Unit 2 - Matter & Energy **Name _____**
PhET Density Simulation Lab **Block ____**

Density, Volume and Mass

Play around with the PhET simulation *Density.*
Choose "Custom" and "My Block"

1. If you change the mass of the block, how does the block change?

2. If you change the volume of the block, how does the block change?

3. How does the density of the block change when you adjust the volume?

4. How does the density of the block change when you adjust the mass?

5. *Prediction:* If you have several blocks of the same mass, will they all float or all sink the same in water?

6. Try out the button "Same Mass" Explain what is different and what is the same about each of these blocks.
   A. Compare features you can observe out of the water.

   B. Compare the behavior in water.

7. *Prediction:* If you have several blocks of the same volume, will they all float or all sink the same in water?

8. Try out the button “Same Volume” Explain what is different and what is the same about each of these blocks.

   A. Compare features you can observe out of the water.

   B. Compare the behavior in water.

9. *Prediction:* If you have several blocks of the same density, will they all float or all sink the same in watere?

10. Try out the button “Same Density” Explain what is different and what is the same about each of these blocks.

    A. Compare features you can observe out of the water.

    B. Compare the behavior in water.

11. Calculate the density for each mystery block, indicate whether it sinks or floats, and use the SHOW TABLE button to determine the block's identity.

Block Label	Mass	Volume	Density	Behavior	Identity
A					
B					
C					
D					
E					