

A photograph of a classroom with two wooden desks. Each desk has a black top and a white sheet of paper. A pencil lies on each desk. In the background, there is a whiteboard and a colorful display board. A red abacus is visible on the left side of the frame.

DRAFT New Louisiana
Standards for 2016-2017
Correlation to *Eureka Math*

Grade 2
April 2016
Draft

**EUREKA
MATH™**

Grade 2 Mathematics

The Grade 2 Louisiana Standards for Mathematics 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 Louisiana standard is fully addressed in *Eureka Math*.
-  Yellow indicates that the Louisiana standard may not be completely addressed in *Eureka Math*.
-  Red indicates that the Louisiana 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 Louisiana standards and in *Eureka Math*.

Standards for Mathematical Practice

Aligned Components of *Eureka Math*

1. Make sense of problems and persevere in solving them.

In second grade, students realize that doing mathematics involves solving problems and discussing how they solved them. Students explain to themselves the meaning of a problem and look for ways to solve it. They may use concrete objects or pictures to help them conceptualize and solve problems. They may check their thinking by asking themselves, “Does this make sense?” They make conjectures about the solution and plan out a problem solving approach.

Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This standard is analogous to the CCSSM Standard 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

2. Reason abstractly and quantitatively.

Younger students recognize that a number represents a specific quantity. They connect the quantity to written symbols. Quantitative reasoning entails creating a representation of a problem while attending to the meanings of the quantities. Second graders begin to know and use different properties of operations and objects.

Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This standard is analogous to the CCSSM Standard 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

Aligned Components of *Eureka Math*

3. Construct viable arguments and critique the reasoning of others.

Second graders may construct arguments using concrete referents, such as objects, pictures, drawings, and actions. They practice their mathematical communication skills as they participate in mathematical discussions involving questions like “How did you get that?”, “Explain your thinking,” and “Why is that true?” They not only explain their own thinking, but listen to others’ explanations. They decide if the explanations make sense and ask appropriate questions.

Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This standard is analogous to the CCSSM Standard 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

4. Model with mathematics.

In early grades, students experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. Students need opportunities to connect the different representations and explain the connections. They should be able to use all of these representations as needed.

Lessons in every module engage students in modeling with mathematics as required by this standard. This standard is analogous to the CCSSM Standard for Mathematical Practice 4, which is specifically addressed in the following modules:

- G2 M4: Addition and Subtraction Within 200 with Word Problems to 100
- G2 M6: Foundations of Multiplication and Division
- G2 M7: Problem Solving with Length, Money, and Data

5. Use appropriate tools strategically.

In second grade, students consider the available tools (including estimation) when solving a mathematical problem and decide when certain tools might be better suited. For instance, second graders may decide to solve a problem by drawing a picture rather than writing an equation.

Lessons in every module engage students in using appropriate tools strategically as required by this standard. This standard is analogous to the CCSSM Standard for Mathematical Practice 5, which is specifically addressed in the following modules:

- G2 M1: Sums and Differences to 100
- G2 M2: Addition and Subtraction of Length Units
- G2 M7: Problem Solving with Length, Money, and Data

Standards for Mathematical Practice

Aligned Components of *Eureka Math*

6. Attend to precision.

As children begin to develop their mathematical communication skills, they try to use clear and precise language in their discussions with others and when they explain their own reasoning.

Lessons in every module engage students in attending to precision as required by this standard. This standard is analogous to the CCSSM Standard 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

7. Look for and make use of structure.

Second graders look for patterns. For instance, they adopt mental math strategies based on patterns (making ten, fact families, doubles).

Lessons in every module engage students in looking for and making use of structure as required by this standard. This standard is analogous to the CCSSM Standard 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

8. Look for and express regularity in repeated reasoning.

Second graders look for patterns. For instance, they adopt mental math strategies based on patterns (making ten, fact families, doubles).

Aligned Components of *Eureka Math*

Lessons in every module engage students in looking for and expressing regularity in repeated reasoning as required by this standard. This standard is analogous to the CCSSM Standard 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 *Eureka Math*

Operations and Algebraic Thinking	Cluster A: Represent and solve problems involving addition and subtraction.	
	2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	<p>G2 M1: Sums and Differences to 100</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>Note: Word problems that directly engage students in this standard are abundant throughout the year. The above references indicate places where this standard is central to the majority of the work in the module.</p>
	Cluster B: Add and subtract within 20.	
	2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.	<p>G2 M1: Sums and Differences to 100</p> <p>Note: Grade 2 students continuously address this standard in various fluency activities throughout the year.</p>
	Cluster C: Work with equal groups of objects to gain foundations for multiplication.	
	2.OA.C.3 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 2s; write an equation to express an even number as a sum of two equal addends.	<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>2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</p>	G2 M6: Foundations of Multiplication and Division
Number and Operations in Base Ten	Cluster A: Understand place value.	
	<p>2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</p>	
	<p>a. 100 can be thought of as a bundle 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

Domain	Standards For Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.</p>	<p>G2 M3 Topic A: Forming Base Ten Units of Ten, a Hundred, and a Thousand</p> <p>G2 M3 Topic B: Understanding Place Value Units of One, Ten, and a Hundred</p> <p>G2 M3 Topic D: Modeling Base Ten Numbers Within 1,000 with Money</p> <p>G2 M3 Topic G: Finding 1, 10, and 100 More or Less than a Number</p> <p>G2 M8 Topic D: Application of Fractions to Tell Time (<i>Students skip-count by 5s using the analog clock.</i>)</p> <p>Note: Grade 2 students count by 1s, 5s, 10s, and 100s in various fluency activities throughout the year.</p>
	<p>2.NBT.A.3 Read and write numbers to 1000 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 D: Modeling Base Ten Numbers Within 1,000 with Money</p>
	<p>2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	<p>G2 M3 Topic F: Comparing Two Three-Digit Numbers</p>

Domain

Standards For Mathematical Content

Aligned Components of *Eureka Math*

Domain	Standards For Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>Cluster B: Use place value understanding and properties of operations to add and subtract.</p>	
	<p>2.NBT.B.5 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 G2 M4 Topic A: Sums and Differences Within 100 G2 M4 Topic B: Strategies for Composing a Ten G2 M4 Topic C: Strategies for Decomposing a Ten G2 M7 Topic B: Problem Solving with Coins and Bills Note: Students also add and subtract within 100 through daily application problems and fluency practice.</p>
	<p>2.NBT.B.6 Add up to four 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>
	<p>2.NBT.B.7 Add and subtract within 1000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; justify the reasoning used with a written explanation. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</p>	<p>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</p>

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	<p>2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</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 M5 Topic A: Strategies for Adding and Subtracting Within 1,000</p>
	<p>2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.</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>
Measurement and Data	<p>Cluster A: Measure and estimate lengths in standard units.</p>	
	<p>2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</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>2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</p>	<p>G2 M2 Topic C: Measure and Compare Lengths Using Different Length Units</p> <p>G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units</p>

Domain	Standards For Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.</p>	<p>G2 M2: Addition and Subtraction of Length Units G2 M7 Topic C: Creating an Inch Ruler G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units</p>
	<p>2.MD.A.4 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 G2 M7 Topic D: Measuring and Estimating Length Using Customary and Metric Units</p>
<p>Cluster B: Relate addition and subtraction to length.</p>		
	<p>2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</p>	<p>G2 M2 Topic D: Relate Addition and Subtraction to Length G2 M7 Topic E: Problem Solving with Customary and Metric Units G2 M7 Topic F: Displaying Measurement Data Note: Throughout the entire <i>Eureka Math</i> curriculum, length is addressed in many of the Application Problems.</p>

Domain	Standards For Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>2.MD.B.6 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 M3 Lesson 9: Count from \$10 to \$1,000 on the place value chart and the empty number line.</p> <p>G2 M7 Topic E: Problem Solving with Customary and Metric Units</p> <p>G2 M7 Lessons 24: Draw a line plot to represent the measurement data; relate the measurement scale to the number line.</p>
<p>Cluster C: Work with time and money.</p>		
	<p>2.MD.C.7 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>2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. <i>Example: If you have 2 dimes and 3 pennies, how many cents do you have?</i></p>	<p>G2 M7 Topic B: Problem Solving with Coins and Bills</p>
<p>Cluster D: Represent and interpret data.</p>		
	<p>2.MD.D.9 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>G2 M7 Topic F: Displaying Measurement Data</p>

Domain	Standards For Mathematical Content	Aligned Components of <i>Eureka Math</i>
	<p>2.MD.D.10 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 a bar graph.</p>	G2 M7 Topic A: Problem Solving with Categorical Data
Geometry	<p>Cluster A: Reason with shapes and their attributes.</p>	
	<p>2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p>	G2 M8 Topic A: Attributes of Geometric Shapes
	<p>2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p>	G2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division
	<p>2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	G2 M8 Topic B: Composite Shapes and Fraction Concepts G2 M8 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles G2 M8 Topic D: Application of Fractions to Tell Time