

How to Write A Lab Report

You will ALWAYS use the following format when writing a lab report, whether a partial or an entire report. The items in **BOLD** type will be subheads that you need to include in your report. The rest of the information explains/defines the requirements for each subhead. The entire report must be preceded by a title page (see Rubric/Title Page handout).

Title

Problem/Purpose What is the question we want to solve? (Be sure to end with the question mark!)

Hypothesis is your educated guess answering your question in the problem followed by your reasoning for making the prediction.

Materials are a LIST of all supplies needed for the experiment in column format. No capital letters unless it is a name brand. Also, do not number the list unless identifying quantities. [NOTE: this step may be skipped if the materials are already listed in the lab instructions.]

Procedures are the exact steps to use in order to perform the experiment; must be very detailed and specific. Write similar to a “how to” paper without the “how to” words. Instead, number each complete sentence and end it with a period. [NOTE: this step may be skipped if the procedures are already listed in the lab instructions.] For example:

1. Gather all materials.
2. Cut a rectangle out of the filter paper that is 5 cm by 25 cm.
3. Using a felt tip pen, make a dot approximately 3 mm in diameter located 1 cm from the bottom of the strip and centered between the two sides. (See Diagram I)
4. Tape the top of the strip to the middle of a pencil, perpendicular to its length.
5. Place the...

Data is the part where you conduct your experiment according to your procedures and record both qualitative and quantitative (**METRIC**) observations of your experiment. You must use this data to create appropriately titled & labeled tables/charts AND graphs for your report. [See SCIENCE GRAPHING GUIDELINES page.]

Results (Data Analysis) is the section in which you summarize all observations, both qualitative (¶1) and quantitative (¶2), in paragraph form with references to the data found in the charts/tables and graphs in the Data section. Use facts only, NO opinions. Also, be sure to discuss the averages for your data from all trials. Finally, make comparisons (¶3⁺) between the variables tested including differences and percentage change.

$$\{\% \text{ change} = (\text{Variable 1} - \text{Variable 2}) / \text{Variable 1}\}$$

Conclusions include explanations of your results during the experiment as they relate to the hypothesis using CLAIM, EVIDENCE, and REASONING (see SCIENTIFIC METHOD and the BASE SCIENTIFIC EXPLANATION RUBRIC pages).

NOTE: If any resources were used, a separate bibliography or Works Cited page must be included after the conclusions. **BE SURE TO INCLUDE YOUR DATA LOG (ALL DATA RECORDED DURING THE EXPERIMENTAL STAGE) AFTER THE REPORT.**