Grade 3 | Minnesota K–12 Academic Standards in Mathematics Correlation to *Eureka Math²®*

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 Math²®*, 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 Math²* 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 Math² 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 Math² 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 Math²* 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 Math²* 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
Compare and represent whole numbers up to 100,000 with an emphasis on place value and equality.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.1.1 Read, write and represent whole numbers up to 100,000. Representations may include numerals, expressions with operations, words, pictures, number lines, and manipulatives such as bundles of sticks and base 10 blocks.	3 M6 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 25: Name and count numbers greater than 1,000. 4 M1 Lesson 5: Organize, count, and represent a collection of objects. 4 M1 Lesson 7: Write numbers to 1,000,000 in unit form and expanded form by using place value structure. 4 M1 Lesson 8: Write numbers to 1,000,000 in standard form and word form. 4 M1 Lesson 9: Compare numbers within 1,000,000 by using >, =, and <. 4 M1 Lesson 10: Name numbers by using place value understanding. 4 M1 Lesson 11: Find 1, 10, and 100 thousand more than and less than a given number.
3.1.1.2 Use place value to describe whole numbers between 1,000 and 100,000 in terms of ten thousands, thousands, hundreds, tens and ones.	3 M6 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 25: Name and count numbers greater than 1,000. 4 M1 Lesson 5: Organize, count, and represent a collection of objects. 4 M1 Lesson 6: Demonstrate that a digit represents 10 times the value of what it represents in the place to its right. 4 M1 Lesson 7: Write numbers to 1,000,000 in unit form and expanded form by using place value structure. 4 M1 Lesson 10: Name numbers by using place value understanding. 4 M1 Lesson 11: Find 1, 10, and 100 thousand more than and less than a given number.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.1.3 Find 10,000 more or 10,000 less than a given five-digit number. Find 1,000 more or 1,000 less than a given four- or five-digit. Find 100 more or 100 less than a given four- or five-digit number.	4 M1 Lesson 11: Find 1, 10, and 100 thousand more than and less than a given number. *Supplemental material is necessary to fully address this standard.*
3.1.1.4 Round numbers to the nearest 10,000, 1,000, 100 and 10. Round up and round down to estimate sums and differences.	3 M2 Topic B: Rounding to the Nearest Ten and Hundred 4 M1 Lesson 12: Round to the nearest thousand. 4 M1 Lesson 13: Round to the nearest ten thousand and hundred thousand. 4 M1 Lesson 14: Round multi-digit numbers to any place. 4 M1 Lesson 15: Apply estimation to real-world situations by using rounding.
3.1.1.5 Compare and order whole numbers up to 100,000.	4 M1 Lesson 9: Compare numbers within 1,000,000 by using >, =, and <.

Number & Operation

Add and subtract multi-digit whole numbers; represent multiplication and division in various ways; solve real-world and mathematical problems using arithmetic.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.2.1 Add and subtract multi-digit numbers, using efficient and generalizable procedures based on knowledge of place value, including standard algorithms.	3 M1 Lesson 1: Organize, count, and represent a collection of objects. 3 M2 Lesson 12: Estimate sums and differences by rounding. 3 M2 Lesson 14: Use place value understanding to add and subtract like units. 3 M2 Lesson 15: Use the associative property to make the next ten to add.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.2.1 *continued*	3 M2 Lesson 16: Use compensation to add.
	3 M2 Lesson 17: Use place value understanding to subtract efficiently using take from a ten.
	3 M2 Lesson 18: Use place value understanding to subtract efficiently using take from a hundred.
	3 M2 Lesson 19: Use compensation to subtract.
	3 M2 Lesson 20: Add measurements using the standard algorithm to compose larger units once.
	3 M2 Lesson 21: Add measurements using the standard algorithm to compose larger units twice.
	3 M2 Lesson 22: Subtract measurements using the standard algorithm to decompose larger units once.
	3 M2 Lesson 23: Subtract measurements using the standard algorithm to decompose larger units twice.
	3 M2 Lesson 24: Subtract measurements using the standard algorithm to decompose larger units across two place values.
	3 M6 Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000.
3.1.2.2 Use addition and subtraction to solve real-world and mathematical problems involving whole numbers. Use various strategies, including the relationship between addition and subtraction, the use of technology, and the context of the problem to assess the reasonableness of results.	3 M1 Lesson 22: Represent and solve two-step word problems using the properties of multiplication.
	3 M1 Lesson 23: Represent and solve two-step word problems using drawings and equations.
	3 M2 Lesson 20: Add measurements using the standard algorithm to compose larger units once.
	3 M2 Lesson 25: Solve two-step word problems.
	3 M3 Lesson 19: Solve two-step word problems involving all four operations and assess the reasonableness of solutions.
	3 M3 Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10.
	3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task.
	3 M6 Lesson 7: Count coins and create money word problems.
	3 M6 Lesson 18: Solve real-world problems involving perimeter and unknown measurements by using all four operations.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.2.3 Represent multiplication facts by using a variety of approaches, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line and skip-counting. Represent division facts by using a variety of approaches, such as repeated subtraction, equal sharing and forming equal groups. Recognize the relationship between multiplication and division.	3 M1 Lesson 1: Organize, count, and represent a collection of objects. 3 M1 Lesson 2: Interpret equal groups as multiplication. 3 M1 Lesson 3: Relate multiplication to the array model. 3 M1 Lesson 4: Interpret the meaning of factors as number of groups or number in each group. 3 M1 Topic B: Conceptual Understanding of Division 3 M1 Topic C: Properties of Multiplication 3 M1 Topic D: Two Interpretations of Division 3 M3 Lesson 2: Count by units of 6 to multiply and divide by using arrays. 3 M3 Lesson 3: Count by units of 8 to multiply and divide by using arrays. 3 M3 Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams. 3 M3 Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. 3 M3 Lesson 18: Create multiplication and division word problems.
3.1.2.4 Solve real-world and mathematical problems involving multiplication and division, including both "how many in each group" and "how many groups" division problems.	3 M1 Topic D: Two Interpretations of Division 3 M1 Lesson 22: Represent and solve two-step word problems using the properties of multiplication. 3 M1 Lesson 23: Represent and solve two-step word problems using drawings and equations. 3 M2 Lesson 25: Solve two-step word problems. 3 M3 Lesson 19: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. 3 M3 Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10. 3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task. 3 M6 Lesson 7: Count coins and create money word problems.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.2.5 Use strategies and algorithms based on knowledge of place value, equality and properties of addition and multiplication to multiply a two- or three-digit number by a one-digit number. Strategies may include mental strategies, partial products, the standard algorithm, and the commutative, associative, and distributive properties.	3 M3 Lesson 20: Multiply by multiples of 10 by using the place value chart. 3 M3 Lesson 21: Multiply by multiples of 10 by using place value strategies and the associative property. 3 M3 Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10. *Supplemental material is necessary to fully address this standard.*

Number & Operation

Understand meanings and uses of fractions in real-world and mathematical situations.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.3.1 Read and write fractions with words and symbols. Recognize that fractions can be used to represent parts of a whole, parts of a set, points on a number line, or distances on a number line.	3 M5 Lesson 4: Partition a whole into fractional units pictorially and identify the unit fraction. 3 M5 Lesson 5: Partition a whole into fractional units and write fractions in fraction form. 3 M5 Lesson 6: Build non-unit fractions less than 1 from unit fractions concretely. 3 M5 Lesson 7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction. 3 M5 Lesson 8: Identify and represent a whole as two non-unit fractions. 3 M5 Lesson 11: Locate fractions from 0 to 1 on a number line by using fraction tiles. 3 M5 Lesson 12: Represent fractions from 0 to 1 on a number line. 3 M5 Lesson 15: Identify fractions on a ruler as numbers on a number line. 3 M5 Lesson 18: Compare fractions with like units by using a number line. 3 M5 Lesson 26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals. 3 M5 Lesson 27: Apply fraction concepts to complete a multi-part task.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.1.3.2 Understand that the size of a fractional part is relative to the size of the whole.	3 M5 Lesson 9: Compare unit fractions by reasoning about their size concretely. *Supplemental material is necessary to fully address this standard.*
3.1.3.3 Order and compare unit fractions and fractions with like denominators by using models and an understanding of the concept of numerator and denominator.	3 M5 Lesson 9: Compare unit fractions by reasoning about their size concretely. 3 M5 Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams. 3 M5 Lesson 18: Compare fractions with like units by using a number line. 3 M5 Lesson 19: Compare fractions with unlike units but the same numerator by using number lines. 3 M5 Lesson 20: Compare fractions with related units by using a number line. 3 M5 Lesson 21: Compare various fractions by representing them on number lines. 3 M5 Lesson 27: Apply fraction concepts to complete a multi-part task.

Algebra

Use single-operation input-output rules to represent patterns and relationships and to solve real-world and mathematical problems.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.2.1.1 Create, describe, and apply single-operation input-output rules involving addition, subtraction and multiplication to solve problems in various contexts.	*Supplemental material is necessary to address this standard.*

Algebra

Use number sentences involving multiplication and division basic facts and unknowns to represent and solve real-world and mathematical problems; create real-world situations corresponding to number sentences.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.2.2.1 Understand how to interpret number sentences involving multiplication and division basic facts and unknowns. Create real-world situations to represent number sentences.	3 M1 Lesson 2: Interpret equal groups as multiplication. 3 M1 Lesson 3: Relate multiplication to the array model. 3 M1 Lesson 4: Interpret the meaning of factors as number of groups or number in each group. 3 M1 Topic B: Conceptual Understanding of Division 3 M1 Lesson 10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model. 3 M1 Lesson 11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model. 3 M1 Lesson 13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model. 3 M1 Topic D: Two Interpretations of Division 3 M3 Lesson 2: Count by units of 6 to multiply and divide by using arrays. 3 M3 Lesson 3: Count by units of 8 to multiply and divide by using arrays. 3 M3 Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams. 3 M3 Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. 3 M3 Lesson 18: Create multiplication and division word problems.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.2.2.2 Use multiplication and division basic facts to represent a given problem situation using a number sentence. Use number sense and multiplication and division basic facts to find values for the unknowns that make the number sentences true.	3 M1 Lesson 5: Represent and solve multiplication word problems by using drawings and equations. 3 M1 Lesson 8: Model measurement and partitive division by drawing arrays. 3 M1 Lesson 9: Represent and solve division word problems using drawings and equations. 3 M1 Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10. 3 M1 Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10. 3 M1 Lesson 18: Represent and solve measurement and partitive division word problems. 3 M1 Lesson 22: Represent and solve two-step word problems using the properties of multiplication. 3 M1 Lesson 23: Represent and solve two-step word problems using drawings and equations. 3 M3 Lesson 2: Count by units of 6 to multiply and divide by using arrays. 3 M3 Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams. 3 M3 Lesson 8: Use the break apart and distribute strategy to multiply with units of 7. 3 M3 Lesson 12: Solve one-step word problems involving multiplication and division. 3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task.

Geometry & Measurement
Use geometric attributes to describe and create shapes in various contexts.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.3.1.1 Identify parallel and perpendicular lines in various contexts, and use them to describe and create geometric shapes, such as right triangles, rectangles, parallelograms and trapezoids.	3 M6 Lesson 8: Compare and classify quadrilaterals. 3 M6 Lesson 9: Compare and classify other polygons. 4 M6 Lesson 4: Identify, define, and draw perpendicular lines. 4 M6 Lesson 5: Identify, define, and draw parallel lines.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.3.1.2 Sketch polygons with a given number of sides or vertices (corners), such as pentagons, hexagons and octagons.	3 M6 Lesson 8: Compare and classify quadrilaterals. 3 M6 Lesson 9: Compare and classify other polygons. 3 M6 Lesson 10: Draw polygons with specified attributes. *Supplemental material is necessary to fully address this standard.*

Geometry & Measurement

Understand perimeter as a measurable attribute of real-world and mathematical objects. Use various tools to measure distances.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.3.2.1 Use half units when measuring distances.	3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M6 Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.
3.3.2.2 Find the perimeter of a polygon by adding the lengths of the sides.	3 M6 Topic C: Problem Solving with Perimeter 3 M6 Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.
3.3.2.3 Measure distances around objects.	3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M6 Lesson 14: Measure side lengths in whole-number units to determine the perimeters of polygons. 3 M6 Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.

Geometry & Measurement

Use time, money and temperature to solve real-world and mathematical problems.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.3.3.1 Tell time to the minute, using digital and analog clocks. Determine elapsed time to the minute.	3 M6 Lesson 1: Relate skip-counting by fives on the clock to telling time on the number line. 3 M6 Lesson 2: Count by fives and ones on the number line as a strategy for telling time to the nearest minute on the clock. 3 M6 Lesson 3: Solve time word problems where the end time is unknown. 3 M6 Lesson 4: Solve time word problems where the start time is unknown. 3 M6 Lesson 5: Solve time word problems where the change in time is unknown. 3 M6 Lesson 6: Solve time word problems and use time data to create a line plot.
3.3.3.2 Know relationships among units of time.	*Supplemental material is necessary to address this standard.*
3.3.3.3 Make change up to one dollar in several different ways, including with as few coins as possible.	*Supplemental material is necessary to address this standard.*
3.3.3.4 Use an analog thermometer to determine temperature to the nearest degree in Fahrenheit and Celsius.	3 M2 Lesson 8: Read temperatures on a thermometer using number line concepts. *Supplemental material is necessary to fully address this standard.*

Data Analysis

Collect, organize, display, and interpret data. Use labels and a variety of scales and units in displays.

Minnesota K–12 Academic Standards in Mathematics	Aligned Components of *Eureka Math²*
3.4.1.1 Collect, display and interpret data using frequency tables, bar graphs, picture graphs and number line plots having a variety of scales. Use appropriate titles, labels and units.	3 M2 Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. 3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M6 Lesson 20: Record measurement data in a line plot. 3 M6 Lesson 21: Create and analyze a line plot for measurement data to the nearest half unit and quarter unit. 3 M6 Lesson 22: Generate categorical data and represent it by using a scaled picture graph. 3 M6 Lesson 23: Solve word problems by creating scaled picture graphs and scaled bar graphs.