

Writing Lab Reports in AP Chemistry Class

All Lab Reports MUST be in your Lab Report Notebook.

FORMAT

The following is the format that must be followed for your lab to be considered for review.

- 1. Name:** (Also include people that you may have worked with during the activity, remember to put your name first).
- 2. Title:** What is this lab called?
- 3. Purpose:** Why are you doing the lab? What is the fundamental concept that is being demonstrated in this experiment or investigation?
- 4. Materials:** This should be a *detailed list* of everything you used in this lab. Remember to include the sizes of beaker, test tubes...
- 5. Procedure:** This section tells the reader *exactly* what you did during the experiment. It should be detailed enough that any scientist could read this section and do exactly what you did during the experiment. Do not make the reader have to guess what you did.
- 6. Results/Data:** This section tells the reader what data you may have collected, or what the results of your measurements were during an experiment. ALL observations go in this section.
- 7. Calculations:** If the lab involved any calculations, then this is the section where you report these calculations. You need not include every calculation that you make. Only include a **SAMPLE** calculation. For example, if you were finding the density of coins, then the calculation would look like this:

Example calculation:

This is a calculation from trial 3 of this experiment.

$$\begin{aligned} \text{density} &= \text{mass/volume} & d &= 3.01\text{g}/28\text{ml} \\ & & d &= 0.11 \text{ g/ml} \end{aligned}$$

Don't forget your significant figures and don't forget your units!



8. Error Analysis: Surely something may have gone wrong during the experiment that may or may not have been preventable. This is the section where you mention all of these factors.

Think about: Personal error, equipment failure, poor directions, carelessness, calculation errors... There are many sources for error and it is very important that you convey this to the reader of your report so that he/she can try to prevent these errors in the future.

9. Conclusion: This is the part of the lab report where you reflect on what you did in the experiment and what you have learned. If the lab/experiment relates to something that we did in class, then make sure to talk about how it may (or may not) be relevant to what we have learned.

- What basic principles in chemistry did this lab demonstrate?
- What did you learn?
- How could it have been made better?

Any loose papers, graphs, etc. must be stapled to a page of your Lab Report Notebook.

The Lab Notebook - Rules

The nature and purpose of the laboratory work determine the type of record that should be prepared. A basic requirement is well expressed by Rhodes (Technical Report Writing, page 18, McGraw-Hill, 1941): "One requirement of a good notebook is that it should be so clear and complete that any intelligent person familiar with the field could, from the notebook alone, write a satisfactory report on the experiment."

The lab notebook in AP Chemistry will be used for all labs. There are some very specific rules which must be followed when keeping a lab notebook. In industry the lab notebook is a legal record of what took place in the lab as well as instruction to others as to how to repeat the experiment.

Rules for Lab Report Notebooks:

1. Must use a 5 square mm quadrille paper notebook.
2. You will write in the notebook ONLY in indelible ink.
3. All pages will be numbered.
4. Pages 1 and 2 will be reserved for the Table of Contents.
5. The student's Name and Period will be written on the front of the notebook.
6. All labs will begin on an ODD numbered page.
7. You must NEVER write in the lab book with a pencil.
8. You must NEVER erase or use "white-out" in the lab book.
9. You must NEVER scribble out or in any way obliterate information in the lab book.
10. To delete words or data, you MUST draw a single line horizontally such that the item is still legible.
11. For deleted numbers or calculations you must have an explanation in the footnotes.
12. You MUST have the notebook prepared upon entering the class on the day of a scheduled lab.

When doing the lab report remember: **Be prompt, complete, concise and neat.**