Name_____ Lab Activity: Density Cubes

Date_____ Period_____

Materials:

- 1 Metric Ruler
- Lab Notebook
- Triple Beam Balance
- Patience

Table 1

Cube Number	1	2	3	4	5	6	7	8	9	10
Height										
Width										
Length										
Volume										
Mass										
Density										
Identity										

Procedure:

1) Measure the height, width, and length of a cube. Record this information in **Table 1**.
2) Using the Triple Beam Balance obtain the mass of the cube. Record this information in **Table 1**.
3) Calculate the volume of the cute. (Remember that V=LxWxH). Record this information in **Table 1**.
4) Density is calculated like this:

   Density = Mass of an object ÷ Volume of that object

   Shorthand→ D = M/V
5) Calculate the density of each cube. Record this information in Table 1.
6) Identify the material that each cube is made from using the following table. Record your answer in **Table 1**.

Material	PVC	Nylon	Brass	Copper	Aluminum	Acrylic	Oak	Pine	Poplar	Steel
Density	1.39-1.42 g/cm^3	1.13 g/cm^3	8.0 g/cm^3	9.0 g/cm^3	2.7 g/cm^3	1.16-1.19 g/cm^3	0.60-0.90 g/cm^3	0.35-0.60 g/cm^3	0.35-0.50 g/cm^3	7.6 g/cm^3

Analysis Questions:

1) If "mpg" means miles you get per gallon of gasoline and "mph" means miles traveled in an hour, what does g/cm^3 (read as grams per cubic centimeter) mean?

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2) What material has the most amount of matter? Explain your answer.

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3) Which material has the least amount of matter? Explain your answer.

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4) If one cm^3 is equal to one mL, calculate the density of a half-liter bottle of water has a mass of 500g. (NOTE: Remember there are 1000mL in 1L)

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MAKE SURE YOU ANSWERED <u>EVERY</u> QUESTION. KEEP THIS IN YOUR LAB NOTEBOOK!

5) Create a BAR graph showing the densities of the objects.