Name: ______________________

Sinking Soda

Objective
You will compare the density of regular coke and diet coke. You will be able to describe the relationship between volume, mass and density.

Procedure
1. With a partner, review what you know about mass, volume and density and add your information to the Facts Chart provided.
2. Make a prediction as to whether the soda cans will sink or float when placed in a transparent container of water and record your information in the data table below.
3. Work with a partner to complete the questions below.

Data

<table>
<thead>
<tr>
<th></th>
<th>Prediction SINK OR FLOAT in water</th>
<th>Actual Results SINK OR FLOAT in water</th>
<th>Observations (notes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Coke</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diet Coke</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis Questions

1. Do you know what the main difference in ingredients is between coke and diet coke? Explain if you do.

2. How can the two cans of soda (that are both 12 ounces) have different mass?
3. Based on your observations, what do you think might happen if we added salt to the water? Explain your thoughts.

4. On a warm day, there is a glass of regular soda with some ice cubes in it and a glass of diet soda with some ice cubes in it. What might you expect to observe when the ice melts in each glass? Will the results be the same or different?