Name _____ Period _____ Date _____

The Problem: Two cans of pop are placed into a tank of water. One of the cans of pop is diet and the other is regular. The can of diet pop and the can of regular pop act differently in the water.

1. What difference do you notice when they are both placed in the tank?

_____

_____

2. Why do you think that the cans acted the way that they did? _____

_____

_____

3. Zero your balance.

Measure the mass of the empty graduated cylinder and record it's mass. _____g.

Fill the graduated cylinder with 50 ml of water and measure the mass of both the cylinder and the water **together**.

Mass of water **and** cylinder _____g.

(-) Minus Mass of just the cylinder _____g.

Mass of just the 50 ml of water in the cylinder _____g.

So, the mass of 50 ml of water is _____g. Hmmmmm!

Try it again and find the mass of 100 ml of water. 100 ml of water has the mass of _____g.

4. What would you predict would be the mass of 200 ml of water? _____g.

Why? _____

_____

5. Using the data table provided, find the mass of 50 ml of regular pop, diet pop, and salt water.

Liquid	Volume (ml)	Mass (g.)
Regular Pop		
Diet Pop		
Salt Water		

6. Now here is the tricky part. We used 50 ml of each liquid – water, regular pop, diet pop, and salt water. We found the mass of 50 ml of each liquid and they were probably all different. Arrange the liquids in order from the one that had the least mass to the one that had the most mass.

Liquid	**Mass (g.)** **(Least mass on top)**

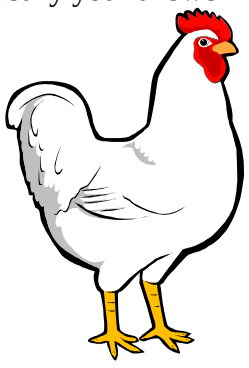
7. **Challenge** – One of the pop cans floated in water and the other sank.

Thought Question - Could I make both cans float in my tank? _____ Why or why not?

What would I have to **do** to make both of them float at the same time?

The Tough Question – (An "Egg"stra "Egg"speriment) – Carefully take the egg that I have given you and do a little experimenting on your own to see if you can make some **predictions** about the **volume** of your egg. (do not actually measure the volume) Justify your answer in writing.

Hint: Does it float?



Lab partners: _____, _____, _____