**Laboratory report**

An experiment is only finished when you have written up your findings, so in some sense writing your lab report is the most important step.

A lab report is a written description of your activities and findings.

**Structure of lab report**

• The title of the experiment.

• The date, your name, email address, and other contact information. Include the names of your lab group partners in the introduction with a description of any division of labor that occurred.

• An abstract that summarizes the objectives, methods, and principal conclusions.

• An introduction that outlines the problem you are exploring and the methods used.

• A brief description of the equipment that you used and information relevant to the experiment (time, date, personnel involved).

• A description of how data were acquired.

 • A log or summary of observations (e.g., a table). Description of any anomalies or systematic errors that might be present in the data.

 • A description of data reduction methods and algorithms. What statistical methods were used to analyze or combine the data into your final result? Describe the methods that you used to estimate the uncertainty in data.

• Comparison of the results achieved with theoretical expectations.

• Summary of conclusions

A typical lab report should not exceed 10 pages (including tables and figures), single spaced, 12- point font. Do not use font smaller than 12 point.

Here are some ideas to help you get started and follow through to a satisfying conclusion.

A lab report is a narrative describing your activities. In most writing style is an important consideration. In scientific writing clarity trumps style. The clearer your report, the easier it will be for the reader to understand and follow your logic and writing. Some tips for clear writing include:

* Think before you write! Clear thinking precedes clear writing. The clearer the ideas are in your head, the clearer they will be on the page. Thinking through your report should leave you with a solid understanding of what you want to say.
* Make an outline thinking through the structure and logic of your report will help focus your writing and lead to clearer text.
* Be explicit. A lab report is not a drama or a mystery where the story is resolved at the end. Never assume that the reader knows what you mean or where you are going. State your objectives and methods early on.
* Keep it simple. Write to express, not to impress! This often means writing in short, simple sentences using simple language. When possible, write short paragraphs, use simple verbs.
* State the principal results, both the intermediate ones and the final ones. Results are not, just in a table of numbers—describe the results in the text. Although a table may contain the actual results, the reader will need help interpreting these results. Figures and tables must be clearly labeled. A figure or table important enough to include in the report should be discussed and referred to by figure number in the body of the report. Figures and tables that are not mentioned in the text will be ignored.
* Focus on content. Don't worry about format (fonts, font size, justification, etc.).