EUREKA MATH™

GREAT MINDS

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

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year. |
| **ALIGNED** | *Eureka Math* is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies. |
| **DATA** | Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data. |
| **FULL SUITE OF RESOURCES** | As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

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

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

Missouri Learning Standards: Mathematics Correlation to *Eureka Math*™

GRADE 3 MATHEMATICS

The majority of the Grade 3 Missouri Learning Standards: Mathematics are fully covered by the Grade 3 *Eureka* Math curriculum. The primary area where the Grade 3 Missouri Learning Standards: Mathematics and Grade 3 *Eureka Math* do not align is in the domain of Number Sense and Operations in Base Ten. One standard from this domain will require the use of *Eureka Math* content from another grade level. A detailed analysis of alignment is provided in the table below.

INDICATORS

Green indicates that the Missouri standard is fully addressed in *Eureka Math*.

Yellow indicates that the Missouri standard may not be completely addressed in *Eureka Math*.

Red indicates that the Missouri standard is not addressed in *Eureka Math*.

Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Missouri standards and in *Eureka Math*.

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Number Sense and Operations in Base Ten	**Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.**	
	3.NBT.A.1 Round whole numbers 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 Topic E: Two- and Three-Digit Measurement Subtraction Using the Standard Algorithm
	3.NBT.A.2 Read, write and identify whole numbers within 100,000 using base ten numerals, number names and expanded form.	G4 M1 Lesson 4: Read and write multi-digit numbers using base ten numerals, number names, and expanded form.

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.NBT.A.3 Demonstrate fluency with addition and subtraction within 1,000.	G3 M2 Lesson 4: Solve word problems involving time intervals within 1 hour by counting backward and forward using the number line and clock. G3 M2 Lesson 5: Solve word problems involving time intervals within 1 hour by adding and subtracting on the number line. G3 M2 Lesson 8: Solve one-step word problems involving metric weights within 100 and estimate to reason about solutions. G3 M2 Lesson 11: Solve mixed word problems involving all four operations with grams, kilograms, liters, and milliliters given in the same units. 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
	3.NBT.A.4 Multiply whole numbers by multiples of 10 in the range 10–90.	G3 M3 Topic F: Multiplication of Single-Digit Factors and Multiples of 10

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Number Sense and Operations in Fractions	**Cluster: Develop understanding of fractions as numbers.**	
	3.NF.A.1 Understand a unit fraction as the quantity formed by one part when a whole is partitioned into equal parts.	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.
	3.NF.A.2 Understand that when a whole is partitioned equally, a fraction can be used to represent a portion of the whole.	
	a. Describe the numerator as representing the number of pieces being considered.	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.
	b. Describe the denominator as the number of pieces that make the whole.	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.

Domain	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	3.NF.A.3 Represent fractions on a number line.		
	a. Understand the whole is the interval from 0 to 1.		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 30: Partition various wholes precisely into equal parts using a number line method.
	b. Understand the whole is partitioned into equal parts.		G3 M5 Topic D: Fractions on the Number Line G3 M5 Lesson 30: Partition various wholes precisely into equal parts using a number line method.
	c. Understand a fraction represents the endpoint of the length a given number of partitions from 0.		G3 M5 Topic D: Fractions on the Number Line
	3.NF.A.4 Demonstrate that two fractions are equivalent if they are the same size, or the same point on a number line.		G3 M5 Topic E: Equivalent Fractions
	3.NF.A.5 Recognize and generate equivalent fractions using visual models, and justify why the fractions are equivalent.		G3 M5 Topic E: Equivalent Fractions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.NF.A.6 Compare two fractions with the same numerator or denominator using the symbols >, = or <, and justify the solution.	G3 M5 Topic C: Comparing Unit Fractions and Specifying the Whole G3 M5 Lesson 18: Compare fractions and whole numbers on the number line by reasoning about their distance from 0. G3 M5 Lesson 19: Understand distance and position on the number line as strategies for comparing fractions. G3 M5 Topic F: Comparison, Order, and Size of Fractions
	3.NF.A.7 Explain why fraction comparisons are only valid when the two fractions refer to the same whole.	G3 M5 Topic C: Comparing Unit Fractions and Specifying the Whole
Relationships and Algebraic Thinking	**Cluster: Represent and solve problems involving multiplication and division.**	
	3.RA.A.1 Interpret products of whole numbers.	G3 M1 Topic A: Multiplication and the Meaning of the Factors G3 M1 Topic C: Multiplication Using Units of 2 and 3
	3.RA.A.2 Interpret quotients of whole numbers.	G3 M1 Topic B: Division as an Unknown Factor Problem G3 M1 Topic D: Division Using Units of 2 and 3 G3 M1 Lesson 17: Model the relationship between multiplication and division.
	3.RA.A.3 Describe in words or drawings a problem that illustrates a multiplication or division situation.	G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.RA.A.4 Use multiplication and division within 100 to solve problems.	G3 M1 Topic D: Division Using Units of 2 and 3 G3 M1 Topic F: Distributive Property and Problem Solving Using Units of 2–5 and 10 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.

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.RA.A.5 Determine the unknown number in a multiplication or division equation relating three whole numbers.	G3 M1 Topic D: Division Using Units of 2 and 3 G3 M1 Lesson 17: Model the relationship between multiplication and division. G3 M3 Lesson 3: Multiply and divide with familiar facts using a letter to represent the unknown. G3 M3 Topic B: Multiplication and Division 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.
	Cluster: Understand properties of multiplication and the relationship between multiplication and division.	
	3.RA.B.6 Apply properties of operations as strategies to multiply and divide.	G3 M1: Properties of Multiplication and Division and Solving Problems with Units of 2−5 and 10 G3 M3: Multiplication and Division with Units of 0, 1, 6−9, and Multiples of 10

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Multiply and divide within 100.	
	3.RA.C.7 Multiply and divide with numbers and results within 100 using strategies such as the relationship between multiplication and division or properties of operations. Know all products of two one-digit numbers.	G3 M1 Topic E: Multiplication and Division Using Units of 4 G3 M3: Multiplication and Division with Units of 0, 1, 6−9, and Multiples of 10
	3.RA.C.8 Demonstrate fluency with products within 100.	G3 M1 Topic E: Multiplication and Division Using Units of 4 G3 M3: Multiplication and Division with Units of 0, 1, 6−9, and Multiples of 10
	Cluster: Use the four operations to solve word problems.	
	3.RA.D.9 Write and solve two-step problems involving variables using any of the four operations.	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

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.RA.D.10 Interpret the reasonableness of answers using mental computation and estimation strategies including rounding.	G3 M1 Topic F: Distributive Property and Problem Solving Using Units of 2–5 and 10 G3 M2 Lesson 17: Estimate sums by rounding and applying to solve measurement word problems. 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 M7 Lessons 28–29: Solve a variety of problems involving area and perimeter using all four operations.
	Cluster: Identify and explain arithmetic patterns.	
	3.RA.E.11 Identify arithmetic patterns and explain the patterns using properties of operations.	G3 M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10
Geometry and Measurement	**Cluster: Reason with shapes and their attributes.**	
	3.GM.A.1 Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category.	G3 M7 Topic B: Attributes of Two-Dimensional Figures
	3.GM.A.2 Distinguish rhombuses and rectangles as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to these subcategories.	G3 M7 Topic B: Attributes of Two-Dimensional Figures

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	3.GM.A.3 Partition shapes into parts with equal areas, and express the area of each part as a unit fraction of the whole.		G3 M5 Topic A: Partitioning a Whole into Equal Parts
	Cluster: Solve problems involving the measurement of time, liquid volumes and weights of objects.		
	3.GM.B.4 Tell and write time to the nearest minute.		G3 M2 Topic A: Time Measurement and Problem Solving
	3.GM.B.5 Estimate time intervals in minutes.		G3 M2 Topic A: Time Measurement and Problem Solving
	3.GM.B.6 Solve problems involving addition and subtraction of minutes.		G3 M2 Lesson 5: Solve word problems involving time intervals within 1 hour by adding and subtracting on the number line.
	3.GM.B.7 Measure or estimate length, liquid volume and weight of objects.		G3 M2 Topic B: Measuring Weight and Liquid Volume in Metric Units G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line. G3 M2 Lesson 21: Estimate sums and differences of measurements by rounding, and then solve mixed word problems.

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.GM.B.8 Use the four operations to solve problems involving lengths, liquid volumes or weights given in the same units.	G3 M2 Topic B: Measuring Weight and Liquid Volume in Metric Units G3 M2 Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line. G3 M2 Lesson 21: Estimate sums and differences of measurements by rounding, and then solve mixed word problems.
	Cluster: Understand concepts of area.	
	3.GM.C.9 Calculate area by using unit squares to cover a plane figure with no gaps or overlaps.	G3 M4 Topic A: Foundations for Understanding Area G3 M4 Lesson 6: Draw rows and columns to determine the area of a rectangle given an incomplete array.
	3.GM.C.10 Label area measurements with squared units.	G3 M4: Multiplication and Area
	3.GM.C.11 Demonstrate that tiling a rectangle to find the area and multiplying the side lengths result in the same value.	G3 M4: Multiplication and Area

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	3.GM.C.12 Multiply whole-number side lengths to solve problems involving the area of rectangles.	G3 M4 Lesson 8: Find the area of a rectangle through multiplication of the side lengths. G3 M4 Lesson 11: Demonstrate the possible whole number side lengths of rectangles with areas of 24, 36, 48, or 72 square units using the associative property. G3 M4 Topic D: Applications of Area Using Side Lengths of Figures
	3.GM.C.13 Find rectangular arrangements that can be formed for a given area.	G3 M4: Multiplication and Area
	3.GM.C.14 Decompose a rectangle into smaller rectangles to find the area of the original rectangle.	G3 M4: Multiplication and Area
Cluster: Understand concepts of perimeter.		
	3.GM.D.15 Solve problems involving perimeters of polygons.	G3 M7: Geometry and Measurement Word Problems
	3.GM.D.16 Understand that rectangles can have equal perimeters but different areas, or rectangles can have equal areas but different perimeters.	G3 M7: Geometry and Measurement Word Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Data and Statistics	**Cluster: Represent and analyze data.**	
	3.DS.A.1 Create frequency tables, scaled picture graphs and bar graphs to represent a data set with several categories.	G3 M6 Topic A: Generate and Analyze Categorical Data G3 M6 Lesson 5: Create ruler with 1-inch, 1/2-inch, and 1/4-inch intervals, and generate measurement data. G3 M6 Lesson 9: Analyze data to problem solve.
	3.DS.A.2 Solve one- and two-step problems using information presented in bar and/or picture graphs.	G3 M6 Lesson 4: Solve one- and two-step problems involving graphs. G3 M6 Lesson 9: Analyze data to problem solve.
	3.DS.A.3 Create a line plot to represent 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.
	3.DS.A.4 Use data shown in a line plot to answer questions.	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.