

## 4<sup>th</sup> Grade Math Curriculum Bundle # 5

<b>Title</b>		<b>Suggested Dates</b>
Division		November 16 – December 4 (12 days)

<b>Big Idea/Enduring Understanding</b>	<b>Guiding Questions</b>
<p>Division is used when grouping is required.</p> <p>The number of weight or mass units can be determined by reading a measuring tool.</p>	<p>What are various strategies for solving problems involving division (one digit and three digit dividend)?</p> <p>What is a remainder and how does it affect your answer?</p> <p>How do you check your answers in division?</p> <p>Why is it important to be able to estimate and measure weight and mass?</p> <p>What are the customary and metric units for weight and mass?</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.

<b>Knowledge &amp; Skills with Student Expectations</b>	<b>District Specificity/Examples</b>	<b>Suggested Resources</b> (See note above)	
<p><b>4.4 The student multiplies and divides to solve meaningful problems involving whole numbers.</b></p> <p>4.4A Model factors and products using arrays and area models.</p> <p><i>Teacher Note: This bundle continues the connection and relationship between multiplication and division. Think about modeling division using arrays for understanding division.</i></p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> <li>• create various concrete models of arrays                             <ul style="list-style-type: none"> <li>○ investigate the relationship of the dimensions (rows and columns) to the factors of a given number</li> </ul> </li> <li>• compare and create different arrays and area models (such as 4x3 and 3x4 and 6 x 2 and 2 x 6 and 1 x 12 and 12 x 1) as equivalence sets (different factors of the same product)</li> <li>• use correct terminology when describing models</li> <li>• verbally describes the relationship of division and multiplication in the models using correct terminology</li> </ul>	<p><b>Teachers will use Math Investigations as the main instructional resource.</b> District resources are listed and categorized to indicate suggested uses. Any additional resources must be aligned with the TEKS.</p> <p><b><u>Math Investigations</u></b></p> <p><u>Multiple Towers and Division Stories</u> Unit 3</p> <p>Investigations 2 Sessions 1 – 5 Pages 60 – 87</p>	<p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>AIRR</u> Beautiful Arrays #56 Which Answer is Correct? #58 Multiple or Divide #61 It's Your Choice #63</p>

## 4<sup>th</sup> Grade Math Curriculum Bundle # 5

<p><b>4.4 The student multiplies and divides to solve meaningful problems involving whole numbers.</b></p> <p>4.4C Recall and apply multiplication facts through 12 x 12.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> <li>• apply various multiplication strategies to help recall multiplication facts</li> <li>• apply multiplication facts with efficiency</li> </ul>		<p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>AIRR</u>            Nothing But the Facts #66            Can You Recall the Facts? #67            Choose the Related Facts #68            Solving for Facts #69</p> <p><u>Roads to Reasoning, Section 1-            Number Sense</u>            Pages 2 – 13</p>
<p><b>4.6 The student uses patterns in multiplication and division.</b></p> <p>4.6A Use patterns and relationships to develop strategies to remember basic multiplication and division facts such as the patterns in related multiplication and division number sentences (fact families) such as <math>9 \times 9 = 81</math> and <math>81 \div 9 = 9</math>.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> <li>• use patterns to develop strategies to remember basic multiplication and division facts (use of known fact families to develop and recall inverse relationships such as <math>9 \times 9 = 81</math> and <math>81 \div 9 = 9</math>)</li> <li>• use relationships to develop strategies to remember basic multiplication and division facts</li> <li>• understand multiplication is for combining and division is for separating</li> <li>• complete a given pattern (beginning, middle or extend)</li> </ul>		<p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>AIRR</u>            Make a True Number Sentence #103</p>
<p><b>4.4 The student multiplies and divides to solve meaningful problems involving whole numbers.</b></p> <p>4.4 E Use division to solve problems involving one-digit divisors (no more than one digit divisors and three digit dividends without technology).</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> <li>• understands that division represents sharing equally or forming equal groups</li> <li>• extract necessary information needed to solve the problem (ignoring extraneous information) and recognizes the operation(s) needed to solve and checks for reasonableness</li> <li>• use various strategies to solve problems involving division (one-digit divisor and three digit dividends)</li> <li>• solve word problems with and without remainders</li> <li>• demonstrate connection that multiplication and division are inverse operations</li> <li>• understand remainders must be less than the</li> </ul>		<p><b><u>Whole Group Lessons</u></b></p> <p><u>Envision</u>            Topic 8            Lesson 3</p> <p><u>Envision</u>            Topic 9            Lessons 2 – 5</p> <p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>Kamico</u>            Candy Company            Pages 134 – 140</p>

## 4<sup>th</sup> Grade Math Curriculum Bundle # 5

	<p>divisor- Ex. If the divisor is six, which numbers could be reasonable remainders?          Understand remainders in real life situations Ex. – Bob needed 22 cans of soda. If soda comes in packs of six, how many packs should he buy?</p>		
<p><b>4.11The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length, (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.</b></p> <p>4.11A Estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units, SI (metric) and customary.</p> <p>Teacher Note: Focus on metric and customary measurement for mass and weight. Continue focus into Bundle 6.</p> <p>*It is recommended that measurement be taught at least once a week.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> <li>• understand measure means to decide "what" is to be measured and select the appropriate unit</li> <li>• estimates length, area, capacity, weight/mass prior to any measuring</li> <li>• identify tools and units needed to measures length (perimeter), area, capacity, weight/mass and solve problems</li> <li>• use tools to measure and find perimeter and area</li> <li>• demonstrates measurement using a variety of different units and tools</li> <li>• measure using different starting point on measuring tools</li> <li>• identifies what concept (perimeter, area weight/mass) is being asked in a real life situations (ex: the amount of carpet needed to cover the square dining room floor, the length of the fence around the perimeter of a garden)</li> <li>• know abbreviations for all metric units</li> </ul>		<p><b><u>Whole Group Lessons</u></b></p> <p><u>Envisions</u>          Topic 17          Lessons 6 and 7</p> <p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>AIRR</u>          Guess the Weight- customary #139          Guess the Weight- metric #140          Customary Weight Benchmark #141          Metric Weigh Benchmark #142          Estimate My Weight #145          Estimate My Mass #146</p> <p>Teacher Note: Have students measure actual objects after estimating weight.</p>
<p><b>4.15 The student communicates about Grade 4 mathematics using informal language.</b></p> <p>4.15B Relate informal language to mathematical language and symbols.</p>	<p>Including but not limited to:</p> <p>Process skill to be addressed with relevant content.</p>		<p><b><u>Small Group Lessons/Centers</u></b></p> <p><u>Kamico</u>          Pass Play          Pages 486 – 497</p>