**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Systems Lab**

**Grade 7 Science: October 2010**

You will design and conduct a controlled experiment that will determine the answer to your choice of some version of the following three questions. You will design the experiment using only the materials provided.

**Questions:**

Which amount of soil is optimum for plant growth?

Which amount of water is optimum for plant growth?

Which seed density is optimum for plant growth?

**Research:** Conduct research using past experiences or the Internet in order to inform your hypothesis. Cite your sources using MLA format. At least three sources must be cited.

**Hypothesis:** If…Then statement.

**Experiment:**

*Materials:* Water, Soil, Seeds, Plastic terrariums, plastic lids, tape.

*Description of the Treatment:* How are you going to test your hypothesis?

*Procedure:* Include the construction of the experiment and the recording of data.

*Variables:*

Independent Variable: The one thing different in each trial.

Dependant Variable: What the scientist measures.

Controlled Variables: All factors that must be kept the same.

**Gathering Data:** Create tables that will be used to record your data.

**Analyzing and Reporting Data:** How will this data be reported? Charts\Graphs.

**Conclusion:** Use the data to inform the acceptance or rejection of your hypothesis.

For this double period lab, we will design and build our experiments. Over the next two weeks, we will spend 10 minutes of each class gathering data and recording observations. This lab will be used to introduce the *Cedar School Lab Report*. At the conclusion of this experiment, a Lab Report will be assigned. In order to be successful in this report, each student in your group must maintain their own copy of observations and data.