
Grade 5 | Minnesota K–12 Academic Standards in Mathematics Correlation to *Eureka Math*²®

When the original *Eureka Math*[®] curriculum was released, it quickly became the most widely used K–5 mathematics curriculum in the country. Now, the Great Minds[®] teacher–writers have created *Eureka Math*²®, a groundbreaking new curriculum that helps teachers deliver exponentially better math instruction while still providing students with the same deep understanding of and fluency in math. *Eureka Math*² carefully sequences mathematical content to maximize vertical alignment—a principle tested and proven to be essential in students’ mastery of math—from kindergarten through high school.

While this innovative new curriculum includes all the trademark *Eureka Math* aha moments that have been delighting students and teachers for years, it also boasts these exciting new features:

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built right into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the *Teach* book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, clear sentences, the *Eureka Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Digital Engagement

The digital elements of *Eureka Math*² add to students’ engagement with the math. The curriculum provides teachers with digital slides for each lesson. In addition, each grade level includes wordless videos that spark students’ interest and curiosity. Students at all levels work through mathematical explorations that help lead to their own mathematical discoveries. Digital lessons and videos provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

Number & Operation

Divide multi-digit numbers; solve real-world and mathematical problems using arithmetic.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>5.1.1.1</p> <p>Divide multi-digit numbers, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms. Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal.</p>	<p>5 M1 Lesson 2: Multiply and divide by 10, 100, and 1,000 and identify patterns in the products and quotients.</p> <p>5 M1 Topic C: Division of Whole Numbers</p> <p>5 M2 Topic A: Fractions and Division</p> <p>6 M2 Lesson 17: Partial Quotients</p> <p>6 M2 Lesson 18: The Standard Division Algorithm</p> <p>6 M2 Lesson 19: Expressing Quotients as Decimals</p>
<p>5.1.1.2</p> <p>Consider the context in which a problem is situated to select the most useful form of the quotient for the solution and use the context to interpret the quotient appropriately.</p>	<p>6 M2 Lesson 20: Real-World Division Problems</p>
<p>5.1.1.3</p> <p>Estimate solutions to arithmetic problems in order to assess the reasonableness of results.</p>	<p>5 M1 Lesson 11: Multiply two multi-digit numbers by using the standard algorithm.</p> <p>5 M1 Lesson 12: Divide two- and three-digit numbers by multiples of 10.</p> <p>5 M1 Lesson 13: Divide two-digit numbers by two-digit numbers resulting in one-digit quotients.</p> <p>5 M1 Lesson 16: Divide four-digit numbers by two-digit numbers.</p>

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<p>5.1.1.4</p> <p>Solve real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers. Use various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.</p>	<p>4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.</p> <p>4 M1 Lesson 16: Add by using the standard algorithm.</p> <p>4 M1 Lesson 17: Solve multi-step addition word problems by using the standard algorithm.</p> <p>4 M1 Lesson 21: Solve two-step word problems by using addition and subtraction.</p> <p>4 M1 Lesson 22: Solve multi-step word problems by using addition and subtraction.</p> <p>4 M3 Topic F: Remainders, Estimating, and Problem Solving</p> <p>5 M1 Lesson 13: Divide two-digit numbers by two-digit numbers resulting in one-digit quotients.</p> <p>5 M1 Lesson 14: Divide three-digit numbers by two-digit numbers in problems that result in one-digit quotients.</p> <p>5 M1 Lesson 16: Divide four-digit numbers by two-digit numbers.</p>
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Number & Operation

Read, write, represent and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.

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<p>5.1.2.1</p> <p>Read and write decimals using place value to describe decimals in terms of groups from millionths to millions.</p>	<p>5 M4 Lesson 1: Model and relate decimal place value units to thousandths.</p> <p>5 M4 Lesson 2: Represent thousandths as a place value unit.</p> <p>5 M4 Lesson 3: Represent decimal numbers to the thousandths place in different forms.</p>
<p>5.1.2.2</p> <p>Find 0.1 more than a number and 0.1 less than a number. Find 0.01 more than a number and 0.01 less than a number. Find 0.001 more than a number and 0.001 less than a number.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>

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<p>5.1.2.3</p> <p>Order fractions and decimals, including mixed numbers and improper fractions, and locate on a number line.</p>	<p>4 M4 Topic C: Compare Fractions</p> <p>4 M5 Lesson 11: Compare and order decimal numbers.</p>
<p>5.1.2.4</p> <p>Recognize and generate equivalent decimals, fractions, mixed numbers and improper fractions in various contexts.</p>	<p>4 M4 Topic B: Equivalent Fractions</p> <p>4 M5 Topic B: Tenths and Hundredths</p>
<p>5.1.2.5</p> <p>Round numbers to the nearest 0.1, 0.01 and 0.001.</p>	<p>5 M4 Lesson 7: Round decimal numbers to the nearest one, tenth, or hundredth.</p> <p>5 M4 Lesson 8: Round decimal numbers to any place value unit.</p> <p><i>Supplemental material is necessary to address rounding numbers to the nearest 0.001.</i></p>

Number & Operation

Add and subtract fractions, mixed numbers and decimals to solve real-world and mathematical problems.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>5.1.3.1</p> <p>Add and subtract decimals and fractions, using efficient and generalizable procedures, including standard algorithms.</p>	<p>5 M2 Lesson 7: Add and subtract fractions with related units by finding equivalent fractions numerically.</p> <p>5 M2 Lesson 8: Add and subtract fractions with unrelated units by finding equivalent fractions pictorially.</p> <p>5 M2 Lesson 9: Add and subtract fractions with unrelated units by finding equivalent fractions numerically.</p> <p>5 M2 Topic C: Addition and Subtraction of Fractions, Whole Numbers, and Mixed Numbers</p> <p>5 M4 Lesson 9: Add decimal numbers by using different methods.</p>

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<p>5.1.3.1 <i>continued</i></p>	<p>5 M4 Lesson 10: Add decimal numbers by using place value understanding.</p> <p>5 M4 Lesson 11: Subtract decimal numbers by using different methods.</p> <p>5 M4 Lesson 12: Subtract decimal numbers by using place value understanding.</p>
<p>5.1.3.2</p> <p>Model addition and subtraction of fractions and decimals using a variety of representations.</p>	<p>5 M2 Lesson 7: Add and subtract fractions with related units by finding equivalent fractions numerically.</p> <p>5 M2 Lesson 8: Add and subtract fractions with unrelated units by finding equivalent fractions pictorially.</p> <p>5 M2 Lesson 9: Add and subtract fractions with unrelated units by finding equivalent fractions numerically.</p> <p>5 M2 Topic C: Addition and Subtraction of Fractions, Whole Numbers, and Mixed Numbers</p> <p>5 M4 Lesson 9: Add decimal numbers by using different methods.</p> <p>5 M4 Lesson 10: Add decimal numbers by using place value understanding.</p> <p>5 M4 Lesson 11: Subtract decimal numbers by using different methods.</p> <p>5 M4 Lesson 12: Subtract decimal numbers by using place value understanding.</p>
<p>5.1.3.3</p> <p>Estimate sums and differences of decimals and fractions to assess the reasonableness of results.</p>	<p>5 M2 Lesson 10: Add whole numbers and mixed numbers and add mixed numbers with related units.</p> <p>5 M2 Lesson 12: Subtract whole numbers from mixed numbers and mixed numbers from whole numbers.</p> <p>5 M2 Lesson 13: Subtract mixed numbers from mixed numbers with related units.</p> <p>5 M4 Lesson 9: Add decimal numbers by using different methods.</p> <p>5 M4 Lesson 12: Subtract decimal numbers by using place value understanding.</p>

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<p>5.1.3.4</p> <p>Solve real-world and mathematical problems requiring addition and subtraction of decimals, fractions and mixed numbers, including those involving measurement, geometry and data.</p>	<p>5 M2 Lesson 11: Add mixed numbers with unrelated units.</p> <p>5 M2 Lesson 14: Subtract mixed numbers from mixed numbers with unrelated units.</p> <p>5 M4 Lesson 13: Solve word problems involving addition and subtraction of decimal numbers and fractions.</p>
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Algebra

Recognize and represent patterns of change; use patterns, tables, graphs and rules to solve real-world and mathematical problems.

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<p>5.2.1.1</p> <p>Create and use rules, tables, spreadsheets and graphs to describe patterns of change and solve problems.</p>	<p>5 M6 Lesson 7: Generate number patterns to form ordered pairs.</p> <p>5 M6 Lesson 8: Identify addition and subtraction relationships between corresponding terms in number patterns.</p> <p>5 M6 Lesson 9: Identify multiplication and division relationships between corresponding terms in number patterns.</p> <p>5 M6 Lesson 11: Draw lines in the coordinate plane and identify points on the lines.</p> <p>5 M6 Lesson 20: Reason about patterns in real-world situations.</p> <p><i>Supplementary material is necessary to address using spreadsheets.</i></p>
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<p>5.2.1.2</p> <p>Use a rule or table to represent ordered pairs of positive integers and graph these ordered pairs on a coordinate system.</p>	<p>5 M6 Lesson 7: Generate number patterns to form ordered pairs.</p> <p>5 M6 Lesson 8: Identify addition and subtraction relationships between corresponding terms in number patterns.</p> <p>5 M6 Lesson 9: Identify multiplication and division relationships between corresponding terms in number patterns.</p> <p>5 M6 Lesson 11: Draw lines in the coordinate plane and identify points on the lines.</p> <p>5 M6 Lesson 20: Reason about patterns in real-world situations.</p>
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Algebra

Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving whole numbers.

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<p>5.2.2.1</p> <p>Apply the commutative, associative and distributive properties and order of operations to generate equivalent numerical expressions and to solve problems involving whole numbers.</p>	<p>5 M1 Lesson 7: Multiply by using familiar methods.</p> <p>5 M1 Lesson 8: Multiply two- and three-digit numbers by two-digit numbers by using the distributive property.</p> <p>5 M1 Topic D: Multi-Step Problems with Whole Numbers</p> <p>5 M3 Lesson 18: Compare and evaluate expressions with parentheses.</p> <p>5 M3 Lesson 22: Evaluate expressions involving nested grouping symbols.</p> <p>6 M4 Lesson 5: Exploring Order of Operations</p> <p>6 M4 Lesson 6: Order of Operations</p>
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Algebra

Understand and interpret equations and inequalities involving variables and whole numbers, and use them to represent and solve real-world and mathematical problems.

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<p>5.2.3.1</p> <p>Determine whether an equation or inequality involving a variable is true or false for a given value of the variable.</p>	<p>6 M4 Lesson 17: Equations and Solutions</p> <p>6 M4 Lesson 18: Inequalities and Solutions</p>
<p>5.2.3.2</p> <p>Represent real-world situations using equations and inequalities involving variables. Create real-world situations corresponding to equations and inequalities.</p>	<p>6 M4 Topic D: Equations and Inequalities</p>
<p>5.2.3.3</p> <p>Evaluate expressions and solve equations involving variables when values for the variables are given.</p>	<p>6 M4 Lesson 8: Algebraic Expressions with Addition, Subtraction, Multiplication, and Division</p> <p>6 M4 Lesson 12: Applying Properties to Multiplication and Division Expressions</p> <p>6 M4 Lesson 17: Equations and Solutions</p>

Geometry & Measurement

Describe, classify, and draw representations of three-dimensional figures.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>5.3.1.1</p> <p>Describe and classify three-dimensional figures including cubes, prisms and pyramids by the number of edges, faces or vertices as well as the types of faces.</p>	<p><i>Supplemental material is necessary to address this standard.</i></p>
<p>5.3.1.2</p> <p>Recognize and draw a net for a three-dimensional figure.</p>	<p>6 M5 Topic C: Nets and Surface Area</p>

Geometry & Measurement

Determine the area of triangles and quadrilaterals; determine the surface area and volume of rectangular prisms in various contexts.

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<p>5.3.2.1</p> <p>Develop and use formulas to determine the area of triangles, parallelograms and figures that can be decomposed into triangles.</p>	<p>6 M5 Topic A: Areas of Polygons</p> <p>6 M5 Topic B: Problem Solving with Area</p>

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<p>5.3.2.2</p> <p>Use various tools and strategies to measure the volume and surface area of objects that are shaped like rectangular prisms.</p>	<p>6 M5 Topic C: Nets and Surface Area</p> <p>6 M5 Topic D: Volumes of Right Rectangular Prisms</p>
<p>5.3.2.3</p> <p>Understand that the volume of a three-dimensional figure can be found by counting the total number of same-sized cubic units that fill a shape without gaps or overlaps. Use cubic units to label volume measurements.</p>	<p>6 M5 Topic D: Volumes of Right Rectangular Prisms</p>
<p>5.3.2.4</p> <p>Develop and use the formulas $V = lwh$ and $V = Bh$ to determine the volume of rectangular prisms. Justify why base area B and height h are multiplied to find the volume of a rectangular prism by breaking the prism into layers of unit cubes.</p>	<p>6 M5 Topic D: Volumes of Right Rectangular Prisms</p>

Data Analysis

Display and interpret data; determine mean, median and range.

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<p>5.4.1.1</p> <p>Know and use the definitions of the mean, median and range of a set of data. Know how to use a spreadsheet to find the mean, median and range of a data set. Understand that the mean is a “leveling out” of data.</p>	<p>6 M6 Lesson 7: Using the Mean to Describe the Center</p> <p>6 M6 Lesson 8: The Mean as a Balance Point</p> <p>6 M6 Lesson 12: Using the Median to Describe the Center</p> <p>6 M6 Lesson 18: Connecting Graphical Representations and Summary Measures</p> <p><i>Supplemental material is necessary to address using a spreadsheet.</i></p>
<p>5.4.1.2</p> <p>Create and analyze double-bar graphs and line graphs by applying understanding of whole numbers, fractions and decimals. Know how to create spreadsheet tables and graphs to display data.</p>	<p>5 M6 Lesson 18: Interpret line graphs.</p> <p><i>Supplemental material is necessary to address double bar graphs, data with fractions and decimals, and creating spreadsheets.</i></p>