Grade 3 | West Virginia College- and Career-Readiness Standards for Mathematics 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

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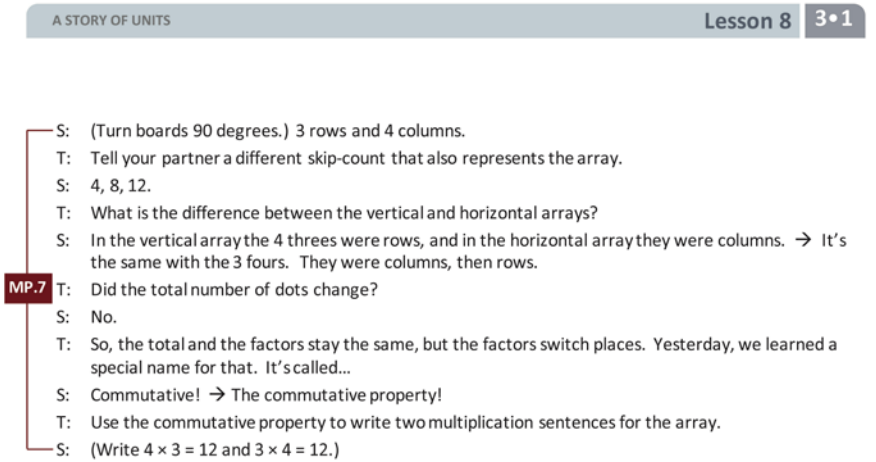
Mathematical Habits of Mind	Aligned Components of *Eureka Math*
MHM.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example: 
MHM.2 Reason abstractly and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

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Operations and Algebraic Thinking

Represent and solve problems involving multiplication and division.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each (e.g., describe context in which a total number of objects can be expressed as 5×7).	G3 M1 Topic A: Multiplication and the Meaning of the Factors G3 M1 Topic C: Multiplication Using Units of 2 and 3 G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
M.3.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each (e.g., describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$).	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. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	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.
M.3.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers (e.g., determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = ? \div 3$, $6 \times 6 = ?$).	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 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 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 M7 Lesson 33: Solidify fluency with Grade 3 skills.

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Operations and Algebraic Thinking

Understand properties of multiplication and the relationship between multiplication and division.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.5 Apply properties of operations as strategies to multiply and divide (e.g., if $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known: Commutative Property of Multiplication; $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$: Associative Property of Multiplication; knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$: Distributive Property).	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. 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.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.6 Understand division as an unknown-factor problem (e.g., find $32 \div 8$ by finding the number that makes 32 when multiplied by 8).	G3 M1 Lesson 5: Understand the meaning of the unknown as the number of groups in division. G3 M1 Lesson 6: Interpret the unknown in division using the array model. 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 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.

Operations and Algebraic Thinking

Multiply and divide within 100.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.7 Fluently (efficiently, flexibly, and accurately) multiply and divide within 100 using strategies such as the relationship between multiplication and division and the properties of operations. By the end of Grade 3, know the multiplication table (facts) within 100 (0s–10s) efficiently.	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. 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 12: Apply the distributive property and the fact $9 = 10 - 1$ as a strategy to multiply. 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 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

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Operations and Algebraic Thinking

Solve problems involving the four operations and identify and explain patterns in arithmetic.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.8 Solve two-step word problems using the four operations, represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	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
M.3.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain those using properties of operations (e.g., observe that 4 times a number is always even and explain why 4 times a number can be decomposed into two equal addends).	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 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.

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Number and Operations in Base Ten

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

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.10 Read and write numbers to 10,000 using standard form, word form, and expanded form.	*Supplemental material is necessary to address this standard.*
M.3.11 Compare two four-digit numbers based on meanings of the thousands, hundreds, tens, and ones digits using >, = and < symbols to record the results of the comparisons. Order numbers based on place value.	*Supplemental material is necessary to address this standard.*
M.3.12 Use place value understanding to 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 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.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.13 Fluently (efficiently, flexibly, and accurately) add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	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 G3 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
M.3.14 Multiply one-digit whole numbers by multiples of 10 in the range $10–90$ (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.	G3 M3 Topic F: Multiplication of Single-Digit Factors and Multiples of 10

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Number and Operations—Fractions

Develop understanding of fractions as numbers.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.15 Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$.	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 M7 Lesson 33: Solidify fluency with Grade 3 skills. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
M.3.16 Understand a fraction as a number on the number line and represent fractions on a number line diagram.	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 18: Compare fractions and whole numbers on the number line by reasoning about their distance from 0. G3 M5 Lesson 30: Partition various wholes precisely into equal parts using a number line method.
M.3.16.a Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line (e.g., given that b parts is 4 parts, then $\frac{1}{b}$ represents $\frac{1}{4}$; students partition the number line into fourths and locate $\frac{1}{b}$ on the number line).	G3 M5 Lesson 30: Partition various wholes precisely into equal parts using a number line method.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.16.b Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line (e.g., given that $\frac{a}{b}$ represents $\frac{3}{4}$ or $\frac{6}{4}$, students partition the number line into fourths and represent these fractions accurately on the same number line; students extend the number line to include the number of wholes required for the given fractions).	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.
M.3.17 Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.	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. G3 M5 Lesson 13: Identify a shaded fractional part in different ways depending on the designation of the whole. G3 M5 Topic D: Fractions on the Number Line G3 M5 Topic E: Equivalent Fractions G3 M5 Lesson 28: Compare fractions with the same numerator pictorially. G3 M5 Lesson 29: Compare fractions with the same numerator using $<$, $>$, or $=$, and use a model to reason about their size.
M.3.17.a Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line.	G3 M5 Topic E: Equivalent Fractions

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.17.b Recognize and generate simple equivalent fractions (e.g., $\frac{1}{2}=\frac{2}{4}, \frac{4}{6}=\frac{2}{3}$). Explain why the fractions are equivalent (e.g., by using a visual fraction model).	G3 M5 Lesson 21: Recognize and show that equivalent fractions refer to the same point on the number line. G3 M5 Lesson 22: Generate simple equivalent fractions by using visual fraction models and the number line. G3 M5 Lesson 23: Generate simple equivalent fractions by using visual fraction models and the number line. G3 M5 Lesson 24: Express whole numbers as fractions and recognize equivalence with different units. G3 M5 Lesson 27: Explain equivalence by manipulating units and reasoning about their size.
M.3.17.c Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers (e.g., express 3 in the form $3=\frac{3}{1}$; recognize that $\frac{6}{1}=6$; locate $\frac{4}{4}$ and 1 at the same point of a number line diagram).	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 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. 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 33: Solidify fluency with Grade 3 skills.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.17.d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$ or $<$ and justify the conclusions (e.g., by using a visual fraction model).	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. G3 M5 Lesson 13: Identify a shaded fractional part in different ways depending on the designation of 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 Lesson 28: Compare fractions with the same numerator pictorially. G3 M5 Lesson 29: Compare fractions with the same numerator using $<$, $>$, or $=$, and use a model to reason about their size. G3 M7 Lesson 33: Solidify fluency with Grade 3 skills.

Measurement and Data

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.18 Tell and write time to the nearest minute, measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes (e.g., by representing the problem on a number line diagram).	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.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.19 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg) and liters (l). Add, subtract, multiply or divide to solve one-step word problems involving masses or volumes that are given in the same units (e.g., by using drawings, such as a beaker with a measurement scale) to represent the problem.	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. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

Measurement and Data

Represent and interpret data.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.20 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs (e.g., draw a bar graph in which each square might represent 5 pets).	G3 M6 Topic A: Generate and Analyze Categorical Data G3 M6 Lesson 9: Analyze data to problem solve. G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.21 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves or quarters.	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.

Measurement and Data

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.22 Recognize area as an attribute of plane figures and understand concepts of area measurement.	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.
M.3.22.a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area and can be used to measure area.	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.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.22.b A plane figure which can be covered without gaps or overlaps by b unit squares is said to have an area of b square units.	G3 M4 Topic A: Foundations for Understanding Area G3 M4 Lesson 5: Form rectangles by tiling with unit squares to make arrays.
M.3.23 Measure areas by counting unit squares (square cm, square m, square in, square ft. and improvised units).	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.
M.3.24 Relate area to the operations of multiplication and addition.	G3 M4 Topic B: Concepts of Area Measurement G3 M4 Topic C: Arithmetic Properties Using Area Models G3 M4 Topic D: Applications of Area Using Side Lengths of Figures
M.3.24.a Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.	G3 M4 Topic B: Concepts of Area Measurement G3 M4 Lesson 9: Analyze different rectangles and reason about their area. G3 M4 Lesson 10: Apply the distributive property as a strategy to find the total area of a large rectangle by adding two products.

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West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.24.b Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.	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 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.
M.3.24.c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	G3 M4 Lesson 9: Analyze different rectangles and reason about their area. G3 M4 Lesson 10: Apply the distributive property as a strategy to find the total area of a large rectangle by adding two products. G3 M4 Lesson 12: Solve word problems involving area.
M.3.24.d Recognize area as additive and find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.	G3 M4 Topic D: Applications of Area Using Side Lengths of Figures

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Measurement and Data

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.25 Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	G3 M7 Topic C: Problem Solving with Perimeter G3 M7 Topic D: Recording Perimeter and Area Data on Line Plots G3 M7 Topic E: Problem Solving with Perimeter and Area G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.

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Geometry

Reason with shapes and their attributes.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of *Eureka Math*
M.3.26 Understand that shapes in distinct categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides) and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	G3 M7 Topic B: Attributes of Two-Dimensional Figures G3 M7 Lesson 34: Create resource booklets to support fluency with Grade 3 skills.
M.3.27 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ or the area of the shape.	G3 M5 Topic A: Partitioning a Whole into Equal Parts 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.

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