Consumer's Challenge Name _____

Double-Stuff Dilemma

1) Make a prediction based on your observations and knowledge of Oreo cookies.

2) Follow your teacher's directions to complete the tests. Record your data in the chart.

Type of Cookie	Mass of Filling
Regular	
Double	

3) Determine the ratio of the mass of double-stuff filling to the mass of regular filling. Express as a decimal to the nearest hundredth (two decimal places).

$$\frac{\text{Mass of Double Filling}}{\text{Mass of Regular Filling}} = \text{Ratio of Double to Regular}$$

4) Analyze the classroom data chart provided by your teacher. What were the overall results? Explain using the classroom data and your own observations.

5) Was your prediction correct? Explain why or why not.

6) Would you consider the classroom data accurate and reliable? Why or why not?

Additional Testing Data

Variables & Controls – Watch the video to answer these questions.

1. What was wrong with the first experiment?

2. What is a controlled experiment?

3. What variables were constant or kept the same?

4. Identify the independent and dependent variables.

5. Why is it important to conduct controlled experiments?

Your Turn – Consumer's Challenge

Identify an advertising claim that could be tested using a controlled experiment in the classroom to determine if it is true or not. Your experiment will need to be approved by the teacher before you can complete it.

Create a Google document that answers all the questions below and submit it to your teacher for approval.

1. Make a prediction of the outcome of your experiment.

2. Identify the controls, independent variable, and dependent variable.

3. What materials will you need? Make a list of all the items you'll need. Your teacher may be able to help with providing some of the items.

4. What data will you collect? How will you collect it?

5. How will you perform the experiment? List the steps with as much detail as possible so someone else could conduct your experiment the exact same way you will.

6. What will you do to make sure the results are accurate and reliable? For example, will you test more than one sample? What will you do to measure accurately?

7. What safety rules will you need to follow? List all of them.

Be prepared to conduct your experiments on _____.

All materials will need to be collected and in the classroom by _____.

After conducting your experiments, your team will write up the results and present them to the class for peer review.