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 Texas Essential Knowledge and Skills for Mathematics are fully covered by the Grade 2 *Eureka Math* curriculum. The areas where the Grade 2 Texas Essential Knowledge and Skills for Mathematics 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 Texas Essential Knowledge and Skills for Mathematics while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

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

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

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

Mathematical Process Standards		Aligned Components of *Eureka Math*
(1) The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:		
a. apply mathematics to problems arising in everyday life, society, and the workplace;		This process standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules: 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 Shape
b. use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;		This process standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules: 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 Shape

Mathematical Process Standards	Aligned Components of *Eureka Math*
c. select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;	This process standard is analogous to the CCSSM Standards for Mathematical Practice 5, which is specifically addressed in the following modules: G2 M1: Sums and Differences to 100 G2 M2: Addition and Subtraction of Length Units G2 M7: Problem Solving with Length, Money, and Data
d. communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;	This process standard 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

Mathematical Process Standards	Aligned Components of *Eureka Math*
e. create and use representations to organize, record, and communicate mathematical ideas;	This process standard is analogous to the CCSSM Standards for Mathematical Practice 6, which is specifically addressed in the following modules: 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 M7: Problem Solving with Length, Money, and Data G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

Mathematical Process Standards	Aligned Components of *Eureka Math*
f. analyze mathematical relationships to connect and communicate mathematical ideas; and	This process standard is analogous to the CCSSM Standards for Mathematical Practice 2, which is 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

Mathematical Process Standards	Aligned Components of *Eureka Math*
g. display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	This process standard is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules: 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

Skill	Expectations		Aligned Components of *Eureka Math*
Number and Operations	**111.4.2** The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:		
	a. use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones;		G2 M3 Topic C: Three-Digit Numbers in Unit, Standard, Expanded, and Word Forms G2 M3 Topic E: Modeling Numbers Within 1,000 with Place Value Disks G2 M3 Topic F: Comparing Two Three-Digit Numbers
	b. use standard, word, and expanded forms to represent numbers up to 1,200;		G2 M3 Topic C: Three-Digit Numbers in Unit, Standard, Expanded, and Word Forms G2 M3 Topic E: Modeling Numbers Within 1,000 with Place Value Disks G2 M3 Topic F: Comparing Two Three-Digit Numbers
	c. generate a number that is greater than or less than a given whole number up to 1,200;		G2 M3 Topic F: Comparing Two Three-Digit Numbers
	d. use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);		G2 M3 Topic F: Comparing Two Three-Digit Numbers

Skill	Expectations		Aligned Components of *Eureka Math*
	e. locate the position of a given whole number on an open number line; and		G2 M7 Topic E: Problem Solving with Customary and Metric Units
	f. name the whole number that corresponds to a specific point on a number line.		G2 M7 Topic E: Problem Solving with Customary and Metric Units
	111.4.3 The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:		
	a. partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words;		G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes
	b. explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part;		G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles
	c. use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole; and		G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles
	d. identify examples and non-examples of halves, fourths, and eighths.		G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles

Skill	Expectations		Aligned Components of *Eureka Math*
	111.4.4 The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:		
	a. recall basic facts to add and subtract within 20 with automaticity;		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.
	b. add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations;		G2 M1: Sums and Differences to 100 G2 M4 Topic A: Sums and Differences Within 100 G2 M4 Lesson 22: Solve additions with up to four addends with totals within 200 with and without two compositions of larger units.
	c. solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms; and		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

Skill	Expectations		Aligned Components of *Eureka Math*
	d. generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000.		G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100 G2 M1 Lesson 5: Make a ten to add within 100. G2 M1 Lesson 8: Take from 10 within 100. G2 M4 Lesson 31: Solve two-step word problems within 100. G2 M6 Lesson 9: Solve word problems involving addition of equal groups in rows and columns.
	111.4.5 The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:		
	a. determine the value of a collection of coins up to one dollar; and		G2 M7 Topic B: Problem Solving with Coins and Bills
	b. use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.		G2 M7 Topic B: Problem Solving with Coins and Bills G4 M6: Decimal Fractions

Skill	Expectations		Aligned Components of *Eureka Math*
	111.4.6 The student applies mathematical process standards to connect repeated addition and subtraction to multiplication and division situations that involve equal groupings and shares.		
	a. model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined; and		G2 M6: Foundations of Multiplication and Division
	b. model, create, and describe contextual division situations in which a set of concrete objects is separated into equivalent sets.		G2 M6: Foundations of Multiplication and Division
Algebraic Reasoning	**111.4.7** The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:		
	a. determine whether a number up to 40 is even or odd using pairings of objects to represent the number;		G2 M6 Topic D: The Meaning of Even and Odd Numbers

Skill	Expectations		Aligned Components of *Eureka Math*
	b. use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200; and		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. represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.		G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100 G2 M1 Lesson 5: Make a ten to add within 100. G2 M1 Lesson 8: Take from 10 within 100. G2 M4 Lesson 31: Solve two-step word problems within 100. G2 M6 Lesson 9: Solve word problems involving addition of equal groups in rows and columns.

Skill	Expectations		Aligned Components of *Eureka Math*
Geometry and Measurement	**111.4.8** The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:		
	a. create two-dimensional shapes based on given attributes, including number of sides and vertices;		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.
	b. classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language;		G1 M5 Topic A: Attributes of Shapes G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes
	c. classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices;		G2 M8 Topic A: Attributes of Geometric Shapes
	d. compose two-dimensional shapes and three-dimensional solids with given properties or attributes; and		G1 M5 Topic B: Part–Whole Relationships Within Composite Shapes

Skill	Expectations		Aligned Components of *Eureka Math*
	e. decompose two-dimensional shapes such as cutting out a square from a rectangle, dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts.		G2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes
	111.4.9 The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:		
	a. find the length of objects using concrete models for standard units of length;		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. describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object;		G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units G2 M7 Lesson 18: Measure an object twice using different length units and compare; relate measurement to unit size.
	c. represent whole numbers as distances from any given location on a number line;		G2 M2 Lesson 8: Solve addition and subtraction word problems using the ruler as a number line. G2 M7 Topic E: Problem Solving with Customary and Metric Units G2 M7 Lesson 24: Draw a line plot to represent the measurement data; relate the measurement scale to the number line.

Skill	Expectations	Aligned Components of *Eureka Math*
	d. determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes;	G2 M2: Addition and Subtraction of Length Units G2 M7 Topic C: Creating an Inch Ruler G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units
	e. determine a solution to a problem involving length, including estimating lengths;	G2 M2 Topic D: Relate Addition and Subtraction to Length G2 M7 Lesson 20: Solve two-digit addition and subtraction word problems involving length by using tape diagrams and writing equations to represent the problem.
	f. use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit; and	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.
	g. read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.	G2 M8 Topic D: Application of Fractions to Tell Time 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.

Skill	Expectations		Aligned Components of *Eureka Math*
Data Analysis	**111.4.10** The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:		
	a. explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category;		G2 M7 Topic A: Problem Solving with Categorical Data
	b. organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more;		G2 M7 Topic A: Problem Solving with Categorical Data
	c. write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one; and		G2 M7 Topic A: Problem Solving with Categorical Data
	d. draw conclusions and make predictions from information in a graph.		G2 M7 Topic A: Problem Solving with Categorical Data
Personal Financial Literacy	**111.4.11** The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
	a. calculate how money saved can accumulate into a larger amount over time;		*Eureka Math* does not address personal financial skills.

Skill	Expectations		Aligned Components of *Eureka Math*
	b. explain that saving is an alternative to spending;		*Eureka Math* does not address personal financial skills.
	c. distinguish between a deposit and a withdrawal;		*Eureka Math* does not address personal financial skills.
	d. identify examples of borrowing and distinguish between responsible and irresponsible borrowing;		*Eureka Math* does not address personal financial skills.
	e. identify examples of lending and use concepts of benefits and costs to evaluate lending decisions; and		*Eureka Math* does not address personal financial skills.
	f. differentiate between producers and consumers and calculate the cost to produce a simple item.		*Eureka Math* does not address personal financial skills.