

## Density Calculation Lab

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

**Question:** Can physical properties of matter be used to identify materials?

**Hypothesis:**

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**Materials:**

- Balance
- Calculator
- Blocks
- Metric Ruler

**Procedure:**

1. Obtain a block from your teacher. Record the block color and number in the data table.
2. Use the metric ruler to measure the dimensions of the block. Record these values in the data table.
3. Calculate the volume of the block using the equation  $L \times w \times h$ . Record the volume in the data table.
4. Use the balance to measure the mass of the block. Record the mass in the data table.
5. Calculate the density of the block using the equation **Density = mass/volume**. Record the density in the data table.

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6. Repeat steps 1-5 for 2 additional blocks, being sure to obtain blocks of different colors. Record all data in the data table below.
7. Use the information below to identify the "name" of the substance that each of your blocks was made of.

**Materials and Density Ranges (g/cm<sup>3</sup>)**

- Alex = 0.48 – 0.54
- Melman = 0.94 – 0.98
- Gloria = 0.89 – 0.93
- Marty = 1.13 – 1.21
- Julien = 1.36 – 1.46

Data/Observations

Block Number	Color of Block	Length (cm)	Width (cm)	Height (cm)	Volume (cm <sup>3</sup> )	Mass (g)	Density (g/cm <sup>3</sup> )

Material Identification

1. Block number \_\_\_\_\_ Name \_\_\_\_\_

2. Block Number \_\_\_\_\_ Name \_\_\_\_\_

~~3. Block Number \_\_\_\_\_ Name \_\_\_\_\_~~

Conclusion – Use your data to answer the question from the beginning of the lab.

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Support Statement

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