

Sample Handout: Typical Format for Writing a Lab Report

This example includes directions for students in italics.

Science Department Laboratory Report

Name:

Class:

Teacher:

Experiment #:

Date of Experiment:

Due Date of Lab Report:

Title

The effect of the IV (independent variable) on the DV (dependent variable).

Abstract

Provide a concise summary of the experiment.

Purpose

Give a rational explanation as to why you are conducting this experiment.

Background Research and Bibliography

Provide a summary of the information you have found that relates to the type of lab you are conducting and cite the source(s).

Materials Used

Provide a concise list of the materials that are required to perform the experiment (e.g., chemicals, type of plant seed, etc.).

Equipment Used

Provide a concise list of any specific equipment that is needed to carry out the experiment (e.g., pH meter, dissolved oxygen meter, etc.).

Procedure

Give a detailed, step-by-step description of how this experiment is conducted. Remember—another scientist should be able to use your method to perform your lab exactly, so do not leave anything out!

Data Collected

(A) Data Table

Produce a labeled table of your results, including units of measurement.

Data Analysis

(B) Calculations

Show any calculations you used in interpreting the results.

(C) Graphs

Provide any labeled, suitably scaled graphs to help interpret the data you collected.

(D) Summary of Data Trends

Give a brief explanation of the observable trends or links in the results (e.g., how did the IV affect the DV?).

Error Analysis

Explain how errors could have occurred during the experiment and what steps were taken to minimize their effect. Provide a statistical analysis of the accuracy of your data.

Conclusion

Give a full explanation of the outcome of your experiment, noting if the purpose was fulfilled using this procedure. Was your hypothesis validated by the collected data? Why or why not? Explain concisely what you achieved by performing this experiment.

Suggestions for Further Investigation

Now that you have conducted the lab, reflect on what you or another scientist could do for a follow-up set of experiments that would take the investigation to the next level.

Experimental Design Diagram

Title: *The effect of the IV on the DV.*

Hypothesis: *Relate what you think will occur to the DV as you change the level of IV (e.g., If the IV does this, then the DV will do this. Your educated guess as to the outcome of the experiment).*

Independent Variable: *Name the variable that you purposefully change during the experiment; include units. Indicate the levels of IV in the columns below.*

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Repeated Trials: *How many data sets were collected; how many times was the experiment done?*

Control: *Note the experimental group used for comparison purposes.*

Dependent Variable: *Name the variable that responds to changes in the IV; include units.*

Constants: *List everything that was kept the same in the experiment. Remember—only the level of IV should change.*