Lab #1: Exercise In Hypothesis Testing
10 points

Introduction:
There are many components of a scientific field investigation, but perhaps the most important part of any study is coming up with a good question. This is imperative before you even begin collecting data or running analyses. What makes a question good (rather than just mediocre, or worse - useless) is that it is clear, and can be at least partly evaluated by data. A good question is usually generated by first making some clever observations of the world around you.

Task For Today:
Today, we will be focusing on developing hypotheses. You will be working individually at first, and then will work up to larger group. While in these groups, you will discuss feasible ways to analyze your questions, and some possible data interpretation issues. At the end of the exercise, all groups will present one of their questions as a prospective field study.

1. Observations – Observe the world around you:
   a. In the first 10 minutes, observe the environment and organisms around you.
   b. Then for the next 15 minutes, write down as many questions as you can, based on your observations. Use your own notepaper for this. Remember don’t proof or refine your questions, just write!

   After you’ve developed your questions, locate a partner near you that you do not know. Introduce yourself and begin.

2. Analysis of questions – As a pair, review the questions that you both asked and consider the following:
   a. What kinds of questions did you ask? (What, when, where, why, how?). Did the questions reflect your background? Your experience? The local environment? The conditions of the day?
   b. Choose five questions that you and your partner feel are important, and restate them as hypotheses. Write these down.
   c. Why would it be important to study these hypotheses?
   d. How would you test some of these hypotheses?
   e. What are some of the expected outcomes?

   After you and your first partner have developed your 5 hypotheses, locate two other groups near you – there should be a total of 6 of you now. Introduce yourself and begin.

3. Project Prospectus – As a group, discuss the merits of your list of combined hypotheses, and pick just one of them to develop into a field study while considering:
   a. Why is the question interesting and important?
   b. What method(s) could be used to test the hypothesis?
   c. How would you interpret the possible outcomes?
   d. Is the question answerable in a short (i.e. days) field study?

4. The Pitch – After your group has given some thought to the questions in #3, your next task is ask for money for your project – Okay, we’re pretending here! You won’t actually be getting money. The exercise is to take your perfectly good question and come up with a 10-minute mock presentation on why a granting agency should be interested in funding you.

Assignment:
The assignment for this week is to post an introduction of yourself to the Discussion Board on Blackboard. Click on the “Discussion” menu link and go to the “Student Introductions” forum. Please make sure you include the following in your post:
   (1) Your Full Name and nick name (what ever you want to be called)
   (2) A little bit about yourself
   (3) Your goals and aspirations
   (4) Embed a picture of yourself (keep it tasteful).