Sci 8 **Determining Mass Lab using the Triple Beam Balance Name: \_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Partner: \_\_\_\_\_\_\_\_\_\_\_\_**

**Purposes:**

* To become familiar with the operation of the triple beam balance.
* To determine the masses of several samples using the balance.

**Part A:** *Label the diagram below using the labels:* pan, beams, weights, adjustment screw, pointer



**Part B:** Determine the Mass (in grams) of the solid objects:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Rubber stopper | Wood Block | Marble | Your Choice: |
| Top Rider (Biggest weight) |  |  |  |  |
| Middle Rider |  |  |  |  |
| Bottom Rider |  |  |  |  |
| Total Mass |  |  |  |  |

**Part C: Determine the mass of 50ml of sand using a beaker.**

Step 1. Measure mass of empty beaker, record in table.

Step 2. Measure 50ml of sand with graduated cylinder. Pour into empty beaker.

Step 3. Measure mass of beaker + sand.

Step 4. Calculate mass of sand by subtracting mass of beaker from beaker + sand.

|  |  |  |
| --- | --- | --- |
| Mass of Empty beaker | Mass of Beaker + Sand | Mass of Sand |
|  |  |  |

**Part D: Determine the mass of 50ml of tap water using a beaker.**

Follow same steps as in Part C.

|  |  |  |
| --- | --- | --- |
| Mass of Empty beaker | Mass of Beaker + water | Mass of 50 ml of water |
|  |  |  |

**Part E: Compare masses of similar looking solutions**.

Measure 20ml of each solution using a graduated cylinder. Return liquids to their containers.

|  |  |  |  |
| --- | --- | --- | --- |
| **Substance (20ml)** | Mass of Empty beaker | Mass of Beaker + Solution | Mass of 20 ml of solution |
| Tap Water |  |  |  |
| Salt Water |  |  |  |
| Sugar Water |  |  |  |

**Questions**

1. What is the definition of Mass?
2. Other than grams, what other units is mass measured in?
3. What units would we use to measure mass of a pumpkin?
4. How many milligrams in a gram?
5. How many grams in a kilogram?
6. Compare the mass of 50ml of sand to 50ml of water. Which has more mass?
7. Compare the masses of the liquids in part E. Why do you think they all have different masses?