

Week 1: Foundations of Chemistry

- **Day 1:** Introduction to Chemistry & Safety Procedures
- **Day 2:** Scientific Method & Measurement (SI Units, Accuracy vs. Precision)
- **Day 3:** Classification of Matter (Elements, Compounds, Mixtures)
- **Day 4:** Physical & Chemical Properties and Changes
- **Day 5:** Lab - Density & Separation of Mixtures

Week 2: Atomic Structure & Periodic Table

- **Day 1:** Atomic Models & Structure (Protons, Neutrons, Electrons)
- **Day 2:** Isotopes & Average Atomic Mass
- **Day 3:** Electron Configuration & Periodic Trends (Electronegativity, Ionization Energy)
- **Day 4:** Chemical Bonding - Ionic vs. Covalent
- **Day 5:** Lab - Flame Test & Periodic Trends

Week 3: Chemical Reactions & Stoichiometry

- **Day 1:** Types of Chemical Reactions (Synthesis, Decomposition, Combustion, etc.)
- **Day 2:** Balancing Chemical Equations
- **Day 3:** The Mole Concept & Stoichiometry Calculations
- **Day 4:** Limiting Reactants & Reaction Yield
- **Day 5:** Lab - Reaction Rate & Stoichiometry in Action

Week 4: Gases, Acids & Bases, and Final Review

- **Day 1:** Gas Laws (Boyle's, Charles's, and Ideal Gas Law)
- **Day 2:** Acids, Bases, and pH Calculations

CHEMISTRY- 4 Week Summer School Syllabus

Ms. Rowell

- **Day 3:** Thermochemistry & Energy Changes in Reactions
- **Day 4:** Nuclear Chemistry & Applications
- **Day 5:** Final Review & Assessment