

## Density

As you work through the steps in the lab procedure, record your experimental values and the results on this worksheet. Use the exact values you record for your data to make later calculations.

### Procedure I: Data – Water

Complete Table 1. Record the mass and volume to one decimal place (e.g., 4.0 or 6.3 or 0.0) and the mass density accurate to two decimal places (e.g. 1.356 would be entered 1.36).

**Table 1: Water (1.0 kg/L)**

Object	Mass ( $m$ ) (kg)	Volume ( $V$ ) (L)	Mass Density ( $D$ ) kg/L	Sink/Float
Block A (yellow)				
Block B (blue)				
Block C (green)				
Block D (red)				
Block E (violet)				

**Procedure II: Calculation – Ethyl Alcohol**

Complete Table 2. Given the information you calculated in Table 1, determine whether or not the blocks would float in Ethyl Alcohol:

**Table 2: Ethyl Alcohol ( $0.8 \text{ g/cm}^3$ )**

<b>Object</b>	<b>Mass (<math>m</math>) (kg)</b>	<b>Volume (<math>V</math>) (L)</b>	<b>Mass Density (<math>D</math>) kg/L)</b>	<b>Sink/Float</b>
<b>Block A (yellow)</b>				
<b>Block B (blue)</b>				
<b>Block C (green)</b>				
<b>Block D (red)</b>				
<b>Block E (violet)</b>				

**Procedure III: Calculation – Glycerin**

Complete Table 3. Given the information you calculated in Table 1, determine whether or not the blocks would float in Glycerin:

**Table 3: Glycerin (1.3 kg/L)**

<b>Object</b>	<b>Mass (<math>m</math>) (kg)</b>	<b>Volume (<math>V</math>) (L)</b>	<b>Mass Density (<math>D</math>) (kg/L)</b>	<b>Sink/Float</b>
<b>Block A (yellow)</b>				
<b>Block B (blue)</b>				
<b>Block C (green)</b>				
<b>Block D (red)</b>				
<b>Block E (violet)</b>				