

<p style="text-align: center;"><b>Domain: Number and Operations in Base Ten</b> <b>Emphasis: Understanding ten ones make a ten</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>In Kindergarten students have gained familiarity with making groups of ten ones. This emphasis develops a more abstract understanding of place value, viewing 2-digit numbers as tens and ones. This understanding of place value supports counting on and making ten strategies that students use to become more efficient in addition and subtraction situations.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 1.OA</b></p> <p>C. Add and subtract within 20.</p> <p>6. Add and subtract 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 the 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 equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p> <p><b>Number and Operations in Base Ten – 1.NBT</b></p> <p>B. Understand place value.</p> <p>2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>a. 10 can be thought of as a bundle of ten ones — called a “ten.”</p> <p>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.6</u> Decompose, Equivalent, Strategy</p> <p><u>1.NBT.2</u> Compose, Digit, Ones, Place value, Tens</p> <hr/> <p><b>Mathematical Practices</b></p> <p>2. Reason abstractly and quantitatively.</p> <p>3. Construct viable arguments and critique the reasoning of others.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p style="text-align: center;"><b>Domain: Operations and Algebraic Thinking</b> <b>Emphasis: Using data to add and subtract to 20</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis, students build on the strategies and problem types with which they are familiar with from Kindergarten, extending the number range to 20. The data work in this unit provides a context for students to make important connections to addition and subtraction.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Operations and Algebraic Thinking – 1.OA</b> <b>A. Represent and solve problems involving addition and subtraction.</b> 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.</p> <p><b>C. Add and subtract within 20.</b> 5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.1</u> Addition, Compare, Number, Solve, Subtraction, Unknown, Word problems</p> <p><u>1.OA.5</u> Count</p> <p><u>1.MD.4</u> Category, Data, How many less, How many more, Interpret, Represent, Total</p>
<p><b>Measurement and Data – 1.MD</b> <b>C. Represent and interpret data.</b> 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.</p>	<p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>4. Model with mathematics.</li> </ol>
<p><b>Comments:</b></p>	

**Teacher Notes:**

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<b>Domain: Measurement and Data</b> <b>Emphasis: Ordering and comparing lengths</b>	<b>First Grade</b>
<p>During this emphasis, students explore length comparison both directly and indirectly. They build and expand upon the direct comparison that they learned in Kindergarten to compare and order three objects directly, and then extend this to indirect comparisons through the use of a third object. This concrete experience with length comparisons supports students' understanding of number comparisons and comparison problem solving.</p>	
<p><b>Common Core State Standards for Mathematical Content</b>  <b>Measurement and Data – 1.MD</b>  <b>A. Measure lengths indirectly and by iterating length units.</b>                      1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p>	<p><b>Academic Vocabulary:</b>                       1.MD.1                      Length, Measure, Order</p>
	<p><b>Mathematical Practices</b>                      3. Construct viable arguments and critique the reasoning of others.                      5. Use appropriate tools strategically.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p align="center"><b>Domain: Number and Operations in Base Ten</b> <b>Emphasis: Exploring quantities to 99</b></p>	<p align="center"><b>First Grade</b></p>
<p>This emphasis is focused on counting and writing two-digit numbers. This emphasis provides student opportunities to practice making groups of ten to efficiently represent and count objects.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Number and Operations in Base Ten – 1.NBT</b> <b>A. Extend the counting sequence.</b> 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.</p>	<p><b>Academic Vocabulary:</b>  <u>1.NBT.1</u> Numeral, Represent</p> <hr/> <p><b>Mathematical Practices</b>  6. Attend to precision. 7. Look for and make use of structure.</p>
<p><b>Comments:</b></p>	
<p><b>Teacher Notes:</b></p>	




<p style="text-align: center;"><b>Domain: Measurement and Data</b> <b>Emphasis: Telling and writing time to the hour</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis, students are not doing any operations with time. Students identify the different parts of the clock, making connections between these parts and the time in hours.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Measurement and Data – 1.MD</b> <b>B. Tell and write time.</b> 3. Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p><b>Academic Vocabulary:</b> <u>1.MD.3</u> Analog clock, Digital clock, Half-hour, Hour, Time</p> <p><b>Mathematical Practices</b> 5. Use appropriate tools strategically. 6. Attend to precision.</p>
<p><b>Comments:</b></p>	
<p><b>Teacher Notes:</b></p>	


<b>Domain: Operations and Algebraic Thinking</b>	<b>First Grade</b>
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<b>Emphasis: Developing addition and subtraction strategies</b>	
<p>During this emphasis, the focus is on “Put Together/Take Apart” problems with unknown addends. These problem types give students the opportunity to see subtraction as the opposite of addition in a different way than as reversing the action. Counting on strategies reinforce that subtraction is an unknown addend problem, which help students view subtraction as being just as easy as addition and emphasizes the relation between subtraction and addition.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 1.OA</b></p> <p><b>B. Understand and apply properties of operations and the relationship between addition and subtraction.</b></p> <p>3. Apply properties of operations as strategies to add and subtract.  <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known.</i>  <i>(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>.</i>  <i>(Associative property of addition.)</i></p> <p>4. 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></p> <p><b>C. Add and subtract within 20.</b></p> <p>6. Add and subtract 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 the 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 equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.3</u>            Associative property of addition,            Commutative property of addition,            properties of operations</p> <p><u>1.OA.4</u>            Addend, Difference</p> <p><u>1.OA.6</u>            Decompose, Equivalent, Strategy</p> <p><b>Mathematical Practices</b></p> <p>3. Construct viable arguments and critique the reasoning of others.            7. Look for and make use of structure.</p>
<b>Comments:</b>	
<b>Teacher Notes:</b>	


<b>Domain: Geometry</b>	<b>First Grade</b>
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<b>Emphasis: Distinguishing attributes of shapes</b>	
<p>During this emphasis students extend their understanding of attributes – e.g. orientation, size, and number of sides – they learned in Kindergarten to distinguish between defining attributes and non-defining attributes. Students need to explore various examples in different ways so that their experiences with shapes are not limited to single examples (e.g. if a student has only worked with equilateral triangles, it may be difficult for them to develop more general understandings of triangles.)</p>	
<p><b>Common Core State Standards for Mathematical Content</b>  <b>Geometry – 1.G</b>  <b>A. Reason with shapes and their attributes.</b>            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.</p>	<p><b>Academic Vocabulary:</b>   <u>1.G.1</u>            Attribute, Orientation, Shape, Size</p>
	<p><b>Mathematical Practices</b>            3. Construct viable arguments and critique the reasoning of others.            7. Look for and make use of structure.</p>
<b>Comments:</b>	
<b>Teacher Notes:</b>	


<b>Domain: Number and Operations in Base Ten</b>	<b>First Grade</b>
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<b>Emphasis: Using place value to read, write, represent, and compare numbers</b>	
During this emphasis, students extend their understanding about ten ones make a ten, to a larger number range. Students apply the structure of ten numbers to reason about larger quantities and their relative magnitude.	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Number and Operations in Base Ten – 1.NBT</b></p> <p><b>A. Extend the counting sequence.</b></p> <p>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.</p> <p><b>B. Understand place value.</b></p> <p>2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>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).</p> <p>3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, and <math>&lt;</math>.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.NBT.1</u> Numeral, Represent</p> <p><u>1.NBT.2</u> Compose, Digit, Ones, Place Value, Tens</p> <p><u>1.NBT.3</u> Compare, Greater than (<math>&gt;</math>), Less than (<math>&lt;</math>), Equal to (<math>=</math>), Symbol</p> <p><b>Mathematical Practices</b></p> <p>1. Reason abstractly and quantitatively.</p> <p>7. Look for and make use of structure.</p>
<b>Comments:</b>	
<b>Teacher Notes:</b>	


<b>Domain: Operations and Algebraic Thinking</b>	<b>First Grade</b>
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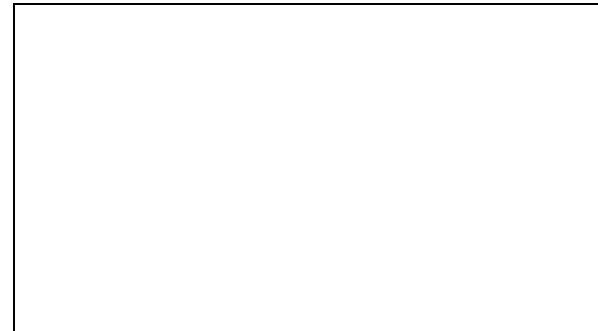


<p><b>Emphasis: Extending strategies for solving addition and subtraction problems</b></p>	
<p>During this emphasis, data provides an authentic context for students to develop appropriate strategies to reason about and solve addition and subtraction problems. In particular, this emphasis introduces “compare” problems. Because compare problems are relatively difficult for students to master, this unit should provide students time to tackle with the misleading language and difficult contexts involved in these problem types.</p>	
<p><b>Common Core State Standards for Mathematical Content</b>  <b>Operations and Algebraic Thinking – 1.OA</b></p> <p><b>A. Represent and solve problems involving addition and subtraction.</b>          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.</p> <p><b>C. Add and subtract within 20.</b>          6. Add and subtract 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 the 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 equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p> <p><b>D. Work with addition and subtraction equations.</b>          7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. 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>.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.1</u>          Addition, Compare, Number, Solve, Subtraction, Unknown, Word problems</p> <p><u>1.OA.6</u>          Decompose, Equivalent, Strategy</p> <p><u>1.OA.7</u>          Equal sign, False, True</p> <p><u>1.MD.4</u>          Category, Data, How many less, How many more, Interpret, Represent, Total</p> <p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> </ol>

**Measurement and Data – 1.MD**

**C. Represent and interpret data.**

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.



**Comments:**

**Teacher Notes:**

<p align="center"><b>Domain: Measurement and Data</b></p> <p align="center"><b>Emphasis: Telling and writing time to the half hour</b></p>	<p align="center"><b>First Grade</b></p>
<p>During this emphasis, students extend their understanding of telling and writing time from just hours to include situations that deal with telling time to the half hour.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Measurement and Data – 1.MD</b></p> <p><b>B. Tell and write time.</b></p> <p>3. Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.MD.2</u> Analog clock, Digital clock, Half-hour, Hour, Time</p> <p><b>Mathematical Practices</b></p> <p>5. Use appropriate tools strategically. 6. Attend to precision.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p align="center"><b>Domain: Number and Operations in Base Ten</b> <b>Emphasis: Adding multiples of ten</b></p>	<p align="center"><b>First Grade</b></p>
<p>During this emphasis, students build on their understanding of adding and subtraction within 20 to develop strategies for adding larger numbers. Students are also introduced to mentally adding 10. These standards are grouped together because the ability to compose a ten and the ability to add and subtract ten is critical knowledge that can help students develop number sense and proficiency with numbers and operations. Concrete objects or drawings afford connections with written numerical work and discussions in terms of tens and ones by using activities that build number sense.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Number and Operations in Base Ten – 1.NBT</b> <b>C. Use place value understanding and properties of operations to add and subtract.</b></p> <p>4. 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.</p> <p>5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.NBT.4</u> Digit, Multiple</p> <p><u>1.NBT.5</u> Explain, Mental</p> <p><b>Mathematical Practices</b></p> <p>1. Make sense of problems and persevere in solving them. 5. Use appropriate tools strategically.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p style="text-align: center;"><b>Domain: Geometry</b> <b>Emphasis: Composing and drawing shapes</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis, students transition from using trial and error to applying their understanding of different attributes in order to draw and compose shapes. Composing and decomposing figures supports students' understanding of part-whole relationships.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Geometry– 1.G</b> <b>A. Reason with shapes and their attributes.</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol>	<p><b>Academic Vocabulary:</b></p> <p><u>1.G.1</u> Attribute, Orientation, Shape, Size</p> <p><u>1.G.2</u> Circle, Composite, Cone, Cube, Cylinder, Flat, Half-circle, Quarter-circle, Rectangle, Rectangular prism, Shape, Solid, Square, Trapezoid, Three-dimensional shape, Triangle, Two-dimensional shape</p> <p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>2. Reason abstractly and quantitatively.</li> <li>4. Model with mathematics.</li> </ol>
<p><b>Comments:</b></p>	

**Teacher Notes:**



<p style="text-align: center;"><b>Domain: Operations and Algebraic Thinking</b></p> <p style="text-align: center;"><b>Emphasis: Interpreting and using symbols in numeric expressions and comparisons.</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis, students apply their conceptual understanding of addition, subtraction, and comparison to interpret and write expressions and equations. It is important for students to make sense of the symbols involved, as well as knowing when to use them. A new concept to this emphasis is reasoning about whether or not equations are true or false.</p> <p>This emphasis also provides an opportunity for students to apply their understanding of the symbols while practicing their addition and subtraction strategies in different problem situations.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 1.OA</b></p> <p><b>D. Work with addition and subtraction equations.</b></p> <p>7. 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></p> <p>8. Determine the unknown whole number in an addition or subtraction equation relating to 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></p> <p><b>Number and Operations in Base Ten – 1.NBT</b></p> <p><b>Understand place value</b></p> <p>3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, and <math>&lt;</math>.</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.7</u> Equal sign, False, True</p> <p><u>1.NBT.3</u> Compare, Greater than (<math>&gt;</math>), Less than (<math>&lt;</math>), Equal to (<math>=</math>), Symbol</p> <p><b>Mathematical Practices</b></p> <p>2. Reason abstractly and quantitatively.</p> <p>4. Model with mathematics.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p align="center"><b>Domain: Number and Operations in Base Ten</b></p> <p align="center"><b>Emphasis: Using understanding of place value to add and subtract</b></p>	<p align="center"><b>First Grade</b></p>
<p>During this emphasis, students extend their understanding of adding multiples of ten to include subtraction. They are also expected to relate their strategies for addition and subtraction to written methods and explain their reasoning.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Number and Operations in Base Ten – 1.NBT</b></p> <p><b>C. Use place value understanding and properties of operations to add and subtract.</b></p> <p>4. 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.</p> <p>5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p> <p>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.</p>	<p><b>Academic Vocabulary:</b></p> <p>1.NBT.4 Digit, Multiple</p> <p>1.NBT.5 Explain, Mental</p> <hr/> <p><b>Mathematical Practices</b></p> <p>6. Attend to precision. 8. Look for and express regularity in repeated reasoning.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p style="text-align: center;"><b>Domain: Operations and Algebraic Thinking</b> <b>Emphasis: Applying properties of operations to solve problems</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis, students apply their understandings of properties of operations through repeated experience with addition and subtraction to solve real-world and mathematical word problems.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 1.OA</b></p> <p><b>A. Represent and solve problems involving addition and subtraction.</b></p> <p>2. 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.</p> <p><b>B. Understand and apply properties of operations and the relationship between addition and subtraction.</b></p> <p>3. 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></p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.2</u> Equation , Sum</p> <p><u>1.OA.3</u> Associative property of addition, Commutative property of addition, Properties of operations</p> <hr/> <p><b>Mathematical Practices</b></p> <p>7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p style="text-align: center;"><b>Domain: Measurement and Data</b> <b>Emphasis: Measuring lengths with non-standard units</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>This emphasis lays the groundwork for the use of standard measurement units in Grade 2 and the general concept of length. Students learn about the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units).</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Measurement and Data – 1.MD</b> <b>A. Measure lengths indirectly and by iterating length units.</b> 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></p>	<p><b>Academic Vocabulary:</b>  <u>1.MD.2</u> Nonstandard, Standard, Unit</p> <hr/> <p><b>Mathematical Practices</b> 3. Construct viable arguments and critique the reasoning of others. 5. Use appropriate tools strategically.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**



<p style="text-align: center;"><b>Domain: Geometry</b> <b>Emphasis: Finding equal shares of shapes</b></p>	<p style="text-align: center;"><b>First Grade</b></p>
<p>During this emphasis students partition shapes into equal shares. The focus is fair shares and equal area to support initial understandings of properties such as congruence and symmetry in area- not to discuss fractions. The terms “halves, fourths, and quarters” name the amount of area that is represented to describe the part-whole relationship. Fraction notation is first used in Grade 3.</p>	
<p><b>Common Core State Standards for Mathematical Content</b> <b>Geometry – 1.G</b> <b>A. Reason with shapes and their attributes.</b> 3. Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p>	<p><b>Academic Vocabulary:</b> <u>1.G.3</u> Equal shares, Fourths, Fourth of, Half of, Halves, Quarter, Quarter of, Share, Whole</p> <hr/> <p><b>Mathematical Practices</b> 3. Construct viable arguments and critique the reasoning of others.</p>
<p><b>Comments:</b></p>	

**Teacher Notes:**

<p align="center"><b>Domain: Operations and Algebraic Thinking</b></p> <p align="center"><b>Emphasis: Demonstrating proficiency in addition and subtraction situations</b></p>	<p align="center"><b>First Grade</b></p>
<p>During this emphasis, students apply their understanding from the entire year to demonstrate fluency in addition and subtraction. Students should experience ample opportunities to practice the various problem types using strategies based on place value, properties of operations, and the relationship between addition and subtraction.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 1.OA</b></p> <p><b>A. Represent and solve problems involving addition and subtraction.</b></p> <p>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.</p> <p><b>C. Add and subtract within 20.</b></p> <p>6. Add and subtract 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 the 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 equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p>	<p><b>Academic Vocabulary:</b></p> <p><u>1.OA.1</u> Addition, Compare, Number, Solve, Subtraction, Unknown, Word problems</p> <p><u>1.OA.6</u> Decompose, Equivalent, strategy</p> <p><b>Mathematical Practices</b></p> <p>3. Construct viable arguments and critique the reasoning of others.</p> <p>8. Look for and express regularity in repeated reasoning.</p>
<p><b>Comments:</b></p>	

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