Biology Unit 1: Foundations
Termite Inquiry Lab

Name _____
Lecture Teacher _____
Lecture Hour _____

Introduction. During this week's lab, you will put the scientific method into action. You will design and test your own experiment about termites. As a result, it is important that you learn some basic background information about termites BEFORE coming to lab. Use the links below to answer the pre-lab questions.

http://science.howstuffworks.com/zoology/insects-arachnids/termite1.htm
http://en.wikipedia.org/wiki/Termite

Pre-Lab Questions.

1. What do termites eat?

2. List and describe the three types (castes) of termites.

3. Termites belong to:

   Kingdom _____Phylum _____Class_____

END OF PRE-LAB! END OF PRE-LAB! END OF PRE-LAB! END OF PRE-LAB! END OF PRE-LAB!

Procedure.

1. Obtain a blank white sheet of paper.
2. Using the Papermate Pens (the color is up to you!), draw a spiral, a figure 8, etc. Make sure the drawing is smaller than a petri dish.
3. Place several termites on the white paper. **Avoid touching the termite with your hands whenever possible!** (Tap the termites from the wood on to the paper. Once on the paper, corral the termites with a petri dish lid.

Observations. An *observation* is anything you can learn using your senses. So, anything you can taste, touch, smell, see, or hear. *Quantitative observations* are those involving numbers or quantities. *Qualitative observations* are simply descriptive (color, sounds, etc.)

After completing the initial procedure, make at least one quantitative observation and at least one qualitative observation in the space below.

Question/Hypothesis. What question or hypothesis (based on your initial observations) could be answered with further experimentation? Write an if, then, because statement in the space below. You will test this hypothesis in an experiment that you and your group design.

*IF*_____
*THEN*_____
*BECAUSE*_____

Design & Test An Experiment. In the space below, record a list of numbered steps your group creates to test the hypothesis. They should be detailed enough that someone else could repeat the experiment exactly. Remember that good experimental design includes one *variable* (effect of different amounts of fertilizer on plant growth), multiple *constants* (all plants get the same sunlight, water, temperature) and one *control*, (plant grown with no fertilizer at all).

List Variable, Control, Constants:

Experimental Steps:

Gather & Record Data. As you conduct the experiment, record both the quantitative and qualitative data observed. Create a data table in the space below. Don't forget titles and unit labels!

Analysis & Conclusions. Answer these questions about your termite experiment. You will need to do outside internet research! (Do not use Wikipedia, Yahoo Answers or similar sites)

1. What pattern/trend do you see in the data? Write about this pattern/trend in your own words.

2. Restate the hypothesis from the beginning of the lab and determine whether it was supported or rejected based on the results. Now, find an **outside source** (reputable website) that helps explain what happened. In other words, explain why the results of the experiment agree/disagree with scientific principles.

   Website Works Cited: (proper format-use easybib)

3. List several sources of error that occurred during the experiment (at least three). How did these sources of error affect your results?