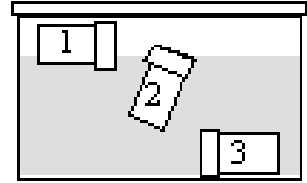


Dunkin' for Density



LP: _____ Date _____

Objectives:

- to determine the density at which an object will float, suspend or sink in water.
- to know the density of water
- to use the formula **density = mass/volume**

Materials:

- Triple Beam Balance
- 3 empty film canisters per group
- small plastic tub filled with water (or large beakers)
- small objects of various masses (marbles, paper clips, pennies, etc.)
- large graduated cylinder

Procedure Part 1:

1. Using the materials at your desk, modify three film canisters so that they will float, sink, or remain suspended in the middle of a tub of tap water.
2. One canister should **float** (1)
3. Another should remain **suspended** (2)
4. And another should **sink** to the bottom (3)
5. Have your teacher **check** your canisters before you proceed to the next part.

Procedure Part 2:

1. Once you have completed Part 1, use the equipment provided to find the mass and volume of each canister.
2. Record the information in **Table 1**.
3. Calculate the density for each canister using the formula **D=M/V**

Data:

Table 1: Mass, Volume and Density of film canisters

Canister	Mass (g)	Volume (cm ³)	Density (g/cm ³)
1			
2			
3			

Analysis and Results:

1. What is the mass of an **empty** film canister? _____

2. Did the **mass** of the canister change at all? Explain.

3. Did the **volume** of the film canister change at all? Explain.

4. What caused each canister to stay at their level in the water? Explain what caused the canisters to float, sink, or suspend using the term **density**.

Conclusion: 2-3 sentences on what you learned.

