

Name	Sanet Hipolito
Lesson Title	Water Cylinders
Grade and Subject	10th, Geometry
Standard	Use area and volume formulas for cylinders and prisms to solve problems.
Objective	Students will build cylinders and prisms with the same amount of materials and find the relationship between the surface area and volume. Also given the same amount of liquid, find the different dimensions of the prism that minimize the materials.
Outline	<p>Why water tanks are Cylinder and Why sizes matter?</p> <p>Activity 1 Students of two or three will build a cylinder and a prism using the same amount of materials. They will use a compass, ruler, two cardboards, pair scissors (If permitted, 3D is also amazing hands on activities for students to build), find the volumes. Create a chart or spreadsheet to record all data on the board.</p> <p>Activity 2 Given the same amount of liquid, find the dimensions of prisms and cylinders. Create a chart to record all data on the board.</p>
Assessment	<p>Students will make a chart and compare the differences and similarities and able to make recommendations based on the result.</p> <p>Students can relate the area versus volume in designing a tank and how people benefit from it.</p>
Materials/Resources	3D printer, pair of scissors, 2 pieces of cardboard, poster paper, tape
Needs/Host Org Requests	3D printer, access to the map of all reservoirs and history