

AP CHEMISTRY

DAY ONE

FYI:

- Distribute textbooks. Write Your Name and Mr. D. on front inside cover.
Author: Steven Zumdahl, "Dr. Z.", see page xxiii
Seating Chart with text numbers
- Lab Fee \$25.00 + AP Test Fee \$95, Board pays half = \$47.50
- Safety Glasses
- Graphing Calculator
- Periodic Table, No Ion Sheet!
- Grading Policy
- AP Exam May 1st 2017 (First AP Exam on 1st Monday of May).
- My schedule (5th lunch, 7th conference)
- Web Page: <http://www.chemisd.com>
- **The Concept Outline The Six Big Ideas for the new AP Curriculum**

Big Idea 1: The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions

Big Idea 2: Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them

Big Idea 3: Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons

Big Idea 4: Rates of chemical reactions are determined by details of the molecular collisions

Big Idea 5: The laws of thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter

Big Idea 6: Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations

Lab Write-Ups and Composition Books:

- Laboratories will often extend more than one period.
 - The Laboratory Notebook (see [The Laboratory Notebook](#))
 - Set up notebooks
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Pre Test, AP Diagnostic

Chapter 1:

- Answers to odd blue questions in back of text. Marathon Problems
- Flip through chapter 1, review topics of SI units and prefixes, sig figs, dimensional analysis, conversions, and density.
- **Practice Problems: P. 32 #26, 27, 30, 32, 36, 41, 46, 49, 53, 60-63, 67, 70, 71, 77, 81**

AP CHEMISTRY THE LABORATORY NOTEBOOK

The cardinal merits of good notes are lucidity, brevity, and simplicity.

Reginald Hughes

Tools and Rules:

- Bound hard covered composition notebook
- Page format either ruled or grid
- Ballpoint pen with black permanent ink
- Write legibly on only the right side of every page in sequence.
- Write page numbers in upper outside corner for each page. Circle the page number to avoid confusion with other data.
- Each student is responsible for his or her notebook and the collection of data.
- All entries must contain a description! i.e. labels to identify data, number with sig figs and units!
- Rewrites: make corrections to data or calculations by crossing out the old entry with a single stroke (accompanied by your initials and note of explanation –we’ll avoid this practice).
- **Mr. D.’s Cardinal Rule: Your lab report notebook must be neat and readable.**

Front Matter:

Exterior Title: your name, instructor’s name, course name and number (AP Chemistry 435), date (academic year), book number (1) and place

Table of Contents: reserve first four pages for summary of notebook’s contents. Example below:

Table of Contents		
Date	Subject	Page No.
Sept. 3, 2016	Density determination of alcohol mixtures for finding percent alcohol content	6
Sept. 21, 2016	Fe in ore by dichromate titration	10

Body of Notebook: In this order!

Title of experiment and date

- I. Introduction and purpose of experiment (keep brief)
- II. Prelab questions
- III. Materials and Procedure (Write in the active voice. Good descriptive drawings are encouraged and often do better than words.) “see Lab” OK
- IV. Observation and Data (**identify and label all entries!**)
 - Observations: what you see, appearance, not an explanation
 - Data and Calculations: construct a simple table. Label all data. Remember sig figs
 - Graphs: include a title or caption and attach with glue. Make certain that all legends, axes, and symbols are clearly defined.
- V. Evaluation of Data: (conclusion questions)

WD-40

“WD-40 literally stands for Water Displacement, 40th attempt. That’s the name straight out of the lab book used by the chemist who developed WD-40 back in 1953. The chemist, Norm Larsen, was attempting to concoct a formula to prevent corrosion—a task which is done by displacing water. Norm’s persistence paid off when he perfected the formula on his 40th try.” From <http://www.howstuffworks.com/question155.htm>