Name_____ Class_____ Date_____

Qualitative and Quantitative Data Lab

Background Information: Not all data collected about specimens can be measured exactly. That which can be measured exactly with numbers is called **quantitative** data. The weight of an item is not subject to discussion. It is what the scale says. Data collectors may use different descriptors about the color of a kiwi fruit-brown, beige, tan. Likewise they may differ about whether or not a persimmon smells pleasant or unpleasant. These are judgmental or **qualitative** decisions and are described with adjectives. They are no less important to collect. Scientists are often called upon to make ***both*** kinds of decisions when collecting data.

Vocab to know:

qualitative: _____

quantitative: _____

texture: _____

bland: _____

perimeter: _____

estimate: _____

Collaborative Roles: Decide amongst yourselves what your collaborative roles should be. Write the names of your group members next to the roles that they are taking on. Don't worry-You'll have a chance to try all of them so you won't miss out on anything!

Group Leader:_____ Materials Manager:_____

Data Collector: _____ Time Keeper: _____

Encourager: _____ (only if there are 5 members in your group)

Materials: Your **MATERIALS MANAGER** will retrieve these materials from the lab supply area by the sink. The **GROUP LEADER** will make sure that all items are present on the table and check them off as they are placed on the table.

- ☐ 1 Tray with a fruit or vegetable specimen on it
- ☐ At least 2 hand lenses
- ☐ 1 tape measure
- ☐ 1 triple beam balance

Procedure and tips for collecting your data:

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1. Gather all materials for your table.
2. You will be moving to a total of 4 different stations with your group. You MUST wait for the teacher to tell you to move before you change stations.
3. You will share the tasks at each station so that each group member will have an opportunity to use all of the equipment. Please make sure to record the date, time, and temperature for each specimen you observe. You also must be sure to record your estimate before you measure the specimen.
4. Please follow the order of observations from your data table. It is important that you work together and discuss your observations. Scientists in the real world collect data in an orderly fashion as precisely as they can!
5. Accuracy and efficiency are important! In real world science there are time constraints-tides, animals moving-get in, do it well, and move on! If you are the **TIME KEEPER**, make sure that you remind your group of how much time you have left!

Practice Data Table

Date: _____ Time:_____ Temperature:_____	
Station #	
General Shape of Specimen	
Texture	
Color outside	
Color Inside	
Greatest Perimeter in cm: ESTIMATE	
Greatest Perimeter in cm: Measured	
Weight in grams: ESTIMATE	
Weight in grams: Measured	
Scent- YES or NO	
If Yes -PLEASANT, UNPLEASANT or BLAND	
Pleasant, Unpleasant, or Bland	
Diagram of Specimen	

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Qualitative and Quantitative Data Lab: Scientifically Speaking.....

Directions: Answer the questions below in full sentences, then write a paragraph to summarize what we did in our lab today.

1. What is the difference between qualitative and quantitative data?

_____

_____

_____

2. Why do you think a scientist would want to record environmental data (date/time/temp) before collecting his/her data?

_____

_____

_____

3. What is something interesting you noticed while collecting your data?

_____

_____

_____

4. What is at least one question you have for further study?

_____

_____

In your paragraph, be sure to:

- ☐ Use at least 4 of the 6 vocabulary words that are relevant to our lab activity.
- ☐ Elaborate on your ideas so that someone who was absent would have a good understanding of what we did in class.
- ☐ Use a formal tone to share your ideas.

_____

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