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

GRADE 2 MATHEMATICS

The majority of the Grade 2 Mathematics Standards of Learning for Virginia Public Schools are fully covered by the Grade 2 *Eureka Math* curriculum. The areas where the Grade 2 Mathematics Standards of Learning for Virginia Public Schools and Grade 2 *Eureka Math* do not align will require the use of *Eureka Math* content from other grade levels or supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, *Eureka Math* can ensure students are successful in achieving the proficiencies of the Mathematics Standards of Learning for Virginia Public Schools while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

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

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

Red indicates that the Virginia 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 Virginia standards and in *Eureka Math*.

Mathematical Process Goals	Aligned Components of *Eureka Math*
Mathematical Problem Solving Students will apply mathematical concepts and skills and the relationships among them to solve problem situations of varying complexities. Students also will recognize and create problems from real-world data and situations within and outside mathematics and then apply appropriate strategies to determine acceptable solutions. To accomplish this goal, students will need to develop a repertoire of skills and strategies for solving a variety of problem types. A major goal of the mathematics program is to help students apply mathematics concepts and skills to become mathematical problem solvers.	This process goal is analogous to the CCSSM Standards for Mathematical Practice 1 and 2, which are specifically addressed in the following modules: G2 M1: Sums and Differences to 100 G2 M2: Addition and Subtraction of Length Units G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000 G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M7: Problem Solving with Length, Money, and Data G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

Mathematical Process Goals	Aligned Components of *Eureka Math*
Mathematical Communication Students will communicate thinking and reasoning using the language of mathematics, including specialized vocabulary and symbolic notation, to express mathematical ideas with precision. Representing, discussing, justifying, conjecturing, reading, writing, presenting, and listening to mathematics will help students to clarify their thinking and deepen their understanding of the mathematics being studied. Mathematical communication becomes visible where learning involves participation in mathematical discussions.	This process goal is analogous to the CCSSM Standards for Mathematical Practice 3 and 6, which are specifically addressed in the following modules: G2 M1: Sums and Differences to 100 G2 M2: Addition and Subtraction of Length Units G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000 G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100 G2 M6: Foundations of Multiplication and Division G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

Mathematical Process Goals	Aligned Components of *Eureka Math*
Mathematical Reasoning Students will recognize reasoning and proof as fundamental aspects of mathematics. Students will learn and apply inductive and deductive reasoning skills to make, test, and evaluate mathematical statements and to justify steps in mathematical procedures. Students will use logical reasoning to analyze an argument and to determine whether conclusions are valid. In addition, students will use number sense to apply proportional and spatial reasoning and to reason from a variety of representations.	This process goal is analogous to the CCSSM Standards for Mathematical Practice 2 and 8, which are specifically addressed in the following modules: G2 M1: Sums and Differences to 100 G2 M2: Addition and Subtraction of Length Units G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000 G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100 G2 M6: Foundations of Multiplication and Division G2 M7: Problem Solving with Length, Money, and Data

Mathematical Process Goals	Aligned Components of *Eureka Math*
Mathematical Connections Students will build upon prior knowledge to relate concepts and procedures from different topics within mathematics and see mathematics as an integrated field of study. Through the practical application of content and process skills, students will make connections among different areas of mathematics and between mathematics and other disciplines, and to real-world contexts. Science and mathematics teachers and curriculum writers are encouraged to develop mathematics and science curricula that support, apply, and reinforce each other.	This process goal is analogous to the CCSSM Standards for Mathematical Practice 4 and 5, which are specifically addressed in the following modules: G2 M1: Sums and Differences to 100 G2 M2: Addition and Subtraction of Length Units G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M6: Foundations of Multiplication and Division G2 M7: Problem Solving with Length, Money, and Data
Mathematical Representations Students will represent and describe mathematical ideas, generalizations, and relationships using a variety of methods. Students will understand that representations of mathematical ideas are an essential part of learning, doing, and communicating mathematics. Students should make connections among different representations—physical, visual, symbolic, verbal, and contextual—and recognize that representation is both a process and a product.	This process goal is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules: G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M6: Foundations of Multiplication and Division G2 M7: Problem Solving with Length, Money, and Data

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
Number and Number Sense	**2.1** The student will		
	a. read, write, and identify the place and value of each digit in a three-digit numeral, with and without models;		G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000
	b. identify the number that is 10 more, 10 less, 100 more, and 100 less than a given number up to 999;		G2 M3 Topic G: Finding 1, 10, and 100 More or Less than a Number G2 M4 Topic A: Sums and Differences Within 100 G2 M4 Lesson 17: Use mental strategies to relate compositions of 10 tens as 1 hundred to 10 ones as 1 ten. G2 M5 Topic A: Strategies for Adding and Subtracting Within 1,000
	c. compare and order whole numbers between 0 and 999; and		G2 M3 Topic F: Comparing Two Three-Digit Numbers
	d. round two-digit numbers to the nearest ten.		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

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	2.2 The student will		
	a. count forward by twos, fives, and tens to 120, starting at various multiples of 2, 5, or 10;		G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000
	b. count backward by tens from 120; and		G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000
	c. use objects to determine whether a number is even or odd.		G2 M6 Topic D: The Meaning of Even and Odd Numbers
	2.3 The student will		
	a. count and identify the ordinal positions first through twentieth, using an ordered set of objects; and		GK M6 Lesson 4: Describe the relative position of shapes using ordinal numbers. Note: Supplemental material is necessary to address ordinal numbers greater than 10.
	b. write the ordinal numbers 1^{st} through 20^{th}.		GK M6 Lesson 4: Describe the relative position of shapes using ordinal numbers. Note: Supplemental material is necessary to address ordinal numbers greater than 10.

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	2.4 The student will		
	a. name and write fractions represented by a set, region, or length model for halves, fourths, eighths, thirds, and sixths;		G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes G3 M5: Fractions as Numbers on the Number Line
	b. represent fractional parts with models and with symbols; and		G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles G3 M5: Fractions as Numbers on the Number Line
	c. compare the unit fractions for halves, fourths, eighths, thirds, and sixths, with models.		G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes G3 M5: Fractions as Numbers on the Number Line
Computation and Estimation	**2.5** The student will		
	a. recognize and use the relationships between addition and subtraction to solve single-step practical problems, with whole numbers to 20; and		G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M4 Lesson 29: Add a pair of two-digit numbers with varied sums in the ones. G1 M6 Topic A: Comparison Word Problems

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	b. demonstrate fluency with addition and subtraction within 20.		G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M4 Lesson 29: Add a pair of two-digit numbers with varied sums in the ones. G1 M6 Topic A: Comparison Word Problems
	2.6 The student will		
	a. estimate sums and differences;		G2 M1 Topic B: Initiating Fluency with Addition and Subtraction Within 100 G2 M2 Topic D: Relate Addition and Subtraction to Length G2 M4: Addition and Subtraction Within 200 with Word Problems to 100 G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100 G2 M6: Foundations of Multiplication and Division G2 M7 Topic B: Problem Solving with Coins and Bills G2 M7 Topic E: Problem Solving with Customary and Metric Units

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	b. determine sums and differences, using various methods; and		G2 M1: Sums and Differences to 100 G2 M4 Topic A: Sums and Differences Within 100 G2 M7 Topic B: Problem Solving with Coins and Bills
	c. create and solve single-step and two-step practical problems involving addition and subtraction.		G2 M1: Sums and Differences to 100 G2 M4 Lesson 5: Solve one- and two-step word problems within 100 using strategies based on place value. G2 M4 Lesson 16: Solve one- and two-step word problems within 100 using strategies based on place value.
Measurement and Geometry	**2.7** The student will		
	a. count and compare a collection of pennies, nickels, dimes, and quarters whose total value is $2.00 or less; and		G2 M7 Topic B: Problem Solving with Coins and Bills
	b. use the cent symbol, dollar symbol, and decimal point to write a value of money.		G2 M7 Topic B: Problem Solving with Coins and Bills Note: These lessons need to be extended to incorporate the decimal point.

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	2.8 The student will estimate and measure		
	a. length to the nearest inch; and		G2 M2 Topic B: Measure and Estimate Length Using Different Measurement Tools G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units
	b. weight to the nearest pound.		G3 M2 Topic B: Measuring Weight and Liquid Volume in Metric Units
	2.9 The student will tell time and write time to the nearest five minutes, using analog and digital clocks.		G2 M8 Topic D: Application of Fractions to Tell Time
	2.10 The student will		
	a. determine past and future days of the week; and		*Eureka Math* does not specifically teach calendar skills except for use in word problem situations.
	b. identify specific days and dates on a given calendar.		*Eureka Math* does not specifically teach calendar skills except for use in word problem situations.
	2.11 The student will read temperature to the nearest 10 degrees.		*Eureka Math* does not address temperature until integers are introduced in Grade 6.

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
	2.12 The student will		
	a. draw a line of symmetry in a figure; and		G4 M4 Topic D: Two-Dimensional Figures and Symmetry
	b. identify and create figures with at least one line of symmetry.		G4 M4 Topic D: Two-Dimensional Figures and Symmetry
	2.13 The student will identify, describe, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms).		GK M2 Topic C: Two-Dimensional and Three-Dimensional Shapes G2 M8 Topic A: Attributes of Geometric Shapes G2 M8 Lesson 6: Combine shapes to create a composite shape; create a new shape from composite shapes.
Probability and Statistics	**2.14** The student will use data from probability experiments to predict outcomes when the experiment is repeated.		G2 M7 Topic A: Problem Solving with Categorical Data G2 M7 Topic F: Displaying Measurement Data
	2.15 The student will		
	a. collect, organize, and represent data in pictographs and bar graphs; and		G2 M7 Topic A: Problem Solving with Categorical Data G2 M7 Topic F: Displaying Measurement Data
	b. read and interpret data represented in pictographs and bar graphs.		G2 M7 Topic A: Problem Solving with Categorical Data G2 M7 Topic F: Displaying Measurement Data

Domain	Mathematical Content Standards		Aligned Components of *Eureka Math*
Patterns, Functions, and Algebra	**2.16** The student will identify, describe, create, extend, and transfer patterns found in objects, pictures, and numbers.		*Eureka Math* does not explicitly address patterns.
	2.17 The student will demonstrate an understanding of equality through the use of the equal symbol and the use of the not equal symbol.		G1 M1 Topic E: The Commutative Property of Addition and the Equal Sign G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions. Note: Supplemental material is necessary to address ≠ to indicate nonequivalent quantities.