

Pre-AP 6th Grade Math Curriculum Bundle # 9

Title	Suggested Dates
Measurement and Geometry	February 22 – March 12 (15 days)

Big Idea/Enduring Understanding	Guiding Questions
In an algebraic relationship one quantity changes in relation to another and can be described using words, symbols, numbers, tables, and graphs.	<ol style="list-style-type: none"> 1. Given a rule, generate a table for five corresponding input and output values, and vice versa. 2. Given any metric or customary unit conversion, generate a table of values and graph the data.
Geometric figures are classified by their attributes.	<ol style="list-style-type: none"> 1. In what ways can a triangle be classified based on the combination of the sides and angles? 2. What is a set of possible angle measures for an obtuse-isosceles triangle? 3. What is a set of possible angle measures for a parallelogram that is not a rectangle?

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>6.4 Patterns, relationships, and algebraic thinking. The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.</p> <p>6.4A use tables and symbols to represent and describe proportional and other relationships such as those involving conversions, arithmetic sequences (with a constant rate of change), perimeter and area</p> <p>Note: Conversions only</p>	<ul style="list-style-type: none"> • use metric and customary conversions 		<p>PH: Lessons 3-1, 3-2, 3-3</p> <p>Text Team Algebraic Reasoning: “Stretching Sequence”</p>

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<p>7.4 Patterns, relationships, and algebraic thinking. The student represents a relationship in numerical, geometric, verbal, and symbolic form.</p> <p>7.4A generate formulas involving unit conversions, perimeter, area, circumference, volume, and scaling</p> <p><i>Note: Conversions only</i></p>			<p>4 Corners Models</p>
<p>7.4 Patterns, relationships, and algebraic thinking. The student represents a relationship in numerical, geometric, verbal, and symbolic form.</p> <p>7.4B graph data to demonstrate relationships in familiar concepts such as conversions, perimeter, area, circumference, volume, and scaling</p> <p><i>Note: Conversions only</i></p>	<ul style="list-style-type: none"> • extract data from tables and graphs • analyze data from tables and graphs to determine relationships 		<p>AIRR 7th Grade Activity #164 Graphing Relationships Activity #165 Graph the Data Best Represents the Data Activity #167 Which Relationship Matches the Data?</p>
<p>6.8 Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles.</p> <p>6.8D convert measures within the same measurement system (customary and metric) based on relationships between units.</p>	<ul style="list-style-type: none"> • all measures on the mathematics chart • use given dimensions of a figure to solve problems • use proportional relationships • all measures of time on mathematics chart 		<p>PH: Lessons 6-7, 9-2</p> <p>LTF Unit 4 Diagnostic</p>
<p>6.6 Geometry and spatial reasoning. The student uses geometric vocabulary to describe angles, polygons, and circles.</p> <p>6.6A use angle measurements to classify angles as acute, obtuse, or right</p>	<ul style="list-style-type: none"> • Name angles by 3 points and/or a given vertex • Determine angle classifications from written descriptions and visual images. 	<p>CMP2 Shapes and Designs Pearson Investigations 1, 2, 3 (Combine needed parts from all to shorten) Emphasize ACE Questions</p>	<p>PH: Lesson 8-2</p>
<p>7.6 Geometry and spatial reasoning. The student compares and classifies two- and three-dimensional figures using geometric vocabulary and properties.</p> <p>7.6A use angle measurements to classify pairs of angles as complementary or supplementary</p>	<ul style="list-style-type: none"> • use diagrams with multiple angles, with and without protractors • find the complement or supplement to an angle measure • use complementary or supplementary angle to find other angles in the figure • use angle notations involving 3-letters and angle symbol “\sphericalangle” 	<p>Note: Discuss/pull in 7th Grade concepts within this resource</p>	<p>PH Textbook: Chapter 8.3</p> <p>PH Textbook – 7th Grade Chapter 7.2</p> <p>Kamico 7th Grade (Book 2) Activity p. 9 “The Right Angle”</p> <p>AIRR 7th Grade What’s my complement or</p>

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			supplement (Activity 202) Understanding Math Understanding Measurement and Geometry: Topic 5
<p>6.6 Geometry and spatial reasoning. The student uses geometric vocabulary to describe angles, polygons, and circles.</p> <p>6.6B identify relationships involving angles in triangles and quadrilaterals</p>	<ul style="list-style-type: none"> • find the sum of degrees in a triangle and a quadrilateral • use of 'hash marks' to describe congruent sides • solve problems involving angle sums of triangles and quadrilaterals involving the side/angle relationship (i.e obtuse isosceles triangle only given the obtuse angle) • problems in which only one angle of a parallelogram is given • right angle symbol • identify triangles and quadrilaterals by angles and sides 		<p>PH: Lessons 8-4, 8-5</p> <p>Brainpop.com Types of Triangles</p> <p>LTF Angles of a Regular Polygon (new – available on-line)</p>
<p>7.6 Geometry and spatial reasoning. The student compares and classifies two- and three-dimensional figures using geometric vocabulary and properties.</p> <p>7.6B use properties to classify triangles and quadrilaterals</p>	<ul style="list-style-type: none"> • connect to models of triangles and quadrilaterals • use sides and angles to classify • use the sum of degrees in a triangle and quadrilateral to solve problems • use shapes that are embedded in a picture (not an isolated given shape) 		<p>PH Textbook – 7th Grade Chapter 7.3, 7.4</p> <p>Kamico 7th Grade (Book 2) Activity p. 25 “That Figures”</p> <p>BrainPop.com Types of Triangles</p> <p>Dessie Material Triangle Vocabulary</p>
<p>7.6 Geometry and spatial reasoning. The student compares and classifies two- and three-dimensional figures using geometric vocabulary and properties.</p> <p>7.6C use properties to classify three-dimensional figures, including pyramids, cones, prisms, and cylinders</p> <p>Note: introduce nets</p>	<ul style="list-style-type: none"> • connect to models of three-dimensional figures • use sides, bases and angles to classify • use nets to classify three-dimensional figures 		<p>PH Textbook – 7th Grade Chapter 8.10</p> <p>Kamico 7th Grade (Book 2) Activity p. 30 “3-D Concentration”</p> <p>AIRR 7th Grade Activity #219 Name that Solid</p>

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<p>6.8 Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles.</p> <p>6.8A estimate measurements (including circumference) and evaluate reasonableness of results</p> <p>Note: Circumference will come later</p>	<ul style="list-style-type: none"> • find length and perimeter in metric and customary units • find area in metric and customary units triangles, quadrilaterals • use various units of time, including elapsed time • use the conversions and formulas on the mathematics chart to solve problems • estimate before calculations • evaluate reasonableness of answers • recognize units related to area and perimeter • given area/perimeter find the missing dimension • use overestimation and underestimation to determine a reasonable range 		<p>PH: Lessons 5-1, 6-6, 9-1, 9-5</p>
<p>6.8 Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles.</p> <p>6.8C measure angles</p>	<ul style="list-style-type: none"> • use a pictorial representation of a protractor and use an actual protractor to measure and construct angles to the nearest degree • measure angles in a given geometric figure • understand angle symbols • measure angles where the rays do not lie on zero degree as shown on the pictorial protractor • use other tools to measure angles (corner paper) • use angle classifications and benchmarks (0 degrees, 90 degrees, 45 degrees) to estimate and determine the reasonableness of angle measurements when reading a protractor • finding the missing angle measure of an angle in a triangle or parallelogram other than the one pictured with a protractor 		<p>PH: Lessons 8-2</p> <p>Middle School Pizzaz: D26</p> <p>LTF: The Shortest Route p. 104</p>
<p>6.13/7.15 Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.</p> <p>6.13A, 7.15A make conjectures from patterns or sets of examples and nonexamples</p>	<ul style="list-style-type: none"> • process skill to be addressed with relevant content 		<p>PH: Lesson 3-1</p> <p>Text Team Algebraic Reasoning: “Stretching Sequences”</p>
<p>6.13/7.15 Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.</p> <p>6.13B, 7.15B validate his/her conclusions using mathematical properties and relationships</p>	<ul style="list-style-type: none"> • process skill to be addressed with relevant content 		<p>PH: Lessons 1-3, 4-1, 8-3, 8-4, 8-5, 9-5</p>