EPS 200 (Stapleton) Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Experimental Design Planning Sheet

Some project Requirements:

1. Collect your own data.
2. Work alone or with one partner.
3. Unless you have received special permission, you must conduct a test that is 10x10 or larger.
4. Get your idea *okayed* by Mr. Stapleton before you begin collecting data.

Some things to consider:

1. How long will your data collection it take?
2. Are the resources available?
3. If test subjects are needed, will they want to participate?
4. Is your measurement tool really appropriate for answering your question?
5. Are the measurement tools precise (consistent)?
6. Are all important variables controlled? Can you control enough variables?
7. Should you take steps to eliminate possible effects of bias?
8. Have your data been represented numerically in a manner that makes sense?

Question:

1. What is your experimental question?
2. What is your independent variable?
3. What is your dependent variable?
4. What is your alternate hypothesis?
5. What reasonable rationale do you have for choosing this hypothesis?

Materials and Methods:

1. Describe your data collection process(es), in detail. Add extra paper if necessary.
2. What important variables that you need to control?
3. What steps have you taken to minimize effects of bias?

Results:

1. Based on your alternate hypothesis, try to anticipate the kinds of results you will find. Create a data table showing the type of made-up data that you anticipate. Most of you will be separating your data into two groups. Clearly define the make-up of those groups.
2. What type of graphical representation would work best for summarizing your data? (E.g. bar graph, histogram, pie chart, scatter plot…)

Statistics:

1. What is your null hypothesis?
2. What type of statistical test do you anticipate using to evaluate your data? You may choose one of the tests on the web link provided on the class website.