Name_____

Shrink Plastic Measurement Worksheet

Data Table

Before Shrinking	Shrink Plastic 1 _____	Shrink Plastic 2 _____	Shrink Plastic 3 _____
L (cm)			
W (cm)			
H (cm)			
Mass (g)			
Area (cm^2)			
Volume (cm^3)			
Density (g/cm^3)			
After Shrinking	Shrink Plastic 1 _____	Shrink Plastic 2 _____	Shrink Plastic 3 _____
L (cm)			
W (cm)			
H (cm)			
Mass (g)			
Area (cm^2)			
Volume (cm^3)			
Density (g/cm^3)			

Post-Lab Questions

1. Calculate the loss in dimension and the percent loss in dimension (shrink rate) for the length, width, and area of each shrink plastic sample using Equations 4 and 5.

$$\text{Loss in dimension } = \text{ Original dimension (cm) } - \text{ Final dimension (cm)} \qquad \textit{Equation 4}$$

$$\text{Percent Loss in Dimension } = \frac{\text{Loss of dimension (cm)}}{\text{Original dimension (cm)}} \times 100\% \qquad \textit{Equation 5}$$

	Length (cm)			Width (cm)			Area (cm²)		
Sample Number	1	2	3	1	2	3	1	2	3
Original measurements (cm)									
Final measurements (cm)									
Loss in dimension (cm)									
Percent loss in dimension (%)									

2. Did the shrink plastic samples shrink uniformly in all directions (length, width and height)?

3. How did the thickness (height) and volume of the shrink plastic samples compare before and after they were shrunk?

4. How did the calculated densities of the three shrink plastic samples compare before and after they were shrunk? Calculate the average density of the three shrink plastic samples after shrinking.

5. How does the calculated average density of the samples compare to the density of water?

6. How do the results of this activity relate to the law of conservation of mass?