

InLAB Handout

Name: _____

Date: _____

Lab Section: _____

Lab Title: _____

InLab: Steps to follow while you are completing your lab experiment

Note: This is the handout version, which only contains the InLab steps. For more help or additional information, you'll need to go to the on-line version of InLab at:

<http://labwrite.ncsu.edu>

1. Setting up the lab:

Before you start the lab, review the objectives and procedures you will follow. In the space below, list the materials you'll be using and describe the set-up for this experiment including instrument calibrations. Take notes about potential sources of uncertainty so that you may refer to them when you are writing the Discussion section of your lab report. You may want to or may be required to draw and label the instruments you'll be using. Use the back of this sheet, if necessary.

2. Getting ready to collect data:

List all the variables in the experiment, identifying independent variable(s) and dependent variable(s). Beside each variable, give the unit of measurement, where appropriate. State your hypothesis, your prediction of the relationship or interaction among variables (revise your original one if necessary). It may be stated in 1-2 sentences or sketched out as a graph.

3. Preparing a table or spreadsheet for recording your data:

Use the list of variables and units of measurement to create a table or set up a spreadsheet for entering your data. You can use the space below to sketch out a table. If necessary, you can put more tables on the back of this sheet. If your lab manual already has tables for reporting your data, use it instead.

4. Conducting the experiment:

Carefully follow the experimental protocol. As you conduct your experiment and record your data, take notes in the space below on what you are doing, being sure to note any changes from the protocol. Describe or sketch other observations as you collect data during the experiment. As you record your data, make notes about trends that emerge in the data.

5. Visualizing the data:

Now that you have entered your data in a table or spreadsheet, you are ready to represent your data in the appropriate visual format for your lab report.

- Establish what types of data you have, quantitative or qualitative (refer to the Resources page in the web version of this document; once there, choose "Data Types").
- Determine if the data should be represented as a table or a graph (refer to the Resources page in the web version of this document; once there, choose "Tables vs. Graphs").
- If you decide to use a graph to represent your data, determine which type of graph is one that best represents your data (refer to the Resources page in the web version of this document; once there, choose "Graph Types").
- If a table is the best format for your data, then modify the table you used to collect your data so that it is labeled and organized properly (refer to the Resources page in the web version of this document; once there, choose "Designing Tables").
- If you need help creating a spreadsheet to make a table or graph, refer to the Resources page in the web version of this document. Once there, choose "Excel Tutorial."
- Remember that the purpose of your table or graph is to summarize your findings for yourself and for others and to reveal trends in your data.

6. Making sense of your data:

Review all your data--tables, graphs, and drawings--and try to make sense of the overall findings of the lab procedure. Summarize the overall findings in a sentence or two. If your lab instructor says it is permissible, compare your findings with those of other students in the lab. Take notes here of what you found, and if there are any differences in the findings, write down some possible reasons for the differences.