EUREKA MATH²®

Grade 3 | North Dakota Mathematics K–12 Standards 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.

Math Attributes	Aligned Components of *Eureka Math²*
3–5.MA.P Learners can develop and carry out a logical plan to problem-solve situations, reflect on the reasonableness of solutions, and explore alternate strategies with guidance.	Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.
3–5.MA.C Learners can make connections and summarize related ideas using supporting evidence.	Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.
3–5.MA.R Learners can reason logically based on experience and knowledge, citing evidence to support their reasoning and conclusions.	Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.

Number and Operations: Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.

3.NO.CC Counting and Cardinality: Learners will understand the relationship between numerical symbols, names, quantities, and counting sequences.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.NO.CC.1 Read and write numbers up to 10,000 using objects or visual representations, including standard, word, and expanded forms.	3 M2 Lesson 1: Connect the composition of 1 kilogram to the composition of 1 thousand. 3 M2 Lesson 4: Connect decomposition of 1 liter to the decomposition of 1 thousand. 3 M2 Lesson 5: Estimate and measure liquid volume using a vertical number line and connect composition of 1 liter to composition of 1 thousand. 3 M6 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 25: Name and count numbers greater than 1,000. *Supplemental material is necessary to address this standard.*

Number and Operations: Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.

3.NO.NBT Base Ten: Learners will understand the place value structure of the base-ten number system and represent, compare, and perform operations with multi-digit whole numbers and decimals.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.NO.NBT.1 Compare two four-digit numbers using symbols >, <, and =. Justify comparisons based on the value of thousands, hundreds, tens, and ones.	*Supplemental material is necessary to address this standard.*

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.NO.NBT.2 Apply place value understanding to round whole numbers to the nearest 10 or 100.	3 M2 Topic B: Rounding to the Nearest Ten and Hundred
3.NO.NBT.3 Add and subtract within 1,000 using place value strategies, algorithms, and/or the relationship between addition and subtraction.	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. 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.NO.NBT.4 Multiply one-digit whole numbers by multiples of 10 within 100.	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.

Number and Operations: Learners will develop a foundational understanding of the number system, operations, and computational fluency to create connections and solve problems within and across concepts.

3.NO.NF Fractions: Learners will understand fractions and equivalency to represent, compare, and perform operations of fractions and decimals.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.NO.NF.1 Partition two-dimensional figures into equal areas and express the area of each part as a unit fraction of the whole. Describe using the language of sixths, eighths, a sixth of, and an eighth of.	3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole
3.NO.NF.2 Represent and understand a fraction as a number on a number line.	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.
3.NO.NF.3 Represent equivalent fractions using visual representations and number lines.	3 M5 Lesson 13: Identify equivalent fractions from 0 to 1 with tape diagrams and on number lines. 3 M5 Lesson 14: Recognize that equivalent fractions share the same location on a number line. 3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M5 Lesson 17: Represent fractions greater than 1 on a number line and identify fractions equivalent to whole numbers. 3 M5 Lesson 22: Identify fractions equivalent to whole numbers by using number lines.

North Dakota Mathematics K–12 Standards	**Aligned Components of *Eureka Math²***
3.NO.NF.3 *continued*	3 M5 Lesson 23: Reason to find fractions equivalent to whole numbers by using patterns and number lines.
	3 M5 Lesson 24: Generate equivalent fractions greater than 1 by using a number line.
	3 M5 Lesson 26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals.
3.NO.NF.4 Recognize whole numbers as fractions and express fractions that are equivalent to whole numbers.	3 M5 Lesson 8: Identify and represent a whole as two non-unit fractions.
	3 M5 Lesson 17: Represent fractions greater than 1 on a number line and identify fractions equivalent to whole numbers.
	3 M5 Lesson 22: Identify fractions equivalent to whole numbers by using number lines.
	3 M5 Lesson 23: Reason to find fractions equivalent to whole numbers by using patterns and number lines.
	3 M5 Lesson 24: Generate equivalent fractions greater than 1 by using a number line.
	3 M5 Lesson 25: Express whole numbers as fractions with a denominator of 1.
3.NO.NF.5 Compare fractions of the same whole having the same numerators or denominators, using symbols $>$, $<$, and $=$ by reasoning about their size (fractions should be limited to denominators of 2, 3, 4, 6, and 8 and should not exceed the whole).	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.

Algebraic Reasoning: Learners will look for, generate, and make sense of patterns, relationships, and algebraic symbols to represent mathematical models while adopting approaches and solutions in novel situations.

3.AR.OA Operations and Algebraic Thinking: Learners will analyze patterns and relationships to generate and interpret numerical expressions.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.AR.OA.1 Using mental strategies, multiply and divide basic facts within 100. Automatically multiply and divide up to 5×5 and 10s facts.	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 Lesson 6: Explore measurement and partitive division by modeling concretely and drawing. 3 M1 Lesson 7: Model measurement and partitive division by drawing equal groups. 3 M1 Lesson 8: Model measurement and partitive division by drawing arrays. 3 M1 Lesson 12: Demonstrate the distributive property using a unit of 4. 3 M1 Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10. 3 M1 Lesson 15: Model division as an unknown factor problem. 3 M1 Topic E: Application of Multiplication and Division Concepts 3 M3 Lesson 1: Organize, count, and represent a collection of objects. 3 M3 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. 3 M3 Lesson 17: Identify and complete patterns with input–output tables. 3 M3 Lesson 24: Organize, count, and represent a collection of objects. 3 M6 Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.AR.OA.2 Apply the properties of operations to solve multiplication and division equations and justify thinking.	3 M1 Topic C: Properties of Multiplication 3 M1 Lesson 19: Use the distributive property to break apart multiplication problems into known facts. 3 M3 Lesson 1: Organize, count, and represent a collection of objects. 3 M3 Lesson 3: Count by units of 8 to multiply and divide by using arrays. 3 M3 Lesson 4: Decompose pictorial arrays to create expressions with three factors. 3 M3 Lesson 5: Use the break apart and distribute strategy to multiply with units of 6 and 8. 3 M3 Lesson 6: Use the break apart and distribute strategy to divide with units of 6 and 8. 3 M3 Lesson 8: Use the break apart and distribute strategy to multiply with units of 7. 3 M3 Lesson 9: Model the associative property as a strategy to multiply. 3 M3 Lesson 10: Use parentheses in expressions with different operations. 3 M3 Lesson 11: Use the break apart and distribute strategy to divide with units of 7. 3 M3 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. 3 M3 Lesson 21: Multiply by multiples of 10 by using place value strategies and the associative property. 3 M3 Lesson 23: Identify patterns and apply strategies to multiply with units of 11 and 12. 3 M3 Lesson 24: Organize, count, and represent a collection of objects.
3.AR.OA.3 Solve two-step authentic word problems using addition and subtraction within 1,000, including equations with a letter as an unknown.	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 M6 Lesson 7: Count coins and create money word problems. *Supplemental material is necessary to address this standard.*

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.AR.OA.4 Use strategies and visual models to solve authentic word problems with multiplication within 100, including unknowns, using grouping models and equations.	3 M1 Lesson 5: Represent and solve multiplication word problems by using drawings and equations. 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 18: Create multiplication and division word problems. 3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task.
3.AR.OA.5 Use strategies and visual models to solve authentic word problems with division within 100, including unknowns, using grouping models 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 18: Create multiplication and division word problems. 3 M3 Lesson 25: Apply multiplication and division concepts to complete a multi-part task.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.AR.OA.6 Identify arithmetic patterns and explain them using the properties of operations.	3 M3 Lesson 13: Count by units of 9 to multiply. 3 M3 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. 3 M3 Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. 3 M3 Lesson 16: Identify patterns using the multiplication table. 3 M3 Lesson 17: Identify and complete patterns with input–output tables. 3 M3 Lesson 23: Identify patterns and apply strategies to multiply with units of 11 and 12.

Geometry and Measurement: Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.

3.GM.G Geometry: Learners will compose and classify figures and shapes based on attributes and properties; represent and solve problems using a coordinate plane.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.GM.G.1 In two-dimensional shapes, identify lines, angles (right, acute, obtuse), and perpendicular and parallel lines.	4 M6 Topic A: Lines and Angles 4 M6 Lesson 10: Use 180° protractors to measure angles. 4 M6 Lesson 11: Estimate and measure angles with a 180° protractor. 4 M6 Lesson 18: Analyze and classify triangles based on side length, angle measures, or both. 4 M6 Lesson 19: Construct and classify triangles based on given attributes. 4 M6 Lesson 20: Sort polygons based on a given rule.
3.GM.G.2 Sort quadrilaterals into categories based on attributes.	3 M4 Lesson 1: Explore attributes of squares, rectangles, and trapezoids. 3 M4 Lesson 5: Relate side lengths to the number of tiles on a side. 3 M6 Topic B: Attributes of Two-Dimensional Figures

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.GM.G.3 Identify lines of symmetry in quadrilaterals.	4 M6 Lesson 17: Recognize, identify, and draw lines of symmetry.

Geometry and Measurement: Learners will use visualization, spatial reasoning, geometric modeling, and measurement to investigate the characteristics of figures, perform transformations, and construct logical arguments.

3.GM.M Measurement: Learners will represent and calculate measurement data, including time, money, and geometric measurement, and convert like measurement units within a given system.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.GM.M.1 Measure lengths using rulers marked with halves and fourths of an inch.	3 M5 Lesson 15: Identify fractions on a ruler as numbers on a number line. 3 M5 Lesson 16: Measure lengths and record data on a line plot. 3 M5 Lesson 26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals. 3 M6 Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.
3.GM.M.2 Measure and estimate liquid volumes and masses of objects using standard units. Solve one-step authentic word problems involving masses or volume given in the same units.	3 M2 Topic A: Understanding Place Value Concepts Through Metric Measurement
3.GM.M.3 Tell and write time to the nearest minute and measure time intervals in minutes.	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.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.GM.M.4 Solve elapsed time authentic word problems on the hour and the half-hour, using a variety of strategies.	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. *Supplemental material is necessary to address using times to the hour and the half-hour.*
3.GM.M.5 Solve authentic word problems involving dollar bills, quarters, dimes, nickels, and pennies using the $ and ¢ symbols appropriately.	3 M6 Lesson 7: Count coins and create money word problems. *Supplemental material is necessary to address this standard.*
3.GM.M.6 Solve problems involving the perimeters of rectangles given the side lengths or when given the perimeter and unknown side length(s).	3 M6 Topic C: Problem Solving with Perimeter
3.GM.M.7 Recognize area as an attribute of plane figures and understand concepts of area measurement.	3 M4 Topic A: Foundations for Understanding Area 3 M4 Lesson 16: Solve historical math problems involving area.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.GM.M.8 Find the area of a rectangle with whole-number side lengths by modeling with unit squares; show that area can be additive and is the same as would be found by multiplying the side lengths.	3 M4 Lesson 2: Recognize area as an attribute of polygons. 3 M4 Lesson 3: Tile polygons to find their areas. 3 M4 Lesson 4: Compose rectangles to compare areas. 3 M4 Lesson 5: Relate side lengths to the number of tiles on a side. 3 M4 Topic B: Concepts of Area Measurement 3 M4 Topic C: Applying Properties of Operations to Area 3 M4 Topic D: Applications of Area

Data, Probability, and Statistics: Learners will ask and answer questions by collecting, organizing, and displaying relevant data, drawing inferences and conclusions, making predictions, and understanding and applying basic concepts of probability.

3.DPS.D Data: Learners will represent and interpret data.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.DPS.D.1 Formulate questions to collect, organize, and represent data with more than four categories using scaled picture and bar graphs.	3 M2 Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. 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. *Supplemental material is necessary to address this standard.*
3.DPS.D.2 Generate data and create line plots marked in whole numbers, halves, and fourths of a unit.	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.

North Dakota Mathematics K–12 Standards	Aligned Components of *Eureka Math²*
3.DPS.D.3 Analyze data and make simple statements to solve one- and two-step problems using information from the graphs.	3 M2 Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. 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.