

Cookie Lab

Quantitative & Qualitative Observations

Name _____

Date _____

Class _____

Intro: Often two types of data can be collected during an experiment.

Quantitative data is information that can be accurately measured and recorded (mathematical information). **Qualitative** data is information collected using the five (5) senses and requires a judgment on the part of the experimenter.

Questions:

1. Which brand of cookie is the least expensive?
2. Which brand of cookie is the best tasting?
3. Which brand of cookie has the best physical qualities?

Hypotheses: Write a hypothesis for each of the questions.

1. _____

2. _____

3. _____

What to do: Each team of two will collect and record data on three brands of chocolate chip cookies. After all of the Quantitative data has been collected the cookies should be divided in half and the Qualitative data collected.

Procedures:

1. Record the cost of each bag of cookies, the number in each bag, and the mass of each bag as given by the teacher.
2. With your partner, record the mass of each cookie, its size, and the number of chocolate chips in each cookie.
3. Next, determine the texture value, crispiness value, color value, aroma value, and finally taste value by using a scale of 1 to 3. The number 3 being the best.
4. Answer the question in the conclusion section.

Data:**Quantitative**

Brand of Cookie	Mass of Cookie			Average Mass	Size of cookie	Number of chocolate chips
	A	B	C			
A						
B						
C						

Qualitative

Brand	Texture	Color	Aroma	Crispiness	Taste
A					
B					
C					

Conclusion: Answer the following questions.

1. Now that you know the mass and cost of each bag of cookies, determine which brand was the least expensive.

2. Look back to your original hypotheses.
Which hypotheses are supported by the data? _____
Which hypotheses are not supported by the data? _____

3. Which brand of cookie is the best tasting? _____

4. Which brand of cookie has the best physical qualities? _____

5. Which brand of cookie is the best buy? _____

6. Compare you results with other groups. Are the results alike? _____

7. Which data, quantitative and qualitative, is most consistent with the rest of the class? _____

8. Which type of data would you expect to be the most accurate and why?
