Operations and Algebraic Thinking
A. Represent and solve problems involving addition and subtraction within 20. *Use objects, drawing, and equations with a symbol for the unknown to represent the problem*

<table>
<tr><td colspan="5">1.OA.1
Use addition and subtraction with 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.</td></tr>
<tr>
<td>Unit 1
Sessions 2.3, 2.4, 2.6, 2.7, 2.8 3.1, 3.2, 3.4, 3.5, 3.6, & 3.7</td>
<td>Unit 3
Sessions 2.1, 2.4, 2.6, 2.7, 2.8, 3.1, 3.2, & 3.6

Unit 4
Sessions 1.5-1.8, & 2.6</td>
<td>Unit 5
Sessions 1.1, 1.5, 1.6, 1.7, 1.8, 2.3, 2.4, 2.6, 3.2, 3.3, 3.4, 3.5, 3.6, & 3.7</td>
<td>Unit 6
Sessions 1.1-1.9

Routines 1.3, 1.5, 2.2, & 2.3</td>
<td>Unit 7
Routine 1.1, 1.2, & 1.3</td>
</tr>
<tr><td colspan="5">1.OA.2
Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.</td></tr>
<tr>
<td>Unit 2
Session 1.3</td>
<td>Unit 3
Sessions 3.1, 3.6
Routine 2.3, 2.5, 3.1, 3.2, 3.4, & 3.6</td>
<td>Unit 6
Sessions 2.1, 2.2, & 2.3</td>
<td>Unit 7
Sessions 1.1 & 1.2</td>
<td></td>
</tr>
<tr><td colspan="5">1.OA.5
Relate counting to addition and subtraction. (counting on or back)</td></tr>
<tr>
<td>Unit 1
Sessions 2.1-2.5, 2.7, 2.8, 3.1-3.7

Routines 2.1, 2.2, 2.6, 3.2-3.6</td>
<td>Unit 3
Sessions 1.1, 1.3, 1.4, 3.1, & 3.2

Routine 1.1</td>
<td>Unit 7
Sessions 1.1, 1.2, & 1.3,</td>
<td></td>
<td></td>
</tr>
<tr><td colspan="5">1.OA.6
Add and subtract within 20 using counting on and making 10.
*By end of first grade addition and subtraction facts within 10.</td></tr>
<tr>
<td>Unit 1
Sessions 2.1-2.8, 3.1-3.7
Routine 3.1
Unit 2
Sessions 1.1-1.4
Routines 1.3 & 1.6</td>
<td>Unit 3
Sessions 1.1 – 1.4, 2.1, - 2.8, 3.1 – 3.6, & 4.8

Routines 1.1, 2.3, 2.5, 3.1, 3.2, 3.4, & 3.6</td>
<td>Unit 5
Sessions 1.1 - 1.8, 2.1 – 2.8, 3.1 – 3.7

Routines 1.2, 1.3, 1.5, 1.8, 2.1, 2.3, 2.5, 2.7, 3.1, 3.6, & 3.7</td>
<td>Unit 6
Sessions 1.1-1.9</td>
<td>Unit 7
Session 1.1, 1.2, 1.3, 2.1, 2.2, 2.4, & 2.5,

Routines 1.1, 1.2, & 1.3</td>
</tr>
</table>

Operations and Algebraic Thinking
B. Understand, use, and apply place value understanding and properties of operations and the relationship between addition and subtraction to add and subtract.

Prop ertie

1.OA.3
Apply properties of operations as strategies to add and subtract.
(Commutative and associative)

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
Sessions 2.2-2.8, 3.1-3.7 Routines 2.5, 2.7, & 3.1	Session 1.3 Routine 2.5	Sessions 1.1, 2.1, 2.4, 2.5, 2.6, 2.7, 3.1, 3.2 3.3, 3.4, 3.6, & 4.8 Routines 2.3, 2.5, 3.1, 3.2, 3.4, & 3.6	Sessions 1.5-1.8 Routine 2.6	Sessions 1.1 – 1.8, 2.1 – 2.8, 3.1 – 3.7 Routines 1.2, 1.3, 1.5, 1.8, 2.1, 2.3, 2.5, 2.7, & 3.1,

1.OA.4				
Understand subtraction as an unknown-addend problem.				
Unit 1	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**
Sessions 3.2-3.5	Sessions 2.2, 2.3, & 2.7	Sessions 1.5-1.8 Routine 2.6	Sessions 1.1, 1.5, 1.6, 1.7, 1.8, 3.2, 3.3, 3.4, 3.5, 3.6, & 3.7	Routine 1.3, 1.5, 2.2, & 2.3

Operations and Algebraic Thinking
C. Work with addition and subtraction equations within 20.

1.OA.7				
Understand the meaning of the equal sign and determine whether equations involving addition and subtraction are true or false. (6 = 6, 7=8-1, 5+2=2+5, 4+2= 5+2)				
Unit 1	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**
Sessions 2.2, 2.4, 2.5, 2.6, 3.2, & 3.4	Sessions 3.1 – 3.6, & 4.8	Sessions 1.5-1.8 Routine 2.6	Sessions 2.1, 2.3, 2.5, 2.7, 2.8, 3.1, & 3.6	Sessions 2.3 Routines 1.3, 1.5, 2.2, & 2.3

1.OA.8				
Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. (What is the unknown that makes the equation true?)				
Unit 1	**Unit 3**	**Unit 5**	**Unit 6**	**Unit 7**
Sessions 2.2, 2.5-2.8, 3.2-3.4, 3.6, & 3.7	Sessions 1.1, 1.3, & 1.4 **Unit 4** Session 1.6 Routine 1.2, 1.4, & 1.6	Sessions 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, & 3.6, Routines 1.2, 1.3, 1.5, 1.8, 2.1, 2.3, 2.5, 2.7, 3.1, & 3.7	Routine 1.3, 1.5, 2.2, & 2.3	Sessions 1.6, 1.7, & 1.8

Numbers and operations in Base Ten:
A. Extend the counting sequence to 120

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.			
Unit 1	**Unit 2**	**Unit 3**	**Unit 7**
Sessions 1.1 – 1.5, & 3.6 Routines 1.2 – 1.5	Session 2.3 Routine 1.1, 1,2, 1.5, 1.7, & 2.2	Session 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, & 4.8 Routine 1.2, 2.2, 2.6, 3.3, 4.1, 4.5, 4.7, & 4.8	Sessions 1.3 - 1.8, 2.1 - 2.8, 3.1 - 3.8 Routines 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, & 3.8

Numbers an Operations in Base ten
B. Understand two-digit place value.
Understand that the two digits of a two-digit number represent amounts of tens and ones.
Understand the following special cases.

Relationship of + and -

Counting to 120

Numbers and Operations in Base ten

Unit 7 Sessions 1.3, 1.4, 1.4, 1.6, 1.7, 1.8, 2.2 - 2.8, 3.1 – 3.8 Routines 1.4, 1.7, 1.8, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, & 3.8				

1.NBT.2a
10 can be thought of as a bundle of ten ones, called a "ten."

Unit 1 Routine 2.4 & 2.8 **Unit 3** Session 1.2, 1.4, 2.4, & 4.1 Routines 1.1 & 1.3 2.1, 2.4, 2.8, & 3.5,	**Unit 4** Routine 1.2, 1.4, 1.6, 2.3	**Unit 5** Sessions 2.3, Routines 1.4, 1.6, 2.2, 2.6, 3.3, 3.4, & 3.5	**Unit 6** Routine 1.1, 1.2, 1.4, 1.6, 1.7, 1.9	**Unit 7** Sessions 1.3 - 1.8, 2.1 - 2.8, 3.1 – 3.8 Routines 1.4, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8

1.NBT.2b
The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

Unit 1 Session 1.3, 1.4, & 1.5 Routine 2.1, 2.6, & 3.6	**Unit 2** Routine 1.3, 1.6, & 2.5	**Unit 3** Session 1.2 & 2.4 Routines 1.3 & 2.1	**Unit 4** Routine 1.2, 1.4, & 2.3	**Unit 5** Session 2.1, 2.3, 3.3, 3.4, & 3.5

1.NBT.2c
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.

Unit 3 Routine 2.4 & 2.8, 3.5, 4.2, 4.4, & 4.6,	**Unit 4** Routine 1.6	**Unit 5** Routines 1.4, 1.6, 2.2, & 2.6	**Unit 6** Sessions 1.1 Routines 1.1, 1.2, 1.4, 1.6, 1.7, & 1.9	**Unit 7** Sessions 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 2.1 – 2.8, 3.1 – 3.8 Routines 1.4, 1.7, 1.8, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, & 3.8

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 =.

Unit 1 Session 2.5 & 3.6 Routine 3.7	**Unit 2** Routine 1.1, 1.2, 1.5, 1.7, & 2.2	**Unit 3** Sessions 3.2, 3.4 Routines 1.2, 1.3, 2,2, 2.4, 2.6, 2.8, 3.3, 3.5, 4.1, 4.2, 4.4, 4.5, 4.6, 4.7, & 4.8	**Unit 7** Session 2.2, 2.4, 2.5, 2.6, 2.7, & 2.8	

1.NBT.4
Add within 100, including adding a two-digit number and a one digit number, 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 to tens and ones to ones, and that it is sometimes necessary to compose a ten.
Unit 7

	Session 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 3.1 – 3.8 Routines 1.5, 1.6, 1.7, 1.8, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, & 3.8

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.
Unit 7
Session 1.3, 1.4, 1.5, 1.6, 1.8, 2.5, 2.6, 2.7, 2.8, 3.1 – 3.8 Routines 1.5, 1.6, 1.7, 1.8, 2.5, 2.6, 2.7, 2.8, 3.1, &3.2
1.NBT.6 Subtract multiples of 10 in the range 10 – 90 from multiplies 10 – 90 (positive or 0 differences, using concrete models or drawings and strategies based on place value, operation, and relationships; relate the strategy to a written method and explain the reasoning used.
Unit 7
Session 1.6, 1.7, 1.8 Routines 1.5, 1.6, 1.7, 1.8

Measurement and Data
A. Measure lengths indirectly and by iterating length units

1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
Unit 4
Session 1.1, 1.2, 1.3
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. Limit to context where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
Unit 4
Session 1.3, 1.4, 1.5, 1.6, 1.7

Measurement (row label)

Measurement and Data:
B. Tell and write time to the half hour.

Time (row label)

1.MD.3
Tell and write time in hours and half hours using analog and digital clocks.

Unit 1	**Unit 3**	**Unit 5**	**Unit 7**	**Unit 8**
Routine 2.3	Routine 1.4, 2.7, & 4.3	Routines 1.1, 1.7, 2.4, 2.8, & 3.2	Routines 2.1 & 3.3	Routines 1.1, 1.3, 1.5, & 1.6
Unit 2	**Unit 4**	**Unit 6**		
Routine 1.4	Session 1.2, 2.1, & 2.4 Routines 1.1, 1.3, 1.5, & 1.7	Routines 1.8 & 2.1		

Measurement and Data:
C. Represent and interpret data.

Graphing (row label)

1.MD.4
Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Unit 2	**Unit 3**	**Unit 4**	**Unit 6**	
Session 2.1, 2.2, 2.3, & 2.4	Session 4.1	Session 1.1-1.9	Session 2.1, 2.2, & 2.3	

	Measurement and Data:
	D. Identify the Value of Coins

<table>
<tr><td rowspan="2" style="writing-mode: vertical">Money</td><td colspan="5">1.MD.5</td></tr>
<tr><td colspan="5">Identify the values of pennies, nickels, dimes, and quarters and know the comparative values. (For example, a dime is of greater value that a nickel.) Use appropriate notation to designate a coin's value. (For example 5¢)
No material in Investigations 3</td></tr>
</table>

Geometry
A. Reason with shapes and their attributes.

<table>
<tr><td rowspan="8" style="writing-mode: vertical">Geometry</td><td colspan="5">1.G.1
Distinguish between defining attributes (for example, triangles are closed and three-sided) versus non-defining attributes (color, orientation, overall size); build and draw shapes that possess defining attributes.</td></tr>
<tr><td>**Unit 2**
Session 1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 2.1-2.5
Routine 2.1, 2.3, & 2.4</td><td>**Unit 4**
Sessions 2.2 &2.3
Routine 1.8, 2.1, 2.2, 2.4, 2.5, & 2.6</td><td>**Unit 8**
Session 1.1-1.9
Routine 1.2, 1.4, 1.7, 1.8, & 1.9</td><td></td><td></td></tr>
<tr><td colspan="5">1.G.2a
Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) to create a composite shape, and compose new shapes from the composite shape.</td></tr>
<tr><td>**Unit 1**
Sessions 1.1 – 1.5</td><td>**Unit 2**
Session 1.1-1.7</td><td>**Unit 4**
Session 2.2-2.5, Routine 1.8, 2.1-2.6</td><td>**Unit 8**
Session 1.3, 1.5, 1.6, 1.7, 1.8, 1.9</td><td></td></tr>
<tr><td>1.G.2b
Compose 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. First grade students do not need to learn formal names such as right rectangular prism.</td><td>**Unit 8**
Sessions 1.1 - 1.9</td><td></td><td></td><td></td></tr>
<tr><td>1.G.3
Partition circles and rectangles into two and four equal shares; describe the shares using the words halves, fourths, and quarters; half of, fourth of, and quarter of. Describe the whole as two or four on the shares. Understand that, for these examples , decomposing into more equal shares creates smaller shares.</td><td>**Unit 4**
Session 2.1-2.6
Routine 1.8, 2.1-2.6</td><td></td><td></td><td></td></tr>
</table>