


2nd Grade Math Curriculum Bundle # 9

Title		Suggested Dates
Geometry and Fractions		February 22- March 12 (15 days)

Big Idea/Enduring Understanding	Guiding Questions
<p>Geometric shapes can be compared and classified by their attributes</p> <p>Fractions represent parts of a whole or a part of a group or set of objects</p>	<p>How can you use mathematical language to describe two-dimensional and three-dimensional shapes?</p> <p>What are some ways you can compare two-dimensional or three-dimensional shapes?</p> <p>What new figures can you create by cutting apart shapes?</p> <p>How are fractional parts represented?</p> <p>How do we use fractions in our everyday lives?</p> <p>How many equal pieces does it take to make a whole?</p> <p>How can you represent a fraction with a group or set of objects?</p>

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
		Teachers will use Math Investigations as the main instructional resource. District resources are listed and categorized to indicate suggested uses. Any additional resources must be aligned with the TEKS.	
<p>2.3 The student adds and subtracts whole numbers to solve problems.</p> <p>2.3B Model addition and subtraction of two-digit numbers with objects, pictures, words, and numbers</p> <p style="color: blue;">Very Important Note: It is very important that the students understand and practice adding and subtracting 2 digit numbers with multiple strategies BEFORE the algorithm is introduced. Concrete models need to be used over and over again to establish a firm understanding at a conceptual level.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • use multiple strategies (ex: base-10 blocks, tally marks, pictures, adding tens and ones separately and then adding the final ten and one together) to solve addition and subtraction problems • represent and use whole numbers in flexible ways by joining and separating numbers (expanded notation $523 = 500 + 20 + 3$) • describe in words an explanation of strategy • model real situations when start (beginning), change (middle), or result (end) is unknown 		<p>Continue to work on addition and subtraction as warm ups and small group activities. Make sure you have taught the concept through manipulatives and made the connection to the algorithm.</p>

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	<ul style="list-style-type: none"> • use equation (number sentence) to represent addition or subtraction situations • use 2 or more addends 		
<p>2.7 The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both</p> <p>2.7A Describe attributes (the number of vertices, faces, edges, sides) of two- and three dimensional geometric figures such as circles, polygons, spheres, cones, cylinders, prisms and pyramids, etc.</p> <p>Note: Two-dimensional has length and width. Three-dimensional has length, width, and height.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • identify common attributes involving two- and three-dimensional geometric figures • identify symmetrical and nonsymmetrical shapes including shapes with equal and unequal sides 	<p><u>Shapes, Blocks, and Symmetry</u> Unit 2</p> <p>Investigation 1 Session 1, pages 24-30 Sessions 2 and 3 combine, pages 31-44</p>	<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 15 Lessons 1-2</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R.</u> Two-Dimensional Figures # 164 Two-Dimensional Figures Vocabulary # 165 Geometry # 166 Shapes on Display # 167 Three-Dimensional Figures # 168 Is it Two- or Three-Dimensional # 169 Describe the Shape # 170 Guess My Shape # 171 Match the Face with the Solid # 172</p> <p><u>Kamico</u> Shape Race Page 195-199</p> <p><u>Region IV Prep</u> Shapes Lesson Pages 108-113</p>
<p>2.7 The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both</p> <p>2.7B Use attributes to describe how 2 two-dimensional or 2 three-dimensional geometric figures are alike or different.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • use attributes (edges, face, shapes of bases or sides) to describe and compare geometric figures (Ex: A cylinder will roll and a prism will not or a square and a rectangle have four sides.) (Ex: An 8 sided polygon is still an octagon whether sides are equal or unequal.) 	<p><u>Shapes, Blocks, and Symmetry</u> Unit 2</p> <p>Investigation 2 Sessions 1-4, pages 62-91</p>	<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 15 Lessons 1-2</p>

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			<p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R.</u> Comparing Two-Dimensional Figures # 175 Comparing Three-Dimensional Figures # 176</p> <p><u>Kamico</u> All About Attributes Pages 202-206</p> <p><u>Region IV Prep</u> Solids Lesson Pages 114-121</p>
<p>2.7 The student uses attributes to identify two and three-dimensional geometric figures. The student compares and contrasts two-and three-dimensional geometric figures or both</p> <p>2.7C Cut two-dimensional geometric figures apart and identify the new geometric figures formed.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • create new shapes by combining or cutting apart existing shapes • Identify the two-dimensional shapes that make up the faces of three-dimensional objects/figures 		<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 15 Lessons 3-4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R.</u> Name the New Figure # 177 Rename the Geometric Figure # 178</p> <p><u>Kamico</u> Get in Shape Pages 207-209</p>
<p>2.6 The student uses patterns to describe relationships and make predictions.</p> <p>2.6A Generate a list of paired numbers based on a real-life situation such as number of tricycles related to number of wheels.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • create a table of ordered pairs based on real-life situation • relate to attributes of 2 dimensional and 3 dimensional shapes 	<p><u>How Many Floors? How Many Rooms?</u> Unit 5</p> <p>Investigation 1 Session 5, pages 61-68</p>	
<p>2.6 The student uses patterns to describe relationships and make predictions.</p> <p>2.6B Identify patterns in a list of related number</p>	<p>Including but not limited to</p> <p>Ex: 1 triangle has 3 sides, 2 triangles have 6 sides, etc.</p>		

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pairs based on a real-life situation and extend the list.			
<p>2.6 The student uses patterns to describe relationships and make predictions.</p> <p>2.6C Identify, describe, and extend repeating and additive patterns to make predictions and solve problems.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • create and extend repeating patterns with numbers, shapes, and pictures 	<p>Note: This TEK is also covered through Lone Star Math. You can also create tables using attributes of two-dimensional and three-dimensional shapes, such as sides, faces, edges, vertices, etc.</p>	
<p>2.2 The student describes how fractions are used to name parts of whole objects or sets of objects.</p> <p>2.2A Use concrete models to represent and name fractional parts of a whole object (with denominators of 12 or less)</p> <p>Notes: Only verbal or written descriptions are appropriate for second grade. 3rd grade students will construct concrete models ex. taking a square and cutting it into 4 equal parts.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • use "out of" when distinguishing part versus whole (ex: one out of three equal parts) • identify part to whole relationships such as one-half means one out of two equal parts • recognize fractions are represented by equal size parts of a whole or of a set of objects • relates fraction symbol to model • model with real world examples such as pizzas, cookies, cakes, paper folding/cutting/shading 	<p><u>Parts of a Whole, Parts of a Group</u> Unit 7</p> <p>Investigation 1 Session 1, pages 20-24</p> <p>Investigation 2 Sessions 1-6, pages 46-75</p> <p>Note: This is the beginning of fractions. Fractions will be continued in Bundle #10.</p>	<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 10 Lessons 1-3, 5-7</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R.</u> Name the Parts of the Whole # 47 What Part of the Whole is Shaded? # 48 Color and Write the Fraction # 49 Modeling Fractions # 50</p>
<p>2.2 The student describes how fractions are used to name parts of whole objects or sets of objects.</p> <p>2.2B Use concrete models to represent and name fractional parts of a set of objects (with denominators of 12 or less).</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • use "out of" when distinguishing part versus the total set of equal parts • model with real world objects such as marbles, tiles, counters, etc. 		