

4th Grade Math Curriculum Bundle # 7

Title	Suggested Dates
Fractions and Decimals	January 5 – January 29 (18 days)



Big Idea/Enduring Understanding	Guiding Questions
There is a need to be able to identify, read, write, and compare numbers beyond whole numbers.	<p>What is the relationship between a fraction and decimal as represented on a number line or in a pictorial model?</p> <p>How could you use a pictorial model to represent both a mixed number and an improper fraction?</p> <p>How can parts of a whole be useful in measuring length?</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>4.2 The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>4.2A Use concrete objects and pictorial models to generate equivalent fractions.</p> <p>Teacher Notes: January 19 Holiday Review identifying fractions using denominators and numerators.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • analyze a concrete model(s) and pictorial models to generate an equivalent Fraction • generate a model of a fraction using equivalence Ex: $12/16 = 9/12$ • analyze a concrete model(s) and pictorial models to recognize non equivalent fractions. Ex. Which of the following is not an equivalent fraction? 	<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>Fraction Cards and Decimal Squares</u> Unit 6</p> <p>Investigations 1 Session 1 – 4 pages 24 – 46</p> <p><u>Fraction Cards and Decimal Squares</u> Unit 6</p> <p>Investigations 2</p>	<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 10 Lesson 1, 3, 4, and 5</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R</u> Are They Equal #21 Equivalence Means They are the Same #23 Concentrate on Equivalence#24</p> <p><u>Kamico</u> Fraction Matchin’</p>

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<p>4.2 The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>4.2C Compare and order fractions using concrete objects and pictorial models.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • analyze concrete objects and pictorial models (whole objects or sets of objects) to compare fractional parts using comparison terminology (less than one whole or equal to one whole or greater than one whole) • analyze concrete objects and pictorial models (whole objects or sets of objects) to compare fractional parts using comparison symbols (less than (<), equal to (=), greater than (>)) • determine the order of fractions with concrete objects or pictorials. 	<p>Sessions 1 – 5 pages 68 – 93</p> <p>Teacher Note: Use Envisions and other 'Fraction' resources before continuing with Investigations 3. It mainly works with decimals.</p> <p><u>Fraction Cards and Decimal Squares</u> Unit 6</p> <p>Investigations 3 Sessions 1 – 5 pages 104 – 131</p>	<p>Pages 19 – 26</p> <p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 11 Lessons 2 – 4</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>A.I.R.R</u> Which is Greater #36</p> <p><u>Kamico</u> Fraction Fever pages 43 – 53</p>
<p>4.2 The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>4.2B Model fraction quantities greater than one using concrete objects and pictorial models.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • recognize fractions are represented by equal size parts of a whole or by a set of objects • model fraction quantities greater than one (improper fractions) using concrete objects • model fraction quantities greater than one (improper fractions) using pictorial models • describe the difference between proper and improper fractions • use "out of" when distinguishing part vs whole (1 out of 2 equal parts) • describe fractional parts using name and symbols in multiple ways • Ex: 7/4 (improper) • use concrete and pictorial models to associate mixed numbers with improper fractions • use appropriate language to describe fractions such as one-half and two thirds 		<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 11 Lesson 1</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>AIRR</u> Mix It & Model It #28</p> <p><u>Kamico</u> Roll With It Pages 27 – 42</p> <p><u>Region IV Prep</u> Fraction Lessons Pages 26 – 37</p>

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<p>4.1 The student uses place value to represent whole numbers and decimals.</p> <p>4.1B Use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects • use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using pictorial models • distinguish between place and value such as 2.75, 5 is in the hundredths place and the value is .05 or 5 hundredths • compare and order whole numbers and decimals using symbols and words • appropriately uses the word “and” to represent the decimal • changes decimal numeral form into word form and word form to numeral representation • create a number smaller, in-between, or larger than given numbers. 		<p><u>Whole Group Lessons</u></p> <p><u>Envisions</u> Topic 1 Lessons 4 – 6</p>
<p>4.10 The student recognizes the connection between numbers and their properties and points on a number line.</p> <p>4.10A Locate and name points on a <u>number line</u> using whole numbers, fractions such as halves and fourths, and decimals such as tenths.</p> <p><i>Teacher Note: Students should be able to create a number line, identify benchmark numbers, and locate fractional parts between benchmark numbers.</i></p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • determine a strategy for locating and naming of whole numbers and fractional values (halves and fourths) and decimals (tenths such as .5) • locate and name points on a number line that may or may not begin with zero • locate and name points on a number line according to increments other than 1 (think skip counting) ex: (8, 15, ?, 29) • demonstrate an understanding of the relationship between the whole number and a fraction on a number line and ruler (customary and metric) • demonstrate an understanding of whole numbers on a number line with relationship to the vertical number line on the thermometer, the circular number line on a clock, etc. 		<p><u>Whole Group Lessons</u></p> <p><u>Envision</u> Topic 13 Lessons 1 and 3</p> <p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Point the Way Alien Pages 242 – 278</p>

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<p>4.2 The student describes and compares fractional parts of whole objects or sets of objects.</p> <p>4.2D Relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • relate decimals to fractions using concrete objects and pictorial models • relate fractions to decimals using concrete objects and pictorial models • generalize equivalence relationship using models <ul style="list-style-type: none"> ○ Ex: 0.01 to 1/100 ○ Ex: 30/100 to 3/10 to .3 		<p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Fraction and Decimals Pages 54 – 64</p>
<p>4.3 The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.</p> <p>4.3B Add and subtract decimals to the hundredths place using concrete objects and pictorial models.</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • model and explain addition and subtraction problems using a variety of concrete objects and pictorial models including money 		<p><u>Small Group Lessons/Centers</u></p> <p><u>AIRR</u> Add/Subtract with Decimals #50/51</p> <p><u>Kamico</u> Decimal Delirium (addition and subtraction) Pages 79 – 96</p>
<p>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.</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 length and measuring using different starting points (Ex: Measure an object not starting at zero.). *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"> • understand measure means to decide "what" is to be measured and select the appropriate unit • estimates length, prior to any measuring • identify tools and units needed to measures length (perimeter), • use tools to measure and find perimeter • demonstrates measurement using a variety of different units and tools • measure using different starting point on measuring tools • identifies what concept (perimeter, capacity, is being asked in a real life situations (the length of a fence around the perimeter of a garden) • know abbreviations for all metric units 		<p><u>Small Group Lessons/Centers</u></p> <p><u>AIRR</u> Understanding the mathematics Chart Ruler #153 Measuring in Centimeters #155</p>
<p>4.16 The student uses logical reasoning to make sense of his or her world.</p> <p>4.16A Make generalizations from patterns or sets of</p>	<p>Including but not limited to:</p> <ul style="list-style-type: none"> • Process skill to be addressed with relevant content. 		<p><u>Small Group Lessons/Centers</u></p> <p><u>Kamico</u> Robot Factory</p>

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examples and non-examples.			Pages 498 – 506
<p>4.16 The student uses logical reasoning to make sense of his or her world.</p> <p>4.16B Justify why an answer is reasonable and explain the solution process.</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 5</p> <p><u>Envisions</u> Topic 5 Lesson 4</p>