The purpose of this project is to give you the experience of designing and conducting a randomized controlled experiment (and the experience of analyzing data from that experiment). Your study will be conducted to investigate the effect that various factors have on the time it takes a paper helicopter to fall to the ground (i.e., the flight time).

Your experiment must have:

- At least two factors of interest (possible choices will be discussed in class).
- Randomization. You may run the experiment as a completely randomized design, a randomized complete block design, etc. The design you choose should take into account the material you are using and any nuisance factors.
- Replication.
- Control of outside variables, as appropriate.

Your final report should include the following:

- **Description of the Experiment:** Clearly indicate the response variable, factors of interest, treatments, and any nuisance factors for which you controlled. Describe in detail how the experiment was conducted. Indicate what design you used and why that design was appropriate, and be sure to specifically indicate how randomization was used in the design (it is not sufficient to simply say “we randomized”… you must clearly describe how you randomized). Clearly identify the number of replications for each treatment.

- **Analysis of data:** Include appropriate tables and/or graphs in your report that are relevant to your analysis. Also, conduct an inferential analysis to determine whether any of your factors have a significant effect on flight time.

- **Summary and Conclusions:** Based on the factors you investigated, what conclusion(s) can be drawn if one wanted to produce a paper helicopter that gave the longest average flight time?

- **Appendix:** Provide the data collected by your group (a copy of the data file used in your analysis will suffice).