

AP Chemistry Summer Assignment 2022-2023

Schoology Access Code: (Log into Schoology or create an account to use code): **BFQ4-X5TM-MMKV2**

Purpose: To keep the skills gained from Honors Level I Chemistry sharp and ready for action as we begin our journey through the Advanced Placement Chemistry Course.

Topics: The following chapters and topics will be reviewed this summer.

Chapter 1: Chemical Foundations

1.1 Chemistry: An Overview

1.2 The Scientific Method

CHEMICAL CONNECTIONS: A Note-able Achievement

1.3 Units of Measurement

CHEMICAL CONNECTIONS: Critical Units!

1.4 Uncertainty in Measurement

1.5 Significant Figures and Calculations

1.6 Learning to Solve Problems Systematically

1.7 Dimensional Analysis

1.8 Temperature

1.9 Density

1.10 Classification of Matter

Chapter 2: Atoms, Molecules, and Ions

2.1 The Early History of Chemistry

2.2 Fundamental Chemical Laws

2.3 Dalton's Atomic Theory

CHEMICAL CONNECTIONS: Berzelius, Selenium, and Silicon

2.4 Early Experiments to Characterize the Atom

2.5 The Modern View of Atomic Structure: An Introduction

2.6 Molecules and Ions

2.7 An Introduction to the Periodic Table

CHEMICAL CONNECTIONS: Hassium Fits Right In

2.8 Naming Simple Compounds

Chapter 3: Stoichiometry

3.1 Counting by Weighing

3.2 Atomic Masses

3.3 The Mole

3.4 Molar Mass

3.5 Learning to Solve Problems

3.6 Percent Composition of Compounds

3.7 Determining the Formula of a Compound

3.8 Chemical Equations

3.9 Balancing Chemical Equations

3.10 Stoichiometric Calculations: Amounts of Reactants and Products

CHEMICAL CONNECTIONS: High Mountains—Low Octane

3.11 The Concept of Limiting Reactant

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Chapter 5: Gases

5.1 Pressure

5.2 The gas laws of Boyle, Charles, and Avogadro

5.3 The ideal gas law

5.4 Gas stoichiometry

5.5 Dalton's law of partial pressures

CHEMICAL CONNECTIONS: Separating Gases

CHEMICAL CONNECTIONS: The Chemistry of Airbags

5.6 The kinetic molecular theory of gases

5.7 Effusion and diffusion

5.8 Real gases

5.9 Characteristics of several real gases

5.10 Chemistry in the atmosphere

AP Chemistry officially begins on Friday, September 2nd.

1. The assignments, detailed on the following page, are to be completed during the summer and submitted on Schoology by the 1st Tuesday of school. The syllabus for the chapter contains all the work that is to be completed. These 3 assignments are also posted by on the Schoology website for this class with PowerPoint and supporting documents.
2. The assignment is worth a 100- point test grade. Work that is 1 day late will receive a 25% reduction. Work that is 2 days late will receive a 50% reduction. If the work is not received within this time frame you should reconsider taking AP chemistry.
3. If you are absent from school on the first Tuesday of school, your work should be emailed to me at tronan@saintpaulknights.org
4. The items below are provided on the following page and on Schoology:
 - [Review #1 pgs. 6-19 Summer Assignment Due July 31st on Schoology](#)
 - [Review #2 pgs. 20-48 Summer Assignment Due September 6th on Schoology](#)
 - [Unit 1 Packet pgs. 1-29 only Due September 9th on Schoology](#)

Materials Required:

- Chemistry - AP Edition, Zumdahl, Zumdahl, DeCoste, 9th or 10th
ISBN: 978-1-305-95773-2 (10th) or 978-1-133-61110-3 (9th)
- Student Lab Notebook Chemistry ISBN: 978-1-930882-23-2
- Notebook / Binder for loose materials and handouts.
- **CALCULATOR**, Ruler, Pens, Pencils, Graph Paper

