



Hattiesburg Public School District

Grade 8 Mathematics Units

2015 – 2016



Unit 7: Shape and Form	Time Frame: 5 Days (April 11 – 15)
Content Standards	Standards for Mathematical Practice
Major Standards	<p>(1) Make sense of problems and persevere in solving them.</p> <p>(2) Reason abstractly and quantitatively.</p> <p>(3) Construct viable arguments and critique the reasoning of others.</p> <p>(4) Model with mathematics.</p> <p>(5) Use appropriate tools strategically.</p> <p>(6) Attend to precision.</p> <p>(7) Look for and make use of structure.</p> <p>(8) Look for and express regularity in repeated reasoning.</p> <p>8.G.5 – MP 3, 4, 5, 6, 7</p> <p>8.G.6 – MP 3, 4, 6, 7</p> <p>8.G.7 – MP 1, 2, 4, 5, 6, 7</p> <p>8.G.8 – MP 1, 2, 4, 5, 6, 7</p> <p>8.G.9 – MP 1, 2, 3, 4, 5, 6, 7, 8</p>
<p>8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. <i>For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.</i></p> <p>8.G.6 Explain a proof of the Pythagorean Theorem and its converse.</p> <p>8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.</p> <p>8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.</p>	
Supporting Standards	
Additional Standards	
<p>8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.</p>	
Pre-requisite Standards	



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8.G.5

- Use skills that involve comparing and classifying angles.
- Understand how to find angle complements and supplements.
- Know basic terms of geometry (parallel, angle, etc.)
- Identify, classify, compare, and observe data.
- Know properties of polygons.

8.G.6

- Classify triangles (right, isosceles, equilateral, scalene).
- Identify triangle parts.
- Classify angles.
- Square numbers and find square roots of numbers.

8.G.7

- Classify triangles (right, isosceles, equilateral, scalene).
- Identify triangle parts.
- Classify angles.
- Recognize square numbers and find square roots of numbers.

8.G.8

- Classify triangles (right, isosceles, equilateral, scalene).
- Identify triangle parts.
- Classify angles.
- Recognize square numbers and find square roots of numbers.

8.G.9

- Identify various polygons in 2-D and 3-D and calculate their perimeter and area.
- Perform rational number operations.



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Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
<p>Lesson Topic Angle Relationships (Identify, Classify and Compare)</p> <p>Standard Ref 8.G.5, 8.G.6, 8.G.7, 8.G.8</p> <p>Resource/Strategy https://docs.google.com/document/d/1uM3pZuKUJugPiGKTLbQXvJAPt_qod2PYicWIKkUapM8/edit</p>	<p>Lesson Topic Find Angle Measurements Using Transversals.</p> <p>Standard Ref 8.G.5</p> <p>Resource/Strategy https://docs.google.com/document/d/1uM3pZuKUJugPiGKTLbQXvJAPt_qod2PYicWIKkUapM8/edit</p>	<p>Lesson Topic Square Numbers/Square Roots of Numbers</p> <p>Standard Ref 8.G.6, 8.G.7, 8.G.8</p> <p>Resource/Strategy https://docs.google.com/document/d/1uM3pZuKUJugPiGKTLbQXvJAPt_qod2PYicWIKkUapM8/edit</p>	<p>Lesson Topic Identify and Classify Triangles</p> <p>Standard Ref 8.G.6, 8.G.7, 8.G.8</p> <p>Resource/Strategy https://docs.google.com/document/d/1uM3pZuKUJugPiGKTLbQXvJAPt_qod2PYicWIKkUapM8/edit</p>	<p>Lesson Topic Identify Various Polygons in 2-D and 3-D and Calculate Their Perimeter and Area.</p> <p>Standard Ref 8.G.9</p> <p>Resource/Strategy https://docs.google.com/document/d/1uM3pZuKUJugPiGKTLbQXvJAPt_qod2PYicWIKkUapM8/edit</p>
Lesson 6	Lesson 7	Lesson 8	Lesson 9	
<p>Lesson Topic Explain a Proof of the Pythagorean Theorem and its Converse.</p> <p>Standard Ref 8.G.6, 8.G.7, 8.G.8</p>	<p>Lesson Topic Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.</p>	<p>Lesson Topic Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.</p> <p>Standard Ref</p>	<p>Lesson Topic Volume Formulas of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.</p> <p>Standard Ref</p>	



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