

<p style="text-align: center;"><b>Domain: Addition and Subtraction</b></p> <p style="text-align: center;"><b>Emphasis: Represent and solve problems involving addition and subtraction</b></p>	<p style="text-align: center;"><b>Second Grade</b></p>
<p><b>Major Cluster (green):</b> Represent and solve problems involving addition and subtraction</p> <p><b>Major Cluster (green):</b> Add and subtract within 20.</p> <p><b>Major Cluster (green):</b> Use place value understanding and properties of operation to gain foundations for multiplication.</p> <p><b>Major Cluster (green):</b> Relate addition and subtraction to length</p> <p><b>Supporting Cluster (blue):</b> Work with equal groups of objects to gain foundations for multiplication.</p> <p><b>Supporting Cluster (blue):</b> Work with time and money.</p> <p><b>Supporting Cluster (blue):</b> Represent and interpret data.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Operations and Algebraic Thinking – 2.OA</b></p> <ol style="list-style-type: none"> <li>Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. <ul style="list-style-type: none"> <li><i>*PASS 1.1 - Describe, extend, and create patterns using symbols, shapes, or designs.</i></li> <li><i>*PASS 1.2 - Formulate and record generalizations about number patterns in a variety of situations.</i></li> <li><i>PASS 1.4 - Recognize and apply the associative property of addition.</i></li> </ul> </li> <li>Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers. <ul style="list-style-type: none"> <li><i>PASS 2.2.b - Include estimating to solve sums and differences.</i></li> </ul> </li> <li>Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.</li> <li>Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. <ul style="list-style-type: none"> <li><i>PASS 2.2.d - Use concrete models to develop understanding of multiplication as repeated addition and division as successive subtraction.</i></li> </ul> </li> </ol> <p><b>Number and Operations in Base Ten – 2.NBT</b></p> <ol style="list-style-type: none"> <li>Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</li> <li>Add up to four two-digit numbers using strategies based on place value and properties of operations.</li> <li>Add and subtract within 1000, 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</li> </ol>	<p><b>Academic Vocabulary:</b></p> <p><b>2.OA.1</b> – addition, sum, subtraction, difference, number, digit</p> <p><b>2.OA.2</b> – addend, odd number, even number</p> <p><b>2.OA.3</b> – equation, even number, odd number</p> <p><b>2.OA.4</b> – array, total</p> <p><b>2.NBT.5</b> – associative property, commutative property, properties of operations</p> <p><b>2.NBT.8</b> – compose, decompose, addition, subtraction</p> <p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>Make sense of problems and persevere in solving them.</li> <li>Construct viable arguments and critique the reasoning of others.</li> <li>Attend to precision.</li> </ol>

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<p>a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</p> <p>8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p>9. Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p><b>Measurement and Data – 2.MD</b></p> <p>5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</p> <p>8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?</p> <p>10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. <u>Solve simple put-together, take-apart, and compare problems<sup>1</sup> using information presented in a bar graph.</u></p>	
<p><b>Comments:</b></p> <p>*These are PASS objectives that need to be included until we have switched completely to CCSS. They don't fit in any emphasis area, so they have been included with the rest of Operations and Algebraic Thinking in this emphasis area.</p>	

**Teacher Notes:**

**Special Education Accommodations Notes:**

**Assessment Notes:**

<p style="text-align: center;"><b>Domain: Place Value</b></p> <p style="text-align: center;"><b>Emphasis: Use place value understanding and properties of operations to add and subtract</b></p>	<p style="text-align: center;"><b>Second Grade</b></p>
<p><b>Major Cluster (green):</b> Understand place value.</p> <p><b>Major Cluster (green):</b> Use place value understanding and properties of operations to add and subtract.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Number and Operations in Base Ten – 2.NBT</b></p> <ol style="list-style-type: none"> <li>1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases.               <ol style="list-style-type: none"> <li>a. 100 can be thought of as a bundle of ten tens — called a “hundred.”</li> <li>b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</li> </ol> </li> <li>2. Count within 1000; skip-count by 5s, 10s, and 100s.               <p style="margin-left: 20px;"><i>PASS 2.2.a - Include estimating to find the sum or difference</i></p> </li> <li>3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.               <p style="margin-left: 20px;"><i>PASS 2.1.a.i - Include entire standard. Model the concept of place value through 4 digits (e.g., base-10 blocks, bundles of 10's, place value mats).</i></p> <p style="margin-left: 20px;"><i>PASS 2.1.a.ii - Read and write whole numbers up to 4 digits (e.g., expanded form, standard form)."</i></p> <p style="margin-left: 20px;"><i>PASS 2.1.b.i. - Compare and order whole numbers up to 4 digits.</i></p> </li> <li>4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> <li>5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</li> <li>6. Add up to four two-digit numbers using strategies based on place value and properties of operations.</li> <li>7. Add and subtract within 1000, 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</li> </ol>	<p><b>Academic Vocabulary:</b></p> <p><b>2.NBT.1</b> – place value, ones, tens, hundreds</p> <p><b>2.NBT.2, 2.NBT.3</b> – count, skip count, expanded form, number names, numeral</p> <p><b>2.NBT.4</b> – compare, mental, equal to (<math>=</math>), less than (<math>&lt;</math>), greater than (<math>&gt;</math>)</p> <p><b>2.NBT.5</b> – associative property, commutative property, properties of operations</p> <p><b>2.NBT.8</b> – compose, decompose, addition, subtraction</p> <p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>2. Reason abstractly and quantitatively.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol>

<b>Domain: Place Value</b>	<b>Second Grade</b>
<p><b>Emphasis: Use place value understanding and properties of operations to add and subtract</b></p> <p>8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p>9. Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p><i>PASS 2.1.d - Demonstrate (using concrete objects, pictures, and numerical symbols) fractional parts including halves, thirds, fourths and common percents (25%, 50%, 75%, 100%).</i></p>	
<b>COMMENTS:</b>	

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<p style="text-align: center;"><b>Domain: Measurement</b></p> <p style="text-align: center;"><b>Emphasis: Measure and estimate lengths in standard units</b></p>	<p style="text-align: center;"><b>Second Grade</b></p>
<p><b>Major Cluster (green):</b> Measure and estimate lengths in standard units.</p> <p><b>Major Cluster (green):</b> Relate addition and subtraction to length.</p> <p><b>Supporting Cluster (blue):</b> Work with time and money.</p> <p><b>Supporting Cluster (blue):</b> Represent and interpret data.</p> <p><b>Additional Cluster (yellow):</b> Reason with shapes and their attributes.</p>	
<p><b>Common Core State Standards for Mathematical Content</b></p> <p><b>Measurement and Data – 2.MD</b></p> <ol style="list-style-type: none"> <li>1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</li> <li>2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</li> </ol> <p><i>PASS 4.2.c - Include reading a thermometer and solving for temperature change.</i></p> <p><i>PASS 4.3 - Determine the correct amount of change when a purchase is made with a five dollar bill.</i></p> <ol style="list-style-type: none"> <li>3. Estimate lengths using units of inches, feet, centimeters, and meters.</li> </ol> <p><i>PASS 5.1.a - Pose questions, collect, record, and interpret data to help answer questions.</i></p> <p><i>PASS 5.2.b - Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data.</i></p> <p><i>PASS 5.2.c - Construct bar graphs, frequency tables, line graphs, line plots, and pictographs with labels and a title from a set of data.</i></p> <ol style="list-style-type: none"> <li>4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</li> <li>5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</li> <li>6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</li> <li>7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</li> </ol>	<p><b>Academic Vocabulary:</b></p> <p><b>2.MD.1, 2.MD.2</b> – length, relate, measure, unit, measuring tape, meter sticks, yard sticks, ruler</p> <p><b>2.MD.3, 2.MD.4, 2.MD.5</b> – centimeter, estimate, inch, foot, meter, standard length unit, represent, solve</p> <p><b>2.MD.6</b> – number line, point</p> <p><b>2.MD.7</b> – analog clock, digital clock, a.m., p.m., hour, minute</p> <p><b>2.MD.8</b> – cent sign (¢), dime, dollar bill, dollar sign (\$), nickel, penny, quarter</p> <p><b>2.MD.9</b> – data, horizontal scale, line plot, whole unit, bar graph, category, data set, picture graph, pictograph</p> <p><b>2.G.1</b> – angle, attribute, cube, face, shape</p> <p><b>2.G.2</b> – column, partition, rectangle, row, square</p> <p><b>2.G.3</b> – circle, equal share, fourths, half, halves, share, thirds, whole</p> <p><b>Mathematical Practices</b></p> <ol style="list-style-type: none"> <li>4. Model with mathematics.</li> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> </ol>

<p style="text-align: center;"><b>Domain: Measurement</b></p> <p style="text-align: center;"><b>Emphasis: Measure and estimate lengths in standard units</b></p>	<p style="text-align: center;"><b>Second Grade</b></p>
<p><i>PASS 4.2.b. - Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.</i></p> <ol style="list-style-type: none"> <li>8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?</li> <li>9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</li> <li>10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems<sup>1</sup> using information presented in a bar graph.</li> </ol> <p><b>Geometry – 2.G</b></p> <ol style="list-style-type: none"> <li>1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.<sup>1</sup> Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</li> </ol> <p><i>PASS 3.1 - Identify symmetric and congruent shapes and figures.</i></p> <ol style="list-style-type: none"> <li>2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</li> <li>3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</li> </ol>	
<p><b>Comments:</b></p> <p>*Geometry is a minor emphasis area in Grade 2 and so has been included within the major emphasis area of Measurement.</p>	



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