

# Writing Lab Reports

Lab reports are an essential part of the scientific process -- recording and organizing the details of an experiment or study makes it easier for other scientists to review and contribute to your research and ensures that you receive credit for your discoveries.

Lab reports generally follow a standard format that divides the information into five sections -- the abstract, the introduction, materials and methods, the results, and the discussion.

## The Abstract

The abstract provides a summary of the full report. It should include a brief description of the experiment's purpose; the methods/theories used in the experiment; significant findings; and relevant conclusions. In most cases, the abstract should be no longer than a single paragraph.

## The Introduction

The introduction should include a brief description of the experiment, the objectives (i.e., the hypothesis) and importance of the experiment, and some background information about the experimental concepts.

**Note:** When discussing the experimental procedure, write in the past tense. Use the present tense when discussing theories (e.g., "Newton's Third Law of Motion states..."), standard equipment (e.g., "intramuscular electromyography measures..."), and the lab report itself (e.g., "the purpose of this report is...").

## Materials and Methods

The materials and methods section should include a description of the process and equipment used to perform the experiment. It is important to provide enough information in your description for another researcher to be able to replicate your experiment after reading your report; however, you do not need to explain standard procedures/policies in great detail.

**Note:** It's useful to include an illustration/diagram of any unique apparatus used in the experiment.

## Results

Report all raw data collected during the experiment in the results section. It may be useful to organize your findings in a table or illustrate them with a chart or graph, but do not analyze or interpret the data in this section.

## Discussion

In the discussion section, write about the significance of the experimental data you collected and whether or not it supports your hypothesis. If you believe that the data may have been affected by an error in the experimental procedure, mention this here. Most discussion sections end with suggestions for future research on phenomena/issues that were not addressed by the experiment.

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**References** – The following works were referred to during the creation of this handout: [\*The University of North Carolina, Chapel Hill's Lab Report Handout.\*](#)



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