



**Area:** Operations and Algebraic Thinking

**Big Idea:** Represent and solve problems involving addition and subtraction.

<b>PA/Common Core Standards</b>	<b>Assessment Anchors/ Eligible Content</b>	<b>Key Vocabulary</b>	<b>Learning Activities</b>	<b>Materials/ Resources/ Technology Tools</b>	<b>Common Summative Assessments/ Targeted Outcomes</b>
<b>Objective:</b> 1: 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).					
• 2.OA.1		<ul style="list-style-type: none"><li>• addition</li><li>• subtraction</li><li>• comparing</li></ul>	<ul style="list-style-type: none"><li>• Unit 1 - Lesson 1, 2, 4, 10 -21, Unit 2 - Lesson 1, 2, 7, 15, Unit 4 - Lessons 3-5, 12 -14, 16-23, Unit 5 - Lessons 3-7, 9-10, Unit 6 - Lessons 8 -9, 14-15, Unit 7 - Lessons 3 -5</li></ul>	<ul style="list-style-type: none"><li>• Math Expressions Student Activity Book</li></ul>	<ul style="list-style-type: none"><li>• Math Expressions Assessments</li></ul>



*Cocalico School District*  
*Course Curriculum Details*  
*Course: Math - 02*

**Area:** Operations and Algebraic Thinking

**Big Idea:** Add and subtract within 20.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
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**Objective:** 1: Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.



**Area:** Operations and Algebraic Thinking

**Big Idea:** Work with equal groups of objects to gain foundations for multiplication.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<p><b>Objective:</b> 1: 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.</p>					
<ul style="list-style-type: none"> <li>• 2.OA.3</li> <li>• 2.OA.2</li> </ul>		<ul style="list-style-type: none"> <li>• odd</li> <li>• add</li> <li>• even</li> <li>• subtract</li> <li>• mental strategies</li> <li>• two-digit numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 1 - Lessons 6-7, 21, Unit 7 - Lesson 1</li> <li>• Unit 1- Lesson 1-21, Unit 2 - Lessons 1, 2, Unit 3 - 1-4, Unit 4 - Lesson 13, Unit 5 - Lessons 3-5, 9, 10</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> <li>• Math Expressions Assessments</li> </ul>
<p><b>Objective:</b> 2: 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.</p>					
<ul style="list-style-type: none"> <li>• 2.OA.4</li> </ul>		<ul style="list-style-type: none"> <li>• arrays</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 7 - Lessons 1, 6</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>



**Area:** Number and Operations in Base Ten

**Big Idea:** Understand place value.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<p><b>Objective:</b> 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). a. 100 can be thought of as a bundle of ten tens - called a "hundred". b. The numbers 100 - 900 refer to one-nine hundreds.</p>					
• 2.NBT.1 -		<ul style="list-style-type: none"> <li>• digits</li> <li>• hundreds</li> <li>• tens</li> <li>• ones</li> </ul>	<ul style="list-style-type: none"> <li>• 2.NBT.1 - Unit 2 - Lessons 1-11, Unit 4 - Lessons 7-12, 14, Unit 6 - Lesson 2</li> <li>• 2.NBT.1a - Unit 2 - Lessons 1-4, 6-11, Unit 4 - Lessons 3, 4, 7-10, 12, 14, Unit 6 - Lessons 1, 4</li> <li>• 2.NBT.1b - Unit 4 - Lesson 7, Unit 6 - Lesson 1</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<p><b>Objective:</b> 2: Count within 1000; skip count by 5s, 10s, and 100s.</p>					
• 2.NBT.1a		<ul style="list-style-type: none"> <li>• hundred</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2- Lessons 1-3, 12, 15, Unit 5 - Lesson 2, Unit 6 - Lessons 1, 4</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<p><b>Objective:</b> 3: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p>					
• 2.NBT.1b		<ul style="list-style-type: none"> <li>• hundreds</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2 - Lessons 1-5, Unit 6 - Lessons 1,2, 4</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<p><b>Objective:</b> 4: Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits using <math>&lt;</math>, <math>=</math>, <math>&gt;</math> symbols to record the results of comparisons.</p>					
• 2.NBT.1		<ul style="list-style-type: none"> <li>• skip count</li> <li>• thousand</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2 - Lessons 5, 15, Unit 3 - Lesson 6, Unit 4 - Lesson 15, Unit 5 - Lesson 10, Unit 6 - Lessons 3, 15</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>



**Area:** Number and Operations in Base Ten

**Big Idea:** Use place value understanding and properties of operations to add and subtract.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<b>Objective:</b> 1: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.					
• 2.NBT.5		<ul style="list-style-type: none"> <li>• add</li> <li>• subtract</li> <li>• place value</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 1- Lessons 9, 16, Unit 2 - Lessons 2, 4, 13-15, Unit 3 - lesson 9, Unit 4 - lessons 3-6, 11-15, 17-23, Unit 5 - Lessons 6, 7, Unit 6 - Lessons 14, 15, Unit 7 - Lessons 4, 5</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 2: Add up to four two-digit numbers using strategies based on place value and properties of operations.					
• 2.NBT.6		<ul style="list-style-type: none"> <li>• add</li> <li>• digit</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 1 - Lesson 9, Unit 2 - Lessons 6, 8-10, 14, Unit 3 - Lessons 3, 4, Unit 4- Lessons 15, Unit 5- Lesson 7, Unit 7 - Lessons 4, 5</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 3: Add and subtract within 1000, using concrete models/drawings/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 sometimes it is necessary to compose or decompose tens or hundreds.					
• 2.NBT.7		<ul style="list-style-type: none"> <li>• add</li> <li>• subtract</li> <li>• strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2- Lessons 4, 6-11, 14, 15, Unit 4 - Lessons 1-3, 5-13, 15-17, 23, Unit 6 - Lessons 2, 5-15</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 4: Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.					
• 2.NBT.8		<ul style="list-style-type: none"> <li>• mentally</li> <li>• add</li> <li>• subtract</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2- Lesson 4, Unit 6 - Lessons 2, 4</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>



**Area:** Number and Operations in Base Ten

**Big Idea:** Use place value understanding and properties of operations to add and subtract.

<b>PA/Common Core Standards</b>	<b>Assessment Anchors/ Eligible Content</b>	<b>Key Vocabulary</b>	<b>Learning Activities</b>	<b>Materials/ Resources/ Technology Tools</b>	<b>Common Summative Assessments/ Targeted Outcomes</b>
<b>Objective:</b> 5: Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)					
<ul style="list-style-type: none"><li>• 2.NBT.9</li></ul>		<ul style="list-style-type: none"><li>• addition</li><li>• subtraction</li><li>• strategies</li></ul>	<ul style="list-style-type: none"><li>• Unit 1 - Lessons 1, 3, 9,</li><li>Unit 2 - Lessons 2, 4, 6-10,</li><li>Unit 4 - Lessons 3-10, 12, 14</li><li>-18, Unit 6 - Lesson 2, 6-13,</li><li>15</li></ul>	<ul style="list-style-type: none"><li>• Math Expressions Student Activity Book</li></ul>	<ul style="list-style-type: none"><li>• Math Expressions Assessments</li></ul>



**Area:** Measurement and Data

**Big Idea:** Measure lengths indirectly and by iterating length units.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<b>Objective:</b> 1: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.					
• 2.MD.1		<ul style="list-style-type: none"> <li>• length</li> <li>• rulers</li> <li>• yardstick</li> <li>• meter stick</li> <li>• measuring tape</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3- Lessons 1, 3, 4, 6 -9, Unit 4 - Lesson 23, Unit 7 - Lesson 1</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 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.					
• 2.MD.2		<ul style="list-style-type: none"> <li>• measure</li> <li>• unit</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3 - Lessons 7-9</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 3: Estimate lengths using units of inches, feet, centimeters, and meters.					
• 2.MD.3		<ul style="list-style-type: none"> <li>• estimate</li> <li>• inches</li> <li>• feet</li> <li>• centimeters</li> <li>• meters</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3 - Lessons 3, 4, 6-8, Unit 4 - Lesson 23</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 4: Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.					
• 2.MD.4		<ul style="list-style-type: none"> <li>• length</li> <li>• difference</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3 - Lessons 1, 2, 6, Unit 4 - Lesson 23</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>



**Area:** Measurement and Data

**Big Idea:** Relate addition and subtraction to length.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<p><b>Objective:</b> 1: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p>					
• 2.MD.5		<ul style="list-style-type: none"> <li>• addition</li> <li>• subtraction</li> <li>• length</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 4 - Lesson 23, Unit 7 - Lessons 3-5</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<p><b>Objective:</b> 2: 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.</p>					
• 2.MD.6		<ul style="list-style-type: none"> <li>• number line</li> <li>• points</li> <li>• sums</li> <li>• differences</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 7 - Lessons 3, 5</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>





**Area:** Measurement and Data

**Big Idea:** Work with time and money.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<b>Objective:</b> 1: Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.					
• 2.MD.7		<ul style="list-style-type: none"> <li>• analog</li> <li>• digital</li> <li>• a.m.</li> <li>• p.m.</li> </ul>	• Unit 5 - Lessons 1, 2	• Math Expressions Student Activity Book	• Math Expressions Assessments
<b>Objective:</b> 2: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ (dollars) and ¢ (cents) symbols appropriately. (Example: If you have 2 dimes and 3 pennies, how many cents do you have?)					
• 2.MD.8		<ul style="list-style-type: none"> <li>• dollar</li> <li>• bills</li> <li>• quarters</li> <li>• dimes</li> <li>• nickels</li> <li>• pennies</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2- Lessons 11, 12, 15</li> <li>- Unit 4 - Lessons 1, 2, 10, 15, Unit 6 - Lesson 1</li> </ul>	• Math Expressions Student Activity Book	• Math Expressions Assessments



**Area:** Measurement and Data

**Big Idea:** Represent and interpret data.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<b>Objective:</b> 1: 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.					
• 2.MD.9		• line plot	• Unit 3- Lessons 6, 7, 8	• Math Expressions Student Activity Book	• Math Expressions Assessments
<b>Objective:</b> 2: Draw a picture graph and a bar graph (with a single unit scale) to represent a data set with up to 4 categories. Solve simple put-together take-apart, and compare problems using information presented on a bar graph.					
• 2.MD.10		• picture graph • bar graph	• Unit 5 - Lessons 3, 4, 5, 6, 7, 8, 9, 10	• Math Expressions Student Activity Book	• Math Expressions Assessments



**Area:** Geometry

**Big Idea:** Reason with shapes and their attributes.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<b>Objective:</b> 1: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Sizes are compared directly or visually, not compared by measuring.)					
• 2.G.1		<ul style="list-style-type: none"> <li>• angles</li> <li>• faces</li> <li>• triangle</li> <li>• quadrilateral</li> <li>• pentagon</li> <li>• hexagon</li> <li>• cubes</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3- Lessons 2, 3, 4, 5, 9, Unit 7- Lessons - 1, 2, 4</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 2: Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.					
• 2.G.2		<ul style="list-style-type: none"> <li>• area</li> <li>• rows</li> <li>• columns</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 7 - Lessons 1, 6</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>
<b>Objective:</b> 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.					
• 2.G.3		<ul style="list-style-type: none"> <li>• equal</li> <li>• halves</li> <li>• thirds</li> <li>• fourths</li> <li>• whole</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 5 - Lesson 2, Unit 7 - Lessons 1, 2, 6</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Student Activity Book</li> </ul>	<ul style="list-style-type: none"> <li>• Math Expressions Assessments</li> </ul>