

DE ANZA COLEGE

Lab Report Format

TITLE

Place the title of the lab experiment at the top of the first page.

OBJECTIVE

State the objective of the experiment clearly. The objective of the experiment is what you're trying to prove or accomplish.

THEORY

Explain relevant concepts and provide any appropriate definitions. Pertinent equations should be derived in a clear, logical manner. Any relevant background information may also be included in this section.

APPARATUS

- Record a list of the equipment being used including the serial number, model, and make of the equipment.
You will need this information for reference in case you need to repeat the experiment or collect additional data.
- Describe the equipment being used and draw a diagram or picture of the equipment.

PROCEDURE

This section includes your plan for performing the experiment.

- A step-by-step plan for conducting the experiment.
- A detailed description of your procedure for performing the lab such that you or anyone else could recreate the experiment exactly as it was performed.
Experimental research is all about repeatability
- The experiments in the lab manual/handouts already have a step-by-step written procedure. You may cut and paste the written procedure from your lab manual into your lab notebook. Keep in mind that you may need to repeat an experimental procedure during the lab final. (The lab handouts have the TITLE, OBJECTIVE, THEORY, APPARATUS, and PROCEDURE sections already written out, so you may cut and paste these sections into your lab notebook.)

DATA

- Your data should be well-organized and easy to read.
- Label each set of data with the appropriate quantity being measured along with the trial/run number.
- Use the 'table' format for easier reading.
- Your data should have the correct number of significant figures and appropriate units.
- If your data is represented by graphical methods, make sure your graph has been appropriately labeled with the correct axis, units, and scale.
- Any work that is printed out from the computer must be attached securely (taped, glued, stapled, etc.) to your lab notebook.
- **Do not** fold the printout and slip it into the notebook, any loosely included material WILL be discarded and your report will be considered incomplete.
- Any work that is done on the computer should not be saved on the hard drive! Once finished with your work, delete it and empty the Recycle Bin.

CALCULATIONS

- Write down the equations used to do calculations.
- The calculations should be clear and readable.
- Show and label calculations in complete detail for any quantity.
- If you are repeating a calculation several times, you only need to show one sample calculation.
- The calculation for % error between experiment and theory should be included here.

CONCLUSION & RESULTS

Include a discussion of the results and their significance.

- Address the experimental objective and state whether it was accomplished.
- Comment on the % error between theory and experiment.
- Identify at least two sources of experimental error (systematic or random) to account for the percentage error involved in the experiment.
- Explain how these errors affected the outcome of the experiment. Was the experimental result greater than or less than the theoretical value? Was this what you had anticipated? Explain why or why not?
- You may also discuss methods to eliminate or minimize these experimental errors.