Name:	 	
Hour:	 Date:	

Chemistry: Density

In this activity, you will calculate the density of three wood pieces (two rectangular solids and one cylinder) and two metal cylinders. Show **all** of your work, and be sure to include **units**. Make all your measurements first, and save your calculations for later. In this way, everyone will get a chance to make the necessary measurements.

Rectangular Solid number:	
Mass:	

Calculate volume using a formula. Show work or explain your calculation.	Calculate density. Show your work.

Wooden Rectangular Solid 2:

Rectangular Solid number:

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Calculate volume using a formula. Show work or explain your calculation.	Calculate density. Show your work.

Wooden Cylinder:

Cylinder number:	
Mass:	

Calculate volume using a formula. Show work or explain your calculation.	Calculate density. Show your work.

Metal Cylinder 1:

Calculate volume using the water-displacement method. Show work or explain your calculation.	Calculate density. Show your work.

Analysis Questions:

- 1. Make a statement about the densities of the five objects compared to the known density of water. Do your results make sense? Why or why not? Explain.
- Pretend that you have an unknown sample of wood. After your measurements, you calculate that the density of the sample is 1.12 g/cm³.
 - A. Is this possible? Why or why not?
 - B. What very simple test could you perform to determine if your calculation might be correct?
- 3. Many ships (like the <u>Titanic</u>) are constructed of steel, which is mostly iron but has small amounts of carbon and/or other elements mixed in. Most metals sink in water, and iron is a metal. How do you explain the fact that the <u>Titanic</u> floated on the water (at least for a while...)?