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 6 MATHEMATICS

The majority of the Grade 6 Texas Essential Knowledge and Skills for Mathematics are fully covered by the Grade 6 *Eureka Math* curriculum. The areas where the Grade 6 Texas Essential Knowledge and Skills for Mathematics and Grade 6 *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: G6 M1: Ratios and Unit Rates G6 M2: Arithmetic Operations Including Division of Fractions G6 M5: Area, Surface Area, and Volume Problems G6 M6: Statistics
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: G6 M1: Ratios and Unit Rates G6 M2: Arithmetic Operations Including Division of Fractions G6 M5: Area, Surface Area, and Volume Problems G6 M6: Statistics

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: G6 M1: Ratios and Unit Rates
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: G6 M3: Rational Numbers G6 M5: Area, Surface Area, and Volume Problems G6 M6: Statistics
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: G6 M1: Ratios and Unit Rates G6 M2: Arithmetic Operations Including Division of Fractions G6 M3: Rational Numbers G6 M4: Expressions and Equations G6 M5: Area, Surface Area, and Volume Problems G6 M6: Statistics

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: G6 M1: Ratios and Unit Rates G6 M2: Arithmetic Operations Including Division of Fractions G6 M3: Rational Numbers G6 M4: Expressions and Equations G6 M6: Statistics
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: G6 M5: Area, Surface Area, and Volume Problems G6 M6: Statistics

Skill	Expectations		Aligned Components of *Eureka Math*
Number and Operations	**111.26.2** The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to:		
	a. classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers;		G6 M3: Rational Numbers
	b. identify a number, its opposite, and its absolute value;		G6 M3 Lesson 4: The Opposite of a Number G6 M3 Lesson 5: The Opposite of a Number's Opposite G6 M3 Lesson 11: Absolute Value—Magnitude and Distance G6 M3 Lesson 13: Statements of Order in the Real World
	c. locate, compare, and order integers and rational numbers using a number line;		G6 M3: Rational Numbers
	d. order a set of rational numbers arising from mathematical and real-world contexts; and		G6 M3 Topic B: Order and Absolute Value
	e. extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$.		G6 M2 Topic A: Dividing Fractions by Fractions

Skill	Expectations		Aligned Components of *Eureka Math*
	111.26.3 The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:		
	a. recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values;		G7 M3 Topic A: Use Properties of Operations to Generate Equivalent Expressions
	b. determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one;		G5 M4 Topic F: Multiplication with Fractions and Decimals as Scaling and Word Problems
	c. represent integer operations with concrete models and connect the actions with the models to standardized algorithms;		G7 M2: Rational Numbers
	d. add, subtract, multiply, and divide integers fluently; and		G7 M2: Rational Numbers

Skill	Expectations		Aligned Components of *Eureka Math*
	e. multiply and divide positive rational numbers fluently.		G5 M2 Topic C: Decimal Multi-Digit Multiplication G5 M2 Topic G: Partial Quotients and Multi-Digit Decimal Division G5 M4: Multiplication and Division of Fractions and Decimal Fractions G6 M2: Arithmetic Operations Including Division of Fractions
Proportionality	**111.26.4** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:		
	a. compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships;		G6 M1 Lesson 10: The Structure of Ratio Tables—Additive and Multiplicative G6 M1 Lessons 19–20: Comparison Shopping—Unit Price and Related Measurement Conversions
	b. apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates;		G6 M1: Ratios and Unit Rates
	c. give examples of ratios as multiplicative comparisons of two quantities describing the same attribute;		G6 M1: Ratios and Unit Rates

Skill	Expectations		Aligned Components of *Eureka Math*
	d. give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients;		G6 M1 Topic C: Unit Rates
	e. represent ratios and percents with concrete models, fractions, and decimals;		G6 M1: Ratios and Unit Rates
	f. represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers;		G6 M1 Topic D: Percent
	g. generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money; and		G6 M1 Topic D: Percent
	h. convert units within a measurement system, including the use of proportions and unit rates.		G6 M1 Lessons 21–22: Getting the Job Done—Speed, Work, and Measurement Units G6 M1 Lesson 23: Problem-Solving Using Rates, Units Rates, and Conversions

Skill	Expectations		Aligned Components of *Eureka Math*
	111.26.5 The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to:		
	a. represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions;		G6 M1: Ratios and Unit Rates G7 M1: Ratios and Proportional Relationships G7 M4 Topic C: Scale Drawings
	b. solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models; and		G6 M1 Topic D: Percent
	c. use equivalent fractions, decimals, and percents to show equal parts of the same whole.		G6 M1 Topic D: Percent
Expressions, Equations, and Relationships	**111.26.6** The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to:		
	a. identify independent and dependent quantities from tables and graphs;		G6 M4 Lesson 31: Problems in Mathematical Terms G6 M4 Lesson 32: Multi-Step Problems in the Real World

Skill	Expectations		Aligned Components of *Eureka Math*
	b. write an equation that represents the relationship between independent and dependent quantities from a table; and		G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations
	c. represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.		G6 M4: Expressions and Equations
	111.26.7 The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:		
	a. generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization;		G6 M4 Topic B: Special Notations of Operations Note: Supplemental material is necessary to address prime factorization.
	b. distinguish between expressions and equations verbally, numerically, and algebraically;		G6 M4: Expressions and Equations
	c. determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations; and		G6 M4 Topic A: Relationships of the Operations G6 M4 Topic C: Replacing Letters and Numbers G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions

Skill	Expectations		Aligned Components of *Eureka Math*
	d. generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.		G6 M2 Lesson 10: The Distributive Property and the Products of Decimals G6 M2 Lesson 16: Even and Odd Numbers G6 M4 Topic A: Relationships of the Operations G6 M4 Topic C: Replacing Letters and Numbers G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions
	111.26.8 The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to:		
	a. extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle;		G7 M6 Topic B: Constructing Triangles G8 M2 Lesson 13: Angle Sum of a Triangle
	b. model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes;		G6 M5 Topic A: Area of Triangles, Quadrilaterals, and Polygons Note: Supplemental material is necessary to introduce the area formula for trapezoids.

Skill	Expectations		Aligned Components of *Eureka Math*
	c. write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers; and		G6 M5: Area, Surface Area, and Volume Problems
	d. determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.		G6 M5: Area, Surface Area, and Volume Problems
	111.26.9 The student applies mathematical process standards to use equations and inequalities to represent situations. The student is expected to:		
	a. write one-variable, one-step equations and inequalities to represent constraints or conditions within problems;		G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations
	b. represent solutions for one-variable, one-step equations and inequalities on number lines; and		G6 M4 Lesson 34: Writing and Graphing Inequalities in Real-World Problems Note: Supplemental material is necessary to address graphing solutions of equations on the number line.

Skill	Expectations		Aligned Components of *Eureka Math*
	c. write corresponding real-world problems given one-variable, one-step equations or inequalities.		G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions Note: Supplemental material is necessary to completely address this standard.
	111.26.10 The student applies mathematical process standards to use equations and inequalities to solve problems. The student is expected to:		
	a. model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts; and		G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations
	b. determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.		G6 M4 Topic G: Solving Equations G6 M4 Topic H: Applications of Equations
Measurement and Data	**111.26.11** The student applies mathematical process standards to use coordinate geometry to identify locations on a plane. The student is expected to graph points in all four quadrants using ordered pairs of rational numbers.		G6 M3 Topic C: Rational Numbers and the Coordinate Plane

Skill	Expectations		Aligned Components of *Eureka Math*
	111.26.12 The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:		
	a. represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;		G6 M6: Statistics Note: Supplemental material is necessary to address stem-and-leaf plots.
	b. use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution;		G6 M6: Statistics
	c. summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and		G6 M6: Statistics Note: Supplemental material is necessary to explicitly address range.
	d. summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution.		G6 M6: Statistics Note: Supplemental material is necessary to address mode and percent bar graphs.

Skill	Expectations		Aligned Components of *Eureka Math*
	111.26.13 The student applies mathematical process standards to use numerical or graphical representations to solve problems. The student is expected to:		
	a. interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots; and		G6 M6: Statistics Note: Supplemental material is necessary to address stem-and-leaf plots.
	b. distinguish between situations that yield data with and without variability.		G6 M6 Lesson 1: Posing Statistical Questions
Personal Financial Literacy	**111.26.14** The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:		
	a. compare the features and costs of a checking account and a debit card offered by different local financial institutions;		*Eureka Math* does not address personal financial skills.
	b. distinguish between debit cards and credit cards;		*Eureka Math* does not address personal financial skills.
	c. balance a check register that includes deposits, withdrawals, and transfers;		*Eureka Math* does not address personal financial skills.
	d. explain why it is important to establish a positive credit history;		*Eureka Math* does not address personal financial skills.

Skill	Expectations		Aligned Components of *Eureka Math*
	e. describe the information in a credit report and how long it is retained;		*Eureka Math* does not address personal financial skills.
	f. describe the value of credit reports to borrowers and to lenders;		*Eureka Math* does not address personal financial skills.
	g. explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study; and		*Eureka Math* does not address personal financial skills.
	h. compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income.		*Eureka Math* does not address personal financial skills.