NAME:_____

DENSITY LAB

BACKGROUND:
Density is a property of all matter. It is calculated by taking the mass of an object and dividing that by the volume of that object. Comparisons in density can often be made by testing to see if an object floats in a specified liquid. Often times the density of objects are compared to the density of fresh water, which is 1 g/mL. Objects that have a larger density than fresh water will sink in water while objects that have a density less than water will float.

OBJECTIVE:
Investigate which items float and sink in water and to calculate their densities to prove why they behave the way they do.

PROCEDURE 1:

1. Pick an object
2. Predict if it will sink or float. (do not put it in water)
3. Mass the object
4. Measure the length, height, and width
5. Calculate the volume; v = L x W x H
6. Calculate the Density; D = m/v

DATA TABLE 1

OBJECT	SINK or FLOAT	MASS g	LENGTH cm	HEIGHT cm	WIDTH cm	VOLUME cm3	DENSITY g/cm3

PROCEDURE 2:

1. Pick an object
2. Predict if it will sink or float.
3. Mass the object
4. Measure how high the water is BEFORE you put the object in the graduated cylinder.
5. Measure how high the water is AFTER you put the object in the graduated cylinder.
6. Calculate the volume; v = water AFTER – water BEFORE
7. Calculate the Density; D = m/v

OBJECT	SINK or FLOAT	MASS g	WATER BEFORE mL	WATER AFTER mL	VOLUME mL	DENSITY g/mL

QUESTIONS:

1. Which objects floated? What were their densities?

2. Which objects sank? What were their densities?

3. Write a statement using your calculations as proof as to why certain objects floated or sank. (You can not just say you saw them float or sink)

4. List all the errors you may have made during this lab.