

4th Grade Math Curriculum Bundle # 4

Title	Suggested Dates
Multiplication continued/ Division	October 26 – November 13 (14 days)



Big Idea/Enduring Understanding	Guiding Questions
Multiplication and division are inverse operations.	<p>How do you know whether to multiply or divide in a given situation?</p> <p>What strategies could you use to mentally multiply and divide numbers by 10s and 100s?</p> <p>Can multiple strategies be used to find products of double digit numbers?</p> <p>How can multiplication and division be used to find area and perimeter of an object?</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)	
<p>4.6 The student uses patterns in multiplication and division.</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 $9 \times 9 = 81$ and $81 \div 9 = 9$.</p>	<p>Including but not limited to</p> <ul style="list-style-type: none"> • 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 $9 \times 9 = 81$ and $81 \div 9 = 9$) • use relationships to develop strategies to remember basic multiplication and division facts • understand multiplication is for combining and division is for separating • complete a given pattern (beginning, middle or extend) 	<p>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> <p><u>Math Investigations</u></p> <p><u>Multiple Towers and Division Stories</u> Unit 3</p> <p>Investigations 1 Sessions 1 – 4 Pages 28 – 50</p> <p>Teacher Note: Skip Investigations 2 of Multiple Towers and Division Stories. You will teach that in bundle 5.</p> <p><u>Multiple Towers and Division</u></p>	<p><u>Whole Group Lessons</u></p> <p><u>Envisions</u> Topic 4 Lessons 2 and 4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R.</u> Nothing but the Facts #66 It's a Cover Up #70 What's the Fact #71 Times 10 and 100 #108</p> <p><u>Kamico</u> Fact Family Feud</p>

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		<p><u>Stories</u> Unit 3</p> <p>Investigations 3 Sessions 1 – 3 Pages 96 – 115</p>	<p>Pages 154 – 163</p> <p><u>Navigating through Algebra</u> Hundred-Board Wonders pages 9 – 11</p>
<p>4.5 The student estimates to determine reasonable results.</p> <p>4.5B Use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • use various strategies to estimate solutions to multiplication and division of problems • emphasize estimating before solving problem situations • estimate solutions by using rounding in multiplication and division • to round to the largest place value for each number (Do not round single digits when multiplying or dividing) <ul style="list-style-type: none"> ▪ Ex: $56 \times 82 = 60 \times 80$ ▪ Ex: $84 \times 7 = 80 \times 7$ ▪ Ex: $362 \div 8 = 400 \div 8$ • estimate solutions by using compatible numbers in multiplication and division • numbers that are easy to compute mentally (do not always end in 0) <ul style="list-style-type: none"> ▪ Ex. 92×12 could be 92×10 or 90×10 or 90×12 	<p><u>Multiple Towers and Division</u> <u>Stories</u> Unit 3</p> <p>Investigations 4 Sessions 2 – 3 pages 129 – 143</p> <p><u>How Many Packages? How Many Groups?</u> Unit 8</p>	<p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Round and Round and Round We Go Pages 151 – 153</p> <p><u>Navigating through Algebra</u> Calculator Patterns Pages 15 – 17 I Spy Patterns Pages 48 – 50</p>
<p>4.6The student uses patterns in multiplication and division.</p> <p>4.6B Use patterns to multiply by 10 and 100.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • generate patterns of multiplying by 10 and 100 in a variety of ways (such as vertical and horizontal tables, lists, use calculator etc) • describe and generalize the pattern of multiplying by 10 and 100 • use knowledge of patterns to solve multiplication of unknown products such as 989×100 • complete the missing number in a number sentence, table, etc 	<p>Investigations 1 Sessions 2 – 4 pages 32 -44</p>	<p><u>Whole Group Lessons</u></p> <p><u>Envisions</u> Topic 5 Lessons 1 – 4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> How Many Zeros? Pages 164 – 176</p>

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<p>4.4 The student multiplies and divides to solve meaningful problems involving whole numbers.</p> <p>4.4D Use multiplication to solve problems (no more than two digits, times two digits, without technology).</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • apply multiplication (up to 2 digits by 2 digits) to problem situations • extract necessary information needed to solve multi-step problems (ignoring extraneous information) and recognizes the operation(s) needed to solve and checks for reasonableness • demonstrate multiplication problem solving methods such as partial product , lattice, and area • apply understanding of concepts such as dozen (12), one week (7 days) half dozen (6) 		<p><u>Whole Group Lessons</u></p> <p><u>Envisions</u> Topic 6 Lesson 3 and 4</p> <p><u>Envisions</u> Topic 7 Lessons 1 – 4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Funny Multiplication Pages 130 – 133</p> <p><u>Region IV Prep</u> Multiplication Lessons, pages 66 – 71</p> <p>District DVD on conceptual methods to teach double digit multiplication. Contact Elementary Math Curriculum Department for your campus copy.</p>
<p>4.11 The 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.</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 area and perimeter.</p> <p>*It is recommended that measurement be taught at</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • understand measure means to decide "what" is to be measured and select the appropriate unit • estimates length, area • identify tools and units needed to measures length (perimeter), area, and solve problems • use tools to measure and find perimeter and area • demonstrates measurement using a variety of different units and tools • measure using different starting point on measuring tools • identifies what concept (perimeter, area, is 		<p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Measure Marathon game previously mentioned</p> <p><u>Region IV Prep</u> Length, Perimeter, and Area Lessons pages 156 – 163</p>

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<p>least once a week.</p>	<p>being asked in a real life situations (ex: the amount of carpet needed to cover the square dining room floor)</p> <ul style="list-style-type: none"> • know abbreviations for all metric units 		
<p>4.14 The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>4.14C Select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • Process skill to be addressed with relevant content. 		<p><u>Whole Group Lessons</u></p> <p><u>Envisions</u> Topic 2 Lesson 10</p> <p><u>Envisions</u> Topic 3 Lesson 8</p> <p><u>Envisions</u> Topic 4 Lesson 5</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Stand Up For Your Strategy pages 474 – 485</p>