**Topics Covered In Chemistry**

**Structure and Properties of Matter**

• Atomic structure

Evolution of atomic models/theory

Electrons

Electron configurations

• Periodic table

Properties

Trends

• Intramolecular chemical bonding

Ionic

Polar/covalent

• Representing compounds

Formula writing

Nomenclature

Models and shapes (Lewis structures, ball and stick, molecular geometries)

• Quantifying matter

•Phases of matter

•Intermolecular chemical bonding

Types and strengths

Implications for properties of substances

Melting and boiling point

Solubility

Vapor pressure

**Interactions of Matter**

• Chemical reactions

Types of reactions

Kinetics

Energy

Equilibrium

Acids/bases

• Gas laws

Pressure, volume and temperature

Ideal gas law

• Stoichiometry

Molar calculations

Solutions

Limiting reagents

• Nuclear Reactions

Radioisotopes

Nuclear energy