Name:………………….………….…………**Due Date**………....

Lab Title:….*Lollipop Hypothesis*………….…….………... **Lab #:….. . . . ..**

Lab Partners:……………….………………….…………………………

Your Lab Score will be based on the following:

Neatness: All labs must be **well-written and done in pencil** unless directed otherwise. There are to be no cross-outs or misspelled words. Questions should be answered in complete sentences.

Accuracy: Certain **questions will be checked** for accuracy.

Completeness: All questions are to be answered completely. There are to be **NO BLANKS** or incomplete sections.

Lab Class Procedure: You are to **follow directions** and use lab equipment properly, work for the entire period, and follow proper clean-up procedures

Rubric:

Lab Score Category	Points Earned
Neatness	0 1
Accuracy	0 1 2 3 4
Completeness	0----------------------3
Lab Class Procedure	0 1 2
Total Lab Score	0 1 2 3 4 5 6 7 8 9 10

You are to submit all lab material with this lab report:

Comments:

I Want a Lolly!
Experimental Design

When a group of people are asked to quickly name the first color that comes to their mind, the color reported with the greatest frequency is red. You have already tried this in your class. Let's assume that this leads you to an idea that red might be a popular color candy. You have just begun to form a hypothesis. A hypothesis is often referred to as a prediction that can be tested. You might continue to develop the idea as follows: If a group of people are offered a choice of lollipops of different colors, then more people will select red than any other color lollipop. Now you have a developed hypothesis.

To test your hypothesis, you will have to determine who is to be tested. Individuals who are actually tested in a research situation are called subjects. If there are 25 students in your class and you want to test them all, then you have 25 subjects. The population is the total number of potential subjects that could participate in the research. If your research is limited only to your class, then the class is referred to as the population.

Now with only 25 subjects in your total population, it will be a simple matter to test the entire population. However, there are situations in which the population you want to test is so large that it would be impossible to test every one of the potential subjects. In this case you would want to select only a portion of the population to test. This portion of the population is called a sample. However, you would need to go a step further and make sure the sample is random. For a sample to be random, each potential subject from the population must have an equal chance of being selected.

1. Define the following terms:

   a. Subject

   b. Population

   c. Random sample

   d. Hypothesis

   e. Conclusion

2. a. What color did your class select with the greatest frequency when asked to write down the name of a color?

   b. List at least three (3) ideas why you think that color is so popular.

      1.

      2.

      3

3. a. What lollipop color was most frequently selected in your class?

   b. Was the lollipop color and the color identified in 2a above the same?

   c. Provide an explanation why those colors matched or didn't match.

4. What factor(s) other than color might be involved in choosing lollipops?

5. What might be an advantage in using *M & M* type candies in testing color preference?

6.   There are several flaws in the design of this experiment. List as many flaws as you can think of below.

7. Keeping the hypothesis about lollipop color, what could you do to correct this experimental design problem?

8. Develop a hypothesis to determine the peanut butter preference (pbp) of people - If they like chunky peanut butter or the smooth kind better.

Read the following passage and then answer the questions.

Let's assume that you are interested in investigating an idea that you have that the majority of students who participate in the high school weight training program are nonsmokers. You find out that there are 375 participants in the program. You end up selecting 50 of them to actually participate in your investigation.

1. State the hypothesis that you would be investigating regarding the weight-training participants.

2. How many students are in your population?

3. How many subjects did you have in the investigation?

4. State a likely conclusion.