**August 9-10**

Class Introduction and Orientation

1. Teacher Introduction

2. Classroom and Learning Rules

3. Grading System

4. White Board and Cabinets Orientation

5. Chrome Books Sites we will use.

6. Classroom Contracts

**August 11-12**

Chemistry Pre-Test (Scientific Reasoning Assessment) Laboratory Orientation

1. Safety Scenario

2. Article in Lab Safety

3. Becoming Familiar with Lab Equipment

4. Laboratory Safety and Contract

5. First Assignment

**August 16-19**

|  |
| --- |
| Define chemistry. |
| List advantages and disadvantages of chemicals to our lives. |
| Distinguish between pure and applied science. |

**August 23-26**

Measuring Systems

Metric System

Dimensional Analysis

**August 30-Sept 2**

The Scientific Method

Lab: Scientific Method

**\*\*\*No School Sept 5\*\*\***

**Sept 6-9**

Matter And Movement

**Sept 13-16**

The Atom, Molecule, and Ions

Electron Arrangement

**\*\*\*\*Quarter Quiz\*\*\*\***

**Sept 20-23 --Grades Go In**

The Periodic Table Families

**\*\*\*No School Sept 27-30\*\*\***

**Oct 4-7**

The Periodic Table

Groups, Atomic #, Mass #

**Oct 11-14**

Electronic Structure and The Periodic Table

**Oct 18-21**

Mass Relations In Chemistry

Measurements & The Mole

Avogadro's #

**Oct 24-28**

The indicators of a Chemical Reaction

Reactions in Aqueous Solutions

**Lab: Reaction or Not**

**Nov 1-4**

Types of Reactions

**Lab: Reactions What?**

**Nov 8-10 --No School on the 11th**

pH Scale

Reactions in Aqueous Solutions

Precipitate, Oxidation-Reduction

Water

**Perspective Lab: Life without Wate**r

**Lab: Rust**

**Nov 15-18**

Gases, Noble Gases, Helium 3

Chemical Equations & Reaction Rates

**\*\*\*Nov 21-25 Thanks Giving Break\*\*\***

**Nov 29 - Dec 2**

The ideal Gas Law

Stoichiometry of Gases

**Lab: Ideal Gas Law Excersizes**

**Dec 6-9**

Stoichiometry & Heat Transfer

Gas Mixtures, Partial Pressure, Mole Fractions

**Perspective Lab: Green House Effect Global Warming**

**Dec 13-16---Grades Go In**

**\*\*\*\*1. Pre Test Midterm\*\*\*\***

**\*\*\*\*2. Midterm\*\*\*\***

**\*\*\*Dec 19 - Jan 6 Winter Break\*\*\***

**SECOND SEMESTER**

**Jan 10-13**

Light, photons and Energy

The Hydrogen Atom

Electron Configuration

**Jan 17-20**

Covalent Bonding

Lewis Dot, the Octet Rule

Covalent vrs Ionic Bonding

The Polarity of Molecules

**Jan 24-27**

Solutions

Types of solutions

**Jan 31 - Feb 3**

Concentrations

Solubility

Colligative Properties.

**Perspective Lab: Oceans**

**Feb 7-10**

Rate of Reactions

Concentration, Rate, and Time

Activation

**\*\*\*\*Quarter Quiz\*\*\*\***

**Feb 14-17\_\_Grades Go In**

Reaction and Temperature,

Catalysts

**Perspective Lab: Ozone**

**\*\*\*Feb 21-24 Presidents Week\*\*\***

**Feb 28-Mar 3**

Equilibrium

N2O2 Equilibrium System

Equilibrium Constant and K

**Mar 7-10**

Acids and Bases

Bronsted-Lowry Model

Water Dissociation Constant

Ionic Bonding

Salts

**Lab: phenolphthalein**

**Mar 14-17**

Ionic & Covalent Substances

Lab: Define an atom and give the name of the scientist who first named the atom.

**Mar 21-24**

Summarize Dalton's atomic theory.

Distinguish between protons, electrons, and neutrons in terms of their symbols, relative masses, charges, and scientific discoverer.

**Lab: Complete the Table of Elements**

**Mar 28-31**

Complex Ions

Naming Complex Ions

**April 4 - 6 --No School on the 7th**

**\*\*\*April 10 -14 Easter Break\*\*\***

**April 18-21**

Electro Chemistry

Standard Voltages

Electrolytic Cells

Commercial Cells

**Lab: Make a Battery**

**April 25-28**

Nuclear Reactions

Stability and Radio Activity

Fusion verses Fission

**Perspective Lab: China's Fusion Reactors**

**May 2-5**

The Diamond Battery

Carbon Dating

**May 9-12**

The Chemistry of Metals

Metallurgy

Alkali and Alkali Earth Metal Reactions

**Lab: Ghost Busters Building**

**Perspective Lab: Metals in Nutrition**

**May 16-19**

The Chemistry of Non Metals

The Elements

Hydrogen Compounds of Nonmetals

Oxygen Compounds of Nonmetals

**May 23-26**

Review

**May 30- June 2 -- Grades Go In**

**\*\*\*\*\*Final Pre Test\*\*\*\*\***

**\*\*\*\*\*Final\*\*\*\*\***