

## NJDOE MODEL CURRICULUM PROJECT

<b>CONTENT AREA: Mathematics</b>	<b>GRADE: 2</b>	<b>UNIT: # 5</b>	<b>UNIT NAME: Represent Data and Recognize Shapes and Their Attributes</b>
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#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
<b>1</b>	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.	2.NBT.7
<b>2</b>	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared visually or directly, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	2.G.1
<b>3</b>	Use tools of measurement to measure lengths of several objects to the nearest whole unit and represent the data on a line plot with appropriate whole number units on the horizontal scale.	2.MD.9
<b>4</b>	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 using information presented in the graph.	2.MD.10
<b>5</b>	Partition a rectangle into rows and columns of same-size squares and count to find the total number.	2.G.2
<b>6</b>	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
<b>7</b>	Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from	<b>2.OA.2</b>

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	memory all sums of two one-digit numbers.	
<b>8</b>	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	<b>2.NBT.5</b>

### Repeated Standards

**SLO #7** is a benchmark for standard **2.OA.2** in this unit: **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.**

**SLO #8** is a benchmark for standard **2.NBT.5** in this unit: **Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction**

*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 #2 Analyze given information and attributes about unknown shapes in order to draw the specified shape.
- 2. Reason abstractly and quantitatively.**  
SLO #8 know and flexibly use the properties of operations in order to understand the relationship between addition and subtraction.
- 3. Construct viable arguments and critique the reasoning of others.**  
SLO #4 Construct viable and logic arguments based on a picture graph and a bar graph.
- 4. Model with mathematics.**  
SLO #4 Use tools such as diagrams and graphs in order to better identify, create, and analyze the components of a dataset.
- 5. Use appropriate tools strategically.**  
SLO #5 Use appropriate and available tools to partition a rectangle into rows and columns of the same size in order to count the total.
- 6. Attend to precision.**

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<p>SLO #6 Use clear and precise definitions to discuss the division of circles and rectangles into equal shares (for example: half, third, or half of).</p> <p><b>7. Look for and make use of structure.</b></p> <p>SLO #8 Look for and discern a pattern or relationship based on place value concepts or properties of operations in the context of addition or subtraction.</p> <p>8. Look for and express regularity in repeated reasoning.</p>
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***Bold type identifies possible starting points for connections to the SLOs in this unit.***

Code #	Common Core State Standards
2.NBT.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.
2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. (Sizes are compared visually or directly, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2.MD.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.
2.MD.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 using information presented in the graph.

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2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
2.G.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.
<b>2.OA.2</b>	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.
<b>2.NBT.5</b>	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

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