**Mass and Matter: That’s heavy man…..heavy!**

Name: Per:

**Background Information: Matter** is all of the "stuff", or atoms and molecules that make up an object. **Mass** is the measurement of all of that "stuff". It's the amount of matter in an object. Matter has both mass and volume and many other properties. Today, examine how matter influences mass. To do this use two different types of beans and a triple beam balance. To start off with, we needed to identify the variables and rephrase the question to reflect the materials we had to work with and then form the hypothetical test statement.

**1. What question are we looking at today? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2. If we wanted to learn more about the main topics of our question, what could we do? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3. What information might we want to look up? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Use your notes to help you define the following**

Matter:

Mass:

Atom:

Variable:

Materials:

* 2 cups
* 16 Kidney Beans
* 16 Black Beans
* 1 container cup
* 1 Triple Beam Balance
* 1 Calculator

**4. What do you think will happen? Make your hypothesis**

If I change the (independent variable) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then the (dependent

variable)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_will (change based on expected outcome)

Because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*Use your vocabulary in your explanation

**5. Procedure:**

**What should the steps be to test our hypothesis?**

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6. Describe what happened during our experiment (use complete sentences and thoughts).**

**Make sure to include lots of details.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Data Table 1:

|  |  |  |
| --- | --- | --- |
| Type of Bean | Number of Beans | Mass (g) |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Data Analysis**:

**7. Now compare the results of your experiment to your hypothesis. You should always restate your hypothesis**

**first.** My hypothesis was supported or not supported (circle one). I said that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_would

1. **The results in the experiment showed** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
2. **What new questions do you have after completing our experiment?**

**1)**

**2)**