**AP STATISTICS PROJECT #1:**

Collecting and Analyzing Data

**PART 1: Find or Produce Data**

Find or produce some quantitative data (though you may also ask categorical questions like gender or class year if you want to compare groups). For example, you could ask Moses Brown students how many minutes they spend doing homework every night. Or you could go online and find a data set where data has already been produced for you (check out my resources online or just do some research on Google). It is pretty easy to find some data on a topic of your choice (for example I quickly looked up the income of the top paid soccer players in the world a few nights ago).

Note\*\* if you decided to collect data with a survey, you don’t need to go too crazy with how many participants you collect data from (around 15-20 is sufficient). We will be doing plenty of projects later where the method by which you collect your data and the number of participants will be important. But for now, simply collect data and you can always comment on the bias of your sample in your conclusion. For this project you only need to ask ONE question or analyze ONE data set.

**PART 2: Analyze your Data**

Using the tools that we have learned from the Preliminary Chapter and Chapter 1, analyze your data. Make appropriate graphs to display your data (these might be bar graphs, histograms, boxplots, or stemplots). Choose graphs appropriately that display your data effectively.

Also calculate numerical summaries like the mean and standard deviation or the 5-number summary (remember to choose according to the distribution of your data).

You will be using minitab or some other statistical software to make these plots, which will be part of your final product.

**PART 3: WRITING AND INTERPRETING YOUR FINDINGS**

Write a paper where you present your findings. Your paper should be concise (as you are only looking at one variable) and should include the following:

**Introduction:** (1 paragraph) Explain what question you are examining and why you are interested in that particular question. Provide any relevant background information that you think could be relevant to a reader and things that could “hook” the reader into why your question is relevant. Also include your hypothesis. What did you expect to find before conducting the study?

**Method:** Explain briefly how (or from where) you collected your data.

NOTE: Your intro and method should address the Who? What? Why? Where? When? How? By Whom?

**Results:** Display graphs of your findings and any numerical summaries that you conducted. Be sure to label graphs. You don’t need to interpret your results in this section as you will do so in your conclusion.

**Conclusion:** Write an analysis of your findings. What can you say about the data that you collected? What stood out to you? Were there any problems in the way that you collected the data? What are the implications of your findings?

*NOTE: We will be going into the computer lab a few times to work on this project and I will also provide you with a grading rubric to help you with the writing of this paper.*