

Name: _____

Date: _____

Period: _____

Orange Activity

Objective: Find the surface area and the volume of an orange.

Instructions:

1) Measure with a ruler (Inches or Centimeters) the diameter of the orange.

Orange Diameter: _____

2) Calculate the radius of sphere using the Diameter. (Radius = $\frac{\text{Diameter}}{2}$)

Radius: _____

2) Peel the orange and save the peels. DO NOT THROW THEM AWAY!!!!

3) On the back of the paper, place the orange peel in a rectangle-like shape. Draw an outline of the rectangle. Now calculate the area of the new rectangle. (Area of Rectangle = $l \times w$)

Area of Orange Peel Rectangle (Don't forget units!): _____

4) Now using the formula for the surface area of a sphere, calculate the surface area of the orange. (Surface Area of Sphere: $4\pi r^2$)

Surface Area of Orange: _____

5) How does the area of the orange peel rectangle (#3) compare to the calculated surface area of the orange (#4)? Are they the same or different? Why?

6) The remaining inside of the orange is the volume of the orange. Calculate the volume of the orange using the radius. (Volume of Sphere: $\frac{4}{3}\pi r^3$)

Volume of the Orange: _____

7) Restore the area around you and enjoy your orange.