Lab 01 – 9/3/13 and 9/5/13
Learning Objectives

By the end of this lab you should understand:

- The process of the scientific method
- The process of designing an experiment

Key facts:

- A hypothesis must be testable
- A hypothesis cannot be proven, only supported or rejected

Key skills:

- Create a testable hypothesis for a phenomenon
- Identify means of testing a hypothesis

Lab Procedure:

- Discussion of safety materials
- Review of Scientific Method lecture notes
- Instructor will cover 6 demonstrations
- Students will freely review all 6 demo stations
- Students will be formed into 6 groups, one for each demo station
    - In these groups, students will construct plausible hypotheses and experimental designs using the scientific method to explain each phenomenon
- Each group will present their proposal to the class

Sample lab quiz questions:

- True/False: A hypothesis must be proven to become a theory
- Describe the difference between the happy ball and the sad ball
- Name a piece of data that might help explain the difference between the diet soda and regular soda
- Suggest a hypothesis as to why in the egg demo, the egg was sucked into the flask
- Is your hypothesis testable? If so, describe a test. If not, explain why not.