

S.T.E.M.

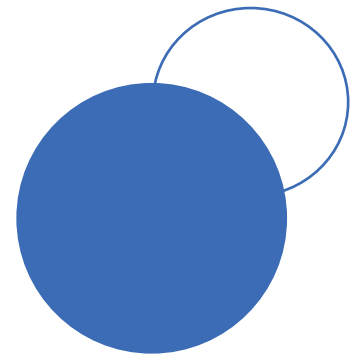
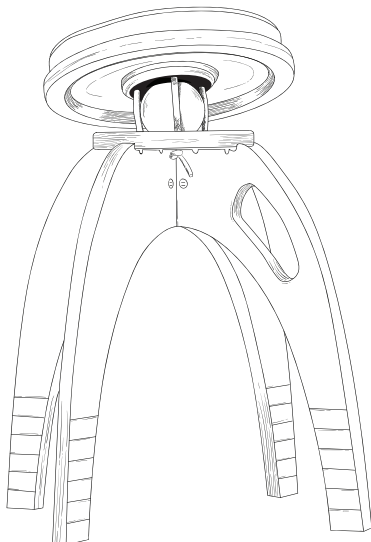
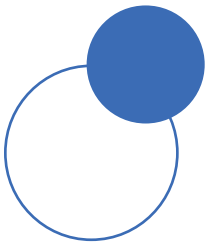
Project Based Learning with the ButtOn Chair

CALCULATING THE VOLUME OF A CYLINDER

CCSS.MATH.CONTENT.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.

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2021



the
button
chair by



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Calculating the Volume of a Cylinder Using the ButtOn Chair

Name:

Date:

Class:

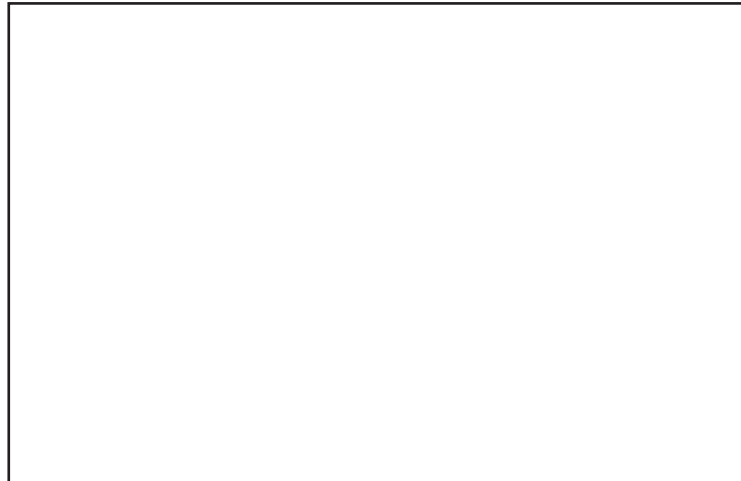
Directions

- Show as much work as possible.
 - Type your equations into the document.
 - You are allowed to use a calculator.
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We are using the two parts of the seat to learn how to calculate the volume of a cylinder. In the previous mini lesson on circumference, we thought of the 7 inch circle and the 10 inch circle as two dimensional. For this activity, we are considering them to be three dimensional cylinders.

This means we need to measure the height of the seats. Each seat has the same height.

1. What is the height of the seat in inches? Draw a diagram and put in the height of the cylinder and the diameter and radius of the base circle.
2. Now that you have your dimensions of the cylinder, use the following equation to calculate the volume for each part of the seat.



$$\text{volume} = \pi r^2 h$$