

# Scientific Method Lab Using Bubble Gum

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**Purpose:** The purpose of this lab is to use the Scientific Method to solve a problem.

## **Materials:**

- a. 2 small pieces of wax paper
- b. 1 meter long piece of string
- c. 1 meter stick
- d. 2 different pieces of bubble gum labeled A and B

## **Procedures:**

- a. Each group will need one piece of gum labeled A and one labeled B. Make 3 observations about each brand of gum.
- b. Part 1:
  - a. Which piece of bubble gum blows the biggest bubble?
  - b. Predict which piece of gum will blow the biggest bubble and why in your observations.
  - c. The person with brand A will chew their piece of gum for 3 minutes. The person with brand B does not begin chewing until all the tests on brand A are completed.
  - d. Blow a bubble.
  - e. Using a string, your partner will measure the diameter (distance across) the bubble. Put the string on the meter stick to measure the distance in centimeters (cm).
  - f. Record the measurement in a data table. You will have to make a data table. Repeat the process for trials 2 and 3.
  - g. Find the average bubble size for brand A (add all the distances up and divide by 3) and put in the data chart.
  - h. Repeat steps 1-5 with brand B gum.
- c. Part 2:
  - a. How does gum stretchability relate to bubble size?
  - b. The person with Gum A will roll their gum into a ball.
  - c. Hold Gum A by using the piece of wax paper. Another person in your group would hold the same piece of gum with another piece of wax paper. Hold the gum near your chest, begin to walk slowly backwards.

- d. The third person in the group should hold the meter stick and measure the distance in centimeters the gum stretched before breaking. Or mark where your gum snapped and measure the distance.
- e. Record the measurement in the data chart. Repeat letters b-d for their Gum B.

**Observations and Data:**

Gum A

Gum B

- |          |          |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

**Part 1:**

	Gum A	Gum B
Trial 1		
Trial 2		
Trial 3		
Average		

**Part 2:**

	Gum A	Gum B
Trial 1		
Trial 2		
Trial 3		
Average		

**Conclusion:**

**Questions:**

1. From part 1, what brand of gum is the best at blowing bubbles and why? Support your answer with observations and your data.
2. From part 2, how does gum stretchability relate to bubble size?
3. With your lab partner, list 5 variables that may affect the outcome of this experiment.
4. Make a third part to this experiment. What other question could you ask related to gum?  
Write/Design the procedures and how you would make your data table.