

# Density Lab

Name \_\_\_\_\_ Date \_\_\_ / \_\_\_ / \_\_\_ Period \_\_\_\_\_

Part 1: Vocabulary: Define the following terms in your own words.

mass:

volume:

density:

Table 1

Object	Mass (g)	Volume (mL)	Density (g/mL)	Sinks or Floats	Reason
3 Pennies					
Blue Block					
Red Block					

Answer the following questions using complete sentences.

1. What is the manipulated variable in Table 1?
2. What is the responding variable in Table 1?
3. What is the constant in Table 1?

Table 2

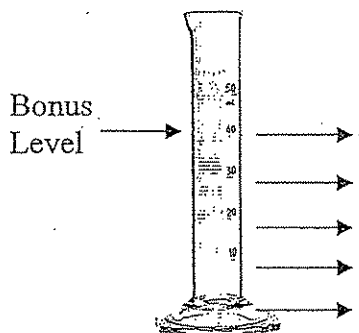
Soda	Mass (g)	Volume (mL)	Density (g/mL)	Sinks or Floats	Reason
Coke					
Diet Coke					

4. What is the manipulated variable in Table 2?
5. What is the responding variable in Table 2?
6. What is the constant in Table 2?

## Part 2: Layering Colors Lab

### Assignment:

- Create 4 distinct layers of colored water of equal proportions. (Each layer will have 10 mL of liquid). To accomplish this task, each layer must have a different density. (40 mL maximum)
- Use the data table below to keep track of your measurements. Graph the results.
- One more level may be added for a bonus point. (One layer might not have any salt)
- Be sure to subtract the mass of the graduate from the mass of the water plus the salt!!!
- Adding salt to 10 mL of water will increase the volume, but use only 10mL of the solution.



Colors	Mass (g)(water + salt)	Volume (mL)	Density (g/mL)
		10	
		10	
		10	
		10	
		10	

Attach your Procedure (List the steps to conduct this experiment.)

1. What is the manipulated variable in the Layering Colors Lab?
2. What is the responding variable in the Layering Colors Lab?
3. What is the constant in the Layering Colors Lab?

Graph the data:

- Label the X and Y axes with units.
- Include an appropriate title
- Summarize the pattern(s) observed in your graph.

