Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Group#\_\_\_\_\_\_\_\_\_Hour:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objective:** What information do we need to know in order to predict the movement of an object?

**Focus Question:** Does mass have an effect on an object's acceleration?

**Prediction:**

If the mass of an object \_\_\_\_\_\_\_\_\_\_\_\_\_ then the acceleration will \_\_\_\_\_\_\_\_\_\_\_\_\_ because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**DURING LAB:**

**Evidence- Data:**

|  |  |  |  |
| --- | --- | --- | --- |
| Object | Mass | Peak Acceleration (m/s2) | Avg. Peak Acceleration (m/s2) |
| Trial 1 | Trial 2 |  Trial 3 |
| Cart |  |  |  |  |  |
| Cart + 1 weight |  |  |  |  |  |
| Cart +2 weights |  |  |  |  |  |
| Cart + 3 weights |  |  |  |  |  |
| Cart + 4 weights |  |  |  |  |  |



**Post Lab:**

1. Look at your graph, what are you comparing?
2. What patterns do you observe in your data?
3. What caused the patterns you observed?
4. What does the pattern of data you see allow you to conclude from the experiment?
5. What kind of mathematical function best fits the pattern of data you see?