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 K MATHEMATICS

The North Carolina Course of Study Kindergarten Mathematics is fully covered by the Grade K *Eureka Math* curriculum. 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 Kindergarten begin to develop effective dispositions toward problem solving. In rich settings in which informal and formal possibilities for solving problems are numerous, young children develop the ability to focus attention, test hypotheses, take reasonable risks, remain flexible, try alternatives, exhibit self-regulation, and persevere (Copley, 2010). Using both verbal and nonverbal means, kindergarten students begin to explain to themselves and others the meaning of a problem, look for ways to solve it, and determine if their thinking makes sense or if another strategy is needed. As the teacher uses thoughtful questioning and provides opportunities for students to share thinking, kindergarten students begin to reason as they become more conscious of what they know and how they solve problems.	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: GK M2: Two-Dimensional and Three-Dimensional Shapes GK M4: Number Pairs, Addition and Subtraction to 10 GK M6: Analyzing, Comparing, and Composing Shapes

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
2. Reason abstractly and quantitatively. Mathematically proficient students in Kindergarten begin to use numerals to represent specific amount (quantity). For example, a student may write the numeral “11” to represent an amount of objects counted, select the correct number card “17” to follow “16” on the calendar, or build a pile of counters depending on the number drawn. In addition, kindergarten students begin to draw pictures, manipulate objects, use diagrams or charts, etc. to express quantitative ideas such as a joining situation (Mary has 3 bears. Juanita gave her 1 more bear. How many bears does Mary have altogether?), or a separating situation (Mary had 5 bears. She gave some to Juanita. Now she has 3 bears. How many bears did Mary give Juanita?). Using the language developed through numerous joining and separating scenarios, kindergarten students begin to understand how symbols (+, –, =) are used to represent quantitative ideas in a written format.	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: GK M1: Numbers to 10 GK M3: Comparison of Length, Weight, Capacity, and Numbers to 10 GK M4: Number Pairs, Addition and Subtraction to 10 GK M5: Numbers 10–20 and Counting to 100

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
3. Construct viable arguments and critique the reasoning of others. In Kindergarten, mathematically proficient students begin to clearly express, explain, organize and consolidate their math thinking using both verbal and written representations. Through opportunities that encourage exploration, discovery, and discussion, kindergarten students begin to learn how to express opinions, become skillful at listening to others, describe their reasoning and respond to others' thinking and reasoning. They begin to develop the ability to reason and analyze situations as they consider questions such as, "Are you sure…?" , "Do you think that would happen all the time…?", and "I wonder why…?"	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: GK M1: Numbers to 10 GK M2: Two-Dimensional and Three-Dimensional Shapes GK M3: Comparison of Length, Weight, Capacity, and Numbers to 10 GK M5: Numbers 10–20 and Counting to 100
4. Model with mathematics. Mathematically proficient students in Kindergarten begin to experiment with representing real-life problem situations in multiple ways such as with numbers, words (mathematical language), drawings, objects, acting out, charts, lists, and number sentences. For example, when making toothpick designs to represent the various combinations of the number "5", the student writes the numerals for the various parts (such as "4" and "1") or selects a number sentence that represents that particular situation (such as 5 = 4 + 1)*. *Kindergarten students should see addition and subtraction equations, but it is not required.	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: GK M1: Numbers to 10 GK M4: Number Pairs, Addition and Subtraction to 10 GK M5: Numbers 10–20 and Counting to 100 GK M6: Analyzing, Comparing, and Composing Shapes

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
5. Use appropriate tools strategically. In Kindergarten, mathematically proficient students begin to explore various tools and use them to investigate mathematical concepts. Through multiple opportunities to examine materials, they experiment and use both concrete materials (e.g., 3-dimensional solids, connecting cubes, ten frames, number balances) and technological materials (e.g., virtual manipulatives, calculators, interactive websites) to explore mathematical concepts. Based on these experiences, they become able to decide which tools may be helpful to use depending on the problem or task. For example, when solving the problem, "There are 4 dogs in the park. 3 more dogs show up in the park. How many dogs are in the park?", students may decide to act it out using counters and a story mat; draw a picture; or use a handful of cubes.	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: GK M3: Comparison of Length, Weight, Capacity, and Numbers to 10 GK M4: Number Pairs, Addition and Subtraction to 10

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
6. Attend to precision. Mathematically proficient students in Kindergarten begin to express their ideas and reasoning using words. As their mathematical vocabulary increases due to exposure, modeling, and practice, kindergarteners become more precise in their communication, calculations, and measurements. In all types of mathematical tasks, students begin to describe their actions and strategies more clearly, understand and use grade-level appropriate vocabulary accurately, and begin to give precise explanations and reasoning regarding their process of finding solutions. For example, a student may use color words (such as blue, green, light blue) and descriptive words (such as small, big, rough, smooth) to accurately describe how a collection of buttons is sorted.	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: GK M2: Two-Dimensional and Three-Dimensional Shapes GK M3: Comparison of Length, Weight, Capacity, and Numbers to 10 GK M6: Analyzing, Comparing, and Composing Shapes

Standards for Mathematical Practice	Aligned Components of *Eureka Math*
7. Look for and make use of structure. Mathematically proficient students in Kindergarten begin to look for patterns and structures in the number system and other areas of mathematics. For example, when searching for triangles around the room, kindergarteners begin to notice that some triangles are larger than others or come in different colors–yet they are all triangles. While exploring the part-whole relationships of a number using a number balance, students begin to realize that 5 can be broken down into sub-parts, such as 4 and 1 or 3 and 2, and still remain a total of 5.	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: GK M1: Numbers to 10 GK M2: Two-Dimensional and Three-Dimensional Shapes GK M3: Comparison of Length, Weight, Capacity, and Numbers to 10 GK M4: Number Pairs, Addition and Subtraction to 10 GK M5: Numbers 10–20 and Counting to 100 GK M6: Analyzing, Comparing, and Composing Shapes
8. Look for and express regularity in repeated reasoning. In Kindergarten, mathematically proficient students begin to notice repetitive actions in geometry, counting, comparing, etc. For example, a kindergartener may notice that as the number of sides increases on a shape, a new shape is created (a triangle has 3 sides, a rectangle has 4 sides, a pentagon has 5 sides, a hexagon has 6 sides). When counting out loud to 100, kindergartners may recognize the pattern 1–9 being repeated for each decade (e.g., Seventy-ONE, Seventy-TWO, Seventy-THREE… Eighty-ONE, Eighty-TWO, Eighty-THREE…). When joining one more cube to a pile, the child may realize that the new amount is the next number in the count sequence.	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: GK M1: Numbers to 10 GK M4: Number Pairs, Addition and Subtraction to 10

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Counting and Cardinality	**Cluster: Know number names and the counting sequence.**	
	NC.K.CC.1 Know number names and recognize patterns in the counting sequence by: • Counting to 100 by ones. • Counting to 100 by tens.	GK M5 Topic A: Count 10 Ones and Some Ones GK M5 Topic D: Extend the Say Ten and Regular Count Sequence to 100
	NC.K.CC.2 Count forward beginning from a given number within the known sequence, instead of having to begin at 1.	GK M5 Topic D: Extend the Say Ten and Regular Count Sequence to 100
	NC.K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20, with 0 representing a count of no objects.	GK M1 Topic D: The Concept of Zero and Working with Numbers 0–5 GK M1 Topic E: Working with Numbers 6–8 in Different Configurations GK M1 Topic F: Working with Numbers 9–10 in Different Configurations GK M5 Topic B: Compose Numbers 11–20 from 10 Ones and Some Ones; Represent and Write Teen Numbers ;

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Count to tell the number of objects.	
	NC.K.CC.4 Understand the relationship between numbers and quantities. • When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object (one-to-one correspondence). • Recognize that the last number named tells the number of objects counted regardless of their arrangement (cardinality). • State the number of objects in a group, of up to 5 objects, without counting the objects (perceptual subitizing).	GK M1 Topic B: Classify to Make Categories and Count GK M1 Topic C: Numbers to 5 in Different Configurations, Math Drawings, and Expressions GK M1 Topic D: The Concept of Zero and Working with Numbers 0–5 GK M1 Topic E: Working with Numbers 6–8 in Different Configurations GK M1 Topic F: Working with Numbers 9–10 in Different Configurations GK M1 Topic G: 1 More than With Numbers 0–10 GK M1 Topic H: 1 Less than With Numbers 0–10 GK M5 Topic C: Decompose Numbers 11–20, and Count to Answer "How many?" Questions in Varied Configurations

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.K.CC.5 • Count to answer “How many?” in the following situations: • Given a number from 1–20, count out that many objects. • Given up to 20 objects, name the next successive number when an object is added, recognizing the quantity is one more/greater. • Given 20 objects arranged in a line, a rectangular array, and a circle, identify how many. • Given 10 objects in a scattered arrangement, identify how many.	GK M1 Topic C: Numbers to 5 in different Configurations, Math Drawings, and Expressions GK M1 Topic D: The Concept of Zero and Working with Numbers 0–5 GK M1 Topic E: Working with Numbers 6–8 in Different Configurations GK M1 Topic F: Working with Numbers 9–10 in Different Configurations GK M5 Topic C: Decompose Numbers 11–20, and Count to Answer "How many?" Questions in Varied Configurations GK M5 Topic E: Represent and Apply Compositions and Decompositions of Teen Numbers
	Cluster: Compare numbers.	
	NC.K.CC.6 Identify whether the number of objects, within 10, in one group is greater than, less than, or equal to the number of objects in another group, by using matching and counting strategies.	GK M3 Topic E: Are There Enough? GK M3 Topic F: Comparison with Sets within 10 GK M3 Topic G: Comparison of Numerals
	NC.K.CC.7 Compare two numbers, within 10, presented as written numerals.	GK M3 Topic F: Comparison of Sets within 10 GK M3 Topic G: Comparison of Numerals

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Operations and Algebraic Thinking	**Cluster: Understand addition and subtraction.**	
	NC.K.OA.1 Represent addition and subtraction, within 10: • Use a variety of representations such as objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, or expressions. • Demonstrate understanding of addition and subtraction by making connections among representations.	GK M4 Topic A: Composition and Decompositions of 2, 3, 4, and 5 GK M4 Topic C: Addition with Totals of 6, 7, and 8 GK M4 Topic D: Subtraction from Numbers to 8 GK M4 Topic E: Subtraction from 9 and 10 GK M4 Topic H: Patterns with Adding 0 and 1 and Making 10
	NC.K.OA.2 Solve addition and subtraction word problems, within 10, using objects or drawings to represent the problem, when solving: • Add to/Take From-Result Unknown • Put Together/Take Apart (Total Unknown and Two Addends Unknown)	GK M4 Topic C: Composition and Decompositions of 2, 3, 4, and 5 GK M4 Topic D: Addition with Totals of 6, 7, and 8 GK M4 Topic F: Addition with totals of 9 and 10 GK M4 Topic G: Subtraction from Numbers to 8 GK M4 Topic H: Subtraction from 9 and 10

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way using objects or drawings, and record each decomposition by a drawing or expression.	GK M1 Topic C: Numbers to 5 in Different Configurations, Math Drawings and Expressions GK M4 Topic A: Compositions and Decompositions of 2, 3, 4, and 5 GK M4 Topic B: Decompositions of 6, 7, and 8 into Number Pairs GK M4 Topic D: Subtraction from Numbers to 8 GK M4 Topic E: Decompositions of 9 and 10 into Number Pairs GK M4 Topic G: Subtraction from 9 and 10
	NC.K.OA.4 For any number from 0 to 10, find the number that makes 10 when added to the given number using objects or drawings, and record the answer with a drawing or expression.	GK M4 Topic H: Patterns with Adding 0 and 1 and Making 10
	NC.K.OA.5 Demonstrate fluency with addition and subtraction within 5.	GK M4 Topic A: Compositions and Decompositions of 2, 3, 4, and 5
	NC.K.OA.6 Recognize and combine groups with totals up to 5 (conceptual subitizing).	GK M1Topic C: Numerals to 5 in Different Configurations, Math Drawings, and Expressions

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Number and Operations in Base Ten	**Cluster: Build foundation for place value.**	
	NC.K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones by: • Using objects or drawings. • Recording each composition or decomposition by a drawing or expression. • Understanding that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	GK M5 Topic A: Count 10 Ones and Some Ones GK M5 Topic B: Compose Numbers 11–20 from 10 Ones and Some Ones GK M5 Topic C: Represent and Write Teen Numbers GK M5 Topic E: Decompose Numbers 11–20, and Count to Answer "How many?" Questions in Varied Configurations
Measurement and Data	**Cluster: Describe and compare measurable attributes.**	
	NC.K.MD.1 Describe measurable attributes of objects; and describe several different measurable attributes of a single object.	GK M3 Topic A: Comparison of Length and Height GK M3 Topic B: Comparison of Length and Height of Linking Cube Sticks Within 10 GK M3 Topic C: Comparison of Weight GK M3 Topic D: Comparison of Volume GK M3 Topic E: Are There Enough? GK M3 Topic H: Clarification of Measurable Attributes

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.	GK M3 Topic A: Comparison of Length and Height GK M3 Topic B: Comparison of Length and Height of Linking Cube Sticks within 10 GK M3 Topic C: Comparison of Weight GK M3 Topic D: Comparison of Volume GK M3 Topic E: Are There Enough? GK M3 Topic H Clarification of Measurable Attributes
	Cluster: Classify objects and count the number of objects in each category.	
	NC.K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	GK M1 Topic A: Attributes of Two Related Objects GK M1 Topic B: Classify to Make Categories and Count GK M2 Topic C: Two-dimensional and Three-Dimensional Shapes
Geometry	**Cluster: Identify and describe shapes.**	
	NC.K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of objects using positional terms.	GK M2 Topic A: Two-Dimensional Flat Shapes GK M2 Topic B: Two-Dimensional Solid Shapes

Domain	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	NC.K.G.2 Correctly name squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres regardless of their orientations or overall size.	GK M2 Topic A: Two-Dimensional Flat Shapes GK M2 Topic B: Two-Dimensional Solid Shapes
	NC.K.G.3 Identify squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres as two-dimensional or three-dimensional.	GK M2 Topic C: Two-dimensional and Three-Dimensional Shapes
	Cluster: Analyze, compare, create, and compose shapes.	
	NC.K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, attributes and other properties.	GK M2 Topic A: Two-Dimensional Flat Shapes GK M2 Topic B: Two-Dimensional Solid Shapes GK M2 Topic C: Two-Dimensional and Three-Dimensional Shapes
	NC.K.G.5 Model shapes in the world by: • Building and drawing triangles, rectangles, squares, hexagons, circles. • Building cubes, cones, spheres, and cylinders.	GK M6 Topic A: Building and Drawing Flat and Solid Shapes
	NC.K.G.6 Compose larger shapes from simple shapes.	GK M6 Topic B: Composing and Decomposing Shapes