

## Lab 4-1: *Weight & Mass*

- Purpose:**
- To determine the relationship between the weight of an object and its mass.
  - To make a graph of Weight vs Mass for a variety of different objects.

**Equipment:**

Electronic balance (in grams)

Spring balances or Force Probes (in Newtons)

**Procedure:**

- Looking around the room and in your backpacks, find a variety of objects to measure.
- Use the electronic balance to find the mass of each object. Convert grams to kilograms.
- Use the spring balances to find the weight of each object in Newtons.

**Data:**

<i>Object</i>	<i>Mass (kg)</i>	<i>Weight (N)</i>

<i>Object</i>	<i>Mass (kg)</i>	<i>Weight (N)</i>

**Analysis:**

- Graph Weight vs. Mass. Weight should be on the y-axis. Add a best fit line.
- Sketch your graph below and write the equation of the best-fit line using meaningful variables:

**Questions:**

- What is the y-intercept of your graph? \_\_\_\_\_ Why is this significant?
- What is the slope of your graph? \_\_\_\_\_ What does this number remind you of?
- What is the relationship between weight and mass? Make this good!