Report #1: Experimental Design Write-up
As a small group, design and conduct a simple experiment of your choosing. Then write up the experiment as a short report.

Report organization

Organize your paper around the basics of experimental design, making sure that you clearly communicate each point.

Basics of experimental design:
1. Identify your objective
2. Decide on what information to collect.
   a. What will the experimental units be?
   b. What treatment will be imposed?
   c. What will be measured?
   d. How will data be collected?
3. Decide on the number of experimental units (sample size).
4. Use appropriate randomization to assign individuals to treatments.
5. Collect data.
6. Analyze data.

Translating this into a report:

- Begin with a brief introduction that describes your objective. It should outline the motivation and purpose of the work. If possible, put forward some sort of hypothesis (or alternative hypotheses), predicting the outcome based on previous knowledge. (1 above)
- Next, describe the experimental design, materials, and procedures (2 – 5 above). Since this part is covers so much of the project, many find it useful to break this part into subsections describing the materials (experimental subjects, instruments, and apparatuses) and the methods (treatments, sample size and randomization, measurement procedures). It’s up to you, just be clear.
- Finally, present the results of your work (6 above). Use summary statistics and graphs as appropriate to make comparisons among your treatments, or between treatments and controls. End with some sort of summary relating your results back to the original purpose and hypotheses of your work.

Final notes:
- Good writing counts! I will grade down for sloppiness in grammar, spelling, organization, and style.
- Please word process, double spaced.
- 3-5 pages should be plenty of space, but clarity (and completeness!) are more important than length.