

Writing a Lab Report

Writing a lab report is the culmination of your laboratory experiences. It is a chance to present your findings to others and to analyze your results and assess any mistakes you may have made.

In order to facilitate sharing of data and information, scientists have adopted a specific format for preparing a lab report. Given below is an outline of that format along with a brief explanation of each part.

TITLE: This should indicate what the lab report is about and what kind of investigation was done.

PURPOSE: In a sentence or two, clearly state the specific objectives of the experiment. Also called the hypothesis if phrased as a question.

INTRODUCTION: This section gives some background on the experiment(s) including a description of the techniques used and reasoning behind the exercise. The Purpose and Introduction are often combined into one section.

MATERIALS: This is a complete listing of all equipment and materials used in the experiment.

METHODS: This section should be a brief, yet detailed description of the lab procedure. Someone should be able to do the experiment again themselves based on this section. Methods is often combined with Materials. Also called PROCEDURE.

DATA/RESULTS: In this section you report the findings of your experiment without analysis or comment. It is akin to a reporter relating the facts of an event. The data may be presented in tables or graphically as appropriate. In some cases calculations or statistical analysis of the data may also be presented.

DISCUSSION/ANALYSIS: In this section of the report you must discuss and interpret the results of your investigation. It is important to refer back to your original hypothesis or purpose. Does your data support or refute your hypothesis? What were your original expectations? What are some factors that may have affected your results one way or the other? If the results are suspect or highly unexpected, analyze where mistakes might have been made.

CONCLUSION: This is a brief summary statement about the experiment commenting on how far the data went in supporting your hypothesis. Some of this may be repeated from the Discussion section, but in a shorter form. In many cases the Discussion and Conclusion sections are combined.

****While scientists do generally follow this format, please be aware that individual teachers may have specific variations that they will expect you to follow.**

The following websites may also be helpful to you:

http://www.chemistrycoach.com/laboratory_report.htm

http://www.ideo.columbia.edu/edu/dees/ees/climate/labs/lab_rpt.html