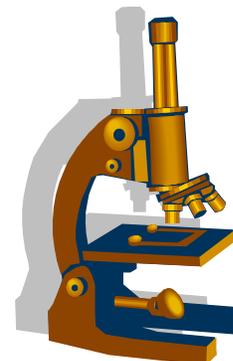


## The Lab Report

A lab report is commonly assigned in science courses. The lab report should contain data, calculations, and explanations of the experiment performed and topic explored during the lab. Depending on the course, the layout of lab reports can differ. For example, chemistry lab reports usually are separated into sections by headings, whereas lab reports for biology courses are commonly in short answer format. Students should do their best to make connections between the topic explanation and the relationship of the data to theories learned in lab lectures.



### Example: The Biology Lab Assignment

#### Basic Guidelines

The basic concept behind a biology writing assignment will be to demonstrate that the student has a clear understanding of the topic. In laboratory-based biology classes, dissections and nomenclature will be stressed during the experiments. Here are some basic tips to prepare for the biology lab:

1. Read the laboratory assignments before the class. Almost all professors post a schedule of what labs are being performed and when so that you are able to better prepare yourself. Quizzes are sometimes given before lab on this information.
2. Take accurate notes of what the professor says before the lab begins. The professor will usually give a 15-20 minute general overview of the lab as well as point out better ways to perform certain steps or deviations from the lab manual, if one is used.
3. When drawing out lab specimens, such as dissections or microscope slides, pay special attention to the size and shape of specific organs or structures. Lab report questions will often involve specific questions on prominent organs or areas in a cross-sectional slide.
4. Almost all biology labs will require a post-lab report, whose contents can range from simple short-answer questions to structured reports.
5. For the short answer worksheet-type lab reports, it is best to utilize the lab manual first, followed by external research, such as a textbook or online website, if needed. When answering the questions, clearly answer with specific information and provide all information necessary.
6. Cite the information after each question. Example: *Question 1: answer (name and author of book, or site URL)*

#### Report Components

The larger, structured biology reports are more complicated, but the same rules apply. The student will usually be given a rubric which will state exactly how to format the report. The usual template is as follows:

1. Introduction/abstract: State the basics and objective of the experiment.
2. Hypothesis: State the expected result of the experiment. Note: It is perfectly all right if the hypothesis is incorrect, as long as the reasons why it was incorrect are fully explained.

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3. Results: Present the actual information collected during the experiment. This is where the bulk of charts, graphs, tables and photographs taken (if any) are written. Do not explain the meaning or any interpretation of the data here: simply present it as clearly as possible.
4. Discussion: Explain how the objective was reached and what the experiment's results reveal. Refer to previous charts, graphs, etc. This is where the data is interpreted and the hypothesis is tested. If it is correct, explain what information or observations support this. If it is incorrect, propose a correct one and explain why the original hypothesis was incorrect.
5. Conclusion: Restate the objective and how it was reached. State whether or not the hypothesis was correct or not, and why. These should be stated as concisely as possible.