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 that demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.
DATA	Schools and districts nationwide are experiencing student academic growth and impressive test scores after using *Eureka Math*. See their stories and data at 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. 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

North Carolina Standard Course of Study Mathematics Correlation to *Eureka Math*®

GRADE 1 MATHEMATICS

The Grade 1 North Carolina Course of Study for Mathematics is fully covered by the Grade 1 *Eureka Math* curriculum. The area where the Grade 1 North Carolina Standard Course of Study for Mathematics and Grade 1 *Eureka* Math do no align is in the domain of Number and Operations in Base Ten. One standard from this domain will require extending activities to larger numbers. A detailed analysis of alignment is provided in the table below.

INDICATORS

GREEN	indicates the North Carolina standard is addressed in *Eureka Math*.
YELLOW	indicates the North Carolina standard may not be completely addressed in *Eureka Math*.
RED	indicates the North Carolina standard is not addressed in *Eureka Math*.
BLUE	indicates there is a discrepancy between the grade level at which this standard is addressed in North Carolina 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 in First Grade continue to develop the ability to focus attention, test hypotheses, take reasonable risks, remain flexible, try alternatives, exhibit self-regulation, and persevere (Copley, 2010). As the teacher uses thoughtful questioning and provides opportunities for students to share thinking, First Grade students become conscious of what they know and how they solve problems. They make sense of task-type problems, find an entry point or a way to begin the task, and are willing to try other approaches when solving the task. They ask themselves, "Does this make sense?" First Grade students' conceptual understanding builds from their experiences in Kindergarten as they continue to rely on concrete manipulatives and pictorial representations to solve a problem, eventually becoming fluent and flexible with mental math as a result of these experiences.	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: G1 M5: Identifying, Composing, and Partitioning Shapes G1 M6: Place Value, Comparison, Addition and Subtraction to 100

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
2. Reason abstractly and quantitatively. Mathematically proficient students in First Grade recognize that a number represents a specific quantity. They use numbers and symbols to represent a problem, explain thinking, and justify a response. For example, when solving the problem, "There are 60 children on the playground. Some children line up. There are 20 children still on the playground. How many children lined up?" First grade students may write 20 + 40 = 60 to indicate a Think-Addition strategy. Other students may illustrate a counting-on by tens strategy by writing 20 + 10 + 10 + 10 + 10 = 60. The numbers and equations written illustrate the students' thinking and the strategies used, rather than how to simply compute, and how the story is decontextualized as it is represented abstractly with symbols.	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: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M3: Ordering and Comparing Length Measurements as Numbers

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
3. Construct viable arguments and critique the reasoning of others. Mathematically proficient students in First Grade continue to develop their ability to clearly express, explain, organize and consolidate their math thinking using both verbal and written representations. Their understanding of grade appropriate vocabulary helps them to construct viable arguments about mathematics. For example, when justifying why a particular shape isn't a square, a first grade student may hold up a picture of a rectangle, pointing to the various parts, and reason, "It can't be a square because, even though it has 4 sides and 4 angles, the sides aren't all the same size." In a classroom where risk-taking and varying perspectives are encouraged, mathematically proficient students are willing and eager to share their ideas with others, consider other ideas proposed by classmates, and question ideas that don't seem to make sense.	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: G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M6: Place Value, Comparison, Addition and Subtraction to 100
4. Model with mathematics. Mathematically proficient students in First Grade model real-life mathematical situations with a number sentence or an equation, and check to make sure that their equation accurately matches the problem context. They also use tools, such as tables, to help collect information, analyze results, make conclusions, and review their conclusions to see if the results make sense and revising as needed.	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: G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M6: Place Value, Comparison, Addition and Subtraction to 100

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
5. Use appropriate tools strategically. Mathematically proficient students in First Grade have access to a variety of concrete (e.g., 3-dimensional solids, ten frames, number balances, number lines) and technological tools (e.g., virtual manipulatives, calculators, interactive websites) and use them to investigate mathematical concepts. They select tools that help them solve and/or illustrate solutions to a problem. They recognize that multiple tools can be used for the same problem—depending on the strategy used. For example, a child who is in the counting stage may choose connecting cubes to solve a problem. While, a student who understands parts of number, may solve the same problem using ten-frames to decompose numbers rather than using individual connecting cubes. As the teacher provides numerous opportunities for students to use educational materials, first grade students' conceptual understanding and higher-order thinking skills are developed.	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: G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M6: Place Value, Comparison, Addition and Subtraction to 100

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
6. Attend to precision. Mathematically proficient students in First Grade attend to precision in their communication, calculations, and measurements. They are able to describe their actions and strategies clearly, using grade-level appropriate vocabulary accurately. Their explanations and reasoning regarding their process of finding a solution becomes more precise. In varying types of mathematical tasks, first grade students pay attention to details as they work. For example, as students' ability to attend to position and direction develops, they begin to notice reversals of numerals and self-correct when appropriate. When measuring an object, students check to make sure that there are not any gaps or overlaps as they carefully place each unit end to end to measure the object (iterating length units). Mathematically proficient first grade students understand the symbols they use (=, >, <) and use clear explanations in discussions with others. For example, for the sentence 4 > 3, a proficient student who is able to attend to precision states, "Four is more than 3" rather than "The alligator eats the four. It's bigger."	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: G1 M1: Sums and Differences to 10 G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M5: Identifying, Composing, and Partitioning Shapes

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
7. Look for and make use of structure. Mathematically proficient students in First Grade carefully look for patterns and structures in the number system and other areas of mathematics. For example, while solving addition problems using a number balance, students recognize that regardless whether you put the 7 on a peg first and then the 4, or the 4 on first and then the 7, they both equal 11 (commutative property). When decomposing two-digit numbers, students realize that the number of tens they have constructed "happens" to coincide with the digit in the tens place. When exploring geometric properties, first graders recognize that certain attributes are critical (number of sides, angles), while other properties are not (size, color, orientation).	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: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M5: Identifying, Composing, and Partitioning Shapes

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
8. Look for and express regularity in repeated reasoning. Mathematically proficient students in First Grade begin to look for regularity in problem structures when solving mathematical tasks. For example, when adding three one-digit numbers and by making tens or using doubles, students engage in future tasks looking for opportunities to employ those same strategies. Thus, when solving 8 + 7 + 2, a student may say, "I know that 8 and 2 equal 10 and then I add 7 more. That makes 17. It helps to see if I can make a 10 out of 2 numbers when I start." Further, students use repeated reasoning while solving a task with multiple correct answers. For example, in the task "There are 12 crayons in the box. Some are red and some are blue. How many of each could there be?" First Grade students realize that the 12 crayons could include 6 of each color (6 + 6 = 12), 7 of one color and 5 of another (7 + 5 = 12), etc. In essence, students repeatedly find numbers that add up to 12.	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: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Operations and Algebraic Thinking	**Cluster: Represent and solve problems.**	
	NC.1.OA.1 Represent and solve addition and subtraction word problems, within 20, with unknowns, by using objects, drawings, and equations with a symbol for the unknown number to represent the problem, when solving: • Add to/Take from-Change Unknown • Put Together/Take Apart-Addend Unknown • Compare-Difference Unknown	G1 M1 Topic B: Counting on from Embedded Numbers G1 M1 Topic G: Addition Word Problems; Subtraction as an Unknown Addend Problem G1 M1 Topic H: Subtraction Word Problems G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic B: Counting On or Taking From Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic C: Strategies for Solving Change or Addend Unknown Problems G1 M2 Topic D: Varied Problems with Decompositions of Ten Numbers as 1 Ten and Some Ones G1 M4 Topic E: Varied Problem Types within 20 G1 M6 Topic A: Comparison Word Problems G1 M6 Topic F: Varied Problem Types within 20

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.1.OA.2 Represent and solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, by using objects, drawings, and equations with a symbol for the unknown number.	G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems
	Cluster: Understand and apply the properties of operations.	
	NC.1.OA.3 Apply the commutative and associative properties as strategies for solving addition problems.	G1 M1 Topic E: The Commutative Property of Addition and the Equal Sign G1 M1 Topic F: Development of Addition Fluency within 10 G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic B: Counting On or Taking From Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic C: Strategies for Solving Change or Addend Unknown Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.1.OA.4 Solve an unknown-addend problem, within 20, by using addition strategies and/or changing it to a subtraction problem.	G1 M1 Topic G: Subtraction as an Unknown Addend Problem G1 M1 Topic H: Subtraction Word Problems G1 M2 Topic B: Counting On or Taking From Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic C: Strategies for Solving Change or Addend Unknown Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Add and subtract within 20.	
	NC.1.OA.9 Demonstrate fluency with addition and subtraction within 10.	G1 M1 Topic A: Embedded Numbers and Decompositions G1 M1 Topic B: Counting on From Embedded Numbers G1 M1 Topic C: Addition Word Problems G1 M1 Topic F: Development of Addition Fluency within 10 G1 M1 Topic I: Decomposition Strategies for Subtraction G1 M1 Topic J: Development of Subtraction Fluency within 10 G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic B: Counting On or Taking From Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic C: Strategies for Solving Change or Addend Unknown Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.1.OA.6 Add and subtract, within 20, using strategies such as: • Counting on • Making ten • Decomposing a number leading to a ten • Using the relationship between addition and subtraction • Using a number line • Creating equivalent but simpler or known sums	G1 M1 Topic A: Embedded Numbers and Decompositions G1 M1 Topic B: Counting on From Embedded Numbers G1 M1 Topic C: Addition Word Problems G1 M1 Topic F: Development of Addition Fluency within 10 G1 M1 Topic I: Decomposition Strategies for Subtraction G1 M1 Topic J: Development of Subtraction Fluency within 10 G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic B: Counting On or Taking From Ten to Solve Result Unknown and Total Unknown Problems G1 M2 Topic C: Strategies for Solving Change or Addend Unknown Problems

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Analyze addition and subtraction equations within 20.	
	NC.1.OA.7 Apply understanding of the equal sign to determine if equations involving addition and subtraction are true.	G1 M1 Topic E: The Commutative Property of Addition and the Equal Sign
	NC.1.OA.8 Determine the unknown whole number in an addition or subtraction equation involving three whole numbers.	G1 M1 Topic D: Strategies for Counting On
Number and Operations in Base Ten	**Cluster: Extend and recognize patterns in the counting sequence.**	
	NC.1.NBT.1 Count to 150, starting at any number less than 150**.**	G1 M4 Topic A: Tens and Ones G1 M6 Topic B: Numbers to 120
	NC.1.NBT.7 Read and write numerals, and represent a number of objects with a written numeral, to 100.	G1 M4 Topic A: Tens and Ones G1 M6 Topic B: Numbers to 120

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Understand place value.	
	NC.1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. • Unitize by making a ten from a collection of ten ones. • Model the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. Demonstrate that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens, with 0 ones.	G1 M2 Topic D: Varied Problems with Decompositions of Ten Numbers as 1 Ten and Some Ones G1 M4 Topic A: Tens and Ones G1 M4 Topic C: Addition and Subtraction of Tens G1 M6 Topic B: Numbers to 120
	NC.1.NBT.3 Compare two two-digit numbers based on the value of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	G1 M4 Topic B: Comparison of Pairs of Two-Digit Numbers G1 M6 Topic B: Numbers to 120
	Cluster: Use place value understanding and properties of operations.	
	NC.1.NBT.4 Using concrete models or drawings, strategies based on place value, properties of operations, and explaining the reasoning used, add, within 100, in the following situations: • A two-digit number and a one-digit number • A two-digit number and a multiple of 10	G1 M4 Topic C: Addition and Subtraction of Tens G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number G1 M4 Topic F: Addition of Tens and Ones to a Two-Digit Number G1 M6 Topic C: Addition to 100 Using Place Value Understanding G1 M6 Topic D: Varied Place Value Strategies for Addition to 100

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	G1 M4 Topic A: Tens and Ones G1 M6 Topic B: Numbers to 120
	NC.1.NBT.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90, explaining the reasoning, using: • Concrete models and drawings • Number lines • Strategies based on place value • Properties of operations • The relationship between addition and subtraction	G1 M4 Topic C: Addition and Subtraction of Tens G1 M6 Topic C: Addition to 100 Using Place Value Understanding
Measurement and Data	**Cluster: Measure lengths.**	
	NC.1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	G1 M3 Topic A: Indirect Comparison in Length Measurement G1 M3 Topic B: Standard Length Units
	NC.1.MD.2 Measure lengths with non-standard units. • Express the length of an object as a whole number of non-standard length units. • Measure by laying multiple copies of a shorter object (the length unit) end to end (iterating) with no gaps or overlaps.	G1 M3 Topic B: Standard Length Units G1 M3 Topic C: Nonstandard and Standard Length Units G1 M3 Topic D: Data Interpretation

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Build understanding of time and money.	
	NC.1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.	G1 M5 Topic D: Application of Halves to Tell Time
	NC.1.MD.5 Identify quarters, dimes, and nickels and relate their values to pennies.	G1 M6 Topic E: Coins and Their Values
	Cluster: Represent and interpret data.	
	NC.1.MD.4 Organize, represent, and interpret data with up to three categories. • Ask and answer questions about the total number of data points. • Ask and answer questions about how many in each category. • Ask and answer questions about how many more or less are in one category than in another.	G1 M3 Topic D: Data Interpretation

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Geometry	**Cluster: Reason with shapes and their attributes.**	
	NC.1.G.1 Distinguish between defining and non-defining attributes and create shapes with defining attributes by: • Building and drawing triangles, rectangles, squares, trapezoids, hexagons, circles. • Building cubes, rectangular prisms, cones, spheres, and cylinders.	G1 M5 Topic A: Attributes of Shapes
	NC.1.G.2 Create composite shapes by: • Making a two-dimensional composite shape using rectangles, squares, trapezoids, triangles, and half-circles naming the components of the new shape. • Making a three-dimensional composite shape using cubes, rectangular prisms, cones, and cylinders, naming the components of the new shape.	G1 M5 Topic B: Part–Whole Relationships Within Composite Shapes
	NC.1.G.3 Partition circles and rectangles into two and four equal shares. • Describe the shares as halves and fourths, as half of and fourth of. • Describe the whole as two of, or four of the shares. • Explain that decomposing into more equal **shares** creates smaller shares.	G1 M5 Topic C: Halves and Quarters of Rectangles and Circles G1 M5 Topic D: Application of Halves to Tell Time