**Lab/Activity: Long Report Format**

**Title:**

**Your Name:**

**Lab Partner(s) name(s) (if applicable):**

**Date performed:**

**Date Due:**

**Page 1: Title and Prelab**

* Pre-lab: the prelab should be completed before starting the laboratory in class.

**Scientific Concept:**

* Identify the scientific concept(s) (principle, theory, law) of the lab and write what you know about the concept(s) from the text, class notes, handouts, etc.

**Objective(s):**

* Describe the specific action you are being asked to perform in the lab, such as measure something, analyze something, test something, et.
* Briefly describe how what you are being asked to do in the lab (the objectives) will help you learn about the lab’s scientific purpose. In other words, show the link between your objective (what you will do in the lab) to the scientific concept(s) (what you are supposed to be learning about by doing the lab).

**Hypothesis (if applicable)**

* First, identify the variables in experiment. Then state your hypothesis—the relationship or interaction among the variables, the outcome of the experiment you anticipate. Your hypothesis may be stated in 1-2 sentences or sketched out as a graph.
* Explain your hypothesis using the scientific concept of the lab to show the reasoning behind your predication.

**Materials:**

* List everything needed to complete your experiment.

**Methods/procedure:**

* Describe the steps you completed during your investigation. This is your procedure. Be sufficiently detailed that anyone could read this section and duplicate your experiment.

**Diagram(s)**

* Draw a model of your lab set-up

**Page 2+: Data Collection Page(s)**

**Page 3+: Data analysis page(s)**

* The Data section contains numbers. The analysis section contains any calculations you made based on those numbers. This is where you interpret the data and determine whether o not a hypothesis was accepted.
* Graphs and figures must both be labeled with a descriptive title. Label the axes on a graph, being sure to include units of measurement. The independent variable is on the x-axis (time is always on the x). The dependent variable (the one you are measuring) is on the y-axis.
* Graph x vs. y
* Linearize the graph and graph again

**Page 4: Conclusions**

Most of the time the conclusion is a single paragraph that sums up what happened in the experiment, whether your hypothesis was accepted or rejected, and what this means.

* Restate purpose
* Restate hypothesis (if applicable)
* Support hypothesis with theory (if applicable)
* Brief description of lab (do not restate procedure)
* Results (with supporting data)
* Sources of error
* Improvement