

Writing a Lab Report

There is no universally accepted format for a lab report. Your teacher will specify how he or she wishes to evaluate your work in the lab. However, the purpose of any lab report should be to record your findings and communicate what you have learned. With these goals in mind, here are some typical guidelines for writing a lab report.

Get organized. A good lab notebook is your key to success in the lab. Record everything in this notebook, and use it as a reference when you write the report.

Take notes during any pre-lab discussion. Good notes will make writing the report go much faster. You will usually be given some clues as to what to observe or how to do the calculations.

Always record the units when collecting data. It's easy to forget a few days later the units you saw for the data you collected.

MODEL FORMAT

A good general, scientifically based model has the following parts:

- 1. Title** The title should clearly describe the nature of the experiment. In some cases, you may be able to use the title of the lab your teacher provides. However, be sure that the title provides clear information. Don't forget to include your name, date, and the names of any lab partners with your title section.
- 2. Abstract or Summary** Though this section appears second in the report, it is often written last. This section summarizes the purpose of the experiment and your findings. It gives the reader a quick overview of what you've done and what you've learned.
- 3. Introduction** This section should describe the problem or hypothesis you are investigating. The introduction should include the reason you are studying the problem and any useful outside information related to the problem or hypothesis.
- 4. Materials and Methods** This section describes your procedure, the materials you used, how you gathered and analyzed your data, and the controls in your experiment. This section should be written in the past tense and passive voice.
For example:
Three 50 mL beakers were each filled with 25 mL of water.
Do not write:
I filled three beakers with water.
- 5. Results** In this section, you describe what you found out through the experiment. Results include your observations, measurement data, graphs, and tables. Calculations and answers to all lab questions should be included.

Writing a Lab Report *continued***DATA TABLES AND CHARTS**

Choose a title for your data table, and then make a list of the types of data to be collected. This list will become the headings for your data columns. For example, if you collected data on plant growth over time, you could record your data in a table like the one below.

PLANT GROWTH OVER TIME

Time (days)	Height of plant (cm)
1	10
3	12
5	15
7	18
9	20

GRAPHS

Choose the scale for each axis of your graph. The scale should take up as much of the paper as possible so that the results can be clearly seen. Then, choose the interval for the scale (the number of days represented by each block in the x -axis scale, for example). Remember, once you choose the interval for the scale, you cannot change it. If you change the interval of your scale, your graph will not accurately represent your data.

Mark the points for each pair of numbers. When all points are marked, draw the best straight or curved line between them. Remember that you do not “connect the dots” when you draw a graph. Instead, you should draw a “best fit” curve—a line or smooth curve that intersects or comes as close as possible to your set of data points.

