Grade 3 | Georgia's K–12 Mathematics Standards Correlation to *Eureka Math*®

About *Eureka Math*

Created by Great Minds®, a mission-driven Public Benefit Corporation, *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

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Data

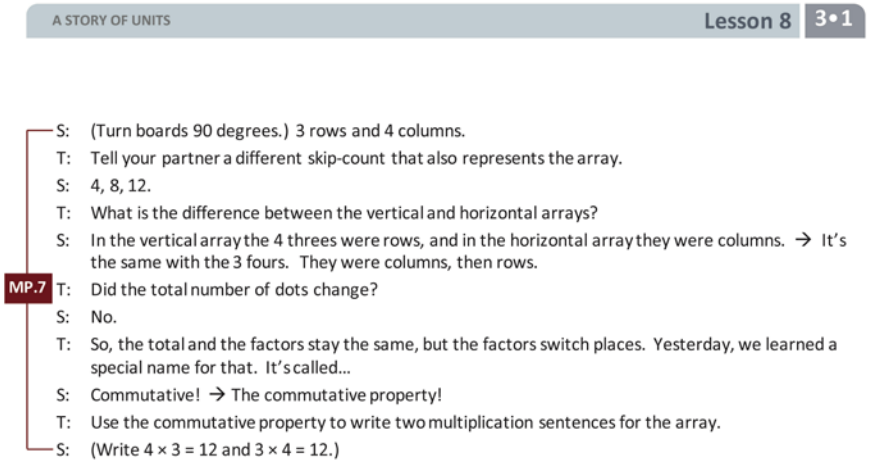
Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

Full Suite of Resources

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

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example: 
MP.2 Reason abstractly and quantitatively.	
MP.3 Construct viable arguments and critique the reasoning of others.	
MP.4 Model with mathematics.	
MP.5 Use appropriate tools strategically.	
MP.6 Attend to precision.	
MP.7 Look for and make use of structure.	
MP.8 Look for and express regularity in repeated reasoning.	

Mathematical Modeling Framework	Aligned Components of *Eureka Math*
MF.1 Explore and describe real-life, mathematical situations or problems.	Lessons in every module engage students in mathematical modeling.
MF.2 Gather information, make assumptions, and define variables related to the problem.	
MF.3 Create a model and arrive at a solution to explain the problem presented.	
MF.4 Analyze and revise models, as necessary.	
MF.5 Evaluate the model and interpret solutions generated from other models. Draw and validate conclusions.	

Framework for Statistical Reasoning	Aligned Components of *Eureka Math*
SR Create statistical investigative questions that can be answered using data. Collect, analyze, and interpret numerical and categorical data involving whole number values obtained from real situations to answer questions.	Lessons in Module 6 engage students in statistical reasoning. *Supplemental material is necessary to fully address the Framework for Statistical Reasoning.*
SR.1 Ask: Create a statistical investigative question that can be answered using data from authentic situations.	
SR.2 Collect: Determine strategies for collecting and organizing numerical data and categorical data involving whole number values to answer a statistical investigative question.	
SR.3 Analyze: Create pictographs, bar graphs, and dot plots with a variety of scales, using appropriate titles, labels, and units within the graphical display.	
SR.4 Interpret: Interpret categorical and numerical data to answer the statistical investigative question created.	

Numerical Reasoning—base ten numerals and place value up to 10,000, and rounding up to 1,000

3.NR.1 Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.NR.1.1 Read and write multi-digit whole numbers up to 10,000 using base-ten numerals and expanded form.	*Supplemental material is necessary to address this standard.*
3.NR.1.2 Use place value reasoning to compare multi-digit numbers up to 10,000, using >, =, and < symbols to record the results of comparisons.	*Supplemental material is necessary to address this standard.*
3.NR.1.3 Use place value understanding to round whole numbers up to 1,000 to the nearest 10 or 100.	G3 M2 Topic C: Rounding to the Nearest Ten and Hundred G3 M2 Lesson 17: Estimate sums by rounding and apply to solve measurement word problems. G3 M2 Lesson 20: Estimate differences by rounding and apply to solve measurement word problems. G3 M2 Lesson 21: Estimate sums and differences of measurements by rounding, and then solve mixed word problems. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

Patterning & Algebraic Reasoning—fluency, addition and subtraction within 10,000, multiplication and division within 100, equality, properties of operations

3.PAR.2 Use part-whole strategies to represent and solve real-life problems involving addition and subtraction with whole numbers within 10,000.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.PAR.2.1 Fluently add and subtract within 1,000 to solve problems.	G3 M2 Topic D: Two- and Three-Digit Measurement Addition Using the Standard Algorithm G3 M2 Topic E: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm G3 M3 Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. G3 M3 Lesson 21: Solve two-step word problems involving multiplying single-digit factors and multiples of 10. G3 M6 Lesson 1: Generate and organize data. G3 M6 Lesson 3: Create scaled bar graphs. G3 M6 Lesson 4: Solve one- and two-step problems involving graphs. G3 M6 Lesson 9: Analyze data to problem solve. G3 M7 Topic A: Solving Word Problems G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.PAR.2.2 Apply part-whole strategies, properties of operations and place value understanding, to solve problems involving addition and subtraction within 10,000. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions.	*Supplemental material is necessary to address this standard.*

Patterning & Algebraic Reasoning—fluency, addition and subtraction within 10,000, multiplication and division within 100, equality, properties of operations

3.PAR.3 Use part-whole strategies to solve real-life, mathematical problems involving multiplication and division with whole numbers within 100.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.PAR.3.1 Describe, extend, and create numeric patterns related to multiplication. Make predictions related to the patterns.	G3 M3 Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9. G3 M3 Lesson 2: Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ where n is the size of the unit. G3 M3 Lesson 4: Count by units of 6 to multiply and divide using number bonds to decompose. G3 M3 Lesson 5: Count by units of 7 to multiply and divide using number bonds to decompose. G3 M3 Lesson 13: Identify and use arithmetic patterns to multiply. G3 M3 Lesson 14: Identify and use arithmetic patterns to multiply. G3 M3 Lesson 16: Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division. G3 M3 Lesson 17: Identify patterns in multiplication and division facts using the multiplication table. G3 M3 Lesson 19: Multiply by multiples of 10 using the place value chart. G3 M3 Lesson 20: Use place value strategies and the associative property $n \times (m \times 10) = (n \times m) \times 10$ (where n and m are less than 10) to multiply by multiples of 10.
3.PAR.3.2 Represent single digit multiplication and division facts using a variety of strategies. Explain the relationship between multiplication and division.	G3 M1 Topic A: Multiplication and the Meaning of the Factors G3 M1 Topic B: Division as an Unknown Factor Problem G3 M1 Topic C: Multiplication Using Units of 2 and 3 G3 M1 Topic D: Division Using Units of 2 and 3 G3 M1 Lesson 14: Skip-count objects in models to build fluency with multiplication facts using units of 4. G3 M1 Lesson 17: Model the relationship between multiplication and division.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.PAR.3.2 ***continued***	G3 M3 Topic A: The Properties of Multiplication and Division G3 M3 Topic B: Multiplication and Division Using Units of 6 and 7 G3 M3 Lesson 10: Use the distributive property as a strategy to multiply and divide. G3 M3 Lesson 11: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Topic D: Multiplication and Division Using Units of 9 G3 M3 Lesson 16: Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division. G3 M3 Lesson 17: Identify patterns in multiplication and division facts using the multiplication table. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.PAR.3.3 Apply properties of operations (i.e., commutative property, associative property, distributive property) to multiply and divide within 100.	G3 M1 Topic C: Multiplication Using Units of 2 and 3 G3 M1 Lesson 15: Relate arrays to tape diagrams to model the commutative property of multiplication. G3 M1 Lesson 16: Use the distributive property as a strategy to find related multiplication facts. G3 M1 Lesson 18: Apply the distributive property to decompose units. G3 M1 Lesson 19: Apply the distributive property to decompose units. G3 M3 Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9. G3 M3 Lesson 2: Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ where n is the size of the unit. G3 M3 Lesson 5: Count by units of 7 to multiply and divide using number bonds to decompose. G3 M3 Lesson 6: Use the distributive property as a strategy to multiply and divide using units of 6 and 7. G3 M3 Lesson 8: Understand the function of parentheses and apply to solving problems. G3 M3 Lesson 9: Model the associative property as a strategy to multiply.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.PAR.3.3 ***continued***	G3 M3 Lesson 10: Use the distributive property as a strategy to multiply and divide. G3 M3 Lesson 12: Apply the distributive property and the fact $9 = 10 - 1$ as a strategy to multiply. G3 M3 Lesson 20: Use place value strategies and the associative property $n \times (m \times 10) = (n \times m) \times 10$ (where n and m are less than 10) to multiply by multiples of 10. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.PAR.3.4 Use the meaning of the equal sign to determine whether expressions involving addition, subtraction, and multiplication are equivalent.	G3 M3 Lesson 1: Study commutativity to find known facts of 6, 7, 8, and 9. G3 M3 Lesson 2: Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ where n is the size of the unit. G3 M3 Lesson 6: Use the distributive property as a strategy to multiply and divide using units of 6 and 7. G3 M3 Lesson 8: Understand the function of parentheses and apply to solving problems. G3 M3 Lesson 9: Model the associative property as a strategy to multiply. G3 M3 Lesson 10: Use the distributive property as a strategy to multiply and divide. G3 M3 Lesson 12: Apply the distributive property and the fact $9 = 10 - 1$ as a strategy to multiply.
3.PAR.3.5 Use place value reasoning and properties of operations to multiply one-digit whole numbers by multiples of 10, in the range 10–90.	G3 M3 Topic F: Multiplication of Single-Digit Factors and Multiples of 10

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.PAR.3.6 Solve practical, relevant problems involving multiplication and division within 100 using part-whole strategies, visual representations, and/or concrete models.	G3 M1 Topic D: Division Using Units of 2 and 3 G3 M1 Lesson 20: Solve two-step word problems involving multiplication and division and assess the reasonableness of answers. G3 M1 Lesson 21: Solve two-step word problems involving all four operations and assess the reasonableness of answers. G3 M3 Lesson 7: Interpret the unknown in multiplication and division to model and solve problems using units of 6 and 7. G3 M3 Lesson 11: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 15: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills.
3.PAR.3.7 Use multiplication and division to solve problems involving whole numbers to 100. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions.	G3 M3 Lesson 11: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 15: Interpret the unknown in multiplication and division to model and solve problems. G3 M3 Lesson 18: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. G3 M3 Lesson 21: Solve two-step word problems involving multiplying single-digit factors and multiples of 10. G3 M7 Topic A: Solving Word Problems

Numerical Reasoning—unit fractions, equivalent fractions, fractions greater than 1

3.NR.4 Represent fractions with denominators of 2, 3, 4, 6 and 8 in multiple ways within a framework using visual models.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.NR.4.1 Describe a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction. Use parts of a whole, parts of a set, points on a number line, distances on a number line and area models.	G3 M5 Topic B: Unit Fractions and their Relation to the Whole G3 M5 Lesson 12: Specify the corresponding whole when presented with one equal part. G3 M5 Lesson 30: Partition various wholes precisely into equal parts using a number line method. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills. *Supplemental material is necessary to address parts of a set.*
3.NR.4.2 Compare two unit fractions by flexibly using a variety of tools and strategies.	G3 M5 Lesson 10: Compare unit fractions by reasoning about their size using fraction strips. G3 M5 Lesson 11: Compare unit fractions with different-sized models representing the whole.
3.NR.4.3 Represent fractions, including fractions greater than one, in multiple ways.	G3 M5 Topic A: Partitioning a Whole into Equal Parts G3 M5 Lesson 14: Place fractions on a number line with endpoints 0 and 1. G3 M5 Lesson 15: Place any fraction on a number line with endpoints 0 and 1. G3 M5 Lesson 16: Place whole number fractions and fractions between whole numbers on the number line. G3 M5 Lesson 17: Practice placing various fractions on the number line. G3 M5 Lesson 18: Compare fractions and whole numbers on the number line by reasoning about their distance from 0. G3 M5 Lesson 21: Recognize and show that equivalent fractions refer to the same point on the number line. G3 M5 Lesson 23: Generate simple equivalent fractions by using visual fraction models and the number line.

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3.NR.4.3 ***continued***	G3 M5 Lesson 24: Express whole numbers as fractions and recognize equivalence with different units. G3 M5 Lesson 25: Express whole number fractions on the number line when the unit interval is 1. G3 M5 Lesson 26: Decompose whole number fractions greater than 1 using whole number equivalence with various models. G3 M7 Lesson 31: Explore and create unconventional representations of one-half. G3 M7 Lesson 32: Explore and create unconventional representations of one-half. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills.
3.NR.4.4 Recognize and generate simple equivalent fractions.	G3 M5 Topic E: Equivalent Fractions

Measurement & Data Reasoning—elapsed time, liquid volume, mass, lengths in half and fourth of an inch, data

3.MDR.5 Solve real-life, mathematical problems involving length, liquid volume, mass, and time.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.MDR.5.1 Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.	G3 M6 Topic A: Generate and Analyze Categorical Data G3 M6 Topic B: Generate and Analyze Measurement Data G3 M7 Lesson 19: Use a line plot to record the number of rectangles constructed from a given number of unit squares. G3 M7 Lesson 22: Use a line plot to record the number of rectangles constructed in Lessons 20 and 21. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

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3.MDR.5.2 Tell and write time to the nearest minute and estimate time to the nearest fifteen minutes (quarter hour) from the analysis of an analog clock.	G3 M2 Topic A: Time Measurement and Problem Solving G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.MDR.5.3 Solve meaningful problems involving elapsed time, including intervals of time to the hour, half hour, and quarter hour where the times presented are only on the hour, half hour, or quarter hour within a.m. or p.m. only.	G3 M2 Topic A: Time Measurement and Problem Solving G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.MDR.5.4 Use rulers to measure lengths in halves and fourths (quarters) of an inch and a whole inch.	G3 M6 Lesson 5: Create ruler with 1-inch, $\frac{1}{2}$-inch, and $\frac{1}{4}$-inch intervals, and generate measurement data. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.MDR.5.5 Estimate and measure liquid volumes, lengths and masses of objects using customary units. Solve problems involving mass, length, and volume given in the same unit, and reason about the relative sizes of measurement units within the customary system.	*Supplemental material is necessary to address this standard.*

Geometric & Spatial Reasoning—polygons, parallel line segments, perpendicular line segments, right angles, lines of symmetry, area, perimeter

3.GSR.6 Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.GSR.6.1 Identify perpendicular line segments, parallel line segments, and right angles, identify these in polygons, and solve problems involving parallel line segments, perpendicular line segments, and right angles.	G3 M7 Lesson 4: Compare and classify quadrilaterals. G3 M7 Lesson 5: Compare and classify other polygons. G3 M7 Lesson 6: Draw polygons with specified attributes to solve problems. G3 M7 Lesson 8: Create a tangram puzzle and observe relationships among the shapes. G4 M4 Lesson 3: Identify, define, and draw perpendicular lines
3.GSR.6.2 Classify, compare, and contrast polygons, with a focus on quadrilaterals, based on properties. Analyze specific 3-dimensional figures to identify and describe quadrilaterals as faces of these figures.	G3 M7 Topic B: Attributes of Two-Dimensional Figures G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills. *Supplemental material is necessary to address 3-dimensional figures.*
3.GSR.6.3 Identify lines of symmetry in polygons.	G4 M4 Lesson 12: Recognize lines of symmetry for given two-dimensional figures. Identify line-symmetric figures, and draw lines of symmetry.

Geometric & Spatial Reasoning—polygons, parallel line segments, perpendicular line segments, right angles, lines of symmetry, area, perimeter

3.GSR.7 Identify area as a measurable attribute of rectangles and determine the area of a rectangle presented in real-life, mathematical problems.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.GSR.7.1 Investigate area by covering the space of rectangles presented in realistic situations using multiple copies of the same unit, with no gaps or overlaps, and determine the total area (total number of units that covered the space).	G3 M4 Topic A: Foundations for Understanding Area
3.GSR.7.2 Determine the area of rectangles (or shapes composed of rectangles) presented in relevant problems by tiling and counting.	G3 M4 Lesson 2: Decompose and recompose shapes to compare areas. G3 M4 Lesson 3: Model tiling with centimeter and inch unit squares as a strategy to measure area. G3 M4 Lesson 4: Relate side lengths with the number of tiles on a side. G3 M4 Lesson 5: Form rectangles by tiling with unit squares to make arrays. G3 M4 Lesson 6: Draw rows and columns to determine the area of a rectangle given an incomplete array. G3 M4 Lesson 7: Interpret area models to form rectangular arrays.
3.GSR.7.3 Discover and explain how area can be found by multiplying the dimensions of a rectangle.	G3 M4 Topic B: Concepts of Area Measurement G3 M4 Topic C: Arithmetic Properties Using Area Models G3 M4 Lesson 12: Solve word problems involving area. G3 M4 Lesson 14: Find areas by decomposing into rectangles or completing composite figures to form rectangles. G3 M4 Lesson 15: Apply knowledge of area to determine areas of rooms in a given floor plan. G3 M4 Lesson 16: Apply knowledge of area to determine areas of rooms in a given floor plan. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

Geometric & Spatial Reasoning—polygons, parallel line segments, perpendicular line segments, right angles, lines of symmetry, area, perimeter

3.GSR.8 Determine the perimeter of a polygon presented in real-life, mathematical problems.

Georgia's K–12 Mathematics Standards	Aligned Components of *Eureka Math*
3.GSR.8.1 Determine the perimeter of a polygon and explain that the perimeter represents the distance around a polygon. Solve problems involving perimeters of polygons.	G3 M7 Topic C: Problem Solving with Perimeter G3 M7 Lesson 23: Solve a variety of word problems with perimeter. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
3.GSR.8.2 Investigate and describe how rectangles with the same perimeter can have different areas or how rectangles with the same area can have different perimeters.	G3 M7 Topic D: Recording Perimeter and Area Data on Line Plots G3 M7 Lesson 24: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced. G3 M7 Lesson 25: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced. G3 M7 Lesson 26: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced. G3 M7 Lesson 27: Use rectangles to draw a robot with specified perimeter measurements, and reason about the different areas that may be produced. G3 M7 Lesson 28: Solve a variety of word problems involving area and perimeter using all four operations. G3 M7 Lesson 29: Solve a variety of word problems involving area and perimeter using all four operations. G3 M7 Lesson 30: Share and critique peer strategies for problem solving. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.