

PAP 7th Grade Curriculum Bundle #7

Title	Suggested Dates
Ratios, Unit Rates, Percent Applications, begin Measurement Conversions	January 5 – January 29 (18 days)

Big Idea/Enduring Understanding	Guiding Questions
The relationship between some measurable quantity and one unit of another is called a unit rate.	1. Why are unit rates needed to make effective comparisons?
Percents are used in the real-world to describe part of a whole. One percent is equal to one one-hundredth (1/100) of a whole.	1. Why are percents used in store sales signs rather than fractions or decimals? 2. How can you use estimation and mental math to calculate a 20% tip? 3. What methods can be used to determine the percent increase or decrease of a quantity?
Relationships between quantities (part-to-part and part-to-whole) can be expressed many ways.	1. How can you choose an appropriate method to make comparisons among quantities using ratios, percents, fractions, rates, or differences? 2. How is being able to express a numerical relationship as a ratio helpful/useful?
Different societies use different measurement systems and it is necessary to convert between and within customary and metric systems.	1. How do you convert metric units to customary units and why is it useful? 2. How are measurement conversions related to ratios and proportionality?

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>7.3 Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.</p> <p>7.3B estimate and find solutions to application problems involving proportional relationships such as similarity, scaling, unit costs, and related measurement units</p> <p><i>Note: Focus on ratios, unit rate, percent applications. Similarity will be covered in bundle 8.</i></p>	<ul style="list-style-type: none"> • use data in a table • use unit price to determine best buy • include real world situations such as tax, sale price, % change, mark-up/discount, commission 	<p>CMP2 Comparing and Scaling Pearson Investigations 1.1, 1.3, 2, 3.2, 4.1</p>	<p>PH Textbook (8th) Lesson 4-3</p> <p>AIRR 7th Grade Activity #147, 149</p> <p>Region IV Unit Rate Lesson</p> <p>LTF Interpreting Rate Graphs</p>

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			<p>(updated version on-line) pg 54-57 Average Rate of Change pg 204-209 (updated version on-line) The Round Trip (new – available on-line) A New Home Run for Rami (new-available on-line)</p> <p>Closing the Distance 7th Lesson 7: Proportions pg. 107-124</p>
<p>8.2 Number, operation, and quantitative reasoning. The student selects and uses appropriate operations to solve problems and justify solutions.</p> <p>8.2D use multiplication by a given constant factor (including unit rate) to represent and solve proportional relationships including conversions between measurement systems.</p> <p>Note: Measurement conversions between systems is new this year.</p> <p>Note: Will be repeated in bundle 9 with applications of similarity of 2-D figures. Introduce conversions here with proportions.</p>	<ul style="list-style-type: none"> • utilize customary and metric conversions within a system • select/write equations that represent a situation • include real world situations such as speed, density, price, and recipes • discuss appropriate labels and units 		<p>LTF Metric and Customary (English) Measurements pg 194-203</p> <p>NCTM: Navigation Number and Operation Exchanging Currency Teacher notes pg 90-92 Student notes pg 133</p> <p>Prentice Hall 4-2 Converting Units pg 166</p> <p>NCTM: Navigating through Measurement Pg 11-21, 67-69, 76-78,86-89, 101-104, 134</p>
<p>7.3 Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.</p> <p>7.3A estimate and find solutions to application problems involving percent</p> <p>Note: Include opportunities where the problem requires students to work through several smaller separate problems and then compare the results of each of those in order to draw conclusions</p>	<ul style="list-style-type: none"> • solve for percent of a number (tax, discount, tip, rebate, commission) • use proportions and emphasize percent over 100 • estimate as needed before computing • Recognize benchmark percents (for example: 10%, 20%, 25%, 50%...) • understand fractional equivalents for percents • identify and use part and whole • use percent bar representation • simple interest • work backwards and forward – given numbers 	<p>CMP2 Bits and Pieces III Pearson Investigation 4, 5</p>	<p>PH Textbook (8th grade) Chapter 5-3 thru 5-7</p> <p>Understanding Math Understanding Percent: Topic 5</p> <p>Closing the Distance 7th Lesson 8: Percents pg. 125-142</p>

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Note: Include problems looking for the part included and the part “NOT” included.	find the percent, given percent find the numbers		
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<p>8.3 Patterns, relationships, and algebraic thinking. The student identifies proportional or non-proportional linear relationships in problem situations and solves problems.</p> <p>8.3B estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates</p> <p>Note: Focus on percent applications and rates. Similarity will be covered in bundle 8.</p>	<ul style="list-style-type: none"> • include real world situations such as tax, sale price, % change, mark-up/discount, commission, simple interest 		<p>AIRR 8th Grade Activity #86-87, 90-105</p> <p>Accelerated Curriculum 8th Unit 2 Lesson 1 Unit 2 Lesson 2</p> <p>Closing the Distance 8th Lesson 4: Percents pg. 49-66</p> <p>LTF</p> <p>Unit 3 Diagnostic</p>
<p>8.12 Probability and statistics. The student uses statistical procedures to describe data.</p> <p>8.12C select and use an appropriate representation for presenting and displaying relationships among collected data, including line plots, line graphs, stem and leaf plots, circle graphs, bar graphs, box and whisker plots, histograms, and Venn diagrams, with and without the use of technology.</p> <p>Note: Circle Graphs only in this bundle</p>	<ul style="list-style-type: none"> • Given a circle graph and the percents for each sector, calculate the quantity (data) represented by each sector • Calculate the percents and degree measures for sectors based on data • Create circle graphs 		<p>AIRR 8th grade Activity #286</p> <p>PH Textbook (8th) 9.8</p>