

# PhET- Density Activity- Funsheet

Custom Section

Name \_\_\_\_\_

<http://phet.colorado.edu/en/simulation/density>

Material	Mass (kg)	Volume (L)	Density (kg/L)	Does it Float?
Styrofoam				
Wood				
Ice				
Brick				
Aluminum				

1. In the custom setting, choose the 'My Object' option in the material drop down box. Set the mass of your object to 4 kg. Adjust the volume to find the minimum volume needed to make the object float.

Volume \_\_\_\_\_ Density \_\_\_\_\_

2. How does the density of a large piece of aluminum compare to a small piece?

## Same Mass Section

Material	Mass (kg)	Volume (L)	Density (kg/L)	Does it Float?
Blue				
Yellow				
Green				
Red				

## Same Volume Section

Material	Mass (kg)	Volume (L)	Density (kg/L)	Does it Float?
Blue				
Yellow				
Green				
Red				

3. Looking at the data on the previous page, what must be true about the density of an object in order for it to float?

**Same Density Section:**

4. Calculate the density of the blue object in this section.

Mass \_\_\_\_\_ Volume \_\_\_\_\_ Density \_\_\_\_\_

5. Explain why both the yellow and red objects float when they have different sizes.

**Mystery Section:**

6. Before you start, pick an object that you think will float. \_\_\_\_\_

Pick an object that you think will sink. \_\_\_\_\_

Material	Mass (kg)	Volume (L)	Density (kg/L)	Does it Float?
A				
B				
C				
D				
E				

7. In the Custom section describe the difference between how Styrofoam and ice floated. Also explain why you think this is the case?

8. In the Same Mass Section discuss what was interesting about the blue object's behavior in the water.

9. In the Mystery Section, click on the "Show Table" button. What is the most dense object on the list? Write its density as well.

10. List something you learned from this activity.