6th Grade - Unit 4: Math - Geometry

Content Area: **Mathematics**
Course(s): **Math 6, Generic Course**
Time Period: **Generic Time Period**
Length: **25 days**
Status: **Published**

Established Goals/Standards

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

MA.6.G	Geometry
MA.6.G.A	Solve real-world and mathematical problems involving area, surface area, and volume.
MA.6.G.A.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
MA.6.G.A.2	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
MA.6.G.A.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
MA.6.G.A.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Essential Questions

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

- How to identify and classify geometric shapes, and compare them?
- What is the meaning of surface area and how do you find it?
- What is the meaning of volume and how do you find it?
- What's the meaning of area and how do you find it?

Enduring Understanding

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

- Area is the number of square units that can cover a geometric shape. Area can be found by counting square units, or applying the appropriate formula.
- Polygons can be described and classified by their sides and angles.
- Surface area is the number of square units that can cover a net of a 3D geometric figure.

- Volume is the number of cubic units that can fill a geometric figure. You can find volume by counting cubic units or applying the appropriate formula

Content

Students will be able to:

- Indentify and classify triangles
- Indentify and classify quadrilaterals
- Find the areas of triangles, parallelograms, trapezoids, and complex figures made by these.
- Draw 3D figures from their 2D views and vice versa.
- Name a given 3D figure.
- Calculate the volume of a rectangular prism
- Use nets to find the surface area of prisms and pyramids

Vocabulary:

- base
- height
- area
- edge
- face
- vertex
- cone
- cube
- cylinder
- prism
- pyramid
- sphere
- surface area
- volume
- isometric dot paper

Assessments

Resources

- Pearson Math Course 1 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