

# Chemistry 18 Week Plan

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## Week 1

COS Al.1, Al.2, Al.3, Al.4

Ch 1 Matter and Change

Ch 3 Atoms: The Building Blocks of Matter

### Labs

Density of a Liquid

How Sweet it is

How to light a Bunsin Burner

Distillation

Chromatagraphy

## Week 2

COS Al.3

Ch 4 Arrangements of Electrons in Atoms

Ch 5 The Periodic Law

### Labs

Calculating Average Atomic Mass

Chemicool People

It's In The Cards

Journey Into the Atom

Mendeleev's Periodic Table Simulator

Paramagnetism and Diamagnetism

Periodic Trends

Periodic Trends: Graphs and Straws

Coinium Isotopes of Atoms

Excited Electrons

Half-Life Simulation

History of Atomic Theory

## Week 3 and 4

COS Al.3, Al.10

Ch 6 Chemical Bonding

### Labs

Bond Types and Physical Properties

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## **Week 5 and 6**

COS AL.3

Ch 7 Chemical Formulas and Chemical Compounds

## **Week 7 and 8**

COS AL.5

Ch 8 Chemical Equations and Reactions

### **Labs**

Calcium Carbonate Decomposition AP

Chemical Reactions

Conducting Solutions

Covalent Bonding and Lewis Structures

Empirical Formulas

Molecular Shape and Polarity

Numerical and Chemical Equations

## **Week 9 and 10**

COS AL.5

Ch 9 Stoichiometry

### **Labs**

Tortoise Island

Aluminum Leftovers

Aspirin Synthesis

Determination of Percent Water in a Chemical Empirical Formula

Using Stoichiometry to Identify the Products of a Reaction

## **Week 11**

COS AL.10, AL.11

Ch 10 States of Matter

### **Labs**

Freezing Point Depression

Intensive and Extensive Properties

Melting Points

Properties of Elements

Temperature and Solubility

## **Week 12**

COS AL.8, AL.11

Ch 11 Gases

### **Labs**

Boyle's Law

Determination of Molar Mass by Vapor Density

Gay Lussac's Law with CO<sub>2</sub> Cartridges

Ideal Gas Law and Molar Volume

Imploding can Demonstration

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## **Week 13 and 14**

COS    Al.6, Al.10

Ch 12   Solutions

Ch 13   Ions in Aqueous solutions and Colligative Properties

### **Labs**

Chemical Equilibrium

Color of Chemistry

Molarity

## **Week 15 and 16**

COS    Al.7

Ch 14   Acids and Bases

Ch 15   Acid-Base Titration and pH

### **LABS**

39 Drops

Acid Base Indicators

Acid Ionization

Acid Titrations

Is There a Buffer Here?

Redox Titration

## **Week 17**

COS    Al.9, Al.11, Al.12

Ch 16   Reaction Energy

Ch 17   Reaction Kinetics

Ch 18   Chemical Equilibrium

### **LABS**

Elephant Toothpaste Demonstration

Endothermic and Exothermic Reactions

Energy Content in Food

Hand Warmer Calorimetry

Kinetic Molecular Theory

Rate Law Determination of the Crystal Violet Reaction

Specific Heat

## **Week 18**

Finals