

# Mass vs Weight Lab (Adapted from www.cpalms.org)

## MATERIALS

Each group will receive:

- 1 Snickers
- 1 Oreo Cookie
- 1 Graham Cracker
- Electronic balance scale
- Calculator

## PROCEDURE

### Part A: Measure the Mass

1. Balance the scale to zero.
2. Place the 1<sup>st</sup> item on scale.
3. Convert grams to kilograms by multiplying by 0.001.
4. Record the mass in Data Table 1 in kg.
5. Repeat the same procedures for the remaining two snacks.

### Part B: Calculate the Weight

1. Use the formula next to "Weight" to calculate the weight for each snack.
2. Enter the weight in Newtons (N) next to each snack.

### Part C: Graph Your Results

1. Create a bar graph for each snack on the 3 planets.
2. Graph the weight of the snacks on the three planets.. Use a different color for each planet
3. Remember to label the title, x axis, and y axis.
4. Repeat the same procedure for graphing the weight of the remaining two planets.

## ANALYSIS QUESTIONS (Write in your notebook)

1. How are weight and mass different? Explain in your own words.
2. What happened to the weight of your snacks as the force of gravity increased from planet to planet?
3. Why do you think your snacks weigh more on Jupiter?
4. What would happen to the weight AND mass of your snacks on Venus (mass = 82% of Earth)? Explain your answer.





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