

# WAUCONDA SCHOOL DISTRICT 118

## UNIT PLANNING ORGANIZER

**Subject: Geometry A**

**Grade Level or Course: Geometry A**

**Unit: 10 Volume    Pacing: 10 days**

### STAGE 1 – DESIRED RESULTS

#### Essential Questions:

- What are the various formulas used to determine the area of polygons?
- What are prisms, cylinders, pyramids, cones, and spheres, and how are their volumes calculated?
- What is a net, and how can it be used to calculate the surface area of various shapes?

#### Big Ideas:

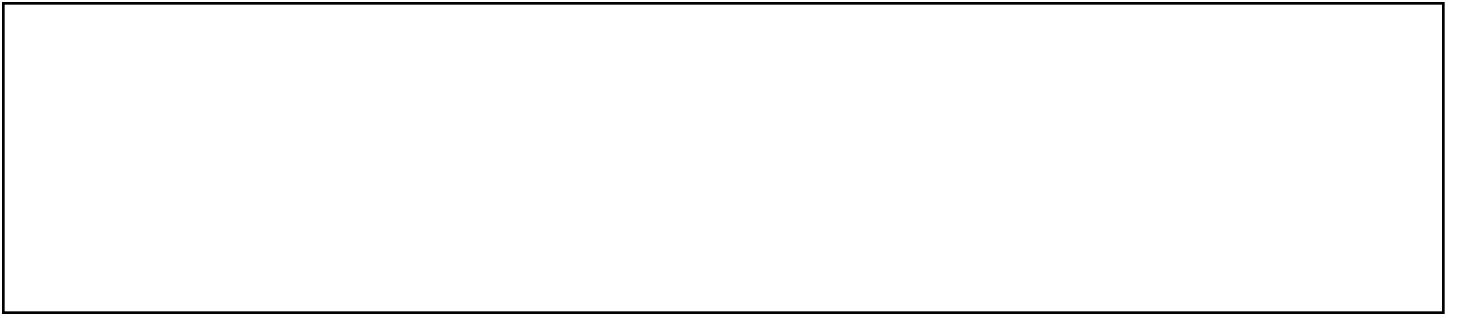
- A three-dimensional figure can be analyzed by describing the relationship among its vertices, edges, and faces.
- The surface area of a three-dimensional figure is equal to the sum of the areas of each surface of the figure.
- The volume of a prism and a cylinder can be found when its height and the area of its base is known.
- The volume of a pyramid is related to the volume of a prism with the same base and height.
- The surface area and volume of a sphere can be found when its radius is known.

#### CCSS (Priority Standards):

- G.GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
- G.GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- G.MG.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

#### CCSS (Supporting Standards):

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## STAGE 2 – EVIDENCE

Concepts (What students need to know)	Performance Tasks (What students will be able to do)	21st Century Skills
<ul style="list-style-type: none"> <li>Exploring Solids</li> <li>Volume of Prisms &amp; Cylinders</li> <li>Volume of Pyramids &amp; Cones</li> <li>Surface Area &amp; Volume of Spheres</li> </ul>	<ul style="list-style-type: none"> <li>Use properties of polyhedra.</li> <li>Find the volume of prisms, cylinders, pyramids, cones, and spheres.</li> </ul>	

### Common Formative/Summative Assessments:

- 2nd Semester Final Exam  
Quest #26, #27 and #28

### Interim Assessments (Informal Progress Monitoring checks):

- Daily Subjective Homework Check
- MiniQuiz

### Modified Common Assessments:

### Modified Interim Assessments:

## STAGE 3 – LEARNING PLAN (INSTRUCTIONAL PLANNING)

**Suggested Resources/Materials/Informational Texts**

**Suggested Research-based Effective Instructional Strategies**

Academic Vocabulary/ Word Wall	Enrichment/Extensions/ Modifications	Interdisciplinary Connection
<p><b>Essential Vocabulary:</b></p> <p>Base Cone Cylinder Edge Face Hemisphere Lateral Area Net Polyhedron Prism Pyramid Prism Slant Height Sphere Surface Area Volume</p> <p><b>Worth-knowing Vocabulary:</b></p>		