

Mr. Peanut Lab: Observation & Error
 Scientific Method

Name: _____



Introduction: Careful observation is important to good science. The results you obtain from an experiment must be reliable and replicable. Detailed observations and notes not only help to identify possible trouble areas, but also allow others to duplicate, and thus verify your work. This investigation is an exercise in observation.

Your auntie has gone on vacation and left you to take care of her prized pet – Peanut. She has owned Peanut for years and loves him dearly. Now this may sound odd, but Peanut is, well a Circus Peanut and owning one is all the rage these days. In fact, all of your friends already have pet peanuts and take them for walks in the park every day. On a sunny day, hundreds of people can be seen watching their peanuts play in the park. Before you join them, you must be able to identify "Peanut" from all the other pets in the park.

Materials:

- Circus Peanut
- Graph Paper
- Metric Ruler
- String
- Balance

Procedures:

1. You will be given a Circus Peanut.
2. Observe the peanut carefully and list as many detailed observations as possible. Describe the shape of the peanut, measure and mass it. You can use string to make the odd measurements (like around the "waist". You may use any other methods of identifying your "pet" except mark on it or crack it.
3. When you have recorded as many observations as completely and accurately as you can, return the peanut to a group container (groups of 4-6). Mix up the peanuts and use your notes to find your "pet peanut".
4. As a table, you will collect the length and mass for each of the peanuts. You should record the class information on Data Table 1 below and complete the questions that follow.

Results:

Please create a sketch of your peanut. Be sure to label any unique characteristics.

Results cont.:

Qualitative Observations for YOUR peanut:

-
-
-

Quantitative Observations for YOUR peanut:

- Length:
- Width:
- Height:
- Circumference:

GROUP DATA:

Student Name	Peanut Length (cm)	Peanut Mass (g)
AVERAGE		

QUESTIONS: (please give *complete* answers ... not minimalist answers)

1. What is the range of peanut size for your table?
 - a. Length (cm):
 - b. Mass (g):
2. If the circus peanut factory says the proper length for peanuts is 5.08 cm, how far off was YOUR peanut. Show ALL work!
3. If the circus peanut factory says the proper mass is 7.21 g, how far off was your table's average. Show ALL work!
4. What concluding statement could you write about the consistency of circus peanut manufacture?
5. Why should a business even be concerned with this?
6. Why is precise measurement considered of vital importance in scientific research?