

The Short & Sweet of Writing a Lab Report

Title

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

Purpose/Focus Question and Abstract

Give a rational explanation as to why you are conducting this experiment. Provide a concise summary of the experiment.

Background Research

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

Hypothesis

Provide a supported hypothesis predicting an expected outcome of some specified group of phenomena or data. It may be either asserted merely as a provisional conjecture to guide investigation (working hypothesis) or accepted as highly probable in the light of established facts and background knowledge.

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

Data Table -Produce an organized and labeled table of your results, including units of measurement.

Data Analysis

Calculations - Show any calculations you used in interpreting the results.

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

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?). This is often part of a detailed conclusion.

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? 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?).

Explain concisely what you achieved by performing this experiment.

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.

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.

Bibliography

Reference works should be cited at the end of your report.