Name: _____   Date: _____   Period: _____

M & M's and the Scientific Method Lab

Materials
- Cup of M & M's
- Graph paper
- Colored pencils
- Paper towel

Procedure

1. Wash your hands.

2. Predict the number of M & M's in your cup before counting them. _____

3. Which color do you expect will be most common? _____

4. In centimeters, predict the size(diameter) of an M & M. _____

5. In grams, predict the mass of an M & M. _____

6. Using a complete sentence, write a hypothesis using the number, colors, and/or the size of M & M's.

   _____

   _____

7. Empty the contents of your cup onto a paper towel.

8. Count the actual number of M & M's. _____

9. List the colors you found in your cup. _____

10. Measure in millimeters one of your M & M's. _____ Convert this number to centimeters. _____

11. Find the mass of one of your M & M's in grams. _____ Convert this number to milligrams. _____

12. Record the diameter of your M & M in centimeters on the board. Are all the M & M's measured in class the same size? _____Using the class data, what is the average diameter of one M&M? _____

13. Record the mass of your M & M in grams on the board.   Do all the M & M's measured in class have the same mass? _____ Using the class data, what is the average mass of one M&M? _____

Group	Diameter	Mass
1		
2		
3		
4		
5		
6		
7		
8		
Average		

14. Sort the M & M's into different colors. Count and record the number of M & M's of each color. Collect other data as needed to test your hypothesis.

Color	Amount	Mass	Diameter

15. Was your hypothesis correct? _____

16. In complete sentences, explain your **procedure** you used to arrive at your results. (What did you do that led you to your conclusion?)

_____

_____

_____

_____

17. What is one constant in your experiment? _____

18. On graph paper, make a bar graph showing the number of M & Ms of each of the colors in your cup. Make sure to label your graphs and create a scientific title. Use color to illustrate your results.

Read the description for the experiment and answer the questions.

Squidward's Symphony

Squidward loves playing his clarinet and believes it attracts more jellyfish than any other instrument he has played. In order to test his hypothesis, Squidward played a song on his clarinet for a total of 5 minutes and counted the number of jellyfish he saw in his front yard. He played the song a total of 3 times on his clarinet and repeated the experiment using a flute and a guitar. He also recorded the number of jellyfish he observed when he was not playing an instrument. The results are shown in the chart.

Number of Jellyfish/Instrument

Trial	No Music	Clarinet	Flute	Guita
1	5	15	5	12
2	3	10	8	18
3	2	12	9	7

1. What is the independent variable?

2. What is the dependent variable?

3. What should Squidward's conclusion be?

4. Are the results reliable? Why or why not?