

OBJECTIVES:

HYPOTHESIS: All matter has a specific density which is its fingerprint of matter.

(Apply your detective thinking).

MATERIALS:

Triple Beam Balance

5 unknown cylinder metals

10 unknown cubes

pencil

calculator


chrome book


For cylinders = graduated cylinder, beaker, water

For cubes = ruler (L X W X H → cm³)

PROCEDURE:

1. Gather materials.
2. Find the mass using a triple beam balance (units = g).
3. Find the volume:
 - ➡ Cylinders: graduated cylinder (units = ml)
 - ➡ Cubes: ruler (cm³).
4. Divide the mass by the volume to find the density of the cylinder or cubes. (units = g/ml or g/cm³).
5. Determine the density of each unknown substance by **matching** your determined density with a density on the sheet.
6. Repeat the same process for the other unknown substances.
7. Clean up!!! Put all materials back in their places and dry off table

 object	Describe object CUBES!!!	Mass of object (g)	Volume (cm ³)	Density of object	Identified Object
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Object 	Describe object	Mass of object (g)	Volume of object (ml)	Density of object (g/ml)	Identified Object
1.					
2.					
3.					
4.					
5.					

Write - up: Write in complete sentences for full credit!

- One GRAPH per GROUP!**** Use your chromebook and make a **BAR GRAPH** for the cubes **ONLY**.
- Share this graph with me, and **title it appropriately** before sharing.
- Write down your group members names : _____
 _____ Last name of the person in **your group** that is sharing the graph: _____
 (Period, assignment, Last name, first initial, 2014)
- Why were the units for the cylinders ml and not cm³? _____

- Summarize:** How did you find the density of the object's in THIS lab. (Use key words like triple beam balance, graduated cylinder, mass and volume). _____

- Only one **CYLINDER** floated in water. **Which one** (NAME the substance) was it and **WHY** did it float?

- List** two possible reasons why you're results could have been inaccurate? _____

- Which has a higher density - a rock with a mass of 200 g and a volume of 100 ml, or a ball with a mass of 300 g and a volume of 200 ml? (**Show your work**) Circle "ROCK" or "BALL" with the highest density.

ROCK:

BALL: