Procedure:

1. Choose a shape from the box.
2. Record the shape and color into your data table.
3. Place the shape onto the scale and record the mass in grams.
4. Place the shape into the graduated cylinder and record the volume in mL.
5. Place the shape into the tank of water to see if it floats or sinks, write the result into the data table.
6. When you are done with all the objects, calculate the density for each to the nearest 100th using the formula $D = \frac{M}{V}$.
7. Label the units: $g/cm^3$ (1mL = 1 cm$^3$)
The density of the water in the pail is 1.0 g/cm³. List the items along with their densities into the correct column below.

<table>
<thead>
<tr>
<th>Object</th>
<th>Mass</th>
<th>Volume</th>
<th>Float or Sink?</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>grams</td>
<td>mL</td>
<td></td>
<td>g/cm³</td>
</tr>
</tbody>
</table>

**Analysis Questions:**

Answer the following using complete sentences.

1. Name the object with the largest mass. Did it float?
2. Name the object with the smallest mass. Did it float?
3. Name the object with the largest volume. Did it float?
4. Name the object with the smallest volume? Did it float?
5. For the objects that floated, what were their densities compared to the density of water?
6. For the objects that sank, what were their densities compared to the density of water?
7. If the density of the liquid in the tank was 2.0 g/cm³, which objects would sink to the bottom and why?
8. If the density of the liquid in the tank was 5.0 g/cm³, which objects would sink to the bottom and why?

**Conclusion:** 2-3 complete sentences on what you learned in this lab.