

MOBILE COUNTY PUBLIC SCHOOLS  
 DIVISION OF CURRICULUM & INSTRUCTION  
 SECOND GRADE MATHEMATICS INSTRUCTIONAL PLANNING GUIDE  
 2017-2018: QTR4

Qtr. 4: Weeks 1-3

March 20 – April 12 (13 Days)

Grade 2, Unit 10 Reason with Shapes

**UNIT OVERVIEW: REASON WITH SHAPES AND THEIR ATTRIBUTES**

In this unit, students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

**ESSENTIAL QUESTIONS:**

- How can we recognize and describe shapes?
- Where can we find geometric figures in the world around us?
- How do we use the following terms: angle, vertex, face, side, and edge to describe geometric figures?
- How do we apply the use of fractions in everyday life?
- How do we know how many fractional parts make a whole?

**KEY VOCABULARY:**

attribute, angle, side, triangle, quadrilateral, square, rectangle, trapezoid, pentagon, hexagon, cube, face, edge, vertex, surface, figure, shape, closed, open, partition, equal size, equal shares, half, halves, thirds, half of, a third of, whole, two halves, three thirds, four fourths, rows, columns

**Standards/Objectives**

**Opportunity for Depth Standards**

**[2-OA.2] Fluently ADD and SUBTRACT** within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.

**Standards Clarification**

**[2-OA.2]** Fluently add and subtract within 20.  
  
*Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Mixed)*

**Additional Standards**

**[2-G.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

**Standards Clarification**

**[2-G.1]** Draw polygons & other figures.

**[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.2]** Partition rectangle into rows & columns. (connect to OA4)

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<p><b>[2-G.3]</b> Partition circles and rectangles into two, three, or four equal shares; describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc.; and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<p><b>[2-G.3]</b> Partition circles and rectangles into halves, thirds, fourths. (connect to MD2)</p>
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**Continued not new**

**OA3, OA4, MD2, MD7, MD8** Continue for reinforcement and review

**Resources for Quarter 4, Unit 10**  
*Some tasks may need to be modified to follow MCPSS pacing.*

<p>Engage New York Module 6 Topic C – (G2) <a href="https://www.engageny.org/resource/grade-2-mathematics-module-6">https://www.engageny.org/resource/grade-2-mathematics-module-6</a></p> <p>Module 8 – (G1, G3) <a href="https://www.engageny.org/resource/grade-2-mathematics-module-8">https://www.engageny.org/resource/grade-2-mathematics-module-8</a></p>	<p>Georgia Standards Unit 2 (OA2) <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</a></p> <ul style="list-style-type: none"> <li>• Incredible Equations</li> <li>• Order is Important</li> </ul> <p>Unit 5 (G1, G2, G3) <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-5.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-5.pdf</a></p>	<p>Howard County – (G1, G2, G3, OA2) <a href="https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance">https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance</a></p>	<p>Math In Focus Chapter 18 – (G1) Chapter 19 Lessons 1-2 – (G1)</p>
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**Focus Standards for Mathematical Practice**

MP.6 Attend to precision.

MP.7 Look for and make use of structure.

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**Qtr. 4: Weeks 4-6  
April 13 – May 2 (14 Days)  
Grade 2, Unit 11 Data**

**UNIT OVERVIEW: REPRESENT AND INTERPRET DATA**

In this unit, students pose a question, determine up to 4 categories of possible responses, collect data, represent data in graphs, and interpret the results. They are able to use the graph selected to note particular aspects of the data collected, including the total number of responses, which category had the most/least responses, and interesting differences/similarities between the four categories. They then solve simple one-step problems using the information from the graph.

**ESSENTIAL QUESTIONS:**

How can we use a picture graph, bar graph, chart, table, or line plots to organize data and answer questions?  
How are tables, graphs and charts alike? How are they different?  
How do we interpret the data that has been collected?

**KEY VOCABULARY:**

collect, organize, display, show, data, attribute, sort, line plot, picture graph, bar graph, question, category, chart, table, most, least, more than, less than, about, same, different

**Standards/Objectives**

**Mastery Standards**

**[2-MD.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.

**Standards Clarification**

**[2-MD.6]** Add and subtract with a number line.

**Opportunity for Depth Standards**

**[2-OA.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.

**Standards Clarification**

**[2-OA.1]** 2-step problems & harder type 1-step problems.

**[2-OA.2]** Fluently **ADD and SUBTRACT** within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.

**[2-OA.2]** Fluently add and subtract within 20.

*Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Mixed)*

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<p><b>[2-MD.5]</b> 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><b>[2-MD.5]</b> Word problems (variety of types) involving length.</p>
<p><b>Supporting Standards</b></p>	<p><b>Standards Clarification</b></p>
<p><b>[2-MD.9]</b> 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.</p>	<p><b>[2-MD.9]</b> Collect measurement data. (connect to MD2 and MD4)</p>
<p><b>[2-MD.10]</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 a bar graph.</p>	<p><b>[2-MD.10]</b> Draw graphs to represent data &amp; use to solve put together, take apart, and compare word problems.</p>
<p><b>Continued not new</b></p>	
<p><b>MD1, MD2, MD3, MD4</b> Continue for reinforcement and review</p>	

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**Resources for Quarter 4, Unit 11**  
*Some tasks may need to be modified to follow MCPSS pacing.*

<p>Engage New York Module 2 Topic D – (MD5, MD6)  <a href="https://www.engageny.org/resource/grade-2-mathematics-module-2">https://www.engageny.org/resource/grade-2-mathematics-module-2</a></p> <p>Module 7 Topics A, B, D, E, F – (MD5, MD6, MD8, MD9, MD10)  <a href="https://www.engageny.org/resource/grade-2-mathematics-module-7">https://www.engageny.org/resource/grade-2-mathematics-module-7</a></p>	<p>Georgia Standards Unit 2 - (OA1, OA2)  <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</a></p> <p>Unit 3 - (MD5, MD6, MD9, MD10)  <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-3.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-3.pdf</a></p> <p>Unit 4 - (MD8, MD10)  <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf</a></p> <ul style="list-style-type: none"> <li>• Desktop Basketball-Money Version</li> </ul>	<p>Howard County - (MD5, MD6, MD8, MD9, MD10)  <a href="https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance">https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance</a></p> <p>Inside Mathematics - (MD5, MD6, MD8, MD9, MD10)  <a href="http://www.insidemathematics.org/common-core-resources/mathematical-content-standards/standards-by-grade/4th-grade">http://www.insidemathematics.org/common-core-resources/mathematical-content-standards/standards-by-grade/4th-grade</a></p>	<p>Math In Focus          Chapter 17 Lessons 1-4 – (MD9, MD10)</p>
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**Focus Standards for Mathematical Practice**

MP.5 Use appropriate tools strategically.

MP.7 Look for and make use of structure.

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**Qtr. 4: Weeks 7-9**

**May 3 – May 24 (16 Days)**

**Grade 2, Unit 12 Place Value Understanding**

**UNIT OVERVIEW: USE PLACE VALUE UNDERSTANDING AND PROPERTIES OF OPERATIONS TO ADD AND SUBTRACT**

In this unit, students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

**ESSENTIAL QUESTIONS:**

How can I use fluency of basic addition facts to solve real world problems?  
What strategies are needed to add 10 or 100 to a number?  
What strategies are needed to subtract 10 or 100 from a number?  
What strategies can I use to add or subtract multi-digit numbers without regrouping?

**KEY VOCABULARY:**

fluent, compose, decompose, place value, digit, ten more, ten less, one hundred more, one hundred less, add, subtract, sum, equal, addition, subtraction

**Standards/Objectives**

**Mastery Standards**

**Standards Clarification**

**[2-NBT.6]** Add up to four two-digit numbers using strategies based on place value and properties of operations.

**[2-NBT.6]** Add up to 4 two digit numbers.

**[2-NBT.9]** Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)

**[2-NBT.9]** Explain strategies and why they work.

**Opportunity for Depth Standards**

**Standards Clarification**

**[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-NBT.7]** Add/subtract within 1000 **NO CONCRETE OR DRAWINGS.**

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<p><b>[2-OA.1]</b> 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.</p>	<p><b>[2-OA.1]</b> 2-step problems &amp; harder type 1-step problems.</p>		
<p><b>[2-OA.2]</b> Fluently <b>ADD and SUBTRACT</b> within 20 using mental strategies. (See standard 6, G1, for a list of mental strategies.) By end of Grade 2, know from memory all sums of 2 one-digit numbers.</p>	<p><b>[2-OA.2]</b> Fluently add and subtract within 20.</p> <p><i>Basic Fact Assessment: Addition and Subtraction with sums and minuends less than or equal to 20 (Mixed)</i></p>		
<p><b>Continued not new</b></p>			
<p><b>NBT1, NBT2, NBT3, NBT4, NBT5, NBT8</b> Continue for reinforcement and review</p>			
<p><b>Resources for Quarter 4, Unit 12</b> <i>Some tasks may need to be modified to follow MCPSS pacing.</i></p>			
<p><b>Engage New York Module 4 – (NBT6, NBT7, NBT9)</b> <a href="https://www.engageny.org/resource/grade-2-mathematics-module-4">https://www.engageny.org/resource/grade-2-mathematics-module-4</a></p> <p><b>Module 5 - (NBT6, NBT7, NBT9)</b> <a href="https://www.engageny.org/resource/grade-2-mathematics-module-5">https://www.engageny.org/resource/grade-2-mathematics-module-5</a></p>	<p><b>Georgia Standards Unit 2 - (OA1, OA2)</b> <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-2.pdf</a></p> <p><b>Unit 4 - (NBT6, NBT7, NBT9)</b> <a href="https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf">https://www.georgiastandards.org/Georgia-Standards/Frameworks/2nd-Math-Unit-4.pdf</a></p>	<p><b>Howard County - (NBT6, NBT7, NBT9, OA1, OA2)</b> <a href="https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance">https://hcpss.instructure.com/courses/106/pages/grade-2-year-at-a-glance</a></p>	<p><b>Math In Focus Chapter 2 pages 35-37, 46-47 – (NBT6)</b></p>
<p><b>Xtra Math</b> <a href="https://xtramath.org/#/home/index">https://xtramath.org/#/home/index</a> Free, individualized web based program that helps to build student fluency.</p>			
<p><b>Focus Standards for Mathematical Practice</b></p>			
<p>MP.1 Make sense of problems and persevere in solving them.</p>			
<p>MP.2 Reason abstractly and quantitatively.</p>			
<p>MP.6 Attend to precision.</p>			
<p>MP.8 Look for and express regularity in repeated reasoning.</p>			