7th Grade - Unit 4: Math - Geometry

Content Area: **Mathematics**
Course(s): **Math 6, Generic Course**
Time Period: **Generic Time Period**
Length: **35 days**
Status: **Published**

Established Goals/Standards

Please choose the appropriate Goals/Standards from the Standards tab above.

MA.7.G	Geometry
MA.7.G.A	Draw, construct, and describe geometrical figures and describe the relationships between them.
MA.7.G.A.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
MA.7.G.A.2	Draw (with technology, with ruler and protractor, as well as freehand) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
MA.7.G.A.3	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.
MA.7.G.B	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
MA.7.G.B.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
MA.7.G.B.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.
MA.7.G.B.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- Compare and contrast the methods of finding perimeter, area, and volume.
- How can you determine the shape of a cross section?
- How to we appropriately label perimeter, area, and volume?
- Why is it important to use precise mathematical vocabulary and symbols?

Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- Cross sections are formed by slicing a 3 Dimensional figure with a plane and identifying the resulting 2 Dimensional figure.
- Geometric figures are named using a distinct number of letters and symbols. Classification is determined properly identifying the angle type.
- Perimeter is measured in units, area is measured in square units, and volume is measured in cubic units.
- The use of the appropriate formulas to determine a given shape's perimeter, area, and volume.

Content

Students will be able to:

- Name and identify angles and special angle pairs.
- Solve for missing angles
- Find the area of parallelogram
- Find the area of a triangle
- Find the area of a trapezoid
- Find the area of an irregular figure
- Find the circumference and area of a cricle.
- Classify and draw 3 Dimensional figures.
- Find the surface area of prisms, and cyclinders using nets.
- Find the volume of prisms and cyclinders.
- Desrcibe cross sections that result for slicing 3 Dimensional figures.

Vocabulary List:

- acute angle
- adjacent angles
- angle
- base
- circumference
- complimentary
- congruent
- diameter
- height
- obtuse angle
- pi
- radius
- right angle
- straight angle
- supplementary
- vertical angles
- center of the sphere
- cone
- cross section
- cube
- cubic unit

- cyclinder
- edge
- face
- prism
- net
- pyramid
- sphere
- surface area
- vertex
- volume

Assessments

Resources

- Pearson textbook and online resources
- Teacher made flip-charts
- Web-based activities (mathplayground.com) (coolmath.com)
- Teacher made worksheets/assessments
- mad minutes
- NJCTL.org (PMI math)
- Pizzazz series of worksheets