Grade 2 | Mathematics Standards of Learning for Virginia Public Schools 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.

Mathematical Process Goals for Students	Aligned Components of *Eureka Math²*
Mathematical Problem Solving	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Communication	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Reasoning	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Connections	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
Mathematical Representations	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.

Number and Number Sense

2.NS.1 The student will utilize flexible counting strategies to determine and describe quantities up to 200.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.1.a Represent forward counting patterns when counting by groups of 2 up to at least 50, starting at various multiples of 2 and using a variety of tools (e.g., objects, number lines, hundreds charts).	2 M6 Topic B: Arrays and Equal Groups 2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 14: Relate doubles to even numbers and write equations to express the sums. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.
2.NS.1.b Represent forward counting patterns created when counting by groups of 5s, 10s, and 25s starting at various multiples up to at least 200 using a variety of tools (e.g., objects, number lines, hundreds charts).	2 M1 Lesson 21: Count efficiently within 1,000 by using ones, tens, and hundreds. 2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 29: Count by $1, $10, and $100. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes. *Supplemental material is necessary to fully address this standard.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.1.c Describe and use patterns in skip counting by multiples of 2 (to at least 50), and multiples of 5, 10, and 25 (to at least 200) to justify the next number in the counting sequence.	2 M1 Lesson 21: Count efficiently within 1,000 by using ones, tens, and hundreds. 2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 29: Count by $1, $10, and $100. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes. 2 M6 Topic B: Arrays and Equal Groups 2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 14: Relate doubles to even numbers and write equations to express the sums. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays. *Supplemental material is necessary to fully address this standard.*
2.NS.1.d Represent forward counting patterns when counting by groups of 100 up to at least 1,000 starting at 0 using a variety of tools (e.g., objects, number lines, calculators, one thousand charts).	2 M1 Lesson 21: Count efficiently within 1,000 by using ones, tens, and hundreds. 2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 29: Count by $1, $10, and $100. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.1.d *continued*	2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes.
2.NS.1.e Represent backward counting patterns when counting by groups of 10 from 200 or less using a variety of tools including objects, number lines, calculators, and hundreds charts.	2 M1 Lesson 21: Count efficiently within 1,000 by using ones, tens, and hundreds. 2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 29: Count by $1, $10, and $100. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects.
2.NS.1.f Describe and use patterns in skip counting backwards by 10s (from at least 200) to justify the next number in the counting sequence.	2 M1 Lesson 21: Count efficiently within 1,000 by using ones, tens, and hundreds. 2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 29: Count by $1, $10, and $100. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.1.g Choose a reasonable estimate up to $1{,}000$ when given a contextual problem (e.g., What would be the best estimate for the number of students in our school—5, 50, or 500?).	2 M1 Lesson 3: Use information presented in a bar graph to solve *put together* and *take apart* problems. 2 M1 Lesson 7: Measure lengths and relate 10 cm and 1 cm. 2 M1 Topic C: Estimate, Measure, and Compare Lengths 2 M1 Lesson 20: Count and bundle ones, tens, and hundreds to $1{,}000$. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M2 Lesson 19: Solve word problems with simplifying strategies for subtraction. 2 M3 Lesson 15: Recognize time as measurement units. 2 M4 Lesson 1: Organize, count, and represent a collection of objects. 2 M4 Lesson 24: Organize, count, and represent a collection of objects. 2 M5 Lesson 1: Organize, count, and represent a collection of coins. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects. 2 M5 Lesson 13: Solve word problems that involve measurements and reason about estimates. 2 M5 Lesson 15: Use measurement data to create a line plot. 2 M6 Lesson 2: Organize, count, and represent a collection of objects. 3 M2 Lesson 8: Read temperatures on a thermometer using number line concepts. 3 M2 Lesson 9: Round two-digit numbers to the nearest ten on the vertical number line. 3 M2 Lesson 10: Round two- and three-digit numbers to the nearest ten on the vertical number line.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.1.h Represent even numbers (up to 50) with concrete objects, using two equal groups or two equal addends.	2 M6 Topic B: Arrays and Equal Groups 2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 14: Relate doubles to even numbers and write equations to express the sums. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.
2.NS.1.i Represent odd numbers (up to 50) with concrete objects, using two equal groups with one leftover or two equal addends plus 1.	2 M6 Topic B: Arrays and Equal Groups 2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 14: Relate doubles to even numbers and write equations to express the sums. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.
2.NS.1.j Determine whether a number (up to 50) is even or odd using concrete objects and justify reasoning (e.g., dividing collections of objects into two equal groups, pairing objects).	2 M6 Topic B: Arrays and Equal Groups 2 M6 Topic C: Rectangular Arrays as a Foundation for Multiplication and Division 2 M6 Lesson 14: Relate doubles to even numbers and write equations to express the sums. 2 M6 Lesson 15: Pair objects and skip-count to determine whether a number is even or odd. 2 M6 Lesson 16: Use rectangular arrays to investigate combinations of even and odd numbers. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.

Number and Number Sense

2.NS.2 The student will demonstrate an understanding of the ten-to-one relationships of the base 10 number system to represent, compare, and order whole numbers up to 999.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.2.a Write the three-digit whole number represented by a given model (e.g., concrete objects, pictures of base 10 blocks).	2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 26: Write base-ten numbers in expanded form. 2 M1 Lesson 27: Read, write, and relate base-ten numbers in all forms. 2 M1 Lesson 31: Count the total value of ones, tens, and hundreds with place value disks. 2 M1 Lesson 38: Compare numbers in different forms.
2.NS.2.b Read, write, and represent three-digit numbers in standard form, expanded form, and word form, using concrete or pictorial representations.	2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 26: Write base-ten numbers in expanded form. 2 M1 Lesson 27: Read, write, and relate base-ten numbers in all forms. 2 M1 Lesson 31: Count the total value of ones, tens, and hundreds with place value disks. 2 M1 Lesson 38: Compare numbers in different forms.
2.NS.2.c Apply patterns within the base 10 system to determine and communicate, orally and in written form, the place (ones, tens, hundreds) and value of each digit in a three-digit whole number (e.g., in 352, the 5 represents 5 tens and its value is 50).	2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 25: Write three-digit numbers in unit form and show the value that each digit represents. 2 M1 Lesson 27: Read, write, and relate base-ten numbers in all forms. 2 M1 Lesson 28: Use place value understanding to count and exchange $1, $10, and $100 bills. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Topic H: Compose and Decompose with Place Value Disks

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.2.d Investigate and explain the ten-to-one relationships among ones, tens, and hundreds, using models.	2 M1 Lesson 20: Count and bundle ones, tens, and hundreds to 1,000. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 28: Use place value understanding to count and exchange $1, $10, and $100 bills. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Lesson 32: Exchange 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand. 2 M1 Lesson 34: Problem solve in situations with more than 9 ones or 9 tens. 2 M2 Topic B: Strategies for Composing a Ten and a Hundred to Add 2 M2 Lesson 20: Reason about when to unbundle a ten to subtract. 2 M2 Lesson 21: Use concrete models to decompose a ten with two-digit totals. 2 M2 Lesson 22: Use place value drawings to decompose a ten and relate them to written recordings. 2 M2 Lesson 23: Use concrete models and drawings to decompose a hundred. 2 M2 Lesson 24: Use place value drawings to decompose a hundred and relate them to written recordings. 2 M2 Lesson 25: Use place value drawings to subtract with two decompositions.
2.NS.2.e Compose and decompose whole numbers up to 200 by making connections between a variety of models (e.g., base 10 blocks, place value cards, presented orally, in expanded or standard form) and counting strategies (e.g., 156 can be 1 hundred, 5 tens, 6 ones; 1 hundred, 4 tens, 16 ones; 15 tens, 6 ones).	2 M1 Lesson 24: Count up to 1,000 by using place value units. 2 M1 Lesson 25: Write three-digit numbers in unit form and show the value that each digit represents. 2 M1 Lesson 27: Read, write, and relate base-ten numbers in all forms. 2 M1 Lesson 28: Use place value understanding to count and exchange $1, $10, and $100 bills. 2 M1 Lesson 30: Determine how many $10 bills are equal to $1,000. 2 M1 Topic H: Compose and Decompose with Place Value Disks 2 M2 Lesson 2: Break apart and add like units. 2 M2 Lesson 3: Use compensation to add within 100. 2 M2 Lesson 4: Use compensation to add within 200.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.2.e *continued*	2 M2 Lesson 5: Make a ten to add within 100. 2 M2 Lesson 6: Make a ten to add within 200. 2 M2 Lesson 7: Solve word problems by using simplifying strategies for addition. 2 M2 Topic B: Strategies for Composing a Ten and a Hundred to Add 2 M2 Topic C: Simplifying Strategies for Subtraction 2 M2 Lesson 20: Reason about when to unbundle a ten to subtract. 2 M2 Lesson 22: Use place value drawings to decompose a ten and relate them to written recordings. 2 M2 Lesson 23: Use concrete models and drawings to decompose a hundred. 2 M2 Lesson 24: Use place value drawings to decompose a hundred and relate them to written recordings. 2 M2 Lesson 25: Use place value drawings to subtract with two decompositions. 2 M2 Lesson 26: Solve *add to* and *take from with start unknown* word problems. 2 M4 Lesson 4: Represent and solve *compare with bigger unknown* word problems. 2 M4 Lesson 5: Use the associative property to make a benchmark number to add within 1,000. 2 M4 Lesson 6: Use compensation to add within 1,000. 2 M4 Lesson 10: Choose and defend efficient solution strategies for addition. 2 M4 Lesson 11: Choose and defend efficient strategies to add up to four two-digit numbers. 2 M4 Lesson 12: Take from a ten or a hundred to subtract. 2 M4 Lesson 13: Use compensation to subtract within 1,000. 2 M4 Lesson 14: Use compensation to keep a constant distance by adding the same amount to both numbers. 2 M4 Lesson 15: Use compensation to keep a constant difference by subtracting the same amount from both numbers. 2 M4 Lesson 20: Subtract by using multiple strategies and defend an efficient strategy. 2 M4 Lesson 22: Solve *compare with smaller unknown* word problems. 2 M4 Lesson 23: Solve two-step addition and subtraction word problems.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.2.f Plot and justify the position of a given number up to 100 on a number line with pre-marked benchmarks of 1s, 2s, 5s, 10s, or 25s.	2 M1 Topic D: Solve *Compare* Problems by Using the Ruler as a Number Line 2 M5 Lesson 12: Identify unknown numbers on a number line by using the interval as a reference point. *Supplemental material is necessary to fully address this standard.*
2.NS.2.g Compare two whole numbers, each 999 or less, represented concretely, pictorially, or symbolically, using words (greater than, less than, or equal to) and symbols (>, <, or =). Justify reasoning orally, in writing, or with a model.	2 M1 Topic I: Compare Two Three-Digit Numbers in Different Forms
2.NS.2.h Order up to three whole numbers, each 999 or less, represented concretely, pictorially, or symbolically from least to greatest and greatest to least.	2 M1 Topic I: Compare Two Three-Digit Numbers in Different Forms

Number and Number Sense

2.NS.3 The student will use mathematical reasoning and justification to solve contextual problems that involve partitioning models into equal-sized parts (halves, fourths, eighths, thirds, and sixths).

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.3.a Model and describe fractions as representing equal-size parts of a whole.	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole
2.NS.3.b Describe the relationship between the number of fractional parts needed to make a whole and the size of the parts (i.e., as the whole is divided into more parts, each part becomes smaller).	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole
2.NS.3.c Compose the whole for a given fractional part and its value (in context) for halves, fourths, eighths, thirds, and sixths (e.g., when given $\frac{1}{4}$, determine how many pieces would be needed to make $\frac{4}{4}$).	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.3.d Using same-size fraction pieces, from a region/area model, count by unit fractions up to two wholes (e.g., zero one-fourths, one one-fourth, two one-fourths, three one-fourths, four one-fourths, five one-fourths; or zero-fourths, one-fourth, two-fourths, three-fourths, four-fourths, five-fourths).	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole 3 M5 Topic C: Fractions on the Number Line 3 M5 Topic D: Comparing Fractions 3 M5 Topic E: Equivalent Fractions
2.NS.3.e Given a context, represent, name, and write fractional parts of a whole for halves, fourths, eighths, thirds, and sixths using:	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole
2.NS.3.e.i region/area models (e.g., pie pieces, pattern blocks, geoboards);	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.3.e.ii length models (e.g., paper fraction strips, fraction bars, rods, number lines); and	2 M3 Lesson 8: Create composite shapes by using equal parts and name them as halves, thirds, and fourths. 2 M3 Lesson 9: Interpret equal shares in composite shapes as halves, thirds, and fourths. 2 M3 Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 3 M5 Topic A: Partition a Whole into Equal Parts 3 M5 Topic B: Unit Fractions and Their Relationship to the Whole 3 M5 Topic C: Fractions on the Number Line
2.NS.3.e.iii set models (e.g., chips, counters, cubes).	*Supplemental material is necessary to address this standard.*
2.NS.3.f Compare unit fractions for halves, fourths, eighths, thirds, and sixths using words (greater than, less than or equal to) and symbols (>, <, =), with region/area and length models.	3 M5 Topic D: Comparing Fractions

Number and Number Sense

2.NS.4 The student will solve problems that involve counting and representing money amounts up to $2.00.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.4.a Identify a quarter and its value and determine multiple ways to represent the value of a quarter using pennies, nickels, and/or dimes.	2 M5 Topic A: Problem Solving with Coins and Bills

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.NS.4.b Count by ones, fives, tens, and twenty-fives to determine the value of a collection of mixed coins and one-dollar bills whose total value is $2.00 or less.	2 M5 Topic A: Problem Solving with Coins and Bills
2.NS.4.c Construct a set of coins and/or bills to total a given amount of money whose value is $2.00 or less.	2 M5 Topic A: Problem Solving with Coins and Bills
2.NS.4.d Represent the value of a collection of coins and one-dollar bills (limited to $2.00 or less) using the cent (¢) and dollar ($) symbols and decimal point (.).	2 M5 Topic A: Problem Solving with Coins and Bills

Computation and Estimation

2.CE.1 The student will recall with automaticity addition and subtraction facts within 20 and estimate, represent, solve, and justify solutions to single-step and multistep problems, including those in context, using addition and subtraction with whole numbers where addends or minuends do not exceed 100.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.a Apply strategies (e.g., rounding to the nearest 10, compatible numbers, other number relationships) to estimate a solution for single-step addition or subtraction problems, including those in context, where addends and minuends do not exceed 100.	2 M1 Lesson 3: Use information presented in a bar graph to solve *put together* and *take apart* problems. 2 M1 Lesson 7: Measure lengths and relate 10 cm and 1 cm. 2 M1 Topic C: Estimate, Measure, and Compare Lengths 2 M1 Lesson 20: Count and bundle ones, tens, and hundreds to 1,000. 2 M1 Lesson 23: Organize, count, and record a collection of objects. 2 M1 Lesson 37: Organize, count, represent, and compare a collection of objects. 2 M2 Lesson 19: Solve word problems with simplifying strategies for subtraction. 2 M3 Lesson 15: Recognize time as measurement units. 2 M4 Lesson 1: Organize, count, and represent a collection of objects. 2 M4 Lesson 24: Organize, count, and represent a collection of objects. 2 M5 Lesson 1: Organize, count, and represent a collection of coins. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects. 2 M5 Lesson 13: Solve word problems that involve measurements and reason about estimates. 2 M5 Lesson 15: Use measurement data to create a line plot. 2 M6 Lesson 2: Organize, count, and represent a collection of objects. 3 M2 Lesson 8: Read temperatures on a thermometer using number line concepts. 3 M2 Lesson 9: Round two-digit numbers to the nearest ten on the vertical number line. 3 M2 Lesson 10: Round two- and three-digit numbers to the nearest ten on the vertical number line.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.b Apply strategies (e.g., the use of concrete and pictorial models, place value, properties of addition, the relationship between addition and subtraction) to determine the sum or difference of two whole numbers where addends or minuends do not exceed 100.	2 M2 Lesson 2: Break apart and add like units. 2 M2 Lesson 3: Use compensation to add within 100. 2 M2 Lesson 5: Make a ten to add within 100. 2 M2 Lesson 20: Reason about when to unbundle a ten to subtract. 2 M2 Lesson 22: Use place value drawings to decompose a ten and relate them to written recordings. 2 M2 Lesson 23: Use concrete models and drawings to decompose a hundred. 2 M4 Lesson 4: Represent and solve *compare with bigger unknown* word problems. 2 M4 Lesson 5: Use the associative property to make a benchmark number to add within 1,000. 2 M4 Lesson 6: Use compensation to add within 1,000. 2 M4 Lesson 10: Choose and defend efficient solution strategies for addition. 2 M4 Lesson 11: Choose and defend efficient strategies to add up to four two-digit numbers. 2 M4 Lesson 12: Take from a ten or a hundred to subtract. 2 M4 Lesson 13: Use compensation to subtract within 1,000. 2 M4 Lesson 20: Subtract by using multiple strategies and defend an efficient strategy. 2 M4 Lesson 22: Solve *compare with smaller unknown* word problems. 2 M4 Lesson 23: Solve two-step addition and subtraction word problems.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.c Represent, solve, and justify solutions to single-step and multistep contextual problems (e.g., join, separate, part-part-whole, comparison) involving addition or subtraction of whole numbers where addends or minuends do not exceed 100.	2 M1 Lesson 22: Use counting strategies to solve *add to with change unknown* word problems. 2 M2 Lesson 7: Solve word problems by using simplifying strategies for addition. 2 M2 Lesson 13: Represent and solve *take from* word problems. 2 M2 Lesson 19: Solve word problems with simplifying strategies for subtraction. 2 M2 Lesson 26: Solve *add to* and *take from with start unknown* word problems. 2 M4 Lesson 3: Solve multi-step word problems and reason about equal expressions. 2 M4 Lesson 4: Represent and solve *compare with bigger unknown* word problems. 2 M4 Lesson 22: Solve *compare with smaller unknown* word problems. 2 M4 Lesson 23: Solve two-step addition and subtraction word problems. 2 M6 Lesson 1: Compose equal groups and write repeated addition equations. 2 M6 Lesson 4: Represent equal groups with a tape diagram. 2 M6 Lesson 17: Solve word problems that involve equal groups and arrays.
2.CE.1.d Demonstrate fluency with addition and subtraction within 20 by applying reasoning strategies (e.g., doubles, near doubles, make-a-ten, compensations, inverse relationships).	1 M1 Lesson 14: Count on to find the total of an addition expression. 1 M1 Lesson 17: Add 0 and 1 to any number. 1 M1 Lesson 20: Find all two-part expressions equal to 6. 1 M1 Lesson 21: Find all two-part expressions equal to 7 and 8. 1 M1 Lesson 22: Find all two-part expressions equal to 9 and 10. 1 M1 Lesson 23: Find the totals of doubles +1 facts. 1 M1 Lesson 24: Use known facts to make easier problems. 1 M2 Lesson 2: Subtract all or subtract 0. 1 M2 Lesson 3: Subtract 1 or subtract 1 less than the total. 1 M2 Lesson 4: Use fingers to subtract 4, 5, and 6 efficiently. 1 M2 Lesson 7: Count on or count back to solve related addition and subtraction problems.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.d *continued*	1 M2 Lesson 16: Compare the efficiency of counting on and counting back to subtract. 1 M3 Lesson 1: Group to make ten when there are three parts. 1 M3 Lesson 4: Use properties of addition to make three-addend expressions easier. 1 M3 Topic B: Make Easier Problems to Add 1 M3 Lesson 13: Count on to make ten within 20. 1 M3 Lesson 14: Count on to make the next ten within 100. 1 M3 Lesson 17: Add a two-digit number and a one-digit number. 1 M3 Lesson 18: Subtract a one-digit number from a two-digit number. 1 M3 Lesson 20: Use strategies to subtract from a teen number. 1 M3 Lesson 21: Take from ten to subtract from a teen number, part 1. 1 M3 Lesson 22: Take from ten to subtract from a teen number, part 2. 1 M3 Lesson 23: Subtract by counting on. 1 M3 Lesson 24: Decompose the subtrahend to count back. 1 M3 Lesson 25: Choose a strategy to make an easier problem.
2.CE.1.e Recall with automaticity addition and subtraction facts within 20.	2 M4 Lesson 7: Use concrete models to add and relate them to written recordings. 2 M4 Lesson 8: Use place vale drawings to represent addition and relate them to written recordings, part 1. 2 M4 Lesson 9: Use place vale drawings to represent addition and relate them to written recordings, part 2. 2 M4 Lesson 10: Choose and defend efficient solution strategies for addition. 2 M4 Lesson 11: Choose and defend efficient strategies to add up to four two-digit numbers. 2 M4 Topic D: Strategies for Decomposing Tens and Hundreds Within 1,000.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.f Use patterns, models, and strategies to make generalizations about the algebraic properties for fluency (e.g., $4 + 3$ is equal to $3 + 4$; $0 + 8 = 8$).	1 M1 Lesson 9: Count on from both parts and record part–total relationships. 1 M1 Lesson 15: Use the commutative property to count on from the larger addend. 1 M1 Lesson 16: Use the commutative property to find larger totals. 1 M3 Topic A: Make Easier Problems with Three Addends 1 M3 Topic B: Make Easier Problems to Add 1 M3 Topic C: Make Easier Addition Problems with a Linear Model
2.CE.1.g Determine the missing number in an equation (number sentence) through modeling and justification with addition and subtraction within 20 (e.g., $3 + \_\_\_ = 5$ or $\_\_\_ + 2 = 5$; $5 - \_\_\_ = 3$ or $5 - 2 = \_\_\_$).	1 M2 Lesson 10: Represent and find an unknown addend in equations. 1 M2 Lesson 12: Represent and find an unknown subtrahend in equations. 1 M2 Lesson 13: Represent and solve *add to* and *take from with change unknown* problems. 1 M2 Lesson 15: Relate counting on and counting back to find an unknown part. 1 M2 Lesson 19: Determine the value of the unknown in various positions.
2.CE.1.h Use inverse relationships to write all related facts connected to a given addition or subtraction fact model within 20 (e.g., given a model for $3 + 4 = 7$, write $4 + 3 = 7$, $7 - 4 = 3$, and $7 - 3 = 4$).	*Supplemental material is necessary to address this standard.*
2.CE.1.i Describe the not equal symbol ($\neq$) as representing a relationship where expressions on either side of the not equal symbol represent different values and justify reasoning.	*Supplemental material is necessary to address this standard.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.CE.1.j Represent and justify the relationship between values and expressions as equal or not equal using appropriate models and/or symbols (e.g., $9 + 24 = 10 + 23$; $45 - 9 = 46 - 10$; $15 + 16 \neq 31 + 15$).	1 M1 Lesson 18: Determine whether number sentences are true or false. 1 M1 Lesson 19: Reason about the meaning of the equal sign. 1 M1 Lesson 24: Use known facts to make easier problems. 1 M2 Lesson 20: Add or subtract to make groups equal. 1 M5 Lesson 18: Determine if number sentences involving addition and subtraction are true or false. 1 M5 Lesson 22: Decompose both addends and add like units. 1 M5 Lesson 23: Decompose an addend and add tens first. 1 M5 Lesson 24: Decompose an addend to make the next ten. 1 M5 Lesson 25: Compare equivalent expressions used to solve two-digit addition equations. 2 M4 Lesson 5: Use the associative property to make a benchmark number to add within $1{,}000$. 2 M4 Lesson 6: Use compensation to add within $1{,}000$. 2 M4 Lesson 10: Choose and defend efficient solution strategies for addition. 2 M4 Lesson 11: Choose and defend efficient strategies to add up to four two-digit numbers. 2 M4 Topic C: Simplifying Strategies for Subtracting Within $1{,}000$ 2 M4 Lesson 20: Subtract by using multiple strategies and defend an efficient strategy. 2 M4 Lesson 21: Apply strategies to find sums and differences and relate addition to subtraction. *Supplemental material is necessary to address the not equal symbol.*

Measurement and Geometry

2.MG.1 The student will reason mathematically using standard units (U.S. Customary) with appropriate tools to estimate, measure, and compare objects by length, weight, and liquid volume to the nearest whole unit.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.1.a Explain the purpose of various measurement tools and how to use them appropriately by:	2 M1 Lesson 5: Connect measurement to physical units by iterating a centimeter cube. 2 M1 Lesson 6: Make a 10 cm ruler and measure objects. 2 M1 Lesson 7: Measure lengths and relate 10 cm and 1 cm. 2 M1 Lesson 8: Make a meter stick and measure with various tools. 2 M1 Lesson 13: Estimate and measure height to model metric relationships. 2 M5 Lesson 8: Iterate an inch tile to create a unit ruler and measure to the nearest inch. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects.
2.MG.1.a.i identifying a ruler as an instrument to measure length;	2 M1 Lesson 5: Connect measurement to physical units by iterating a centimeter cube. 2 M1 Lesson 6: Make a 10 cm ruler and measure objects. 2 M1 Lesson 7: Measure lengths and relate 10 cm and 1 cm. 2 M1 Lesson 8: Make a meter stick and measure with various tools. 2 M1 Lesson 13: Estimate and measure height to model metric relationships. 2 M5 Lesson 8: Iterate an inch tile to create a unit ruler and measure to the nearest inch. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects.
2.MG.1.a.ii identifying different types of scales as instruments to measure weight; and	*Supplemental material is necessary to address this standard.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.1.a.iii identifying different types of measuring cups as instruments to measure liquid volume.	*Supplemental material is necessary to address this standard.*
2.MG.1.b Use U.S. Customary units to estimate, measure, and compare the two for reasonableness:	2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects. 2 M5 Lesson 10: Measure an object twice by using different length units, and compare and relate measurement to unit size. 2 M5 Lesson 11: Measure to compare differences in lengths.
2.MG.1.b.i the length of an object to the nearest inch, using a ruler;	2 M5 Lesson 8: Iterate an inch tile to create a unit ruler and measure to the nearest inch. 2 M5 Lesson 9: Use an inch ruler and a yard stick to estimate and measure the length of various objects.
2.MG.1.b.ii the weight of an object to the nearest pound, using a scale; and	*Supplemental material is necessary to address this standard.*
2.MG.1.b.iii the liquid volume of a container to the nearest cup, using a measuring cup.	*Supplemental material is necessary to address this standard.*

Measurement and Geometry

2.MG.2 The student will demonstrate an understanding of the concept of time to the nearest five minutes, using analog and digital clocks.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.2.a Identify the number of minutes in an hour (60 minutes) and the number of hours in a day (24 hours).	2 M3 Lesson 14: Distinguish between a.m. and p.m. 2 M3 Lesson 15: Recognize time as measurement units.
2.MG.2.b Determine the unit of time (minutes, hours, days, or weeks) that is most appropriate when measuring a given activity or context and explain reasoning (e.g., Would you measure the time it takes to brush your teeth in minutes or hours?).	2 M3 Lesson 15: Recognize time as measurement units.
2.MG.2.c Show, tell, and write time to the nearest five minutes, using analog and digital clocks.	2 M3 Lesson 14: Distinguish between a.m. and p.m. 2 M3 Lesson 16: Use a clock to tell time to the half hour or quarter hour. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes.
2.MG.2.d Match a written time (e.g., 1:35, 6:20, 9:05) to the time shown on an analog clock to the nearest five minutes.	2 M3 Lesson 14: Distinguish between a.m. and p.m. 2 M3 Lesson 16: Use a clock to tell time to the half hour or quarter hour. 2 M3 Lesson 17: Relate the clock to a number line to count by fives. 2 M3 Lesson 18: Tell time to the nearest 5 minutes.

Measurement and Geometry

2.MG.3 The student will identify, describe, and create plane figures (including circles, triangles, squares, and rectangles) that have at least one line of symmetry and explain its relationship with congruency.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.3.a Explore a figure using a variety of tools (e.g., paper folding, geoboards, drawings) to show and justify a line of symmetry, if one exists.	*Supplemental material is necessary to address this standard.*
2.MG.3.b Create figures with at least one line of symmetry using various concrete and pictorial representations.	*Supplemental material is necessary to address this standard.*
2.MG.3.c Describe the two resulting figures formed by a line of symmetry as being congruent (having the same shape and size).	*Supplemental material is necessary to address this standard.*

Measurement and Geometry

2.MG.4 The student will describe, name, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms).

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.4.a Trace faces of solid figures (cubes and rectangular prisms) to create the set of plane figures related to the solid figure.	1 M6 Lesson 4: Name solid shapes and describe their attributes. 1 M6 Lesson 5: Reason about the functionality of three-dimensional shapes based on their attributes. 1 M6 Lesson 6: Create composite shapes and identify shapes within two- and three-dimensional composite shapes. 2 M3 Topic A: Attributes of Geometric Shapes 2 M3 Lesson 6: Recognize that a whole polygon can be decomposed into smaller parts and the parts can be composed to make a whole. 2 M3 Lesson 7: Combine shapes to create a composite shape and create a new shape from composite shapes.
2.MG.4.b Compare and contrast models and nets (cutouts) of cubes and rectangular prisms (e.g., number and shapes of faces, edges, vertices).	1 M6 Lesson 4: Name solid shapes and describe their attributes. 1 M6 Lesson 5: Reason about the functionality of three-dimensional shapes based on their attributes. 1 M6 Lesson 6: Create composite shapes and identify shapes within two- and three-dimensional composite shapes. *Supplemental material is necessary to fully address this standard.*

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.MG.4.c Given a concrete or pictorial model, name and describe the solid figure (sphere, cube, and rectangular prism) by its characteristics (e.g., number of edges, number of vertices, shapes of faces).	1 M6 Lesson 4: Name solid shapes and describe their attributes. 1 M6 Lesson 5: Reason about the functionality of three-dimensional shapes based on their attributes. 1 M6 Lesson 6: Create composite shapes and identify shapes within two- and three-dimensional composite shapes. 2 M3 Topic A: Attributes of Geometric Shapes 2 M3 Lesson 6: Recognize that a whole polygon can be decomposed into smaller parts and the parts can be composed to make a whole. 2 M3 Lesson 7: Combine shapes to create a composite shape and create a new shape from composite shapes.
2.MG.4.d Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms) according to their characteristics (e.g., number and shapes of their faces, edges, vertices).	1 M6 Lesson 4: Name solid shapes and describe their attributes. 1 M6 Lesson 5: Reason about the functionality of three-dimensional shapes based on their attributes. 1 M6 Lesson 6: Create composite shapes and identify shapes within two- and three-dimensional composite shapes.

Probability and Statistics

2.PS.1 The student will apply the data cycle (pose questions; collect or acquire data; organize and represent data; and analyze data and communicate results) with a focus on pictographs and bar graphs.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.PS.1.a Pose questions, given a predetermined context, that require the collection of data (limited to 25 or fewer data points for no more than six categories).	*Supplemental material is necessary to address this standard.*
2.PS.1.b Determine the data needed to answer a posed question and collect the data using various methods (e.g., voting; creating lists, tables, or charts; tallying).	*Supplemental material is necessary to address this standard.*
2.PS.1.c Organize and represent a data set using a pictograph where each symbol represents up to 2 data points. Determine and use a key to assist in the analysis of the data.	2 M1 Topic A: Represent Data to Solve Problems
2.PS.1.d Organize and represent a data set using a bar graph with a title and labeled axes (limited to 25 or fewer data points for up to six categories, and limit increments of scale to multiples of 1 or 2).	2 M1 Topic A: Represent Data to Solve Problems

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.PS.1.e Analyze data represented in pictographs and bar graphs and communicate results:	2 M1 Topic A: Represent Data to Solve Problems
2.PS.1.e.i ask and answer questions about the data represented in pictographs and bar graphs (e.g., total number of data points represented, how many in each category, how many more or less are in one category than another). Pictograph keys will be limited to symbols representing 1, 2, 5, or 10 pieces of data and bar graphs will be limited to scales with increments in multiples of 1, 2, 5, or 10; and	2 M1 Topic A: Represent Data to Solve Problems
2.PS.1.e.ii draw conclusions about the data and make predictions based on the data.	2 M1 Topic A: Represent Data to Solve Problems

Patterns, Functions, and Algebra

2.PFA.1 The student will describe, extend, create, and transfer repeating and increasing patterns (limited to addition of whole numbers) using various representations.

Mathematics Standards of Learning for Virginia Public Schools	Aligned Components of *Eureka Math²*
2.PFA.1.a Identify and describe repeating and increasing patterns.	*Supplemental material is necessary to address this standard.*
2.PFA.1.b Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, pictures, and numbers.	*Supplemental material is necessary to address this standard.*
2.PFA.1.c Create a repeating or increasing pattern using various representations (e.g., objects, pictures, numbers).	*Supplemental material is necessary to address this standard.*
2.PFA.1.d Transfer a given repeating or increasing pattern from one form to another (e.g., objects, pictures, numbers) and explain the connection between the two patterns.	*Supplemental material is necessary to address this standard.*