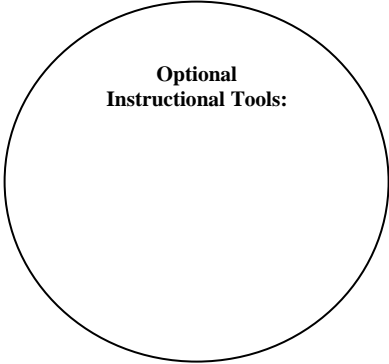


Topic: Coordinate Geometry and Right Triangles

Key Learning(s): G.2.1.1
 The student will be able to solve problems involving right triangles.
CC.2.3.HS.A.7, CC.2.2.HS.C.9



Unit Essential Question(s):
 What are the different methods used to solve problems involving right triangles?

<p>Concept: G.2.1.1.1 Use the Pythagorean theorem to write and/or solve problems involving right Triangles.</p>	<p>Concept: G.2.1.1.2 Use trigonometric ratios to write and/or solve problems involving right triangles.</p>	<p>Concept</p>
<p>Lesson Essential Questions: How is the Pythagorean theorem used to write and/or solve problems involving right triangles?</p>	<p>Lesson Essential Questions: How are trigonometric ratios used to write and/or solve problems involving right triangles?</p>	<p>Lesson Essential Questions:</p>
<p>Vocabulary: Pythagorean Theorem, right triangles</p>	<p>Vocabulary: Trigonometric ratios, right triangle</p>	<p>Vocabulary:</p>

<p>Concept:</p>	<p>Concept</p>	<p>Concept:</p>
<p>Lesson Essential Questions:</p>	<p>Lesson Essential Questions:</p>	<p>Lesson Essential Questions:</p>
<p>Vocabulary:</p>	<p>Vocabulary:</p>	<p>Vocabulary:</p>

Attached Document(s):

Additional Info:

Coordinate Geometry and Right Triangles

Topic:

Key Learning(s): G.2.1.2

The students will solve problems using analytic geometry.

CC.2.3.HS.A.11

**Optional
Instructional Tools:**

Unit Essential Question(s):

How can you solve problems using analytic geometry?

<p>Concept: G.2.1.2.1</p> <p>Calculate the distance and/or midpoint between two points on a number line or on a coordinate plane.</p>	<p>Concept: G.2.1.2.2</p> <p>Relate slope to perpendicularity and/or parallelism (limit to linear algebraic equations).</p>	<p>Concept: G.2.1.2.3</p> <p>G.2.1.2.3 Use slope, distance, and/or midpoint between two points on a coordinate plane to establish properties of a 2-dimensional shape.</p>
<p>Lesson Essential Questions:</p> <p>How is the distance and/or midpoint calculated between two points on a number line or on a coordinate plane?</p>	<p>Lesson Essential Questions:</p> <p>What is the relationship between the slopes of parallel lines?</p> <p>What is the relationship between the slopes of perpendicular lines?</p>	<p>Lesson Essential Questions:</p> <p>How are the slope, distance, and/or midpoint between two points on a coordinate plane used to establish properties of a 2-dimensional shape?</p>
<p>Vocabulary: distance, midpoint</p>	<p>Vocabulary: slope, parallel, perpendicular</p>	<p>Vocabulary: slope, distance, midpoint, 2-dimensional</p>

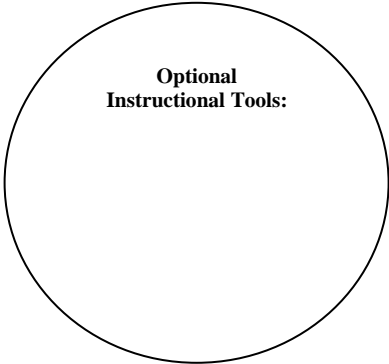
Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

Additional Info:

Topic: Measurement of Two-Dimensional Shapes and Figures

Key Learning(s): G.2.2.1
 The students will use and/or compare measurements of angles
 CC.2.3.HS.A3



Unit Essential Question(s):
 How can you use and/or compare measurements of angles?

Concept: G.2.2.1.1 Use properties of angles formed by intersecting lines to find the measures of missing angles.	Concept: G.2.2.1.2 Use properties of angles formed when two parallel lines are cut by a transversal to find the measures of missing angles.	Concept:
Lesson Essential Questions: How can the properties of angles formed by intersecting lines are used to find the measures of missing angles?	Lesson Essential Questions: How are the properties of angles formed when two parallel lines are cut by a transversal used to find the measures of missing angles?	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

Additional Info:

Measurement of Two-Dimensional Shapes and Figures

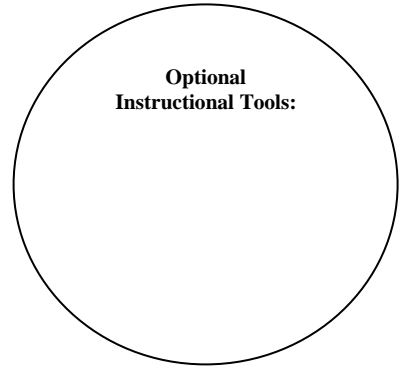
Topic:

Key Learning(s): G.2.2.2

The students will use and/or develop procedures to determine or describe measures of perimeter, circumference, and/or area.

CC.2.3.HS.A3,CC.2.3.HS.A.9

**Optional
Instructional Tools:**



Unit Essential Question(s):

What are the procedures to determine or describe measures of perimeter, circumference, and/or area?

<p>Concept: G.2.2.2.1</p> <p>Estimate area, perimeter, or circumference of an irregular figure.</p>	<p>Concept: : G.2.2.2.2</p> <p>Find the measurement of a missing length, given the perimeter, circumference, or area.</p>	<p>Concept: : G.2.2.2.3</p> <p>Find the side lengths of a polygon with a given perimeter to maximize the area of the polygon.</p>
<p>Lesson Essential Questions:</p> <p>How do you estimate area, perimeter, or circumference of an irregular figure?</p>	<p>Lesson Essential Questions:</p> <p>How can you find the measurement of a missing length, given the perimeter, circumference, or area?</p>	<p>Lesson Essential Questions:</p> <p>How can you find the side lengths of a polygon with a given perimeter to maximize the area of the polygon?</p>
<p>Vocabulary:estimate, area, perimeter, circumference, irregular</p>	<p>Vocabulary:perimeter, circumference, area</p>	<p>Vocabulary:polygon, perimeter, maximize, area</p>

<p>Concept: G.2.2.2.4</p> <p>Develop and/or use strategies to estimate the area of a compound/composite figure.</p>	<p>Concept: G.2.2.2.5</p> <p>Find the area of a sector of a circle.</p>	<p>Concept:</p>
<p>Lesson Essential Questions:</p> <p>How can you develop and/or use strategies to estimate the area of a compound/composite figure?</p>	<p>Lesson Essential Questions:</p> <p>How can you find the area of a sector of a circle?</p>	<p>Lesson Essential Questions:</p>
<p>Vocabulary:compound, composite figure</p>	<p>Vocabulary:sector</p>	<p>Vocabulary:</p>

Attached Document(s):

Additional Info:

Measurement of Two-Dimensional Shapes and Figures

Topic:

Key Learning(s): G.2.2.3

The students will describe how a change in one dimension of a 2-dimensional figure affects other measurements of that figure.

CC.2.3.HS.A.8

Unit Essential Question(s):

Can you describe how a change in one dimension of a 2-dimensional figure affects other measurements of that figure?

**Optional
Instructional Tools:**

Concept: G.2.2.3.1 Describe how a change in the linear dimension of a figure affects its perimeter, circumference, and area.	Concept:	Concept:
Lesson Essential Questions: How does changing the length of the radius of a circle affect the circumference of the circle?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.
Vocabulary: radius, circumference	Vocabulary:	Vocabulary:

Attached Document(s):**Additional Info:**

Measurement of Two-Dimensional Shapes and Figures

Topic:

Key Learning(s): G.2.2.4

The students will apply probability to practical situations.

CC.2.3.HS.A.10

**Optional
Instructional Tools:**

Unit Essential Question(s):

How can probability be applied to practical situations?

Concept: G.2.2.4.1 Use area models to find probabilities.	Concept:	Concept:
Lesson Essential Questions: How is area models used to find probabilities?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.
Vocabulary: models, probabilities	Vocabulary:	Vocabulary:

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

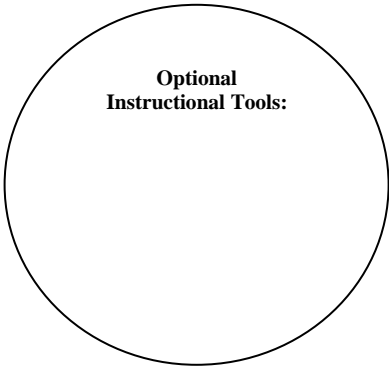
Additional Info:

Topic: Measurements of Three-Dimensional Shapes and Figures

Key Learning(s): G.2.3.1

The students will use and/or develop procedures to determine or describe measures of surface area and/or volume.

CC.2.3.HS.A.12, CC.2.3.HS.A.14



Unit Essential Question(s):

What procedures can be developed to determine or describe measures of surface area and/or volume?

<p>Concept: G.2.3.1.1</p> <p>Calculate the surface area of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet.</p>	<p>Concept: G.2.3.1.2</p> <p>Calculate the volume of prisms, cylinders, cones, pyramids, and/or spheres. Formulas are provided on a reference sheet.</p>	<p>Concept: G.2.3.1.3</p> <p>Find the measurement of a missing length, given the surface area or volume.</p>
<p>Lesson Essential Questions:</p> <p>How can the surface area of prisms, cylinders, cones, pyramids, and/or spheres be calculated?</p>	<p>Lesson Essential Questions:</p> <p>How can the volume of prisms, cylinders, cones, pyramids, and/or spheres be calculated?</p>	<p>Lesson Essential Questions:</p> <p>How can the measurement of a missing length be found, given the surface area or volume?</p>
<p>Vocabulary: surface area, prism, cylinder, cone, sphere</p>	<p>Vocabulary: volume, prisms, cylinders, Pyramids, spheres</p>	<p>Vocabulary: surface area, volume</p>

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

Additional Info:

Measurements of Three-Dimensional Shapes and Figures

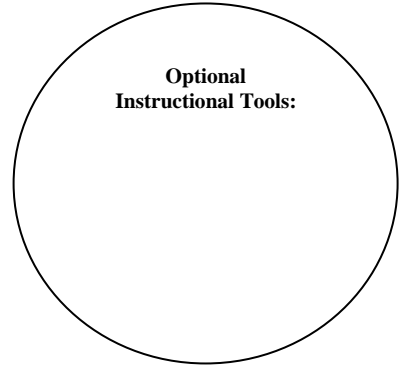
Topic:

Key Learning(s): G.2.3.2

The students will be able to describe how a change in one dimension of a 3-dimensional figure affects other measurements of that figure.

CC.2.3.HS.A.13

**Optional
Instructional Tools:**



Unit Essential Question(s):

How does a change in one dimension of a 3-dimensional figure affect other measurements of that figure?

Concept: G.2.3.2.1 Describe how a change in the linear dimension of a figure affects its surface area or volume	Concept:	Concept:
Lesson Essential Questions: How does changing the length of the edge of a cube affect the volume of the cube?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.
Vocabulary: cube, volume	Vocabulary:	Vocabulary:

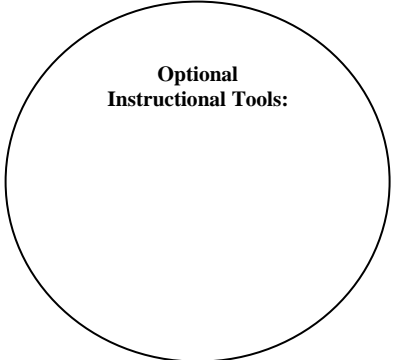
Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

Additional Info:

Topic: Properties of Circles, Spheres, and Cylinders

Key Learning(s): G.1.1.1
 The students will identify and/or use parts of circles and segments associated with circles, spheres, and cylinders.
 CC2.3.HS.A.13, CC.2.3.HS.A.8, CC.2.3.HS.A.9



Unit Essential Question(s): How can you identify and/or use parts of circles and segments associated with circles, spheres, and cylinders?

<p>Concept: G.1.1.1.1 Identify, determine, and/ or use the radius, diameter, segment, and/ or tangent of a circle.</p>	<p>Concept: G.1.1.1. 2 Identify, determine, and/or use the arcs, semicircles, sectors, and/or angles of a circle.</p>	<p>Concept: G.1.1.1.3 Use chords, tangents, and secants to find missing arc measures or missing segment measures.</p>
<p>Lesson Essential Questions: How can you identify, determine, and/ or use the radius, diameter, segment, and/ or tangent of a circle?</p>	<p>Lesson Essential Questions: How can you identify, determine, and/or use the arcs, semicircles, sectors, and/or angles of a circle?</p>	<p>Lesson Essential Questions: How can you use chords, tangents, and secants to find missing arc measures or missing segment measures?</p>
<p>Vocabulary:radius, diameter, segment, tangent</p>	<p>Vocabulary:arcs, semicircles, sectors, angles</p>	<p>Vocabulary:chords, tangents, secants</p>

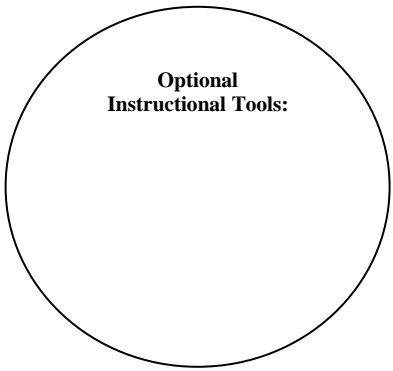
<p>Concept G.1.1.1.4 Identify and/or use the properties of a Sphere or cylinder.</p>	<p>Concept:</p>	<p>Concept:</p>
<p>Lesson Essential Questions: How can you identify and/or use the properties of a sphere or cylinder?</p>	<p>Lesson Essential Questions:</p>	<p>Lesson Essential Questions:</p>
<p>Vocabulary: sphere, cylinder</p>	<p>Vocabulary:</p>	<p>Vocabulary:</p>

Attached Document(s):

Additional Info:

Topic: Properties of Polygons and Polyhedra

Key Learning(s): G.1.2.1
 The students will recognize and/or apply properties of angles, polygons, and polyhedra.
 CC.2.3.HS.A.3,CC.2.3.HS.A.13



Unit Essential Question(s): How can you recognize and/or apply properties of angles, polygons, and polyhedral?

Concept: G.1.2.1.1 Identify and/or use properties of triangles.	Concept: G.1.2.1.2 Identify and/or use properties of quadrilaterals	Concept: G.1.2.1.3 Identify and/or use properties of isosceles and equilateral triangles.
Lesson Essential Questions: How can you identify and/or use properties of triangles?	Lesson Essential Questions: How can you identify and/or use properties of quadrilaterals?	Lesson Essential Questions: How can you identify and/or use properties of isosceles and equilateral triangles?
Vocabulary:triangles	Vocabulary:quadrilaterals	Vocabulary:isosceles, equilateral triangles

Concept: G.1.2.1.4 Identify and/or use properties of regular polygons.	Concept: G.1.2.1.5 Identify and/or use properties of pyramids and prisms.	Concept:
Lesson Essential Questions: How can you identify and/or use properties of regular polygons?	Lesson Essential Questions: How can you identify and/or use properties of pyramids and prisms?	Lesson Essential Questions:
Vocabulary:regular polygons	Vocabulary:pyramids, prisms	Vocabulary:

Attached Document(s):

Additional Info: