

## 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](http://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](http://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](http://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





# Arizona Mathematics Standards Correlation to *Eureka Math*™

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## GRADE 2 MATHEMATICS

The Grade 2 Arizona Mathematics Standards are fully covered by the Grade 2 *Eureka Math* curriculum. A detailed analysis of alignment is provided in the table below.

## INDICATORS

-  Green indicates that the Arizona standard is fully addressed in *Eureka Math*.
-  Yellow indicates that the Arizona standard may not be completely addressed in *Eureka Math*.
-  Red indicates that the Arizona 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 Arizona standards and in *Eureka Math*.

## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

### **1: Make sense of problems and persevere in solving them.**

Mathematically proficient students explain to themselves the meaning of a problem, look for entry points to begin work on the problem, and plan and choose a solution pathway. While engaging in productive struggle to solve a problem, they continually ask themselves, “Does this make sense?” to monitor and evaluate their progress and change course if necessary. Once they have a solution, they look back at the problem to determine if the solution is reasonable and accurate. Mathematically proficient students check their solutions to problems using different methods, approaches, or representations. They also compare and understand different representations of problems and different solution pathways, both their own and those of others.

Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules:

G2 M4: Addition and Subtraction Within 200 with Word Problems to 100

G2 M7: Problem Solving with Length, Money, and Data

G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

### **2: Reason abstractly and quantitatively.**

Mathematically proficient students make sense of quantities and their relationships in problem situations. Students can contextualize and decontextualize problems involving quantitative relationships. They contextualize quantities, operations, and expressions by describing a corresponding situation. They decontextualize a situation by representing it symbolically. As they manipulate the symbols, they can pause as needed to access the meaning of the numbers, the units, and the operations that the symbols represent. Mathematically proficient students know and flexibly use different properties of operations, numbers, and geometric objects and when appropriate they interpret their solution in terms of the context.

Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 2, which is specifically addressed in the following modules:

G2 M1: Sums and Differences to 100

G2 M2: Addition and Subtraction of Length Units

G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

G2 M4: Addition and Subtraction Within 200 with Word Problems to 100

G2 M7: Problem Solving with Length, Money, and Data

## Standards for Mathematical Practice

### **3: Construct viable arguments and critique the reasoning of others.**

Mathematically proficient students construct mathematical arguments (explain the reasoning underlying a strategy, solution, or conjecture) using concrete, pictorial, or symbolic referents. Arguments may also rely on definitions, assumptions, previously established results, properties, or structures.

Mathematically proficient students make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples.

Mathematically proficient students present their arguments in the form of representations, actions on those representations, and explanations in words (oral or written). Students critique others by affirming or questioning the reasoning of others. They can listen to or read the reasoning of others, decide whether it makes sense, ask questions to clarify or improve the reasoning, and validate or build on it. Mathematically proficient students can communicate their arguments, compare them to others, and reconsider their own arguments in response to the critiques of others.

## Aligned Components of *Eureka Math*

Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules:

G2 M2: Addition and Subtraction of Length Units

G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

G2 M4: Addition and Subtraction Within 200 with Word Problems to 100

G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100

G2 M6: Foundations of Multiplication and Division

G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

<p><b>4: Model with mathematics.</b></p> <p>Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. When given a problem in a contextual situation, they identify the mathematical elements of a situation and create a mathematical model that represents those mathematical elements and the relationships among them. Mathematically proficient students use their model to analyze the relationships and draw conclusions. They interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.</p>	<p>Lessons in every module engage students in modeling with mathematics as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules:</p> <p>G2 M4: Addition and Subtraction Within 200 with Word Problems to 100</p> <p>G2 M6: Foundations of Multiplication and Division</p> <p>G2 M7: Problem Solving with Length, Money, and Data</p>
<p><b>5: Use appropriate tools strategically.</b></p> <p>Mathematically proficient students consider available tools when solving a mathematical problem. They choose tools that are relevant and useful to the problem at hand. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful; recognizing both the insight to be gained and their limitations. Students deepen their understanding of mathematical concepts when using tools to visualize, explore, compare, communicate, make and test predictions, and understand the thinking of others.</p>	<p>Lessons in every module engage students in using appropriate tools strategically as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 5, which is specifically addressed in the following modules:</p> <p>G2 M1: Sums and Differences to 100</p> <p>G2 M2: Addition and Subtraction of Length Units</p> <p>G2 M7: Problem Solving with Length, Money, and Data</p>

## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

### **6: Attend to precision.**

Mathematically proficient students clearly communicate to others using appropriate mathematical terminology, and craft explanations to convey their reasoning. When making mathematical arguments about a solution, strategy, or conjecture, they describe mathematical relationships and connect their words clearly to their representations. Mathematically proficient students understand meanings of symbols used in mathematics, calculate accurately and efficiently, label quantities appropriately, and record their work clearly and concisely.

Lessons in every module engage students in attending to precision as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 6, which is specifically addressed in the following modules:

G2 M2: Addition and Subtraction of Length Units

G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

G2 M4: Addition and Subtraction Within 200 with Word Problems to 100

G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100

G2 M7: Problem Solving with Length, Money, and Data

G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes

## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

### **7: Look for and make use of structure.**

Mathematically proficient students use structure and patterns to assist in making connections among mathematical ideas or concepts when making sense of mathematics. Students recognize and apply general mathematical rules to complex situations. They are able to compose and decompose mathematical ideas and notations into familiar relationships. Mathematically proficient students manage their own progress, stepping back for an overview and shifting perspective when needed.

Lessons in every module engage students in looking for and making use of structure as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 7, which is specifically addressed in the following modules:

G2 M1: Sums and Differences to 100

G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100

G2 M6: Foundations of Multiplication and Division

G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes



## Standards for Mathematical Practice

## Aligned Components of *Eureka Math*

### **8: Look for and express regularity in repeated reasoning.**

Mathematically proficient students look for and describe regularities as they solve multiple related problems. They formulate conjectures about what they notice and communicate observations with precision. While solving problems, students maintain oversight of the process and continually evaluate the reasonableness of their results. This informs and strengthens their understanding of the structure of mathematics which leads to fluency.

Lessons in every module engage students in looking for and expressing regularity in repeated reasoning as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 8, which is specifically addressed in the following modules:

G2 M1: Sums and Differences to 100

G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100

G2 M6: Foundations of Multiplication and Division

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
<b>Operations and Algebraic Thinking</b>	<b>Cluster: Represent and solve problems involving addition and subtraction.</b>	
	<p><b>2.OA.A.1</b> Use addition and subtraction within 100 to solve one-step word problems. Use addition to solve two-step word problems using single-digit addends. Represent a word problem as an equation with a symbol for the unknown.</p>	<p>G2 M1 Topic A: Foundations for Fluency with Sums and Differences Within 100</p> <p>G2 M1 Lesson 5: Make a ten to add within 100.</p> <p>G2 M1 Lesson 8: Take from 10 within 100.</p> <p>G2 M4 Lesson 31: Solve two-step word problems within 100.</p> <p>G2 M6 Lesson 9: Solve word problems involving addition of equal groups in rows and columns.</p>
	<b>Cluster: Add and subtract within 20.</b>	
	<p><b>2.OA.B.2</b> Fluently add and subtract within 20. By the end of Grade 2, know from memory all sums of two one-digit numbers.</p>	<p>G2 M1: Sums and Differences to 100</p> <p>G2 M4 Lesson 5: Solve one- and two-step word problems within 100 using strategies based on place value.</p> <p>G2 M4 Lesson 16: Solve one- and two-step word problems within 100 using strategies based on place value.</p>
	<b>Cluster: Work with equal groups of objects to gain foundations for multiplication.</b>	
<p><b>2.OA.C.3</b> Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by pairing objects or counting them by 2's).</p>	<p>G2 M6 Topic D: The Meaning of Even and Odd Numbers</p>	

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p><b>2.OA.C.4</b></p> <p>Use addition to find the total number of objects arranged in rectangular arrays (with up to 5 rows and 5 columns). Write an equation to express the total as a sum of equal addends.</p>	G2 M6: Foundations of Multiplication and Division
<b>Number and Operations in Base Ten</b>	<b>Cluster: Understand place value.</b>	
	<p><b>2.NBT.A.1</b></p> <p>Understand that the three digits of a three-digit number represent groups of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones and also equals 70 tens and 6 ones). Understand the following as special cases:</p>	
	<p>a. 100 can be thought of as a group of ten tens—called a “hundred.”</p>	G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000
	<p>b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</p>	G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000
	<p><b>2.NBT.A.2</b></p> <p>Count within 1,000; skip count by 5’s, 10’s and 100’s.</p>	G2 M3: Place Value, Counting, and Comparison of Numbers to 1,000

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p><b>2.NBT.A.3</b> Read and write numbers up to 1,000 using base-ten numerals, number names, and expanded form.</p>	<p>G2 M3 Topic C: Three-Digit Numbers in Unit, Standard, Expanded, and Word Forms</p> <p>G2 M3 Topic E: Modeling Numbers Within 1,000 with Place Value Disks</p> <p>G2 M3 Topic F: Comparing Two Three-Digit Numbers</p>
	<p><b>2.NBT.A.4</b> Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p>	<p>G2 M3 Topic F: Comparing Two Three-Digit Numbers</p>
<p><b>Cluster: Use place value understanding and properties of operations to add and subtract.</b></p>		
	<p><b>2.NBT.B.5</b> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	<p>G2 M1: Sums and Differences to 100</p> <p>G2 M4 Topic A: Sums and Differences Within 100</p> <p>G2 M7 Topic B: Problem Solving with Coins and Bills</p>
	<p><b>2.NBT.B.6</b> Add up to three two-digit numbers using strategies based on place value and properties of operations.</p>	<p>G2 M4 Lesson 22: Solve additions with up to four addends with totals within 200 with and without two compositions of larger units.</p>

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p><b>2.NBT.B.7</b>            Demonstrate understanding of addition and subtraction within 1,000, connecting objects or drawings to strategies based on place value (including multiples of 10), properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written form.</p>	<p>G2 M4: Addition and Subtraction Within 200 with Word Problems to 100</p> <p>G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100</p>
	<p><b>2.NBT.B.8</b>            Mentally add 10 or 100 to a given number in the range of 100 and 900, and mentally subtract 10 or 100 from a given number in the range of 100 and 900.</p>	<p>G2 M3 Topic G: Finding 1, 10, and 100 More or Less than a Number</p> <p>G2 M4 Topic A: Sums and Differences Within 100</p> <p>G2 M4 Lesson 17: Use mental strategies to relate compositions of 10 tens as 1 hundred to 10 ones as 1 ten.</p> <p>G2 M5 Topic A: Strategies for Adding and Subtracting Within 1,000</p>
	<p><b>2.NBT.B.9</b>            Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)</p>	<p>G2 M4: Addition and Subtraction Within 200 with Word Problems to 100</p> <p>G2 M5: Addition and Subtraction Within 1,000 with Word Problems to 100</p>

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
<b>Measurement and Data</b>	<b>Cluster: Measure and estimate lengths in standard units.</b>	
	<p><b>2.MD.A.1</b> Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).</p>	<p>G2 M2: Addition and Subtraction of Length Units</p> <p>G2 M7 Topic C: Creating an Inch Ruler</p> <p>G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units</p>
	<p><b>2.MD.A.2</b> Measure the length of an object twice, using different standard length units for the two measurements; describe how the two measurements relate to the size of the unit chosen. Understand that depending on the size of the unit, the number of units for the same length varies.</p>	<p>G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units</p> <p>G2 M7 Lesson 18: Measure an object twice using different length units and compare; relate measurement to unit size.</p>
	<p><b>2.MD.A.3</b> Estimate lengths using units of inches, feet, centimeters, and meters.</p>	<p>G2 M2 Topic B: Measure and Estimate Length Using Different Measurement Tools</p> <p>G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units</p>
	<p><b>2.MD.A.4</b> Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</p>	<p>G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units</p> <p>G2 M2 Lesson 9: Measure lengths of string using measurement tools, and use tape diagrams to represent and compare lengths.</p> <p>G2 M7 Lesson 19: Measure to compare the differences in lengths using inches, feet, and yards.</p>

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<b>Cluster: Relate addition and subtraction to length.</b>	
	<p><b>2.MD.B.5</b></p> <p>Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same unit.</p>	<p>G2 M2 Topic D: Relate Addition and Subtraction to Length</p> <p>G2 M7 Lesson 20: Solve two-digit addition and subtraction word problems involving length by using tape diagrams and writing equations to represent the problem.</p>
	<p><b>2.MD.B.6</b></p> <p>Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p>	<p>G2 M2 Lesson 8: Solve addition and subtraction word problems using the ruler as a number line.</p> <p>G2 M7 Topic E: Problem Solving with Customary and Metric Units</p> <p>G2 M7 Lesson 24: Draw a line plot to represent the measurement data; relate the measurement scale to the number line.</p>
	<b>Cluster: Work with time and money.</b>	
	<p><b>2.MD.C.7</b></p> <p>Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>	<p>G2 M8 Topic D: Application of Fractions to Tell Time</p>
	<p><b>2.MD.C.8</b></p> <p>Solve word problems involving collections of money, including dollar bills, quarters, dimes, nickels, and pennies. Record the total using \$ and ¢ appropriately.</p>	<p>G2 M7 Topic B: Problem Solving with Coins and Bills</p>

Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p><b>Cluster: Represent and interpret data.</b></p> <p><b>2.MD.D.9</b> Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</p> <p><b>2.MD.D.10</b> Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.</p>	<p>G2 M7 Topic F: Displaying Measurement Data</p> <p>G2 M7 Topic A: Problem Solving with Categorical Data</p>
<p><b>Geometry</b></p>	<p><b>Cluster: Reason with shapes and their attributes.</b></p> <p><b>2.G.A.1</b> Identify and describe specified attributes of two-dimensional and three-dimensional shapes, according to the number and shape of faces, number of angles, and the number of sides and/or vertices. Draw two-dimensional shapes based on the specified attributes (e.g., triangles, quadrilaterals, pentagons, and hexagons).</p>	<p>G2 M8 Topic A: Attributes of Geometric Shapes</p> <p>G2 M8 Lesson 6: Combine shapes to create a composite shape; create a new shape from composite shapes.</p>



Domain	Standards for Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p><b>2.G.A.2</b></p> <p>Partition a rectangle into rows and columns of same-size rectangles and count to find the total number of rectangles.</p>	<p>G2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division</p>
	<p><b>2.G.A.3</b></p> <p>Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, fourths, half of, third of, fourth of, and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<p>G2 M8: Time, Shapes, and Fractions as Equal Parts of Shapes</p>