

**ALPHA BORO PUBLIC SCHOOL**

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT: #** 1

**UNIT NAME:** Add and Subtract within 20

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Count utilizing written or verbal numerals starting at any number less than 100.	1.NBT.1
2	Count forward or backwards from any number within 20 to solve addition & subtraction problems.	1.OA.5
3	Compose and decompose numbers to 20 to identify the value of the number in the tens & ones place.	1.NBT.2
4	Add or subtract whole numbers within 20 using strategies including making a 10 or decomposing a number leading to a 20.	1.OA.6
5	Apply properties of operations to add or subtract whole numbers within 20 (Commutative & Associative properties of addition).	1.OA.3
6	Solve subtraction problems using unknown addends (within 20).	1.OA.4
<b>Repeated Standards</b>		
<p><b>SLO #1</b> is a benchmark for standard <b>1.NBT.1</b> in this unit: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p> <p><b>SLO #3</b> is a benchmark for standard <b>1.NBT.2</b> in this unit: Understand that the two digit number represent amounts of tens and ones.</p> <p>Understand the following as special cases:</p> <ul style="list-style-type: none"> <li>a. 10 can be thought of as a bundle of ten ones – called a “ten.”</li> <li>b. The numbers from 11 to 19 are composed of a ten and a one, two, three, four, five, six, seven, eight or nine ones.</li> <li>c. The number 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</li> </ul>		

## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT:** # 1

**UNIT NAME:** Add and Subtract within 20

**SLO #4** is a benchmark for standard **1.OA.6** in this unit: **Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).**

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

### Selected Opportunities for Connection to Mathematical Practices

- 1. Make sense of problems and persevere in solving them.**  
SLO #3 Explain what it means to decompose a number into two separate quantities (less than or equal to 20).  
SLO #4 Understand that the decomposition of numbers is a starting point to solving addition or subtraction of whole numbers within 20.  
SLO #6 Know the process and necessary information needed to solve subtraction problems with unknown addends (within 20).
- 2. Reason abstractly and quantitatively.**  
SLO #3 Reason about the quantities and relationship among the decomposed parts of numbers and the composed number (up to 20).  
SLO #4 Understand what each decomposed number represents in relation to an addition or subtraction problem within 20.  
SLO #5 Know how to correctly and appropriately apply the property of operations to either addition or subtraction problems (e.g. commutative and associative properties can be applied to addition but not subtraction problems).
  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.**  
SLO #3 Understand the structure of decomposed numbers (the two addends are equivalent to the number being decomposed).  
SLO #4 Look for a pattern or structure in the steps to solving addition or subtraction problems (within 20).
- 8. Look for and express regularity in repeated reasoning.**

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

## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA: Mathematics**      **GRADE: 1**      **UNIT: # 1**      **UNIT NAME: Add and Subtract within 20**

<b>Code #</b>	<b>Common Core State Standards</b>
<b>1.NBT.1</b>	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
<b>1.OA.5</b>	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
<b>1.NBT.2</b>	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: <ul style="list-style-type: none"> <li>a. 10 can be thought of as a bundle of ten ones - called a "ten."</li> <li>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</li> <li>c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</li> </ul>
<b>1.OA.6</b>	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ).
<b>1.OA.3</b>	Apply properties of operations as strategies to add and subtract.3 <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i>
<b>1.OA.4</b>	Understand subtraction as an unknown-addend problem. <i>For example, subtract <math>10 - 8</math> by finding the number that makes 10 when added to 8.</i>

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**ALPHA BORO PUBLIC SCHOOL**

<b>CONTENT AREA:</b> Mathematics	<b>GRADE:</b> 1	<b>UNIT:</b> # 2	<b>UNIT NAME:</b> Word Problems Involving Addition and Subtraction
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#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Use addition and subtraction within 20 to solve word problems involving situations or adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.	1.OA.1
2	Solve addition word problems with three whole numbers with sums less than or equal to 20.	1.OA.2
3	Demonstrate understanding of the equal sign by determining if an equation is true or false.	1.OA.7
4	Solve addition or subtraction equations by finding the missing whole number in any position.	1.OA.8
5	Count to 120, starting at any number less than 120.	1.NBT.1
6	Read and write numerals to 120 including representing a number of objects with a written numeral.	1.NBT.1

**Repeated Standards**

**SLO #1** is a benchmark for standard **1.OA.1** in this unit: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. E.g. by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

**SLOs #5 & #6** are benchmarks for standard **1.NBT.1** in this unit: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

**NOTE:** SLO #1 for standard **1.OA.1** as written in this unit will be repeated in Unit #4 and Unit #5.

**NOTE:** SLOs #5 and #6 for standard **1.NBT.1** will be repeated in Unit #4.

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ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics	GRADE: 1	UNIT: # 2	UNIT NAME: Word Problems Involving Addition and Subtraction
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**Selected Opportunities for Connection to Mathematical Practices**

- 1. Make sense of problems and persevere in solving them.**  
SLO #1 Know the process and necessary information needed to solve addition and subtraction word problems with unknown quantities (within 20).  
SLO #2 Analyze the information given in an addition word problem (with three numbers) in order to solve the problem.  
SLO #4 Analyze equations with missing values in any position and be able to solve the equations.
- 2. Reason abstractly and quantitatively.**  
SLO #1 Understand the known and unknown quantities in word problems and how they relate to solving the problem.  
SLO #2 Understand what the numbers in different word problems represent and how the information is relevant to the solution.  
SLO #6 Know how to represent the quantity or set of objects with a written numeral of any number less than 120.
- 3. Construct viable arguments and critique the reasoning of others.**  
SLO #3 Understand the quantities in an equation and demonstrate this understanding by applying the equal sign correctly.
- 4. Model with mathematics.**  
SLO #1 be able to write a mathematical equation based on a word problem.  
SLO #2 Apply previously learned addition skills to solve addition word problems (with three numbers).
- 5. Use appropriate tools strategically.**
- 6. Attend to precision.**  
SLO #3 Understand the meaning of the equal sign and apply the sign consistently and appropriately to equations.
- 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.***

## ALPHA BORO PUBLIC SCHOOL

<b>CONTENT AREA:</b> Mathematics	<b>GRADE:</b> 1	<b>UNIT:</b> # 2	<b>UNIT NAME:</b> Word Problems Involving Addition and Subtraction
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<b>Code #</b>	<b>Common Core State Standards</b>
<b>1.OA.1</b>	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. <sup>2</sup>
<b>1.OA.2</b>	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
<b>1.OA.7</b>	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? <math>6 = 6</math>, <math>7 = 8 - 1</math>, <math>5 + 2 = 2 + 5</math>, <math>4 + 1 = 5 + 2</math>.</i>
<b>1.OA.8</b>	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 + ? = 11</math>, <math>5 = \square - 3</math>, <math>6 + 6 = \square</math>.</i>
<b>1.NBT.1</b>	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

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## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT:** # 3

**UNIT NAME:** Understand Place Value

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Decompose two- digit numbers as the sum of tens and ones for numbers less than 100.	1.NBT.2c
2	Compare two digit numbers using <, >, and = symbols.	1.NBT.3
3	Add a 2-digit and a 1-digit number, and a 2-digit number and a multiple of 10, using concrete models or drawings (sums within 50). Add tens and tens, and ones and ones, by decomposing 2-digit numbers and composing an additional ten when necessary (e.g., 18 + 20 equals 10 + 8 + 20 equals 30 + 8 equals 38; and, 37 + 5 equals 30 + 7 + 5 equals 30 + 12 equals 30 + 10 + 2 equals 40 + 2 equals 42).	1.NBT.4
4	Mentally find ten more or ten less than a number without having to count and explain the reasoning used.	1.NBT.5
5	Subtract multiples of ten from multiples of ten (numbers less than 100, differences greater than or equal to zero) and explain the reasoning used.	1.NBT.6

### Repeated Standards

<p><b>SLO #3</b> is a benchmark for standard 1.NBT.4 in this unit: <b>Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</b></p>
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## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT:** # 3

**UNIT NAME:** Understand Place Value

### Selected Opportunities for Connection to Mathematical Practices

<ol style="list-style-type: none"> <li><b>1. Make sense of problems and persevere in solving them.</b> SLO #1 Explain what it means to decompose a two-digit number into two parts (numbers less than 100). SLO #3 Explain how to solve addition problems involving 1-digit numbers, 2-digit numbers, and multiples of 10.</li> <li><b>2. Reason abstractly and quantitatively.</b> SLO #1 Understand the quantities that are represented in a two-digit decomposed number. SLO #2 Understand the quantities of numbers and their relationship to each other in order to correctly apply the <math>&lt;</math>, <math>&gt;</math>, or <math>=</math> symbols.</li> <li><b>3. Construct viable arguments and critique the reasoning of others.</b> SLO #5 Accurately and efficiently explain the reasoning involved in subtracting multiples of ten from multiples of ten.</li> <li><b>4. Model with mathematics.</b></li> <li><b>5. Use appropriate tools strategically.</b> SLO #3 Be able to identify the proper tools to help model addition problems involving 1-digit numbers, 2-digit numbers, and multiples of 10.</li> <li><b>6. Attend to precision.</b> SLO #2 State the meaning behind the <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> symbols, and apply the signs consistently and appropriately.</li> <li><b>7. Look for and make use of structure.</b> SLO #1 Understand the pattern of decomposing numbers less than 100 (e.g. 82 is equal to 8 groups of 10 and two ones). SLO #3 Understand the structure involved in adding 2-digit and 1 digit numbers, and 2-digit numbers and a multiple of 10 (include decomposing 2-digit numbers).</li> <li><b>8. Look for and express regularity in repeated reasoning.</b></li> </ol>
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***Bold type identifies possible starting points for connections to the SLOs in this unit.***

Code #	Common Core State Standards
1.NBT.2c	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).



ALPHA BORO PUBLIC SCHOOL

CONTENT AREA: Mathematics

GRADE: 1

UNIT: # 3

UNIT NAME: Understand Place Value

1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .
<b>1.NBT.4</b>	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
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.
1.NBT.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

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**ALPHA BORO PUBLIC SCHOOL**

**CONTENT AREA: Mathematics**

**GRADE: 1**

**UNIT: # 4**

**UNIT NAME: Measurement and Shapes**

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Order three objects by lengths and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than pencil).	1.MD.1
2	Use an object to measure another object's length by laying multiple copies end to end with no overlaps giving measurements in whole number units.	1.MD.2
3	Tell and write time to the half-hour using "o'clock" and digital notation.	1.MD.3
4	Name the attributes of a given two-dimensional shape (square, triangle, rectangle, regular hexagon) distinguishing between defining and non-defining attributes.	1.G.1
5	Draw and build shapes when given defining attributes (e.g., 3 sides, 4 sides, 3 corners, 4 corners).	1.G.1
6	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.	1.OA.1
7	Add or subtract whole numbers within 20 (various strategies: counting on, composition, etc.).	1.OA.6
8	Read and write numerals to 120 starting at any number and represent a number of objects with a written numeral.	1.NBT.1

**Repeated Standards**

**SLO #6** is a benchmark for standard **1.OA.1** in this unit: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.

**SLO #7** is a benchmark for standard **1.OA.6** in this unit: Add and subtract within 20, demonstrating fluency for addition and subtraction within

## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT:** # 4

**UNIT NAME:** Measurement and Shapes

10. Use strategies such as counting on; making 10 (e.g.  $8+6=8+2+4=10+14$ ) decomposing a number leading to a ten (e.g.  $13-4=13-3-1=10-1=9$ ); using the relationship between addition and subtraction (e.g. knowing that  $8+4=12$ , one knows  $12-8=4$ ); and creating equivalent but easier known sums (e.g. adding  $6+7$  by creating the known equivalent  $6+6+1=12+1=13$ ).

SLO #8 is a benchmark for standard 1.NBT.1 in this unit: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

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### Selected Opportunities for Connection to Mathematical Practices

- 1. Make sense of problems and persevere in solving them.**  
SLO #1 Use concrete objects to help order the lengths of multiple objects.  
SLO #7 Analyze the given information and the relationship among numbers in addition and subtraction problems in order to solve.
- 2. Reason abstractly and quantitatively.**  
SLO #8 Know how to represent the quantity or set of objects with a written numeral of any number less than 120.
3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.**  
SLO #6 Apply previously learned mathematics to solve addition and subtraction word problems (within 20).
- 5. Use appropriate tools strategically.**  
SLO #1 and #2 Consider and make use of available tools when comparing objects by length.
- 6. Attend to precision.**  
SLO #2 Use precise and accurate measurements when measuring the lengths of objects.
- 7. Look for and make use of structure.**  
SLO #7 Look for and discern patterns when solving addition and subtraction problems within 20 (e.g. adding two even numbers yields an even number, subtraction of two odd numbers yields an even number, or  $3 + 7$  is equivalent to  $7 + 3$ ).
8. Look for and express regularity in repeated reasoning.

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## ALPHA BORO PUBLIC SCHOOL

**CONTENT AREA:** Mathematics

**GRADE:** 1

**UNIT:** # 4

**UNIT NAME:** Measurement and Shapes

### Common Core State Standards

Code #	
1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1.MD.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i>
1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.
1.G.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. 2
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ).
1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

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**ALPHA BORO PUBLIC SCHOOL**

<b>CONTENT AREA: Mathematics</b>		
<b>GRADE: 1</b>	<b>UNIT: # 5</b>	<b>UNIT NAME: Reasons with Shapes and Their Attributes</b>

<b>#</b>	<b>STUDENT LEARNING OBJECTIVES</b>	<b>CORRESPONDING CCSS</b>
<b>1</b>	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	1.G.2
<b>2</b>	Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and, quarters, and use the phrases half of, fourth of, and quarter of.	1.G.3
<b>3</b>	Describe the whole circle (or rectangle) partitioned into two or four equal shares as "two of", or "four of" the shares.	1.G.3
<b>4</b>	Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; and relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	1.NBT.4
<b>5</b>	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	1.OA.1
<b>6</b>	Add and subtract within 20 (fluently within 10). Use strategies such as: counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1$ )	1.OA.6

ALPHA BORO PUBLIC SCHOOL

<b>CONTENT AREA: Mathematics</b>		
<b>GRADE: 1</b>	<b>UNIT: # 5</b>	<b>UNIT NAME: Reasons with Shapes and Their Attributes</b>

	<p>= 10 - 1 = 9); relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent sums (e.g., adding <math>6 + 7</math> by creating the known equivalents <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p>	
<b>7</b>	<p>Organize, represent, and interpret, data with up to three categories, and compare the number counts of data points among the categories, e.g., equal to, more than, or less than another category.</p>	1.MD.4

**Repeated Standards**

	<p><b>SLO #4</b> is a benchmark for standard <b>1.NBT.4</b> in this unit: <b>Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</b></p> <p><b>SLO #5</b> is a benchmark for standard <b>1.OA.1</b> in this unit: <b>Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</b></p> <p><b>SLO #6</b> is a benchmark for standard <b>1.OA.6</b> in this unit: <b>Add and subtract numbers within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalents <math>6 + 6 + 1 = 12 + 1 = 13</math>).</b></p>	
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ALPHA BORO PUBLIC SCHOOL

<b>CONTENT AREA:</b> Mathematics	<b>GRADE:</b> 1	<b>UNIT:</b> # 5	<b>UNIT NAME:</b> Reasons with Shapes and Their Attributes
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**Selected Opportunities for Connection to Mathematical Practices**

- 1. Make sense of problems and persevere in solving them.**  
SLO #1 Use concrete component objects to help conceptualize and form two and three-dimensional shapes.  
SLO #2 Understand the relationship of the whole to its parts when dividing shapes into equal shares  
SLO #4 Explain the steps involved and how to solve an addition problem (within 100).
- 2. Reason abstractly and quantitatively.**  
SLO #2 Understand and make sense of the quantities of the whole and its equal shares.  
SLO # 5 Understand and make sense of the quantities and how they relate to solving an addition or subtraction word problem.  
SLO # 6 Understand and make sense of the relationship between addition and subtraction and the quantities involved in equation.
- 3. Construct viable arguments and critique the reasoning of others.**
- 4. Model with mathematics.**  
SLO #5 Apply previously learned mathematics skills to solve addition and subtraction word problems.
- 5. Use appropriate tools strategically.**  
SLO #1 Use available and appropriate tools when composing new two and three-dimensional shapes.  
SLO #4 Utilize appropriate tools when using diagrams or concrete models to add within 100.
- 6. Attend to precision.**  
SLO #2 Use clear and precise mathematical language to explain and describe dividing shapes into equal shares.  
SLO #3 Use clear and precise mathematical language to explain and describe parts of a whole.  
SLO #4 Use clear and precise language when explaining how to add within 100, which might include reasoning based on place value, properties of operations, or the relationship between addition and subtraction.
- 7. Look for and make use of structure.**  
SLO #4 Understand the pattern when adding within 100.  
SLO #6 Understand the relationship between addition and subtraction.
- 8. Look for and express regularity in repeated reasoning.**

***Look for and express regularity in repeated reasoning.***

## ALPHA BORO PUBLIC SCHOOL

<b>CONTENT AREA:</b> Mathematics	<b>GRADE:</b> 1	<b>UNIT:</b> # 5	<b>UNIT NAME:</b> Reasons with Shapes and Their Attributes
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<b>Code #</b>	<b>Common Core State Standards</b>
1.G.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
1.G.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more shares creates smaller shares.
<b>1.NBT.4</b>	Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
<b>1.OA.1</b>	Add and subtract numbers within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalents $6 + 6 + 1 = 12 + 1 = 13$ ).
<b>1.OA.6</b>	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
1.MD.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, e.g., how many in each category, and how many more or less are in one category than in another.

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