

	Standards	Lessons	Textbook Correlation
	<p><u>CCSS.ELA-Literacy.RI.9-10.1</u> Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p><u>CCSS.Math.Content.HSG-CO.2</u> Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).</p> <p><u>CCSS.Math.Content.HSG-CO.4</u> Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.</p> <p><u>CCSS.Math.Content.HSG-CO.5</u> Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.</p> <p>*<u>CCSS.Math.Content.HSG-CO.6</u> Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.</p> <p>*<u>CCSS.Math.Content.HSG-CO.7</u> Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.</p> <p>*<u>CCSS.Math.Content.HSG-CO.8</u> Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.</p> <p>*<u>CCSS.Math.Content.HSG-SRT.2</u> Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.</p> <p>*<u>CCSS.Math.Content.HSG-SRT.3</u> Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.</p>	<p>[12 days]</p>	<p>Pearson Chapter 9</p>
	<p><u>CCSS.ELA-Literacy.RI.9-10.1</u> Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>*<u>CCSS.Math.Content.HSG-GPE.7</u> Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.*</p> <p>*<u>CCSS.Math.Content.HSG-MG.1</u> Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*</p>	<p>[13 days]</p>	<p>Pearson Chapter 10: Do Not Teach 10-5</p>

	<p>*CCSS.Math.Content.HSG-CO.1 Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.</p> <p>CCSS.Math.Content.HSG-CO.13 Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.</p> <p>CCSS.Math.Content.HSG-C.1 Prove that all circles are similar.</p> <p>CCSS.Math.Content.HSG-C.2 Identify and describe relationships among inscribed angles, radii, and chords. <i>Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.</i></p> <p>CCSS.Math.Content.HSG-C.5 Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.</p>		
	<p>CCSS.ELA-Literacy.RI.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>CCSS.Math.Content.HSG-GMD.1 Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. <i>Use dissection arguments, Cavalieri's principle, and informal limit arguments.</i></p> <p>CCSS.Math.Content.HSG-GMD.2 (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.</p> <p>CCSS.Math.Content.HSG-GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.*</p> <p>CCSS.Math.Content.HSG-GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.</p> <p>*CCSS.Math.Content.HSG-MG.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*</p> <p>*CCSS.Math.Content.HSG-MG.2 Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*</p>	<p>[16 days]</p>	<p>Pearson Chapter 11</p>

Unit 8: Transformations

Unit 9: Area

Unit 10: Surface Area & Volume

Mathematical Practices:

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Learning Statements:

- I can identify rigid motions.
 - I can find translation images of figures.
 - I can find reflection images of figures.
 - I can draw and identify rotation images of figures.
 - I can find compositions of isometries, including glide reflections.
 - I can classify isometries.
 - I can identify congruence transformations.
 - I can prove triangle congruence using isometries.
 - I can understand dilation images of figures.
 - I can identify similarity transformations and verify properties of similarity.
 - I can find the area of parallelograms and triangles.
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- I can find the area of a trapezoid, rhombus, or kite.
 - I can find the area of a regular polygon.
 - I can find the perimeters and areas of similar polygons.
 - I can find the measures of central angles and arcs.
 - I can find the circumference and arc length.
 - I can find the areas of circles, sectors, and segments of circles.
 - I can use segment and area models to find the probabilities of events.
 - I can recognize polyhedrons and their parts.
 - I can visualize cross sections of space figures.
 - I can find the surface area of a prism and a cylinder.
 - I can find the surface area of a pyramid and a cone.
 - I can find the volume of a prism and the volume of a cylinder.
 - I can find the volume of a pyramid and of a cone.
 - I can find the surface area and volume of a sphere.
 - I can compare and find the areas and volumes of similar solids.
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