF.A Develop understanding of fractions as numbers.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.NF.A.1</p> <p>Understand the concept of a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction.</p>	<p>M5 L4: Partition a whole into fractional units pictorially and identify the unit fraction.</p> <p>M5 L5: Partition a whole into fractional units and write fractions in fraction form.</p> <p>M5 L6: Build non-unit fractions less than 1 from unit fractions concretely.</p> <p>M5 L7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction.</p> <p>M5 L8: Identify and represent a whole as two non-unit fractions.</p> <p>M5 L27: Apply fraction concepts to complete a multi-part task.</p>
<p>3.NF.A.2</p> <p>Understand a fraction as a number on the number line; Represent fractions on a number line diagram.</p>	<p>M5 L11: Locate fractions from 0 to 1 on a number line by using fraction tiles.</p> <p>M5 L12: Represent fractions from 0 to 1 on a number line.</p> <p>M5 L15: Identify fractions on a ruler as numbers on a number line.</p> <p>M5 L18: Compare fractions with like units by using a number line.</p> <p>M5 L26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals.</p> <p>M5 L27: Apply fraction concepts to complete a multi-part task.</p>

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<p>3.NF.A.3</p> <p>Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</p>	<p>M5 L9: Compare unit fractions by reasoning about their size concretely.</p> <p>M5 L10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams.</p> <p>M5 L13: Identify equivalent fractions from 0 to 1 with tape diagrams and on number lines.</p> <p>M5 L14: Recognize that equivalent fractions share the same location on a number line.</p> <p>M5 L16: Measure lengths and record data on a line plot.</p> <p>M5 L17: Represent fractions greater than 1 on a number line and identify fractions equivalent to whole numbers.</p> <p>M5 L18: Compare fractions with like units by using a number line.</p> <p>M5 L19: Compare fractions with unlike units but the same numerator by using number lines.</p> <p>M5 L20: Compare fractions with related units by using a number line.</p> <p>M5 L21: Compare various fractions by representing them on number lines.</p> <p>M5 L22: Identify fractions equivalent to whole numbers by using number lines.</p> <p>M5 L23: Reason to find fractions equivalent to whole numbers by using patterns and number lines.</p> <p>M5 L24: Generate equivalent fractions greater than 1 by using a number line.</p> <p>M5 L25: Express whole numbers as fractions with a denominator of 1.</p> <p>M5 L26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals.</p> <p>M5 L27: Apply fraction concepts to complete a multi-part task.</p>
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Geometric Reasoning and Measurement

3.GM.A Reason with shapes and their attributes.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.GM.A.1</p> <p>Understand that shapes in different categories may share attributes and that shared attributes can define a larger category.</p>	<p>M4 L1: Explore attributes of squares, rectangles, and trapezoids.</p> <p>M6 L8: Compare and classify quadrilaterals.</p> <p>M6 L9: Compare and classify other polygons.</p> <p>M6 L10: Draw polygons with specified attributes.</p> <p>M6 L11: Reason about composing polygons by using tetrominoes.</p> <p>M6 L12: Reason about composing polygons by using tangrams.</p>
<p>3.GM.A.2</p> <p>Partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.</p>	<p>M5 L1: Partition a whole into equal parts and name the fractional unit.</p> <p>M5 L2: Partition different wholes into fractional units concretely.</p> <p>M5 L3: Partition a whole into fractional units by folding fraction strips.</p> <p>M5 L4: Partition a whole into fractional units pictorially and identify the unit fraction.</p> <p>M5 L5: Partition a whole into fractional units and write fractions in fraction form.</p> <p>M5 L6: Build non-unit fractions less than 1 from unit fractions concretely.</p> <p>M5 L7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction.</p> <p>M5 L8: Identify and represent a whole as two non-unit fractions.</p> <p>M5 L9: Compare unit fractions by reasoning about their size concretely.</p> <p>M5 L10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams.</p>

Geometric Reasoning and Measurement

3.GM.B Solve problems involving measurement and estimation.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.GM.B.3</p> <p>Tell, write, and measure time to the nearest minute. Solve problems in authentic contexts that involve addition and subtraction of time intervals in minutes.</p>	<p>M6 L1: Relate skip-counting by fives on the clock to telling time on the number line.</p> <p>M6 L2: Count by fives and ones on the number line as a strategy for telling time to the nearest minute on the clock.</p> <p>M6 L3: Solve time word problems where the end time is unknown.</p> <p>M6 L4: Solve time word problems where the start time is unknown.</p> <p>M6 L5: Solve time word problems where the change in time is unknown.</p> <p>M6 L6: Solve time word problems and use time data to create a line plot.</p>
<p>3.GM.B.4</p> <p>Measure, estimate and solve problems in authentic contexts that involve liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).</p>	<p>M2 L1: Connect the composition of 1 kilogram to the composition of 1 thousand.</p> <p>M2 L2: Estimate the weight of familiar objects and read scales when weighing objects.</p> <p>M2 L3: Use all four operations to solve one-step word problems involving weight.</p> <p>M2 L4: Connect decomposition of 1 liter to the decomposition of 1 thousand.</p> <p>M2 L5: Estimate and measure liquid volume using a vertical number line and connect composition of 1 liter to composition of 1 thousand.</p> <p>M2 L6: Use all four operations to solve one-step word problems involving liquid volume.</p> <p>M2 L7: Solve one-step word problems using metric units.</p>

Geometric Reasoning and Measurement

3.GM.C Geometric measurement understand concepts of area and relate area to multiplication and to addition.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.GM.C.5</p> <p>Recognize area as an attribute of plane figures and understand concepts of area measurement presented in authentic contexts by tiling and counting unit squares.</p>	<p>M4 L2: Recognize area as an attribute of polygons.</p> <p>M4 L3: Tile polygons to find their areas.</p> <p>M4 L4: Compose rectangles to compare areas.</p> <p>M4 L5: Relate side lengths to the number of tiles on a side.</p> <p>M4 L16: Solve historical math problems involving area.</p>
<p>3.GM.C.6</p> <p>Measure areas by counting standard and non-standard unit squares.</p>	<p>M4 L2: Recognize areas as an attribute of polygons.</p> <p>M4 L3: Tile polygons to find their areas.</p> <p>M4 L4: Compose rectangles to compare areas.</p> <p>M4 L5: Relate side lengths to the number of tiles on a side.</p> <p>M4 L6: Tile rectangles with squares to make arrays and relate the side lengths to area.</p> <p>M4 L7: Draw rows and columns to complete a rectangular array and determine its area.</p> <p>M4 L16: Solve historical math problems involving area.</p> <p>M4 L18: Find the area of shapes and represent area data on a line plot.</p>
<p>3.GM.C.7</p> <p>Relate area to multiplication and addition. Use relevant representations to solve problems in authentic contexts.</p>	<p>M4 L6: Tile rectangles with squares to make arrays and relate the side lengths to area.</p> <p>M4 L7: Draw rows and columns to complete a rectangular array and determine its area.</p> <p>M4 L8: Determine the area of a rectangle by using side lengths.</p> <p>M4 L9: Multiply side lengths to find the area of a rectangle.</p> <p>M4 L11: Decompose to find the total area of a rectangle.</p> <p>M4 L12: Find all possible side lengths of rectangles with a given area.</p> <p>M4 L13: Apply area understanding to real-world situations.</p> <p>M4 L14: Reason to find the area of composite shapes by using grids.</p> <p>M4 L15: Reason to find the area of composite shapes by using rectangles.</p>

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.GM.C.7 <i>continued</i></p>	<p>M4 L17: Apply area concepts to a real-world context.</p> <p>M4 L18: Find the area of shapes and represent area data on a line plot.</p> <p>M4 L19: Apply area concepts to complete a multi-part task.</p>

Geometric Reasoning and Measurement

3.GM.D Geometric measurement recognize perimeter.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
<p>3.GM.D.8</p> <p>Solve problems involving authentic contexts for perimeters of polygons.</p>	<p>M6 L13: Decompose quadrilaterals to understand perimeter as the boundary of a shape.</p> <p>M6 L14: Measure side lengths in whole-number units to determine the perimeters of polygons.</p> <p>M6 L15: Recognize perimeter as an attribute of shapes and solve problems with unknown measurements.</p> <p>M6 L16: Solve problems to determine the perimeters of rectangles with the same area.</p> <p>M6 L17: Solve problems to determine the areas of rectangles with the same perimeter.</p> <p>M6 L18: Solve real-world problems involving perimeter and unknown measurements by using all four operations.</p> <p>M6 L19: Measure the perimeter of various circles to the nearest quarter inch by using string.</p>

Data Reasoning

3.DR.A Pose investigative questions and collect/consider data.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
3.DR.A.1 Generate questions to investigate situations within the classroom, school, or community. Collect or consider measurement data that can naturally answer questions by using information presented in a scaled picture and/or bar graph.	M5 L16: Measure lengths and record data on a line plot. M6 L20: Record measurement data in a line plot. M6 L21: Create and analyze a line plot for measurement data to the nearest half unit and quarter unit.

Data Reasoning

3.DR.B Analyze, represent, and interpret data.

Oregon Mathematics Standards	Aligned Components of <i>Eureka Math</i> ²
3.DR.B.2 Analyze measurement data with a scaled picture graph or a scaled bar graph to represent a data set with several categories. Interpret information presented to answer investigative questions.	M2 L13: Collect and represent data in a scaled bar graph and solve related problems. M6 L22: Generate categorical data and represent it by using a scaled picture graph. M6 L23: Solve problems by creating scaled picture graphs and scaled bar graphs.