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 5 MATHEMATICS

The majority of the Grade 5 Nebraska Mathematics Standards are fully covered by the Grade 5 *Eureka Math* curriculum. The areas where the Grade 5 Nebraska Mathematics Standards and Grade 5 *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 Nebraska Mathematics Standards while still benefiting from the coherence and rigor of *Eureka Math*.

INDICATORS

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

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

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

Mathematical Processes	Aligned Components of *Eureka Math*
1: Solves mathematical problems. Through the use of appropriate academic and technical tools, students will make sense of mathematical problems and persevere in solving them. Students will draw upon their prior knowledge in order to employ critical thinking skills, reasoning skills, creativity, and innovative ability. Additionally, students will compute accurately and determine the reasonableness of solutions.	Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 1, 2, and 5, which are specifically addressed in the following modules: G5 M2: Multi-Digit Whole Number and Decimal Fraction Operations G5 M3: Addition and Subtraction of Fractions G5 M4: Multiplication and Division of Fractions and Decimal Fractions G5 M5: Addition and Multiplication with Volume and Area G5 M6: Problem Solving with the Coordinate Plane
2: Models and represents mathematical problems. Students will analyze relationships in order to create mathematical models given a real-world situation or scenario. Conversely, students will describe situations or scenarios given a mathematical model.	Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules: G5 M4: Multiplication and Division of Fractions and Decimal Fractions G5 M5: Addition and Multiplication with Volume and Area

Mathematical Processes	Aligned Components of *Eureka Math*
3: Communicates mathematical ideas effectively. Students will communicate mathematical ideas effectively and precisely. Students will critique the reasoning of others as well as provide mathematical justifications. Students will utilize appropriate communication approaches individually and collectively and through multiple methods, including writing, speaking, and listening.	Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 3 and 6, which are specifically addressed in the following modules: G5 M1: Place Value and Decimal Fractions G5 M3: Addition and Subtraction of Fractions G5 M4: Multiplication and Division of Fractions and Decimal Fractions G5 M5: Addition and Multiplication with Volume and Area G5 M6: Problem Solving with the Coordinate Plane

Mathematical Processes	Aligned Components of *Eureka Math*
4: Makes mathematical connections. Students will connect mathematical knowledge, ideas, and skills beyond the math classroom. This includes the connection of mathematical ideas to other topics within mathematics and to other content areas. Additionally, students will be able to describe the connection of mathematical knowledge and skills to their career interest as well as within authentic/real-world contexts.	Lessons in every module engage students in modeling with mathematics as required by this standard. This habit of mind is analogous to the CCSSM Standards for Mathematical Practices 7 and 8, which are specifically addressed in the following modules: G5 M1: Place Value and Decimal Fractions G5 M2: Multi-Digit Whole Number and Decimal Fraction Operations G5 M3: Addition and Subtraction of Fractions G5 M4: Multiplication and Division of Fractions and Decimal Fractions G5 M5: Addition and Multiplication with Volume and Area G5 M6: Problem Solving with the Coordinate Plane

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Number	**Numeric Relationships: Students will demonstrate, represent, and show relationships among whole numbers, fractions, and decimals within the base-ten number system.**	
	MA 5.1.1.a Determine multiple equivalent representations for whole numbers and decimals through the thousandths place using standard form, word form, and expanded notation.	G5 M1: Place Value and Decimal Fractions
	MA 5.1.1.b Compare whole numbers, fractions, mixed numbers, and decimals through the thousandths place and represent comparisons using symbols <, >, or =.	G4 M1 Topic B: Comparing Multi-Digit Whole Numbers G5 M1 Lesson 6: Compare decimal fractions to the thousandths using like units, and express comparisons with >, <, =.
	MA 5.1.1.c Round whole numbers and decimals to any given place.	G4 M1 Topic C: Rounding Multi-Digit Whole Numbers G5 M1 Topic C: Place Value and Rounding Decimal Fractions
	MA 5.1.1.d Recognize and generate equivalent forms of commonly used fractions, decimals, and percents (e.g., halves, thirds, fourths, fifths, and tenths).	G5 M1: Place Value and Decimal Fractions G5 M3: Addition and Subtraction of Fractions G5 M4 Topic F: Multiplication with Fractions and Decimals as Scaling and Word Problems G6 M1 Topic D: Percent

Category	Mathematics Standards	Aligned Components of *Eureka Math*
	MA 5.1.1.e Write powers of 10 with exponents.	G5 M1 Topic A: Multiplicative Patterns on the Place Value Chart G5 M1 Topic E: Multiplying Decimals G5 M2 Topic A: Mental Strategies for Multi-Digit Whole Number Multiplication
	Operations: Students will demonstrate the meaning of operations and compute accurately with whole numbers, fractions, and decimals.	
	MA 5.1.2.a Multiply multi-digit whole numbers using the standard algorithm.	G5 M2 Topic B: The Standard Algorithm for Multi-Digit Whole Number Multiplication G5 M2 Topic D: Measurement Word Problems with Whole Number and Decimal Multiplication
	MA 5.1.2.b Divide four-digit whole numbers by a two-digit divisor, with and without remainders using the standard algorithm.	G5 M2 Topic E: Mental Strategies for Multi-Digit Whole Number Division G5 M2 Topic F: Partial Quotients and Multi-Digit Whole Number Division G5 M2 Topic H: Measurement Word Problems with Multi-Digit Division

Category	Mathematics Standards		Aligned Components of *Eureka Math*
	MA 5.1.2.c Multiply a whole number by a fraction or a fraction by a fraction using models and visual representations.		G5 M4 Topic C: Multiplication of a Whole Number by a Fraction G5 M4 Lesson 10: Compare and evaluate expressions with parentheses. G5 M4 Topic E: Multiplication of a Fraction by a Fraction G5 M4 Topic H: Interpretation of Numerical Expressions
	MA 5.1.2.d Divide a unit fraction by a whole number and a whole number by a unit fraction.		G5 M4 Lesson 25: Divide a whole number by a unit fraction. G5 M4 Lesson 26: Divide a unit fraction by a whole number.
	MA 5.1.2.e Explain division of a whole number by a fraction using models and visual representations.		G5 M4 Lesson 27: Solve problems involving fraction division. G5 M4 Lesson 28: Write equations and word problems corresponding to tape and number line diagrams. G5 M4 Topic H: Interpretation of Numerical Expressions
	MA 5.1.2.f Interpret a fraction as division of the numerator by the denominator.		G5 M4 Topic B: Fractions as Division

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	MA 5.1.2.g Add, subtract, multiply, and divide decimals to the hundredths using concrete models or drawings and strategies based on place value, properties of operations (i.e., Commutative, Associative, Distributive, Identity, Zero), and/or relationships between operations.		G5 M1: Place Value and Decimal Fractions G5 M2: Multi-Digit Whole Number and Decimal Fraction Operations G5 M4 Lessons 17–18: Relate decimal and fraction multiplication. G5 M4 Lesson 29: Connect division by a unit fraction to division by 1 tenth and 1 hundredth. G5 M4 Lessons 30–31: Divide decimal dividends by non-unit decimal divisors.
	MA 5.1.2.h Add and subtract fractions and mixed numbers with unlike denominators.		G5 M3: Addition and Subtraction of Fractions
	MA 5.1.2.i Determine the reasonableness of computations involving whole numbers, fractions, and decimals.		G4 M1: Place Value, Rounding, and Algorithms for Addition and Subtraction G5 M1: Place Value and Decimal Fractions G5 M3: Addition and Subtractions of Fractions
	MA 5.1.2.j Multiply and divide by powers of 10.		G5 M1 Topic A: Multiplicative Patterns on the Place Value Chart G5 M2 Topic A: Mental Strategies for Multi-Digit Whole Number Multiplication G5 M2 Lesson 16: Use *divide by 10* patterns for multi-digit whole number division.

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Algebra	**Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions and equations.**	
	MA 5.2.1.a Form ordered pairs from a rule such as $y = 2x$, and graph the ordered pairs on a coordinate plane.	G5 M6 Lesson 14: Construct parallel line segments, and analyze relationships of the coordinate pairs. G5 M6 Lesson 16: Construct perpendicular line segments, and analyze relationships of the coordinate pairs. G5 M6 Topic D: Problem Solving in the Coordinate Plane
	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.	
	MA 5.2.2.a Interpret and evaluate numerical or algebraic expressions using order of operations (excluding exponents).	G5 M2 Lesson 3: Write and interpret numerical expressions, and compare expressions using a visual model. G5 M2 Lesson 4: Convert numerical expressions into unit form as a mental strategy for multi-digit multiplication. G5 M4 Lesson 10: Compare and evaluate expressions with parentheses. G5 M4 Topic H: Interpretation of Numerical Expressions
	Applications: Students will solve real-world problems involving equations with fractions and mixed numbers.	
	MA 5.2.3.a Solve real-world problems involving addition and subtraction of fractions and mixed numbers with like and unlike denominators.	G5 M3 Lesson 7: Solve two-step word problems. G5 M3 Lesson 9: Add fractions making like units numerically. G5 M3 Topic D: Further Applications

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Geometry	**Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.**	
	MA 5.3.1.a Identify three-dimensional figures including cubes, cones, pyramids, prisms, spheres, and cylinders.	G2 M8 Lesson 5: Relate the square to the cube, and describe the cube based on attributes. G5 M5: Addition and Multiplication with Volume and Area Note: Supplemental material is necessary to completely address this standard.
	MA 5.3.1.b Identify faces, edges, and vertices of rectangular prisms.	G2 M8 Lesson 5: Relate the square to the cube, and describe the cube based on attributes. G5 M5: Addition and Multiplication with Volume and Area Note: Supplemental material is necessary to completely address this standard.
	MA 5.3.1.c Justify the classification of two-dimensional figures based on their properties.	G5 M5 Topic D: Drawing, Analysis, and Classification of Two-Dimensional Shapes
	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	
	MA 5.3.2.a Identify the origin, x axis, and y axis of the coordinate plane.	G5 M6 Topic A: Coordinate Systems

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	MA 5.3.2.b Graph and name points in the first quadrant of the coordinate plane using ordered pairs of whole numbers.	G5 M6 Topic A: Coordinate Systems G5 M6 Lesson 7: Plot points, use them to draw lines in the plane, and describe patterns within the coordinate pairs.
	Measurement: Students will perform and compare measurements and apply formulas.	
	MA 5.3.3a Recognize that solid figures have volume that is measured in cubic units.	G5 M5 Topic A: Concepts of Volume
	MA 5.3.3.b Use concrete models to measure the volume of rectangular prisms in cubic units by counting cubic units.	G5 M5 Topic A: Concepts of Volume
	MA 5.3.3.c Generate conversions within the customary and metric systems of measurement.	G5 M1 Lesson 4: Use exponents to denote powers of 10 with application to metric conversions. G5 M2 Topic D: Measurement Word Problems with Whole Number and Decimal Multiplication G5 M4 Topic C: Multiplication of a Whole Number by a Fraction G5 M4 Lesson 19: Convert measures involving whole numbers, and solve multi-step word problems. G5 M4 Lesson 20: Convert mixed unit measurements, and solve multi-step word problems.

Category	Mathematics Standards	Aligned Components of *Eureka Math*
Data	**Analysis & Applications: Students will analyze data to address the situation.**	
	MA 5.4.2.a Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (e.g., frequency charts) and bar graphs.	G3 M6: Collecting and Displaying Data G3 M7 Topic D: Recording Perimeter and Area Data on Line Plots G5 M6: Problem Solving with the Coordinate Plane
	MA 5.4.2.b Formulate questions that can be addressed with data and make predictions about the data.	G5 M4 Topic A: Line Plots of Fraction Measurements