

# Strand 1- Atomic and Molecular Structure

=> AUHSD Science Content Standards 1a-h <=

## **Introduction** (1 week)

### Topics of Discussion

Course Description and Expectations

Lab Safety

Laboratory Apparatuses

### Activities

Math in Chemistry Pre-Skills Test

Lab- Using Laboratory Measuring Devices

## **Chapter 1- Chemistry and You** (1week)

### Topics of Discussion

Scientific Method

Scientific Measurement

SI Units

Conversions

Dimensional Analysis

Significant Figures

Significant Figures in Calculations

Scientific Notation

Percent Yield

### Activities

HW- pp. 50-51(#1-24, 30-57) & #25-28 for Honors

Lab Safety Test

Lab Drawer Check-in

Lab- Mass, Volume, and Density

=> AUHSD Science Content Standards 2, 3, 4, 8, & 15 (general) <=

## **Chapter 2- Energy and Matter** (1 week)

### Topics of Discussion

Energy

Temperature

Matter

Elements and Compounds

### Activities

HW- pp. 82-83(#1-24) & #25-30 for Honors

Lab- Chemical and Physical Change

Video- Introduction to Matter, the Elements, and Units of Measure

Introduction/Chapters 1& 2 Free Response Exam

**=> AUHSD Science Content Standards 2h, 12a-c, & 13 <=**

**Chapter 3- Atomic Structure (1 week)**

Topics of Discussion

Early Models of the Atom  
Discovering Atomic Structure  
Modern Atomic Theory

Activities

HW- pp. 122-23(#1-10, 14-18, 22-24) & #27, 28, 30, 31 for Honors  
CW- "Extra Practice" Handout  
Lab- Isotopes

**=> AUHSD Science Content Standards 2e, 2g, 2i, & 2j<=**

**Chapter 4- Electron Configurations (2 weeks)**

Topics of Discussion

Radiant Energy  
Quantum Theory  
Another Look at the Atom  
A New Approach to the Atom  
Electron Configuration

Activities

HW- pp. 156-57(#1-24) & #25-28 for Honors  
CW- Atomic Structure  
Lab- Spectral Analysis of Fluorescent Lights  
Video- Atomic Structure

**=> AUHSD Science Content Standards 2a-c & 2f <=**

**Chapter 5- The Periodic Table (1 week)**

Topics of Discussion

Development of the Periodic Table  
Reading the Periodic Table  
Periodic Trends

Activities

HW- pp. 188-89(#1-28) & #29-34 for Honors  
CW- An Alien Periodic Table  
Lab- Periodic Trends  
Video- The Periodic Table (TWOC)  
Video- Atomic Orbitals (Cal Tech)  
Chapters 3, 4, & 5 Free Response Exam

