Honors Biology

Design an Experiment Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Each person develops a problem to be solved using the scientific method. Here are some examples but you **cannot** use them.

1. You have developed a new tomato plant. What color light makes the plant grow best?
2. You have a mouthwash. Does it really kill germs?
3. You’ve invented a new gas additive. How much do you add to a tank of gas to improve gas mileage?
4. Does eating Jell-O cause your hair to grow faster?
5. You have developed a new plant fertilizer. Does it help produce more corn per corn stalk?
6. Does caffeine make students learn more easily?
7. At what temperature do crickets chirp more often?
8. Hot Lunch increases EOC scores.

* You may discuss the assignment within the group but everyone has to pick a different subject.
* Make sure you include the following:

1. Problem Statement
2. Hypothesis
3. Materials List - including amounts to be used
4. What conditions are you going to allow?
5. Procedure in detail
6. Experimental AND control group
7. Independent (or manipulated) and dependent (or responding) variable
8. How are you going to measure?
9. When are you going to measure?
10. How many are you going to measure?
11. How are you going to analyze your data (What kind of graph)?

* Design the experiment following the layout of the lab report format. Since you will not do the experiment, you will not be able to write a conclusion. However, explain what data you will use to come to a conclusion and answer the problem statement.