

Creating the Perfect Laboratory Report

This handout is a guide for helping you create high quality lab reports for every lab exercise performed in class. Follow your teacher's specific instructions as to what parts should be included in a report for any given lab.

I. TITLE: The title of your lab should be as specific as possible and in the following format:

The Effect of _____ on _____

*this first blank has the variable that you changed (controlled)

*the independent variable

*the one from the x-axis of graph

*this second blank has the variable that you measure during your lab experiment

*the dependent variable

*the variable from the y-axis

II. PROBLEM/PURPOSE: Why are you doing this lab?

This can be stated as the question you will answer. If the statement is a question, don't forget to use a question mark (?).

III. HYPOTHESIS: Always will be an "If.....then..." statement.

The hypothesis should relate to the purpose/problem of the lab.

IV. PROCEDURE: The procedure should be in a step-by-step, numbered format

Be as specific as possible

ex. don't say: "get a beaker", say "use one, 400mL beaker"

V. DATA TABLE: Every data table should have a title. *Usually* the title of the table is the same as the title of both the lab report and of the graph! **Use a ruler to create a neat table!**

The Effect of ____ (Independent variable) on ____ (Dependent variable)

Variable (units)	Trials	Variable (units)	Average of Variable (units)
The first column of every data table has the independent/experimental variable	no one is perfect, so it is always a good idea to do at least three trials!	Each of the next data table columns has the dependent variable. This is the stuff you are measuring in the lab	If you have trials, you must calculate an average. Usually, you only graph the average of your data

VI. GRAPH: See rules for creating the perfect graph in your notes!
Follow all graphing rules

VII. ANALYSIS QUESTIONS: In this class, some labs may have specific analysis questions that you must answer.
*Be specific in your answer.
*Cite your lab data in your answer when appropriate
*Answer question thoroughly using **complete sentences**

VIII. CONCLUSION: *The conclusion is the most important section of the lab report,*
In the conclusion, you must demonstrate that you understand your lab data and how to do the lab!
The conclusion usually consists of these three parts:

- A. Did you prove or disprove your hypothesis?
Explain how you know by citing your lab data. This means that you write down your quantitative data.
- B. What were at least two sources of error that may have (or actually did) occur during your lab?
Explain how these errors affected your lab's data.
(NOTE: Your lab partner is NOT a source of error!
Measuring incorrectly is not error either, it's ignorance!!)
- C. State what you learned from this lab exercise.
-or-
State any related experiments that could be done

---> Typed lab reports are **STRONGLY** encouraged, and are *occasionally required!*

---> When you complete your lab report, proof read it for spelling and grammar errors. Double check to make sure all important aspects for both data table and graph are present.

---> Be proud of your work!