

## Unit Plan by Prioritized Standards

<b>Content Area</b>	7th Grade Math
<b>Grade/Course</b>	7th Math
<b>Unit of Study</b>	Unit 4 Geometry
<b>Duration of Unit</b>	29 days

Insert priority standards below (include code). **CIRCLE or Highlight** the **SKILLS** that students need to be able to do and **UNDERLINE** the **CONCEPTS** that students need to know. **(address “supporting” standards in daily lesson plans)**

**MGSE7.G.5** **Use facts** about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

<b>Skills</b> (what must be able to do)	<b>Concepts</b> (what students need to know)	<b>DOK Level / Bloom's</b>
Using facts write and solve	Simple equations for an unknown angle in a figure using supplementary, complementary, vertical & adjacent angles	2/3

**Step 5: Determine BIG Ideas** (enduring understandings students will remember long after the unit of study)

**Step 6: Write Essential Questions** (these guide instruction and assessment for all tasks. The big ideas are answers to the essential questions)

Use freehand, ruler, protractor and technology to draw geometric shapes with give conditions.

Construct triangles from 3 measures of angles or sides.

Given conditions, determine what and how many type(s) of triangles are possible to construct.

Describe the two-dimensional figures that result from slicing three-dimensional figures.

Identify and describe supplementary, complementary, vertical, and adjacent angles.

Use understandings of supplementary, complementary, vertical and adjacent angles to write and solve equations.

What are the characteristics of angles and sides that will create geometric shapes, especially triangles?

How can attributes of specific shapes, symmetry, and angles be used to accurately describe the design of a mosaic pattern?

How can angle and side measures help us to create and classify triangles?

How can special angle relationships – supplementary, complementary, vertical, and adjacent – be used to write and solve equations for multi-step problems?

Explain (verbally and in writing) the relationships between the angles formed by two intersecting lines.

Solve mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Solve real-world problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms

How can the interior and exterior measures of polygons be used to write and solve equations for multi-step problems?

How are angle relationships applied to similar polygons?

How are the circumference, diameter, and pi related?

How do we find the circumference of a circle?

How are the areas of parallelograms and triangles related to the area of a rectangle?

How can area be maximized when the perimeter is a fixed number?

How is the formula for the area of a circle related to the formula for the area of a parallelogram?

How do I apply the concepts of surface area and circumference to solve real-world problems?

What two-dimensional figures can be made by slicing a cube by planes?

What two-dimensional figures can be made by slicing: cones, prisms, cylinders, and pyramids by planes?

How do you determine volume and surface area of a cube?

How do you determine surface area of a cylinder?

How can I use formulas to determine the volumes of fundamental solid figures?

How can I estimate the surface area of simple geometric solids?

How can I use surface areas of plane figures to derive formulas for the surface areas of solid figures?

## Essential Unit Vocabulary

Adjacent Angle  
Circumference  
Complementary Angle  
Congruent  
Cross- section  
Irregular Polygon  
Parallel Lines  
Pi  
Regular Polygon  
Supplementary Angle  
Vertical Angles

**Next step, create assessments and engaging learning experiences**