Fairfield Public Schools
Mathematics

Grade K

Grade K Mathematics Overview
Students in Kindergarten will focus on two critical areas: representing, relating, and operating on whole numbers and describing shapes and spatial relationships. More time in Kindergarten is devoted to number than to other topics. Students will develop an understanding of counting: one to one matching, the last number said tells the quantity, there is a sequence to our numbers, and there is a pattern to the underlying structure to our number system. Students will develop an understanding of early number concepts and place value. Students combine and take apart numbers. Students describe their physical world using geometric ideas. Students in Kindergarten will develop, discuss, and use efficient, accurate, and generalizable methods to solve real world problems.

Grade K Mathematics Year-At-A-Glance

Pacing Guide									
1st Marking Period			2nd Marking Period				3rd Marking Period		
September	October	November	December	January	February	March	April	May	June
Unit 1 Counting and Matching Numerals 0-5 with Comparing	Unit 2 Counting and Matching Numerals 6-10 with Comparing	Unit 3 Geometry		Unit 4 Counting and Matching Numerals 11-20	Unit 5 Addition and Subtraction within 5		Unit 6 Developing Early Place Value Concepts	Unit 7 Measurement by Direct Comparison	Unit 8 Investigating Addition and Subtraction within 10

Grade K Overview		
Central Understandings: Insights learned from exploring generalizations through the essential questions. (Students will understand that…) • Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools, and technologies. • Quantitative relationships can be expressed numerically in multiple ways in order to make connections and simplify calculations using a variety of strategies, tools and technologies. • Shapes and structures can be analyzed, visualized, measured, and transformed using a variety of strategies, tools, and technologies. • Data can be analyzed to make informed decisions using a variety of strategies, tools, and technologies.	**Essential Questions** • How do patterns and functions help us describe data and physical phenomena and solve a variety of problems? • How are quantitative relationships represented by numbers? • How do geometric relationships and measurements help us to solve problems and make sense of our world? • How can collecting, organizing, and displaying data help us analyze information and make reasonable and informed decisions?	**Assessments** • Formative Assessments • Summative Assessments • District –Wide Screening Tools

Content Outline: Unit 1: Counting and Matching Numerals 0-5 with Comparing Quantities Unit 2: Counting and Match Numerals 6-10 with Comparing Quantities Unit 3: Identifying, Describing, Comparing, Analyzing, and Composing 2-D and 3-D Shapes Unit 4: Counting and Matching Numerals 11 - 20 Unit 5: Addition & Subtraction within 5 Unit 6: Developing Early Place Value Concepts Unit 7: Measurement by Direct Comparison Unit 8: Investigating Addition & Subtraction within 10	**Mathematics Standards** CT Common Core State Standards (CCSS) **Fairfield Public Schools Skills Matrix** (Skills Matrix) **Primary Resources** • About Teaching Mathematics, Marilyn Burns • Contexts for Learning Mathematics, Fosnot et al. • Teaching Student-Centered Mathematics –Van de Walle and Lovin • Growing With Mathematics • Math Their Way

Kindergarten Standards for Mathematical Practice

The K-12 Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. This page gives examples of what the practice standards look like at the specified grade level.

Standards	Explanations and Examples
Students are expected to: **1. Make sense of problems and persevere in solving them**.	In Kindergarten, students begin to build the understanding that doing mathematics involves solving problems and discussing how they solved them. Students explain to themselves the meaning of a problem and look for ways to solve it. Younger students may use concrete objects or pictures to help them conceptualize and solve problems. They may check their thinking by asking themselves, "Does this make sense?" or they may try another strategy.
Students are expected to:. **2. Reason abstractly and quantitatively.**	Younger students begin to recognize that a number represents a specific quantity. Then, they connect the quantity to written symbols. Quantitative reasoning entails creating representation of a problem while attending to the meanings of the quantities.
Students are expected to: **3. Construct viable arguments and critique the reasoning of others.**	Younger students construct arguments using concrete referents, such as objects, pictures, drawings, and actions. They also begin to develop their mathematical communication skills as they participate in mathematical discussions involving questions like "How did you get that?" and "Why is that true?" They explain their thinking to others and respond to others' thinking.
Students are expected to: **4. Model with mathematics.**	In early grades, students experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. Students need opportunities to connect the different representations and explain the connections. They should be able to use all of these representations as needed.
Students are expected to: **5. Use appropriate tools strategically.**	Younger students begin to consider the available tools (including estimation) when solving a mathematical problem and decide when certain tools might be helpful. For instance, kindergarteners may decide that it might be advantageous to use linking cubes to represent two quantities and then compare the two representatives side-by-side.
Students are expected to: **6. Attend to precision.**	As kindergarteners begin to develop their mathematical communication skills, they try to use clear and precise language in their discussions with others and in their own reasoning.
Students are expected to: **7. Look for and make use of structure.**	Younger students begin to discern a pattern or structure. For instance, students recognize the pattern that exists in the teen numbers; every teen number is written with a 1 (representing one ten) and ends with the digit that is first stated. They also recognize that $3 + 2 = 5$ and $2 + 3 = 5$.
Students are expected to: **8. Look for and express regularity in repeated reasoning**.	In the early grades, students notice repetitive actions in counting and computation, etc. For example, they may notice that the next number in a counting sequence is one more. When counting by tens, the next number in the sequence is "ten more" (or one more group of ten). In addition, students continually check their work by asking themselves, "Does this make sense?"

Adapted from Connecticut Standards for Mathematics

Grade K

Unit 1: Launch/Counting and Matching Numerals 0-5 with Comparing

The purpose of the launch is to establish classroom routines. The first unit is intended to engage students in thinking mathematically. The lessons focus on learning how to engage one another as mathematicians using 21st century skills. Student discourse is enhanced by using turn & talk, think-pair-share, justify reasoning, and constructing viable arguments for mathematical thinking.   Students represent their thinking using mathematical models and numbers, questioning peers for deeper understanding and clarification. The correctness of solutions lies within the logic of the mathematics. The students will focus on the numerals 0-5 with an emphasis on counting and matching numerals. Students will compare sets and numbers to 5 and beyond.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	Essential Questions
- Counting helps students to understand how numbers are related. - Numbers can be represented by numerals, sets, and number names. - Counting objects requires synchrony and tagging (Synchrony: remembering the word that comes next and using only one word for each object. Tagging: touching each object once and only once.) - Numbers grow by one, and exactly one, each time. (Hierarchal Inclusion) - When counting a set the number they end on is the number of objects in a set. (Cardinality) - One to one correspondence (if there is a corresponding object matched to each object in a set, the sets are equivalent) is necessary to the understanding of equivalency. - The number of objects in a set remains the same regardless of the arrangement of the set. (Conservation of a Number) - The number of objects can be recognized at a glance without counting. (Subitizing) **Thinking Ahead, Linking Big Ideas among units:** **Unit 2: Counting and Matching Numerals** Expanding Unit 1 to include quantities to 10	- Why do we count? - How do we count? - How are numerals used? - How do we represent quantities? - How do we write numerals? - How are two quantities related? - How do we compare quantities?

Counting and Cardinality

Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

> a. 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.

> b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

> c. Understand that each successive number name refers to a quantity that is one larger.

Compare numbers.

K.CC.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

K.CC.7. Compare two numbers between 1 and 10 presented as written numerals.

Measurement and Data
Classify objects and count the number of objects in each category.

K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Grade K
Unit 2: Counting and Matching Numerals 6-10 with Comparing Quantities
The purpose of this unit is to develop an understanding of quantity and number. Students count and match numerals through 10. Students build on the five structure to understand the ten structure. Students compare sets of objects and numbers and develop strategies to determine more, less and the same quantities of objects.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	**Essential Questions**
- Counting helps students to understand how numbers are related. - Numbers can be represented by numerals, sets, and number names. - Counting objects requires synchrony and tagging (Synchrony: remembering the word that comes next and using only one word for each object. Tagging: touching each object once and only once.) - Numbers grow by one, and exactly one, each time. (Hierarchal Inclusion) - When counting a set the number they end on is the number of objects in a set. (Cardinality) - One to one correspondence (if there is a corresponding object matched to each object in a set, the sets are equivalent) is necessary to the understanding of equivalency. - The number of objects in a set remains the same regardless of the arrangement of the set. (Conservation of a Number) **Thinking Ahead, Linking Big Ideas among units:** **Unit 3: Geometry** - Students use their knowledge of measurement while working with shapes. - Students compose and decompose shapes. Students describe their physical world using geometric ideas like shape, orientation and spatial relations.	- Why do we count? - How do we count? - How are numerals used? - How do we represent quantities? - How do we write numerals? - How are two quantities related? - How do we compare quantities?

Common Core State Standards
Grade K
Unit 2: Counting and Matching Numerals to 20

Counting and Cardinality
Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

    a. 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.

    b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

    c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Compare numbers.

K.CC.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

K.CC.7. Compare two numbers between 1 and 10 presented as written numerals.

Measurement and Data K.MD
Classify objects and count the number of objects in each category.

K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Grade K
Unit 3: Geometry: Identifying, Describing, Comparing, Analyzing, Composing 2D and 3D shapes

The purpose of this unit is for students to describe their physical world in terms of shape, orientation and spatial relations. They use basic shapes and spatial reasoning to model objects in their environment and construct more complex shapes. They identify, name and describe two dimensional and three dimensional objects in their environment, and describe the relative positions of these objects using terms such as above, below, beside, in front of. Students will analyze and compare two and three dimensional shapes to describe their similarities, differences, parts and other attributes. They will draw and create shapes.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	Essential Questions
- Shapes can be compared by using a variety of geometric attributes. - Shapes can be described relative to their position in space. - Shapes can be seen from different perspectives. - Shapes can be two-dimensional or three-dimensional. - Shapes and objects can be described by their attributes. - Shapes can be constructed and deconstructed into other shapes.	- What shapes are in our environment? - How are 2-D shapes alike and different? - How are 3-D shapes alike and different? - How are 2-D and 3-D shapes alike and different from each other? - How can I represent a shape? - What shapes can be composed from other shapes? - What shapes can be decomposed into other shapes?
Thinking Ahead, Linking Big Ideas: **Unit 4 : Counting and Matching Numerals to 20** Expand on Unit 2 to include building numbers up to 20	

Measurement and Data
Describe and compare measurable attributes.

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. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Classify objects and count the number of objects in each category.

K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Geometry
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

K.G.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.

K.G.2. Correctly name shapes regardless of their orientations or overall size.

K.G.3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Analyze, compare, create, and compose shapes.

K.G.4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

K.G.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

K.G.6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Grade K

Unit 4: Counting and Matching Numerals 11 - 20

The purpose of this unit is to develop an understanding of the benchmark numbers 5 and 10 to count and match numerals through 20. Students use benchmark numbers to compose and decompose numbers. They begin using units of 5s and 10s to help determine other quantities. Foundational place value concepts are developed as students begin to build numbers using a group of ten and some ones.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	**Essential Questions**
- Children use number to count not only objects but also groups- and to count them both simultaneously. - Teen numbers are a group of 10 and another number. - Ten objects can be perceived simultaneously as set of ten objects or as one group of ten (unitizing). - The positions of digits determine what value they represent. - Place values patterns occur when making and adding on groups of ten. - Numbers can be composed and decomposed. (11 is 10 plus one more) - Our number system is built on ten. - The benchmark of 10 can be used to effectively count on. **Thinking Ahead, Linking Big Ideas among units:** **Unit 5: Addition and Subtraction within 5** - Students begin to look at number combinations as putting together (addition) and taking apart (subtraction).	- Why do we count? - How do we count? - How are numerals used? - How do we represent quantities? - How do we write numerals? - How are two quantities related? - How do we compare quantities? - How does the 5 and 10 structure help us to understand bigger numbers?

Counting and Cardinality
Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

    a. 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.

    b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

    c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Grade K
Unit 5: Addition and Subtraction within five
The purpose of the unit is for the students to understand that addition is putting together and adding to and subtraction is taking apart and taking from. Students will work with groups up to 5 to develop part whole relationships. Students solve addition and subtraction word problems and represent their thinking through verbal explanations, expressions, equations and acting out a situation. They develop compose and decompose numbers using different number combinations.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	**Essential Questions**
- Addition is combining numbers (joining). - Addition means the whole in terms of the parts. - Subtraction is taking apart numbers (separating). - Subtraction names a missing part. - Addition and subtraction are related. - Sets and numbers can be composed and decomposed. - Manipulatives can be used to solve contextual problems for addition. - Addition and subtraction can be represented by equations (number sentences). **Thinking Ahead, Linking Big Ideas among units:** **Unit 6: Developing Early Place Value Concepts** - Students build larger numbers by counting and grouping quantities. They compose and decompose numbers and build an understanding of number relationship and magnitude.	How are numerals used? How can two quantities be related? How do we compose and decompose numbers? Why do we compose and decompose numbers? How is addition and subtraction related? What different strategies can we use to add and subtract?

Counting and Cardinality
Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

   a. 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.

   b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

   c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Operations and Algebraic Thinking
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

K.OA.5. Fluently add and subtract within 5.

Grade K
Unit 6: Developing Early Place Value Concepts: Teen and Twenty Numbers (11-30) and Counting to 120

The purpose of this unit is to work with numbers 11-30 to compose and decompose these numbers as to gain foundational concepts for place value. Students build larger numbers by counting and grouping quantities over 100.   They compose and decompose numbers and build an understanding of number relationship and magnitude.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	**Essential Questions**
• Counting helps students to understand how numbers are related and that each successive number named refers to a quantity that is one larger. • Teen numbers are 10 plus another number. • Ten is found within every 2 digit number. • A set of ten can be perceived as a single entity. (Unitizing) • The positions of digits determine what value they represent. • Place values patterns occur when making and adding on groups of ten. • Two-digit numbers can be composed and decomposed. • There are multiple ways to take apart and combine any given set of numbers. • Our number system is structured around multiples of ten. • Skip counting allows students to count sets of objects with the same number of items. • Benchmark numbers help us to mentally think about numbers. **Thinking Ahead, Linking Big Ideas among units:** **Unit 7: Measurement by Direct Comparison** • Numbers are used for quantifying measurement • Things can be measured by comparing attributes	• Why do we count? • How do numerals represent quantities? • How does the location of the number affect its value? • How are different quantities related? • Which quantity is larger and how do we know? • How can we compare quantities?

Counting and Cardinality
Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

a. 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.

b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Operations and Algebraic Thinking
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Number and Operations in Base Ten
Work with numbers 11-19 to gain foundations for place value.

K.NBT.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Grade K

Unit 7: Measurement by Direct Comparison

The purpose of this unit is to describe measurable attributes of objects and to estimate and measure using non-standard units. Students will compare these attributes, such as length, width, height, and weight. Students use direct comparisons of the length of objects and develop strategies to determine more of, less of, or the same.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	Essential Questions
- Measurement involves a comparison of an attribute of an item or situation with a standard or non-standard unit of measure. - Objects can be measured. - Non-standard units can be used to measure. - There is a purpose for measurement. - Estimation is a way to determine if the answer is reasonable. **Thinking Ahead, Linking Big Ideas among units:** **Unit 8: Investigating Addition and Subtraction within 10** - Students build on their understanding of composing and decomposing numbers to five by building numbers to ten. - Students develop an understanding of addition as putting together and subtraction as taking apart.	- Why do we measure? - How is measurement used? - How do we decide which unit to use to measure an object? - When do we use estimation? - How do you know if your estimation is reasonable?

Common Core State Standards Grade K Unit 7: Measurement by Direct Comparison
Measurement and Data **Describe and compare measurable attributes.** K.MD.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. 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. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Grade K

Unit 8: Investigating Addition and Subtraction within Ten

The purpose of the unit is for students to build upon their understanding that addition as putting together and adding to and subtraction as taking apart and taking from (from Unit 4) within groups up to 10. They develop strategies for adding and subtracting small whole numbers. They use a variety of models, including discrete objects and linear models. They use properties of addition to add whole numbers using increasingly sophisticated strategies based on these properties to solve addition and subtraction problems within ten. Students will develop fluency with addition and subtraction five.

Big Ideas: The central organizing ideas and underlying structures of mathematics.	**Essential Questions**
- Addition is combining numbers (joining). - Addition means the whole in terms of the parts. - Subtraction is taking apart numbers (separating). - Subtraction names a missing part. - Addition and subtraction are connected. - Sets and numbers can be composed and decomposed. - Manipulatives can be used to solve contextual problems for addition - Addition and Subtraction can be represented by equations (number sentences).	- How are numerals used? - How can two quantities be related? - How do we compose and decompose numbers? - Why do we compose and decompose numbers? - How are addition and subtraction related? - What different strategies can we use to add and subtract? - What are efficient strategies we can use to combine and take apart numbers?
Thinking Ahead, Linking Big Ideas: **Grade 1:** The focus of grade 1 is to develop automaticity of addition and subtraction facts. Students develop addition and subtraction strategies, understanding of place value, measurement concepts and reasoning about shapes.	

Common Core State Standards
Grade K
Unit 8: Investigating Addition and Subtraction to Ten

Counting and Cardinality
Know number names and the count sequence.

K.CC.1. Count to 120 by ones and by tens.

K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

K.CC.3. Write numbers from 0 to 30. Represent a number of objects with a written numeral 0-30 (with 0 representing a count of no objects).

Count to tell the number of objects.

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

    a. 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.

    b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

    c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Operations and Algebraic Thinking
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

K.OA.5. Fluently add and subtract within 5.