

3rd Grade Math Curriculum Bundle # 7

Title	Suggested Dates
Multiplication/Area	January 5 – January 29 (18 days)



Big Idea/Enduring Understanding	Guiding Questions
Explore the relationship between multiplication and addition.	<p>How are multiplication and addition related?</p> <p>How can an array model be used to represent multiplication?</p> <p>How can multiplication be used in daily life?</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 resources. District resources are listed and categorized to indicate suggested uses. Any additional resources must be aligned with the TEKS.	
<p>3.4 The student recognizes and solves problems in multiplication and division situations.</p> <p>3.4A Learn and apply multiplication facts 12 x 12 using concrete models and objects.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • create various concrete models (including arrays-gridded and pictorial) to help learn multiplication facts • investigate the relationship of the dimensions (rows and columns) to the factors of a given number • distinguish between 3 x 8 and a 8 x 3 array (row vs column) • interpret multiplication as repeated addition or multiples • relate different models (such as 4x3 and 3x4 and 6 x 2 and 2 x 6 and 1 x 12 and 12 x 1) as equivalent products (different factors of the same product) • develop various multiplication strategies to help recall and apply multiplication facts 	<p><u>Math Investigations</u></p> <p><u>Equal Groups</u> Unit 5</p> <p>Investigation 1 Session 1 – 4 pages 24 – 42</p> <p>Investigation 2 Session 1 – 6 pages 48 – 78</p> <p>Investigation 3 Session 1 – 6 pages 82 – 110</p>	<p><u>Whole Group Lesson</u></p> <p><u>Envision</u> Topic 6 Lessons 1 – 4</p> <p><u>Small Group Lesson/Centers</u></p> <p><u>AIRR</u> Cups and Counters # 46 Groups Of #47 Say It With a Picture #48 Multiplication Bingo #49</p>

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<p>3.6 The student uses patterns to solve problems.</p> <p>3.6B Identify patterns in multiplication facts using concrete objects, pictorial models, or technology.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • Investigate various strategies to identify patterns in multiplication facts • recognizes relationship between skip counting and multiplication • understand the commutative property of multiplication • relates the patterns observed to repeated addition, multiples or a rule. • Identify a number pattern that begins with any multiple of a number (8, 12, 16...multiples of 4) • students need to be able to recognize various models of arrays, clusters, sets, and groups of objects that are represented in multiplication patterns 		<p><u>Whole Group Lesson</u></p> <p><u>Envision</u> Topic 7 Lessons 1 - 4</p> <p><u>Small Group Lesson/Centers</u></p> <p><u>AIRR</u> Fact Finders #68 Sticker Designs #69</p> <p><u>Kamico</u> Multiplication Shuffle Page 142</p> <p><u>Navigating Through Problem Solving and Reasoning</u> And We All Go Marching pg 12-18</p>
<p>3.6 The student uses patterns to solve problems.</p> <p>3.6C Identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$, $3 \times 2 = 6$, $6 \div 2 = 3$, $6 \div 3 = 2$.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • generate all members of a fact family given one fact of the family • recognize related multiplication and division facts in equations by completing the unknown factor, product, divisor, dividend, or quotient <ul style="list-style-type: none"> • $2 \times 3 = ?$ • $2 \times ? = 6$ • $? \div 3 = 2$ • $6 \div ? = 3$ • understand multiplication is for joining and division is for separating • recognizes that multiplication and division are inverse relationships • recognize that the commutative property works in multiplication but not division ($3 \times 4 = 12$, $4 \times 3 = 12$, $6 \div 3 = 2$, $3 \div 6 = 0.5$) • recognize the fact that does not belong within a family 		<p><u>Whole Group Lesson</u></p> <p><u>Envision</u> Topic 10 Lesson 4</p> <p><u>Small Group Lesson/Centers</u></p> <p><u>AIRR</u> Making Sets #70 For A Fact #71 Name the Missing Factors #72 How Many Ways To Say It #73</p> <p><u>Kamico</u> Find Your Family Page 148</p>

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<p>3.11 The student directly compares the attributes of length, area, weight/mass, and capacity, and uses comparative language, to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass.</p> <p>3.11C Use concrete and pictorial models of square units to determine the area of two-dimensional surfaces.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • identifies the correct tools to determine area • identifies correct labels using standard units - square units • identifies when to use area in a real life situation (ex: the amount of carpet need to cover the square dining room) • verbally describes how to calculate the area of a given object • calculates area of two-dimensional models of square units (ex: counting tiles) • identify two half units as a whole unit • Make sure students understand fractional parts and how they relate to the whole. • Give students opportunities to draw pictures of area, not just always find it from a given problem. 	<p><u>Math Investigations</u> <u>Perimeter, Angles, and Area</u> Unit 4</p> <p>Investigation 2 Session 1 – 6 pages 62 – 97</p>	<p><u>Whole Group Lesson</u></p> <p><u>Envision</u> Topic 17 Lessons 3 – 4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>AIRR</u> It's a Cover Up #103 Area and Perimeter of Irregular Shapes #104 Build the Shape, Find the Area #105 The Area Is #106 I've Got You Covered #10 Draw My Area #11</p> <p><u>Kamico</u> Area EnCOUNTER Page 229</p> <p><u>Navigating Through Problem Solving and Reasoning</u> Big Cover Up pg. 53-57</p> <p><u>Region 4: Making Connections with Measurement</u> page 67 – 85</p>
<p>3.15 The student communicates about Grade 3 mathematics using informal language.</p> <p>3.15B Relate informal language to mathematical language and symbols.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • drawing a multiplication model to help them write a number sentence to solve a problem 		<p><u>Whole Group Lesson</u></p> <p><u>Envision</u> Topic 9 Lesson 7</p> <p><u>Kamico</u> Triple Play page 339</p>