ALPHA BORO PUBLIC SCHOOL

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count by ones up to 10	K.CC.1
2	Represent the number of objects by the correct numeral up to 5 (using zero to represent no objects).	K.CC.3
3	Assign an ascending number name for each object in a group.	K.CC.4
4	For objects named in the standard order, identify the last number named as the number of counted objects in the set (regardless of the order they are counted).	K.CC.4
5	Know the next number name in counting is always one greater than the previous number.	K.CC.4
6	Answer "how many?" questions about groups of objects up to 10 when arranged in a line or up to 5 in a scattered configuration.	K.CC.5
7	Create addition and subtraction events with objects (or make drawings) to represent a sum (putting together) or a difference (taking from) up to 10.	K.OA.1

Repeated Standards

SLO #1 is a benchmark for standard **K.CC.1** in this unit: **Count to 100 by ones and by tens.**

SLO #2 is a benchmark for standard **K.CC.3** in this unit: **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).**

SLO #6 is a benchmark for standard **K.CC.5** in this unit: **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.**

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 1	UNIT NAME: Number Names and Count Sequences

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO #7 Reason about and make sense of addition and subtraction events by drawing pictures and using diagrams to represent the sums or differences.
2. **Reason abstractly and quantitatively.**
   SLO #2 Make sense of the numbers 1 through 10 and understand that they represent quantities.
   SLO #4 For objects named in order, understand the relationship of the last named number to the quantity of the set.
   SLO #6 Make sense of number relationships (up to 10) using objects regardless of configuration.
3. Construct viable arguments and critique the reasoning of others.
4. **Model with mathematics.**
   SLO #7 Make sense of and reason about addition and subtraction events (up to 10) by using pictures and diagrams to map or represent the equations relationships.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
K.CC.1	Count to 100 by ones and by tens.
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).
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

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 1	UNIT NAME: Number Names and Count Sequences

	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.
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.

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ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 2	UNIT NAME: Addition as "adding to" and Subtraction as "taking from"

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count and represent with a written numeral a number of objects to 10	K.CC.3
2	Write numerals from zero to 10.	K.CC.3
3	Count to 30 by ones and tens.	K.CC.1
4	Count forward beginning from any given number up to 50 – instead of having to begin at one.	K.CC.2
5	Use objects or drawings to represent and solve addition and subtraction word problems (within 10)	K.OA.2
6	Fluently add within 5.	K.OA.5
7	Classify and sort objects into given categories and count the objects in each category (up to 10 objects).	K.MD.3

Repeated Standards

SLOs #1 and #2 are benchmarks for standard **K.CC.3** in this unit: **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).**

SLOs #3 is a benchmark for standard **K.CC.1** in this unit: **Count to 100 by ones and by tens.**

SLOs #6 is a benchmark for standard **K.OA.5** in this unit: **Fluently add and subtract within 5.**

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 2	UNIT NAME: Addition as "adding to" and Subtraction as "taking from"

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO #5 Think about and make sense of the steps to solve addition and subtraction word problems.
2. **Reason abstractly and quantitatively.**
   SLO #1 Understand that the quantity of objects is represented by its corresponding written numeral.
   SLO #5 Think and reason about the quantities and their relationships to each other (either addition or subtraction) in word problems
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. **Use appropriate tools strategically.**
   SLO #5 Consider and use available tools (drawings and diagrams) to help understand how to solve addition and subtraction word problems.
6. Attend to precision.
7. **Look for and make use of structure.**
   SLO #7 Use patterns or structure to classify objects and understand the numerical relationship between the classified objects.
8. Look for and express regularity in repeated reasoning.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
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).
K.CC.1	Count to 100 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.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.5	Fluently add and subtract within 5.
K.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.3

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 3	UNIT NAME: Compare Numbers and Shapes

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count and represent with a written numeral a number of objects to 20.	K.CC.3
2	Write numerals from zero to 20.	K.CC.3
3	Count to 30 by ones and tens.	K.CC.1
4	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. (groups of up to 10 objects).	K.CC.6
5	Compare numbers (up to 10) written as numerals.	K.CC.7
6	Describe measurable attributes of objects, e.g., length and weight.	K.MD.1
7	Directly compare and describe two objects with a measurable attribute in common using "more of"/"less of" the attribute. For example, directly compare the heights of two children and describe one child as taller/shorter.	K.MD.2
8	Analyze and compare two- and three-dimensional shapes in different sizes and orientations by counting sides or vertices ("corners") or comparing attributes such as side lengths.	K.G.4

Repeated Standards

SLOs #1 & #2 are benchmarks for standard **K.CC.3** in this unit: **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).**

SLOs #3 is a benchmark for standard **K.CC.1** in this unit: **Count to 100 by ones and by tens.**

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

	GRADE: K	UNIT: # 3	UNIT NAME: Compare Numbers and Shapes

CONTENT AREA: Mathematics

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO #1 Understand that the quantity of objects is represented by its corresponding written numeral.
   SLO #7 and #8 Use given information to compare either two similar or dissimilar objects by analyzing the objects' attributes.

2. **Reason abstractly and quantitatively.**
   SLO #4 Analyze the relationship between two groups of objects as either equivalent or non-equivalent.
   SLO #4 Abstractly reason about the numerical relationship (greater than, less than or equal to) between groups in order to reach a conclusion about the groups.

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

4. Model with mathematics.

5. Use appropriate tools strategically.

6. **Attend to precision.**

7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
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).
K.CC.1	Count to 100 by ones and by tens.
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.1
K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 3	UNIT NAME: Compare Numbers and Shapes

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.*
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).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 4	UNIT NAME: Foundations for Place Value

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count orally to 70 by ones and tens.	K.CC.1
2	Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing or equations (e.g., write 7 as 2 + 5 and 6 + 1).	K.OA.3
3	Given a number less than 10, find a number that makes 10 (e.g., 1 + 9, 2 + 8, 3 + 7, 4 + 6, 5 + 5, etc.).	K.OA.4
4	Use mental math strategies to solve addition and subtraction facts within 5.	**K.OA.5**
5	Compose and decompose numbers from 11 to 19 into a group of ten and one(s) with or without manipulatives. Record each composition or decomposition through a drawing or equation.	K.NBT.1

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

SLOs #1 is a benchmark for standard K.CC.1 in this unit: **Count to 100 by ones and tens**
SLOs #4 is a benchmark for standard K.OA.5 in this unit: **Fluently add and subtract within 5.** (**mastery by the end of this unit**)

Repeated Standards

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO #3 Know how to explain that when two separate quantities are added they equal a third separate quantity.
   SLO #5 Explain what it means to decompose a number into a group of ten and a group of one(s).
2. **Reason abstractly and quantitatively.**
   SLOs #2 and #3 Reason about the quantities and relationship between two addends and their sum (up to 10).
   SLO #5 Reason about the quantities and relationship between two addends and their sum (between 11 and 19).
3. **Construct viable arguments and critique the reasoning of others.**
   SLO #2 Construct an argument about what it means to decompose a number into two parts (less than or equal to 10).

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 4	UNIT NAME: Foundations for Place Value

4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. **Look for and make use of structure.**
SLO #2 Understand the structure of decomposed numbers (the two addends are equivalent to the number being decomposed).
SLO #3 Understand the various patterns when adding two numbers to get 10.
SLO #5 Understand the pattern of decomposing numbers 11-19 (e.g. 12 is equal to 1 group of 10 and two ones).
8. Look for and express regularity in repeated reasoning.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
K.CC.1	Count to 100 by ones and by tens.
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.4	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.OA.5	Fluently add and subtract within 5.
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 (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics | **GRADE: K** | **UNIT: # 5** | **UNIT NAME: Geometric Shapes**

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count to 100 by ones and by tens.	**K.CC.1**
2	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.1
3	Correctly name shapes regardless of their orientations or overall size.	K.G.2
4	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	K.G.3
5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	K.G.5
6	Compose simple shapes to form larger shapes *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*	K.G.6

SLOs #1 is a benchmark for standard **K.CC.1** in this unit: **Count to 100 by ones and tens. (Mastery by the end of this unit)**

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

Repeated Standards

Selected Opportunities for Connection to Mathematical Practices

1. **Make sense of problems and persevere in solving them.**
   SLO #2 Analyze, describe, and make sense of objects in the environment.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. **Model with mathematics.**
   SLO #5 Use various concrete objects to compose a model of shapes in the environment.

ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: K	UNIT: # 5	UNIT NAME: Geometric Shapes

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
K.CC.1	Count to 100 by ones and by tens.
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").
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?"*

Bold type indicates grade level fluency requirements. (identified by PARCC Model Content Frameworks).

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5. Use appropriate tools strategically.
6. **Attend to precision.**
   SLO #2 Be able to precisely communicate the names, shapes, and positions of objects to others.
7. **Look for and make use of structure.**
   SLOs #5 and #6 Look for a pattern or structure when composing and decomposing shapes.
8. Look for and express regularity in repeated reasoning.

SLO #6 Use simple concrete shapes to help conceptualize and model larger more complex shapes.