Curriculum Units and Learning Outcomes

Content Area: Grade 8 Math	**Grade Level: 8**
Unit Title: Unit 8 - Geometry	
Unit Summary: The students will be able to determine the volume of a cylinder, sphere, or cone. They will also be able to find a missing dimension when given the volume and the other dimensions.	
Massachusetts Standards: ● 8.G.C.9: Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	
Enduring Understandings: Students will understand that: ● Many real-world problems can be modeled and solved using cylinders, cones, spheres, and other three-dimensional shapes. ● Students will understand how to use ratios to compare the areas and volume of similar figures.	
Essential Questions: ● Why are geometry and geometric figures relevant and important? ● How can geometry be used to solve problems about real-world situations, spatial relationships, and logical reasoning?	

Students will demonstrate KNOWLEDGE of:	**Students will be SKILLED at**:
● Finding the volume of a cylinder, cone and sphere. ● Finding the surface areas and volumes of similar solids.	● Using a formula to find the volume of a cylinder, cone and a sphere. ● Using the formula for the volume of a cylinder to find the missing dimensions. ● Using the formula for the volume of a cone to find a missing dimension. ● Using the formula for the volume of a sphere to find the radius. ● Finding volumes of composite solids.

	● Using corresponding dimensions to determine whether solids are similar. ● Using corresponding dimensions to find missing measures in similar solids. ● Using linear measures to find surface areas and volumes of similar solids.

Estimated Duration: 6 days