


6th Grade Math Curriculum Bundle # 5

Title		Suggested Dates
Fractions and Decimals, and Percents		November 16 – December 4 (12 days)

Big Idea/Enduring Understanding	Guiding Questions
Part-whole relationships can be expressed in equivalent fraction, decimal, and percent forms.	<ol style="list-style-type: none"> 1. Describe how area (tenths, hundredths, thousandths, etc.) and number line models can be used to express decimal values. 2. How can fractional benchmarks be used to determine the approximate value of a decimal or a percent? 3. How does decimal place value (tenths, hundredths, etc...) connect to equivalent fractions and percents? 4. Describe the ways in which you can express values greater than 1 whole. 5. How do you decide which form of a rational number is best to use in a situation?
Numerical data in the form of rational numbers can be graphed on a number line and/or on a coordinate plane.	<ol style="list-style-type: none"> 1. How is graphing an ordered pair of rational numbers similar or different than graphing an ordered pair of whole numbers? 2. How does the size of the unit on the scale of a graph help to determine placement of data points?

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>6.1 Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</p> <p>6.1A compare and order non-negative rational numbers</p> <p><i>Note: All forms of rational numbers, introducing decimals</i></p>	<ul style="list-style-type: none"> • use the following forms of non-negative rational numbers: <ul style="list-style-type: none"> ○ fractions with like & unlike denominators - unit, proper, improper, mixed numbers ○ decimals • arrange fractions or decimals from “least to greatest” and “greatest to least” <ul style="list-style-type: none"> ○ including speed “fastest/slowest” • use a variety of forms in real world applications • arrange on a number line (fractions and decimals) • inequalities (<, >, =) • tables 	<p>CMP2 Bits and Pieces I Pearson Investigations 3, 4</p>	<p>PH: Lessons 1-6, 4-8, 4-9</p> <p>Region 4 Accelerated Curriculum 6: Unit 2 lesson 2 pgs 54-59</p> <p>AIRR: Activity 35</p>

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<p>6.1 Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</p> <p>6.1B generate equivalent forms of rational numbers including whole numbers, fractions, and decimals</p> <p>Note: All forms of rational numbers, decimals. Connect fraction benchmarks to decimal benchmarks.</p>	<ul style="list-style-type: none"> • use the following forms of rational numbers and convert between equivalent forms of: <ul style="list-style-type: none"> ○ fractions ○ mixed numbers, proper and improper fractions ○ decimals (repeating, terminating, non-terminating) • use a variety of forms in real world applications • identify placement of fractions and decimals related to benchmarks (0, .25, .5, .75, 1) 		<p>PH: Lessons 4-5, 4-6, 4-8, 4-9, 7-6</p> <p>Kamico: “Changing Times”</p> <p>Region 4 Closing the Distance: Lesson 1 pgs 3-18, Lesson 2 pgs 19-38</p>
<p>6.3 Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.</p> <p>6.3B represent ratios and percents with concrete models, fractions, and decimals</p> <p>Note: Teacher may need to model/modify or provide supplemental materials to emphasize percent bars before proceeding to Investigation 4.2</p>	<ul style="list-style-type: none"> • conversions of fractions, decimals and percents between all forms • simplify ratios expressed with fractions • represent ratios as proper or improper fractions, decimals, and percents • use percents over and under 100 • use pictures and models to express ratios • stress the use of benchmarks; $1/10$, $1/5$, $1/4$, $1/3$, $1/2$ • use models of length and hands-on measurements to express ratios using metric and customary units 		<p>PH: Lessons 7-6</p> <p>AIRR: “Smarty Numbers” Activity 107-122</p> <p>TEX Team Numerical Reasoning: “Percent Benchmarks”</p> <p>TEX Team Proportionality: “Reflect & Apply”</p> <p>Understanding Math Understanding Percent: Topic 1</p>
<p>6.7 Geometry and spatial reasoning. The student uses coordinate geometry to identify location in two dimensions.</p> <p>6.7 The student is expected to locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers.</p> <p>Note: Scales using rational numbers</p>	<ul style="list-style-type: none"> • use only first quadrant • use a variety of grids (<u>using different incremental units</u>) • locate points using fraction and decimal coordinates 		<p>PH: Lesson 11-8</p> <p>Region IV: pp. 28-29</p> <p>Kamico I (2004): pp. 287-290</p> <p>AIRR: Activity 173 (revisited from Bundle #1)</p>