AP Chemistry Lab Notebook Guide

The main purpose of your laboratory notebook is to be a permanent record of your experiments. During an experiment, you will use it to record data and observations necessary to complete lab reports that explain your results. Your lab data and any observations must be entered into your lab notebook DURING the experiment to make sure your data is reliable and replicable.

**Basics:**

• Must be permanently bound. Composition notebooks only. Spiral notebooks will not be accepted.

• Written in INK. If an error is made, it should be marked through with a single line and initialed by the notebook owner.

• Your name should be written on the front cover.

• Reserve the first two pages for the Table of Contents (Date, Title of Experiment, Page #s).

• Number all pages in advance at the bottom right corner and NEVER remove pages.

• All graphs must be computer generated and labeled properly and glued into your notebook or they will not be graded.

**For each experiment your notebook should include the following:**

1. Title and Date written in the top corner of each page.
2. Objective—outlines the important concepts and purpose of the experiment.
3. Materials--A bulleted list of ALL of the materials used in the experiment
   1. Chemicals with the names written out (no abbreviations) and include molarities where known.
   2. Quantities of each (example: 4 test tubes)
4. Procedure—A brief summary of each of the steps taken in completing the lab. It is NOT an exhaustive description containing minute detail, but enough so you can follow this in the lab. This should be numbered steps, and in passive past tense (ex: 5.00 g of material was weighed and placed in a beaker. Non-ex: We weighed 5.00g of material and placed it in a beaker).
5. Data—Data should be recorded directly into the lab book during the experiment. Data should be neatly organized (tables if appropriate), and all data should be reported to the correct number of significant figures.
6. Graphs—All graphs should be computer generated and labeled appropriately, then pasted intolab notebook.
7. Calculations—Any mathematical manipulation of the data collected during the experiment.
8. Analysis/Questions: This section would be where you would answer ALL of the questions that accompany an experiment
9. Discussion/Data Analysis—This should be a three-paragraph dissertation on your results and data and what they mean. Turn to the back of this page for a brief outline of each paragraph.

**Paragraph 1:**

* Begin with purpose of the lab
* Briefly discuss the procedure
* Discuss ALL of your data and results for the experiment
* Conclude with whether you successfully met the purpose of the experiment, what you “discovered”, and if it makes sense why or why not.

**Paragraph 2:**

* Discuss what the central chemical idea was behind the experiment and explain the key concepts
* Discuss the key mathematical relationships used to help you form your conclusions
* Include how your results led you to form certain conclusions

**Paragraph 3:**

* Begin this paragraph with your percent error for the experiment (if known)
* Discuss any errors or mistakes that you encountered in this lab and how they might have affected your results.
* Discuss whether your solution (conclusion) to the experimental question is realistic. Why or why not? Include any other solutions to the problem that you feel would also be acceptable and why.
* Discussion of theory demonstrated by the lab