

# Grade 2 | North Dakota Mathematics K-12 Standards Correlation to Eureka Math®

#### About Eureka Math

Created by Great Minds<sup>®</sup>, a mission-driven Public Benefit Corporation, *Eureka Math*<sup>®</sup> 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

Great Minds offers detailed analyses that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at <u>greatminds.org/state-studies</u>.

#### 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**

Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at <u>greatminds.org/</u><u>math/curriculum</u>.

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

Math Attributes	Aligned Components of Eureka Math
<b>K-2.MA.P</b> Learners can identify and use strategies to problem-solve situations and determine an appropriate solution.	Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.
<b>K-2.MA.C</b> Learners can make connections and demonstrate relationships using words, pictures, or symbols.	Lessons in every module engage students in math attributes. These are indicated in margin notes included with every lesson.
<b>K-2.MA.R</b> Learners can use prior knowledge and experiences to explain their thinking.	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.

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

# K–12 Standards Aligned Components of Eureka Math 2.NO.CC.1 G2 M3 Topic B: Understanding Place Value Units of One, Ten, and a Hundred Count forward from any given number G2 M3 Lesson 4: Count up to 1,000 on the place value chart. within 1,000. G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money G2 M3 Lesson 11: Count the total value of ones, tens, and hundreds with place value disks. G2 M3 Lesson 12: Change 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand. G2 M3 Topic G: Finding 1, 10, and 100 More or Less Than a Number G2 M7 Lesson 21: Identify unknown numbers on a number line diagram by using the distance between numbers and reference points. G2 M7 Lesson 22: Represent two-digit sums and differences involving length by using the ruler as a number line. 2.NO.CC.2 G2 M3 Topic B: Understanding Place Value Units of One, Ten, and a Hundred Count backward from any given number G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money within 1.000. G2 M3 Lesson 11: Count the total value of ones, tens, and hundreds with place value disks. G2 M3 Lesson 12: Change 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand. G2 M3 Topic G: Finding 1, 10, and 100 More or Less Than a Number G2 M7 Lesson 21: Identify unknown numbers on a number line diagram by using the distance between numbers and reference points. G2 M7 Lesson 22: Represent two-digit sums and differences involving length by using the ruler as a number line.

# North Dakota Mathematics

K-12 Standards	Aligned Components of Eureka Math
2.NO.CC.3	G2 M3 Lesson 5: Write base ten three-digit numbers in unit form; show the value of each digit.
Read and write numbers up to 1,000 using standard, word, and expanded forms.	G2 M3 Lesson 6: Write base ten numbers in expanded form.
	G2 M3 Lesson 7: Write, read, and relate base ten numbers in all forms.
	G2 M3 Lesson 13: Read and write numbers within 1,000 after modeling with place value disks.
	G2 M3 Lesson 14: Model numbers with more than 9 ones or 9 tens; write in expanded, unit, standard, and word forms.
2.NO.CC.4	G2 M3 Topic B: Understanding Place Value Units of One, Ten, and a Hundred
Skip count forward and backward by 2s and 100s and recognize the patterns of skip counts.	G2 M3 Lesson 4: Count up to 1,000 on the place value chart.
	G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money
	G2 M3 Lesson 11: Count the total value of ones, tens, and hundreds with place value disks.
	G2 M3 Topic G: Finding 1, 10, and 100 More or Less Than a Number

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#### North Dakota Mathematics K–12 Standards

# 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.

2.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 Math
2.NO.NBT.1	G2 M3 Topic A: Forming Base Ten Units of Ten, a Hundred, and a Thousand
Understand that the three digits of a three-digit number represent a composition of some hundreds, some tens, and some ones.	G2 M3 Topic B: Understanding Place Value Units of One, Ten, and a Hundred
	G2 M3 Topic C: Three-Digit Numbers in Unit, Standard, Expanded, and Word Forms
	G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money
	G2 M3 Topic E: Modeling Numbers Within 1,000 with Place Value Disks
	G2 M3 Topic G: Finding 1, 10, and 100 More or Less Than a Number

# Aligned Components of Eureka Math

<b>2.NO.NBT.2</b> Compare two three-digit numbers using symbols >, <, and =. Justify comparisons based on the value of hundreds, tens, and ones.	G2 M3 Topic F: Comparing Two Three-Digit Numbers
2.NO.NBT.3	G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100
Add within 100 using place value strategies and/or the relationship	G2 M1 Topic B: Initiating Fluency with Addition and Subtraction Within 100
	G2 M2 Lesson 8: Solve addition and subtraction word problems using the ruler as a number line.
between addition and subtraction.	G2 M4 Topic A: Sums and Differences Within 100
	G2 M4 Topic B: Strategies for Composing a Ten
	G2 M4 Topic D: Strategies for Composing Tens and Hundreds
	G2 M6 Lesson 2: Use math drawings to represent equal groups, and relate to repeated addition.
	G2 M6 Lesson 3: Use math drawings to represent equal groups, and relate to repeated addition.
	G2 M6 Lesson 4: Represent equal groups with tape diagrams, and relate to repeated addition.
	G2 M7 Topic B: Problem Solving with Coins and Bills
	G2 M7 Lesson 22: Represent two-digit sums and differences involving length by using the ruler as a number line.

K–12 Standards	Aligned Components of Eureka Math
2.NO.NBT.4	G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100
Subtract within 100 using place value strategies and/or the relationship between addition and subtraction.	G2 M1 Topic B: Initiating Fluency with Addition and Subtraction Within 100
	G2 M2 Lesson 8: Solve addition and subtraction word problems using the ruler as a number line.
	G2 M4 Topic A: Sums and Differences Within 100
	G2 M4 Topic C: Strategies for Decomposing a Ten
	G2 M4 Topic E: Strategies for Decomposing Tens and Hundreds
	G2 M7 Topic B: Problem Solving with Coins and Bills
	G2 M7 Lesson 22: Represent two-digit sums and differences involving length by using the ruler as a number line.
2.NO.NBT.5	G2 M3 Topic G: Finding 1, 10, and 100 More or Less Than a Number
Mentally add or subtract 10 or 100 to or from a given number between	G2 M3 Lesson 19: Model and use language to tell about 1 more and 1 less, 10 more and 10 less, and 100 more and 100 less.
100 and 900.	G2 M3 Lesson 21: Complete a pattern counting up and down.
	G2 M4 Lesson 1: Relate $1$ more, $1$ less, $10$ more, and $10$ less to addition and subtraction of $1$ and $10$ .
	G2 M4 Lesson 2: Add and subtract multiples of $10$ including counting on to subtract.
	G2 M4 Lesson 3: Add and subtract multiples of 10 and some ones within 100.
	G2 M4 Lesson 4: Add and subtract multiples of 10 and some ones within 100.
	G2 M4 Lesson 17: Use mental strategies to relate compositions of $10$ tens as $1$ hundred to $10$ ones as $1$ ten.
	G2 M5 Lesson 1: Relate 10 more, 10 less, 100 more, and 100 less to addition and subtraction of 10 and 100.
	G2 M5 Lesson 2: Add and subtract multiples of $100$ , including counting on to subtract.
	G2 M5 Lesson 3: Add multiples of 100 and some tens within 1,000.
	G2 M5 Lesson 4: Subtract multiples of 100 and some tens within 1,000.

# 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.

2.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

K–12 Standards	Aligned Components of Eureka Math
<b>2.NO.NF.1</b> Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the language of halves, thirds, fourths, half of, a third of, and a fourth of.	G2 M8 Topic B: Composite Shapes and Fraction Concepts G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles G2 M8 Lesson 13: Construct a paper clock by partitioning a circle into halves and quarters, and tell time to the half hour or quarter hour.
<b>2.NO.NF.2</b> Recognize that identical wholes can be equally divided in different ways.	G2 M8 Topic B: Composite Shapes and Fraction Concepts G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles
<b>2.NO.NF.3</b> Recognize that partitioning shapes into more equal shares creates smaller shares.	G2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division G2 M8 Topic B: Composite Shapes and Fraction Concepts G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles

# 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.

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

K–12 Standards	Aligned Components of Eureka Math
2.AR.OA.1	G2 M1 Lesson 1: Practice making ten and adding to ten.
Automatically add and subtract	G2 M1 Lesson 3: Add and subtract like units.
within 20.	G2 M1 Lesson 4: Make a ten to add within 20.
	G2 M1 Lesson 7: Take from ten within 20.
2.AR.OA.2	G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100
Apply the properties of operations	G2 M1 Topic B: Initiating Fluency with Addition and Subtraction Within $100$
to solve addition and subtraction	G2 M4 Topic A: Sums and Differences Within 100
equations within 100 ana justify thinking.	G2 M4 Topic F: Student Explanations of Written Methods
	G2 M5 Topic D: Student Explanations for Choice of Solution Methods
	G2 M7 Topic B: Problem Solving with Coins and Bills
2.AR.OA.3	G2 M4 Lesson 5: Solve one- and two-step word problems within 100 using strategies based
Solve one- and two-step authentic word problems with addition within 100, including the use of unknowns.	on place value.
	G2 M4 Lesson 16: Solve one- and two-step word problems within 100 using strategies based on place value.
	G2 M4 Lesson 31: Solve two-step word problems within 100.
	G2 M6 Lesson 9: Solve word problems involving addition of equal groups in rows and columns.

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K-12 Standards	Aligned Components of Eureka Math
2.AR.OA.4	G2 M4 Lesson 5: Solve one- and two-step word problems within 100 using strategies based
Solve one- and two-step authentic word problems with subtraction within 100, including the use of unknowns.	on place value. G2 M4 Lesson 16: Solve one- and two-step word problems within 100 using strategies based on place value. G2 M4 Lesson 31: Solve two-step word problems within 100.
2.AR.OA.5	G2 M6 Topic A: Formation of Equal Groups
Use repeated addition to find the total number of objects arranged in a rectangular array.	G2 M6 Topic B: Arrays and Equal Groups
	G2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division
2.AR.OA.6	G2 M6 Topic D: The Meaning of Even and Odd Numbers
Identify a group of objects from 0 to 20 as even or odd by showing even numbers as a sum of two equal parts.	

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.

2.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 Math

2.GM.G.1	G2 M8 Topic A: Attributes of Geometric Shapes
ldentify two-dimensional shapes (parallelograms and quadrilaterals).	

### Aligned Components of Eureka Math

<b>2.GM.G.2</b> Identify two-dimensional shapes found within three-dimensional shapes.	G2 M8 Lesson 5: Relate the square to the cube, and describe the cube based on attributes. Supplemental material is necessary to fully address this standard.
<b>2.GM.G.3</b> Compose geometric shapes having specified geometric attributes, such as a given number of edges, angles, faces, vertices, and/or sides.	G2 M8 Topic A: Attributes of Geometric Shapes G2 M8 Lesson 6: Combine shapes to create a composite shape; create a new shape from composite shapes.

# 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.

2.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 Math

2.GM.M.1	G2 M2 Topic A: Understand Concepts About the Ruler
Measure the length of an object	G2 M2 Lesson 4: Measure various objects using centimeter rulers and meter sticks.
using two different standard units of measurement. Describe how the two	G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units
measurements relate to the size of the	G2 M7 Topic C: Creating an Inch Ruler
units chosen.	G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units

K–12 Standards	Aligned Components of Eureka Math
<b>2.GM.M.2</b> Estimate and measure to determine	G2 M2 Lesson 5: Develop estimation strategies by applying prior knowledge of length and using mental benchmarks.
how much longer one object is than another, expressing the difference with a standard unit of measurement.	G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units
	G2 M2 Lesson 9: Measure lengths of string using measurement tools, and use tape diagrams to represent and compare the lengths.
	G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units
2.GM.M.3	G2 M8 Topic D: Application of Fractions to Tell Time
Tell and write time to the nearest five minutes (including quarter after and quarter to) with a.m. and p.m. using analog and digital clocks.	
2.GM.M.4	G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money
Count collections of money (quarters, dimes, nickels, and pennies) relating to counting patterns by 1s, 5s, and 10s up to one dollar.	G2 M7 Topic B: Problem Solving with Coins and Bills

# 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.

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

# North Dakota Mathematics K-12 Standards

K–12 Standards	Aligned Components of Eureka Math
2.DPS.D.1	G2 M7 Topic A: Problem Solving with Categorical Data
Formulate questions and collect, organize, and represent data with up to four categories using single unit scaled picture and bar graphs.	
2.DPS.D.2	G2 M7 Topic F: Displaying Measurement Data
Generate data and create line plots marked in whole-number units.	
2.DPS.D.3	G2 M7 Topic A: Problem Solving with Categorical Data
Analyze data and interpret the results to solve one-step comparison problems using information from the graphs.	