

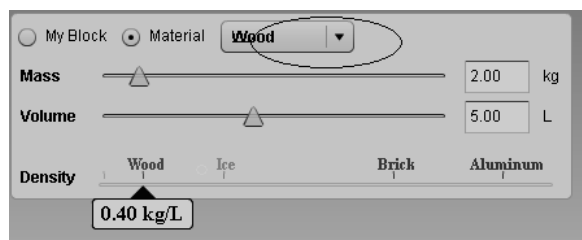
Density PhET Lab Part 2:

(note: "sink" means stays on the bottom) 

Start:

1.

Go to the "Science Skills Unit" link on my website on the VMHS site
2. Scroll down to the bottom of the page
3. Click on the "**CLICK TO RUN**" button for the density simulation
4. Experiment with choosing a material:



Put the **materials** in the correct boxes 

material	S=sinker F=Floater	Density given

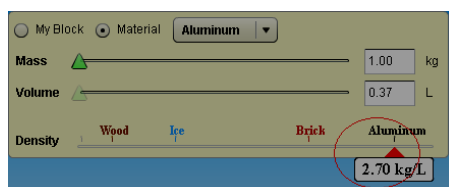
5. Try to get aluminum to **float**.



Talk with your partner about

this possibility- can you change the mass of the aluminum block without changing the volume of the aluminum block?

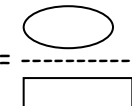
6. What do you and your partner notice about the **density triangle** at the bottom of the box? Why do you think this does or does not move?



7. How does the density of aluminum (2.70 kg/L) help explain what you see?



Frame: The aluminum will _____ in the water because the density of the aluminum is _____ kg/L _____ and the density of water is _____ kg/L _____. We have learned that _____

8.  Density =  " _____ over _____ equals _____ "

In the "Blocks" box, click on **Mystery**:

Blocks

☐ Custom

☐ Same Mass

☐ Same Volume

☐ Same Density

☒ Mystery



Test the boxes in the water- just drag and drop!!!



When you have determined which ones sink and float, **fill in the data table** for each box.

Sample	Starting volume of water (A)	volume of water and block (B)	Volume of block alone (difference B-A)	Mass (kg)	Density (kg/L)	What is it most likely made of? (hint: use Show Table for help)
A	100-L					
B	100-L					
C	100-L					
D	100-L					
E	100-L					

9.



Look closely at green box C and red box D and discuss your observations.



List three observations you made while comparing the two boxes.

1 st observation	2 nd observation	3 rd observation

10. Dear Students,

I am going to build a boat. My partner says I cannot put a refrigerator and a television in my boat because that would make it too heavy-and the boat might sink. Then we would be swimming with the sharks!!!!



What would you advise me to tell my friend? Is she right or wrong? Be sure to give me some evidence based on what you learned from the **boxes** or other places in this activity.
