

Lab FW 5.1B Comparing Spheres and Cylinders



Name _____

Date _____ Period _____

Filling & Wrapping Unit



Materials: Construction paper, Scissors, Scotch tape, Centimeter Ruler, Modeling Dough (Play-doh)



Key Learning: Help students develop a **visual image** of the relationship between the **volume of a sphere** and the **volume of a cylinder**. Formulas are often used without understanding or justification. This experiment will allow students to judge the reasonability of the volume formulas for these shapes.



Guided Directions



this is a
GROUP
ACTIVITY

- 1) Using modeling dough (Play-doh) make a sphere with a diameter of 4-6 centimeters. Try to make the sphere as perfectly round as you can.
- 2) Carefully measure the diameter of your sphere. Wrap a small rectangular piece of construction paper, cut to the same height, around the sphere. This will take the shape of a cylinder with an open top and bottom. Tape the cylinder together so that it adheres to the sphere.
- 3) Flatten the sphere so that it fits snugly inside your paper cylinder.

Estimate the relationship (ratio) between the volume of the sphere and the volume of the cylinder? Compare your results with the results of other groups.

Describe your findings below: