

Thinkwell's Homeschool Chemistry

Course Lesson Plan: 37 weeks

Welcome to Thinkwell's Homeschool Chemistry! We're thrilled that you've decided to make us part of your homeschool curriculum. This lesson plan is meant to be a guide for you and your homeschool student. Each day, you'll tackle a different topic and all the materials associated with that topic, such as video lectures, exercises, and interactivities. If you follow our day-by-day schedule, you'll complete the full curriculum for the course in 37 weeks. Feel free to modify and amend the plan as it best works for you. And, as always, please [let us know](#) what we can do to help get you up and running with Thinkwell's Chemistry!

Week 1	
Chapter 1: An Introduction to Matter and Measurement	
Assignments	Notes
<u>Week 1, Day 1</u>	
<input type="checkbox"/> 1.1.1 An Introduction to Chemistry <input type="checkbox"/> 1.1.2 The Scientific Method	
<u>Week 1, Day 2</u>	
<input type="checkbox"/> 1.2.1 States of Matter	
<u>Week 1, Day 3</u>	
<input type="checkbox"/> 1.2.2 A Word About Laboratory Safety <input type="checkbox"/> 1.2.3 CIA Demonstration: Differences in Density Due to Temperature	
<u>Week 1, Day 4</u>	
<input type="checkbox"/> 1.2.4 Properties of Matter <input type="checkbox"/> 1.3.1 The Measurement of Matter	
<u>Week 1, Day 5</u>	
<input type="checkbox"/> 1.3.2 Precision and Accuracy <input type="checkbox"/> 1.3.3 CIA Demonstration: Precision and Accuracy with Glassware	

Week 2	
Chapter 1: An Introduction to Matter and Measurement	
Chapter 1 Test	
Assignments	Notes
<u>Week 2, Day 1</u>	
<input type="checkbox"/> 1.3.4 Significant Figures <input type="checkbox"/> 1.3.5 Dimensional Analysis	
<u>Week 2, Day 2</u>	
<input type="checkbox"/> 1.4.1 Scientific (Exponential) Notation	
<u>Week 2, Day 3</u>	
<input type="checkbox"/> 1.4.2 Common Mathematical Functions	
<u>Week 2, Day 4</u>	
<input type="checkbox"/> Chapter 1 Practice Test	
<u>Week 2, Day 5</u>	Chapter 1 Test Score: _____
<input type="checkbox"/> Chapter 1 Test	

Week 3 Chapter 2: Atoms, Molecules, and Ions	
Assignments	Notes
<u>Week 3, Day 1</u> <input type="checkbox"/> 2.1.1 Early Discoveries and the Atom <input type="checkbox"/> 2.1.2 Understanding Electrons	
<u>Week 3, Day 2</u> <input type="checkbox"/> 2.1.3 Understanding the Nucleus <input type="checkbox"/> 2.2.1 Mass Spectrometry: Determining Atomic Masses	
<u>Week 3, Day 3</u> <input type="checkbox"/> 2.2.2 Examining Atomic Structure <input type="checkbox"/> 2.2.3 CIA Demonstration: Flame Colors	
<u>Week 3, Day 4</u> <input type="checkbox"/> 2.3.1 Creating the Periodic Table <input type="checkbox"/> 2.4.1 Describing Chemical Formulas	
<u>Week 3, Day 5</u> <input type="checkbox"/> 2.4.2 Naming Chemical Compounds <input type="checkbox"/> 2.4.3 Organic Nomenclature	

Week 4 Chapter 2 Test Chapter 3: Stoichiometry	
Assignments	Notes
<u>Week 4, Day 1</u> <input type="checkbox"/> Chapter 2 Practice Test	
<u>Week 4, Day 2</u> <input type="checkbox"/> Chapter 2 Test	Chapter 2 Test Score: _____
<u>Week 4, Day 3</u> <input type="checkbox"/> 3.1.1 An Introduction to Chemical Reactions and Equations <input type="checkbox"/> 3.1.2 CIA Demonstration: Magnesium and Dry Ice	
<u>Week 4, Day 4</u> <input type="checkbox"/> 3.1.3 Balancing Chemical Equations	
<u>Week 4, Day 5</u> <input type="checkbox"/> 3.2.1 The Mole and Avogadro's Number <input type="checkbox"/> 3.2.2 Introducing Conversions of Masses, Moles, and Number of Particles	

Week 5 Chapter 3: Stoichiometry Chapter 3 Test	
Assignments	Notes
<u>Week 5, Day 1</u> <input type="checkbox"/> 3.3.1 Finding Empirical and Molecular Formulas <input type="checkbox"/> 3.3.2 Stoichiometry and Chemical Equations	

<u>Week 5, Day 2</u> <input type="checkbox"/> 3.3.3 Finding Limiting Reagents <input type="checkbox"/> 3.3.4 CIA Demonstration: Self-Inflating Hydrogen Balloons	
<u>Week 5, Day 3</u> <input type="checkbox"/> 3.3.5 Theoretical Yield and Percent Yield <input type="checkbox"/> 3.3.6 A Problem Using the Combined Concepts of Stoichiometry	
<u>Week 5, Day 4</u> <input type="checkbox"/> Chapter 3 Practice Test	
<u>Week 5, Day 5</u> <input type="checkbox"/> Chapter 3 Test	Chapter 3 Test Score: _____

Week 6 Chapter 4: Reactions in Aqueous Solutions	
Assignments	Notes
<u>Week 6, Day 1</u> <input type="checkbox"/> 4.1.1 Properties of Solutions <input type="checkbox"/> 4.1.2 CIA Demonstration: The Electric Pickle	
<u>Week 6, Day 2</u> <input type="checkbox"/> 4.1.3 Concentrations of Solutions <input type="checkbox"/> 4.1.4 Factors Determining Solubility	
<u>Week 6, Day 3</u> <input type="checkbox"/> 4.2.1 Precipitation Reactions <input type="checkbox"/> 4.2.2 Acid-Base Reactions	
<u>Week 6, Day 4</u> <input type="checkbox"/> 4.2.3 Oxidation-Reduction Reactions <input type="checkbox"/> 4.3.1 Acid-Base Titrations	
<u>Week 6, Day 5</u> <input type="checkbox"/> 4.3.2 Solving Titration Problems <input type="checkbox"/> 4.3.3 Gravimetric Analysis	

Week 7 Chapter 4 Test Chapter 5: Gases	
Assignments	Notes
<u>Week 7, Day 1</u> <input type="checkbox"/> Chapter 4 Practice Test	
<u>Week 7, Day 2</u> <input type="checkbox"/> Chapter 4 Test	Chapter 4 Test Score: _____
<u>Week 7, Day 3</u> <input type="checkbox"/> 5.1.1 Properties of Gases <input type="checkbox"/> 5.1.2 Boyle's Law	
<u>Week 7, Day 4</u> <input type="checkbox"/> 5.1.3 Charles's Law <input type="checkbox"/> 5.1.4 The Combined Gas Law	

<u>Week 7, Day 5</u>	
<input type="checkbox"/> 5.1.5 Avogadro's Law <input type="checkbox"/> 5.1.6 CIA Demonstration: The Potato Cannon	

Week 8	
Chapter 5: Gases	
Assignments	Notes
<u>Week 8, Day 1</u>	
<input type="checkbox"/> 5.2.1 The Ideal Gas Law <input type="checkbox"/> 5.2.2 Partial Pressure and Dalton's Law	
<u>Week 8, Day 2</u>	
<input type="checkbox"/> 5.2.3 Applications of the Gas Laws	
<u>Week 8, Day 3</u>	
<input type="checkbox"/> 5.2.4 The Kinetic-Molecular Theory of Gases <input type="checkbox"/> 5.2.5 CIA Demonstration: The Ammonia Fountain	
<u>Week 8, Day 4</u>	
<input type="checkbox"/> 5.3.1 Molecular Speeds <input type="checkbox"/> 5.3.2 Effusion and Diffusion	
<u>Week 8, Day 5</u>	
<input type="checkbox"/> 5.4.1 Comparing Real and Ideal Gases	

Week 9	
Chapter 5 Test	
Chapter 6: Thermochemistry	
Assignments	Notes
<u>Week 9, Day 1</u>	
<input type="checkbox"/> Chapter 5 Practice Test	
<u>Week 9, Day 2</u>	Chapter 5 Test Score: _____
<input type="checkbox"/> Chapter 5 Test	
<u>Week 9, Day 3</u>	
<input type="checkbox"/> 6.1.1 The Nature of Energy <input type="checkbox"/> 6.1.2 Energy, Calories, and Nutrition	
<u>Week 9, Day 4</u>	
<input type="checkbox"/> 6.1.3 The First Law of Thermodynamics <input type="checkbox"/> 6.1.4 Work	
<u>Week 9, Day 5</u>	
<input type="checkbox"/> 6.1.5 Heat <input type="checkbox"/> 6.1.6 CIA Demonstration: Cool Fire	

Week 10 Chapter 6: Thermochemistry Chapter 6 Test	
Assignments	Notes
<u>Week 10, Day 1</u> <input type="checkbox"/> 6.2.1 Heats of Reaction: Enthalpy <input type="checkbox"/> 6.2.2 CIA Demonstration: The Thermite Reaction	
<u>Week 10, Day 2</u> <input type="checkbox"/> 6.3.1 Constant Pressure Calorimetry <input type="checkbox"/> 6.3.2 Bomb Calorimetry (Constant Volume)	
<u>Week 10, Day 3</u> <input type="checkbox"/> 6.4.1 Hess's Law <input type="checkbox"/> 6.4.2 Enthalpies of Formation	
<u>Week 10, Day 4</u> <input type="checkbox"/> Chapter 6 Practice Test	
<u>Week 10, Day 5</u> <input type="checkbox"/> Chapter 6 Test	Chapter 6 Test Score: _____

Week 11 Chapter 7: Modern Atomic Theory	
Assignments	Notes
<u>Week 11, Day 1</u> <input type="checkbox"/> 7.1.1 The Wave Nature of Light <input type="checkbox"/> 7.1.2 Absorption and Emission	
<u>Week 11, Day 2</u> <input type="checkbox"/> 7.1.3 CIA Demonstration: Luminol <input type="checkbox"/> 7.1.4 The Ultraviolet Catastrophe	
<u>Week 11, Day 3</u> <input type="checkbox"/> 7.1.5 The Photoelectric Effect <input type="checkbox"/> 7.1.6 The Bohr Model	
<u>Week 11, Day 4</u> <input type="checkbox"/> 7.1.7 The Heisenberg Uncertainty Principle <input type="checkbox"/> 7.2.1 The Wave Nature of Matter	
<u>Week 11, Day 5</u> <input type="checkbox"/> 7.2.2 Radial Solutions to the Schrödinger Equation <input type="checkbox"/> 7.2.3 Angular Solutions to the Schrödinger Equation	

Week 12 Chapter 7: Modern Atomic Theory Chapter 7 Test	
Assignments	Notes
<u>Week 12, Day 1</u> <input type="checkbox"/> 7.3.1 Atomic Orbital Size <input type="checkbox"/> 7.3.2 Atomic Orbital Shapes and Quantum Numbers	

<u>Week 12, Day 2</u> <input type="checkbox"/> 7.3.3 Atomic Orbital Energy	
<u>Week 12, Day 3</u> <input type="checkbox"/> Chapter 7 Practice Test	
<u>Week 12, Day 4</u> <input type="checkbox"/> Chapter 7 Test	Chapter 7 Test Score: _____
<u>Week 12, Day 5</u> <input type="checkbox"/> 8.1.1 Understanding Electron Spin <input type="checkbox"/> 8.1.2 Electron Shielding	

Week 13 Chapter 8: Electron Configurations and Periodicity Chapter 8 Test	
Assignments	Notes
<u>Week 13, Day 1</u> <input type="checkbox"/> 8.1.3 Electron Configurations through Neon <input type="checkbox"/> 8.1.4 Electron Configurations beyond Neon <input type="checkbox"/> 8.1.5 Periodic Relationships	
<u>Week 13, Day 2</u> <input type="checkbox"/> 8.2.1 Periods and Atomic Size <input type="checkbox"/> 8.2.2 Ionization Energy <input type="checkbox"/> 8.2.3 Electron Affinity	
<u>Week 13, Day 3</u> <input type="checkbox"/> 8.2.4 An Introduction to Electronegativity <input type="checkbox"/> 8.3.1 Hydrogen, Alkali Metals and Alkaline Earth Metals <input type="checkbox"/> 8.3.2 Transition Metals and Nonmetals	
<u>Week 13, Day 4</u> <input type="checkbox"/> Chapter 8 Practice Test	
<u>Week 13, Day 5</u> <input type="checkbox"/> Chapter 8 Test	Chapter 8 Test Score: _____

Week 14 Chapter 9: Chemical Bonding: Fundamental Concepts Chapter 9 Test	
Assignments	Notes
<u>Week 14, Day 1</u> <input type="checkbox"/> 9.1.1 Valence Electrons and Chemical Bonding <input type="checkbox"/> 9.1.2 Ionic Bonds <input type="checkbox"/> 9.1.3 CIA Demonstration: Conductivity Apparatus-Ionic versus Covalent Bonds	
<u>Week 14, Day 2</u> <input type="checkbox"/> 9.2.1 Lewis Dot Structures for Covalent Bonds <input type="checkbox"/> 9.2.2 Predicting Lewis Dot Structures <input type="checkbox"/> 9.3.1 Resonance Structures <input type="checkbox"/> 9.3.2 Formal Charge	

<u>Week 14, Day 3</u> <input type="checkbox"/> 9.3.3 Electronegativity, Formal Charge, and Resonance <input type="checkbox"/> 9.4.1 Bond Properties <input type="checkbox"/> 9.4.2 Using Bond Dissociation Energies	
<u>Week 14, Day 4</u> <input type="checkbox"/> Chapter 9 Practice Test	
<u>Week 14, Day 5</u> <input type="checkbox"/> Chapter 9 Test	Chapter 9 Test Score: _____

Week 15 Chapter 10: Molecular Geometry and Bonding Theory	
Assignments	Notes
<u>Week 15, Day 1</u> <input type="checkbox"/> 10.1.1 Valence-Shell Electron-Pair Repulsion Theory <input type="checkbox"/> 10.1.2 Molecular Shapes for Steric Numbers 2-4	
<u>Week 15, Day 2</u> <input type="checkbox"/> 10.1.3 Molecular Shapes for Steric Numbers 5 & 6 <input type="checkbox"/> 10.1.4 Predicting Molecular Characteristics Using VSEPR Theory	
<u>Week 15, Day 3</u> <input type="checkbox"/> 10.2.1 Valence Bond Theory <input type="checkbox"/> 10.2.2 An Introduction to Hybrid Orbitals	
<u>Week 15, Day 4</u> <input type="checkbox"/> 10.2.3 Pi Bonds <input type="checkbox"/> 10.2.4 Molecular Orbital Theory <input type="checkbox"/> 10.2.5 Applications of the Molecular Orbital Theory	
<u>Week 15, Day 5</u> <input type="checkbox"/> 10.2.6 Beyond Homonuclear Diatomics <input type="checkbox"/> 10.2.7 CIA Demonstration: The Paramagnetism of Oxygen	

Week 16 Chapter 10 Test Chapter 11: Oxidation-Reduction Reactions	
Assignments	Notes
<u>Week 16, Day 1</u> <input type="checkbox"/> Chapter 10 Practice Test	
<u>Week 16, Day 2</u> <input type="checkbox"/> Chapter 10 Test	Chapter 10 Test Score: _____
<u>Week 16, Day 3</u> <input type="checkbox"/> 11.1.1 Oxidation Numbers	
<u>Week 16, Day 4</u> <input type="checkbox"/> 11.1.2 Balancing Redox Reactions by the Oxidation Number Method <input type="checkbox"/> 11.1.3 Balancing Redox Reactions Using the Half-Reaction Method	

<u>Week 16, Day 5</u>	
<input type="checkbox"/> 11.1.4 The Activity Series of the Elements <input type="checkbox"/> 11.1.5 CIA Demonstration: The Reaction between Al and Br ₂	
Week 17	
Chapter 11 Test	
Chapter 12: Condensed Phases: Liquids and Solids	
Assignments	Notes
<u>Week 17, Day 1</u>	
<input type="checkbox"/> Chapter 11 Practice Test	
<u>Week 17, Day 2</u>	Chapter 11 Test Score: _____
<input type="checkbox"/> Chapter 11 Test	
<u>Week 17, Day 3</u>	
<input type="checkbox"/> 12.1.1 An Introduction to Intermolecular Forces and States of Matter <input type="checkbox"/> 12.1.2 Intermolecular Forces <input type="checkbox"/> 12.2.1 Properties of Liquids	
<u>Week 17, Day 4</u>	
<input type="checkbox"/> 12.2.2 CIA Demonstration: Boiling Water at Reduced Pressure <input type="checkbox"/> 12.2.3 Vapor Pressure and Boiling Point <input type="checkbox"/> 12.2.4 Molecular Structure and Boiling Point	
<u>Week 17, Day 5</u>	
<input type="checkbox"/> 12.2.5 Phase Diagrams <input type="checkbox"/> 12.2.6 CIA Demonstration: Boiling Water in a Paper Cup <input type="checkbox"/> 12.3.1 Types of Solids	
Week 18	
Chapter 12: Condensed Phases: Liquids and Solids	
Assignments	Notes
<u>Week 18, Day 1</u>	
<input type="checkbox"/> 12.3.2 CIA Demonstration: The Conductivity of Molten Salts <input type="checkbox"/> 12.3.3 Crystal Structure	
<u>Week 18, Day 2</u>	
<input type="checkbox"/> 12.3.4 Calculating Atomic Mass and Radius from a Unit Cell <input type="checkbox"/> 12.3.5 Crystal Packing	
<u>Week 18, Day 3</u>	
<input type="checkbox"/> 12.4.1 Ceramics and Glass <input type="checkbox"/> 12.4.2 CIA Demonstration: Superconductivity	
<u>Week 18, Day 4</u>	
<input type="checkbox"/> Chapter 12 Practice Test	
<u>Week 18, Day 5</u>	Chapter 12 Test Score: _____
<input type="checkbox"/> Chapter 12 Test	

Week 19 Chapter 13: Physical Properties of Solutions	
Assignments	Notes
<u>Week 19, Day 1</u> <input type="checkbox"/> 13.1.1 Types of Solutions <input type="checkbox"/> 13.1.2 Molarity and the Mole Fraction <input type="checkbox"/> 13.1.3 Molality	
<u>Week 19, Day 2</u> <input type="checkbox"/> 13.1.4 Energy and the Solution Process <input type="checkbox"/> 13.2.1 Temperature Change and Solubility <input type="checkbox"/> 13.2.2 Extractions	
<u>Week 19, Day 3</u> <input type="checkbox"/> 13.2.3 Pressure Change and Solubility <input type="checkbox"/> 13.3.1 Vapor Pressure Lowering <input type="checkbox"/> 13.3.2 Boiling Point Elevation and Freezing Point Depression	
<u>Week 19, Day 4</u> <input type="checkbox"/> 13.3.4 Osmosis <input type="checkbox"/> 13.3.5 Colligative Properties of Ionic Solutions	
<u>Week 19, Day 5</u> <input type="checkbox"/> 13.4.1 Colloid Formation and Flocculation <input type="checkbox"/> 13.4.2 CIA Demonstration: The Tyndall Effect	

Week 20 Chapter 13 Test Midterm Exam	
Assignments	Notes
<u>Week 20, Day 1</u> <input type="checkbox"/> Chapter 13 Practice Test	
<u>Week 20, Day 2</u> <input type="checkbox"/> Chapter 13 Test	Chapter 13 Test Score: _____
<u>Week 20, Day 3</u> <input type="checkbox"/> Study for Midterm Exam	
<u>Week 20, Day 4</u> <input type="checkbox"/> Study for Midterm Exam	
<u>Week 20, Day 5</u> <input type="checkbox"/> Midterm Exam	Midterm Exam Score: _____

Week 21 Chapter 14: Chemical Kinetics	
Assignments	Notes
<u>Week 21, Day 1</u> <input type="checkbox"/> 14.1.1 An Introduction to Reaction Rates <input type="checkbox"/> 14.1.2 Rate Laws: How the Reaction Rate Depends on Concentration <input type="checkbox"/> 14.1.3 Determining the Form of a Rate Law	

<u>Week 21, Day 2</u> <input type="checkbox"/> 14.2.1 First-Order Reactions <input type="checkbox"/> 14.2.2 Second-Order Reactions <input type="checkbox"/> 14.2.3 A Kinetics Problem	
<u>Week 21, Day 3</u> <input type="checkbox"/> 14.3.1 The Collision Model <input type="checkbox"/> 14.3.2 The Arrhenius Equation <input type="checkbox"/> 14.3.3 Using the Arrhenius Equation	
<u>Week 21, Day 4</u> <input type="checkbox"/> 14.4.1 Defining the Molecularity of a Reaction <input type="checkbox"/> 14.4.2 Determining the Rate Laws of Elementary Reactions <input type="checkbox"/> 14.4.3 Calculating the Rate Laws of Multistep Reactions	
<u>Week 21, Day 5</u> <input type="checkbox"/> 14.4.4 Steady State Kinetics <input type="checkbox"/> 14.5.1 Catalysts and Types of Catalysts <input type="checkbox"/> 14.5.2 A Word About Laboratory Safety	

Week 22 Chapter 14: Chemical Kinetics Chapter 14 Test Chapter 15: Chemical Equilibrium	
Assignments	Notes
<u>Week 22, Day 1</u> <input type="checkbox"/> 14.5.3 CIA Demonstration: Elephant Snot <input type="checkbox"/> 14.5.4 CIA Demonstration: The Cobalt(II)-Catalyzed Reaction of Potassium Sodium Tartrate <input type="checkbox"/> 14.5.5 CIA Demonstration: The Copper-Catalyzed Decomposition of Acetone	
<u>Week 22, Day 2</u> <input type="checkbox"/> Chapter 14 Practice Test	
<u>Week 22, Day 3</u> <input type="checkbox"/> Chapter 14 Test	Chapter 14 Test Score: _____
<u>Week 22, Day 4</u> <input type="checkbox"/> 15.1.1 The Concept of Equilibrium <input type="checkbox"/> 15.1.2 The Law of Mass Action and Types of Equilibrium <input type="checkbox"/> 15.1.3 Converting Between K_c and K_p	
<u>Week 22, Day 5</u> <input type="checkbox"/> 15.2.1 Approaching Chemical Equilibrium <input type="checkbox"/> 15.2.2 Predicting the Direction of a Reaction <input type="checkbox"/> 15.2.3 Strategies for Solving Equilibrium Problems	

Week 23 Chapter 15: Chemical Equilibrium Chapter 15 Test	
Assignments	Notes
<u>Week 23, Day 1</u> <input type="checkbox"/> 15.2.4 Solving Problems Far from Equilibrium <input type="checkbox"/> 15.2.5 An Equilibrium Problem Using the Quadratic Equation	
<u>Week 23, Day 2</u> <input type="checkbox"/> 15.3.1 Le Châtelier's Principle <input type="checkbox"/> 15.3.2 The Effect of Changing Amounts on Equilibrium <input type="checkbox"/> 15.3.3 The Effect of Pressure and Volume on Equilibrium	
<u>Week 23, Day 3</u> <input type="checkbox"/> 15.3.4 The Effects of Temperature and Catalysts on Equilibrium <input type="checkbox"/> 15.3.5 CIA Demonstration: $\text{NO}_2/\text{N}_2\text{O}_4$ <input type="checkbox"/> 15.3.6 CIA Demonstration: Shifting the Equilibrium of FeSCN^{2+}	
<u>Week 23, Day 4</u> <input type="checkbox"/> Chapter 15 Practice Test	
<u>Week 23, Day 5</u> <input type="checkbox"/> Chapter 15 Test	Chapter 15 Test Score: _____

Week 24 Chapter 16: Acids and Bases	
Assignments	Notes
<u>Week 24, Day 1</u> <input type="checkbox"/> 16.1.1 Arrhenius/Brønsted-Lowry Definitions of Acids and Bases <input type="checkbox"/> 16.1.2 Hydronium, Hydroxide, and the pH Scale	
<u>Week 24, Day 2</u> <input type="checkbox"/> 16.2.1 Strong Acids and Bases <input type="checkbox"/> 16.2.2 CIA Demonstration: Natural Acid-Base Indicators <input type="checkbox"/> 16.2.3 Weak Acids	
<u>Week 24, Day 3</u> <input type="checkbox"/> 16.2.4 Weak Bases <input type="checkbox"/> 16.2.5 Lewis Acids and Bases <input type="checkbox"/> 16.2.6 Trends in Acid and Base Strengths	
<u>Week 24, Day 4</u> <input type="checkbox"/> 16.3.1 Examining Polyprotic Acids <input type="checkbox"/> 16.4.1 Acid-Base Properties of Salt Solutions	
<u>Week 24, Day 5</u> <input type="checkbox"/> Chapter 16 Practice Test	

Week 25 Chapter 16 Test Chapter 17: Equilibrium in Aqueous Solution	
Assignments	Notes
<u>Week 25, Day 1</u> <input type="checkbox"/> Chapter 16 Test	Chapter 16 Test Score: _____
<u>Week 25, Day 2</u> <input type="checkbox"/> 17.1.1 Strong Acid-Strong Base and Weak Acid-Strong Base Reactions <input type="checkbox"/> 17.1.2 Strong Acid-Weak Base and Weak Acid-Weak Base Reactions <input type="checkbox"/> 17.1.3 The Common Ion Effect	
<u>Week 25, Day 3</u> <input type="checkbox"/> 17.2.1 An Introduction to Buffers <input type="checkbox"/> 17.2.2 CIA Demonstration: Buffers in Action <input type="checkbox"/> 17.2.3 Acidic Buffers	
<u>Week 25, Day 4</u> <input type="checkbox"/> 17.2.4 Basic Buffers <input type="checkbox"/> 17.2.5 The Henderson-Hasselbalch Equation	
<u>Week 25, Day 5</u> <input type="checkbox"/> 17.3.1 Strong Acid-Strong Base Titration <input type="checkbox"/> 17.3.2 CIA Demonstration: Barium Hydroxide-Sulfuric Acid Titration <input type="checkbox"/> 17.3.3 Weak Acid-Strong Base Titration	

Week 26 Chapter 17: Equilibrium in Aqueous Solution	
Assignments	Notes
<u>Week 26, Day 1</u> <input type="checkbox"/> 17.3.4 Polyprotic Acid-Strong Base Titration <input type="checkbox"/> 17.3.5 Weak Base-Strong Acid Titration <input type="checkbox"/> 17.3.6 Acid-Base Indicators	
<u>Week 26, Day 2</u> <input type="checkbox"/> 17.4.1 The Solubility Product Constant <input type="checkbox"/> 17.4.2 CIA Demonstration: Silver Chloride and Ammonia <input type="checkbox"/> 17.4.3 Solubility and the Common Ion Effect	
<u>Week 26, Day 3</u> <input type="checkbox"/> 17.4.4 Fractional Precipitation <input type="checkbox"/> 17.4.5 The Effects of pH on Solubility <input type="checkbox"/> 17.5.1 The Formation of Complex Ions <input type="checkbox"/> 17.5.2 Amphoteric Metal Hydroxides	
<u>Week 26, Day 4</u> <input type="checkbox"/> Chapter 17 Practice Test	
<u>Week 26, Day 5</u> <input type="checkbox"/> Chapter 17 Test	Chapter 17 Test Score: _____

Week 27 Chapter 18: Introduction to Organic Reactions	
Assignments	Notes
<u>Week 27, Day 1</u> <input type="checkbox"/> 18.1.1 An Introduction to Reactivity <input type="checkbox"/> 18.1.2 Bond Strengths <input type="checkbox"/> 18.1.3 Inductive Effects	
<u>Week 27, Day 2</u> <input type="checkbox"/> 18.1.4 Hybridization Effects <input type="checkbox"/> 18.1.5 Resonance Effects <input type="checkbox"/> 18.1.6 Solvent Effects: Acid Dissociation versus Proton Affinity	
<u>Week 27, Day 3</u> <input type="checkbox"/> 18.2.1 A Review of Relationship between Acids and Conjugate Bases <input type="checkbox"/> 18.2.2 Strengths of Organic Bases <input type="checkbox"/> 18.2.3 Solvent Effects on Organic Base Strength	
<u>Week 27, Day 4</u> <input type="checkbox"/> 18.3.1 Lewis Acids and the Formation of Acid-Base Adducts <input type="checkbox"/> 18.3.2 Oxides as Lewis Acids	
<u>Week 27, Day 5</u> <input type="checkbox"/> 18.4.1 Nucleophilic Substitution at sp^3 Carbon <input type="checkbox"/> 18.4.2 Nucleophilic Substitution at sp^2 Carbon	

Week 28 Chapter 18: Introduction to Organic Reactions Chapter 18 Test Chapter 19: Thermodynamics	
Assignments	Notes
<u>Week 28, Day 1</u> <input type="checkbox"/> 18.4.3 Elimination Reactions <input type="checkbox"/> 18.4.4 CIA Demonstration: Slime	
<u>Week 28, Day 2</u> <input type="checkbox"/> Chapter 18 Practice Test	
<u>Week 28, Day 3</u> <input type="checkbox"/> Chapter 18 Test	Chapter 18 Test Score: _____
<u>Week 28, Day 4</u> <input type="checkbox"/> 19.1.1 Spontaneous Processes <input type="checkbox"/> 19.2.1 Entropy and the Second Law of Thermodynamics <input type="checkbox"/> 19.2.2 Entropy and Temperature	
<u>Week 28, Day 5</u> <input type="checkbox"/> 19.3.1 Gibbs Free Energy <input type="checkbox"/> 19.3.2 Standard Free Energy Changes of Formation	

Week 29 Chapter 19: Thermodynamics Chapter 19 Test Chapter 20: Electrochemistry	
Assignments	Notes
<u>Week 29, Day 1</u> <input type="checkbox"/> 19.4.1 Enthalpy and Entropy Contributions to K <input type="checkbox"/> 19.4.2 The Temperature Dependence of K <input type="checkbox"/> 19.4.3 Free Energy Away from Equilibrium	
<u>Week 29, Day 2</u> <input type="checkbox"/> Chapter 19 Practice Test	
<u>Week 29, Day 3</u> <input type="checkbox"/> Chapter 19 Test	Chapter 19 Test Score: _____
<u>Week 29, Day 4</u> <input type="checkbox"/> 20.1.1 Reviewing Oxidation-Reduction Reactions <input type="checkbox"/> 20.2.1 Electrochemical Cells	
<u>Week 29, Day 5</u> <input type="checkbox"/> 20.2.2 Electromotive Force <input type="checkbox"/> 20.2.3 Standard Reduction Potentials <input type="checkbox"/> 20.2.4 Using Standard Reduction Potentials	

Week 30 Chapter 20: Electrochemistry Chapter 20 Test	
Assignments	Notes
<u>Week 30, Day 1</u> <input type="checkbox"/> 20.2.5 The Nernst Equation <input type="checkbox"/> 20.2.6 Electrochemical Determinants of Equilibria	
<u>Week 30, Day 2</u> <input type="checkbox"/> 20.3.1 Batteries <input type="checkbox"/> 20.3.2 CIA Demonstration: The Fruit-Powered Clock <input type="checkbox"/> 20.4.1 Corrosion and the Prevention of Corrosion	
<u>Week 30, Day 3</u> <input type="checkbox"/> 20.5.1 Electrolytic Cells <input type="checkbox"/> 20.5.2 The Stoichiometry of Electrolysis	
<u>Week 30, Day 4</u> <input type="checkbox"/> Chapter 20 Practice Test	
<u>Week 30, Day 5</u> <input type="checkbox"/> Chapter 20 Test	Chapter 20 Test Score: _____

Week 31 Chapter 21: Nuclear Chemistry Chapter 21 Test	
Assignments	Notes
<u>Week 31, Day 1</u> <input type="checkbox"/> 21.1.1 The Nature of Radioactivity <input type="checkbox"/> 21.1.2 The Stability of Atomic Nuclei <input type="checkbox"/> 21.1.3 Binding Energy	
<u>Week 31, Day 2</u> <input type="checkbox"/> 21.2.1 Rates of Disintegration Reactions <input type="checkbox"/> 21.2.2 Radiochemical Dating	
<u>Week 31, Day 3</u> <input type="checkbox"/> 21.3.1 Nuclear Fission <input type="checkbox"/> 21.3.2 Nuclear Fusion <input type="checkbox"/> 21.3.3 Applications of Nuclear Chemistry	
<u>Week 31, Day 4</u> <input type="checkbox"/> Chapter 21 Practice Test	
<u>Week 31, Day 5</u> <input type="checkbox"/> Chapter 21 Test	Chapter 21 Test Score: _____

Week 32 Chapter 22: Chemistry of Metals Chapter 22 Test	
Assignments	Notes
<u>Week 32, Day 1</u> <input type="checkbox"/> 22.1.1 Metallurgical Processes <input type="checkbox"/> 22.1.2 Band Theory of Conductivity <input type="checkbox"/> 22.1.3 Intrinsic Semiconductors	
<u>Week 32, Day 2</u> <input type="checkbox"/> 22.1.4 Doped Semiconductors <input type="checkbox"/> 22.2.1 The Alkali Metals	
<u>Week 32, Day 3</u> <input type="checkbox"/> 22.2.2 The Alkaline Earth Metals <input type="checkbox"/> 22.2.3 Aluminum <input type="checkbox"/> 22.2.4 CIA Demonstration: The Reaction between Al and Br ₂	
<u>Week 32, Day 4</u> <input type="checkbox"/> Chapter 22 Practice Test	
<u>Week 32, Day 5</u> <input type="checkbox"/> Chapter 22 Test	Chapter 22 Test Score: _____

Week 33 Chapter 23: Transition Metals Chapter 23 Test	
Assignments	Notes
<u>Week 33, Day 1</u> <input type="checkbox"/> 23.1.1 Properties of Transition Metals <input type="checkbox"/> 23.1.2 CIA Demonstration: Copper One-Pot Reactions <input type="checkbox"/> 23.2.1 Complexes and Ligands	
<u>Week 33, Day 2</u> <input type="checkbox"/> 23.2.2 Naming Coordination Compounds <input type="checkbox"/> 23.2.3 Structures of Coordination Compounds and Isomers <input type="checkbox"/> 23.3.1 Color and Transition Metals	
<u>Week 33, Day 3</u> <input type="checkbox"/> 23.3.2 Crystal Field Theory <input type="checkbox"/> 23.3.3 Ligand Field Theory <input type="checkbox"/> 23.3.4 Magnetic Properties and Spin	
<u>Week 33, Day 4</u> <input type="checkbox"/> Chapter 23 Practice Test	
<u>Week 33, Day 5</u> <input type="checkbox"/> Chapter 23 Test	Chapter 23 Test Score: _____

Week 34 Chapter 24: Nonmetals	
Assignments	Notes
<u>Week 34, Day 1</u> <input type="checkbox"/> 24.1.1 General Properties of Nonmetals <input type="checkbox"/> 24.1.2 Hydrogen	
<u>Week 34, Day 2</u> <input type="checkbox"/> 24.2.1 General Properties of Carbon <input type="checkbox"/> 24.2.2 Silicon	
<u>Week 34, Day 3</u> <input type="checkbox"/> 24.3.1 Nitrogen <input type="checkbox"/> 24.3.2 Phosphorus	
<u>Week 34, Day 4</u> <input type="checkbox"/> 24.4.1 Oxygen <input type="checkbox"/> 24.4.2 CIA Demonstration: Creating Acid Rain <input type="checkbox"/> 24.4.3 Sulfur	
<u>Week 34, Day 5</u> <input type="checkbox"/> 24.5.1 Halogens <input type="checkbox"/> 24.5.2 Aqueous Halogen Compounds <input type="checkbox"/> 24.6.1 Properties of Noble Gases	

Week 35 Chapter 24 Test Chapter 25: Organic Chemistry	
Assignments	Notes
<u>Week 35, Day 1</u> <input type="checkbox"/> Chapter 24 Practice Test	
<u>Week 35, Day 2</u> <input type="checkbox"/> Chapter 24 Test	Chapter 24 Test Score: _____
<u>Week 35, Day 3</u> <input type="checkbox"/> 25.1.1 Alkanes <input type="checkbox"/> 25.1.2 Alkenes and Alkynes	
<u>Week 35, Day 4</u> <input type="checkbox"/> 25.1.3 Isomers <input type="checkbox"/> 25.1.4 Aromatic Hydrocarbons	
<u>Week 35, Day 5</u> <input type="checkbox"/> 25.2.1 Alcohols, Ethers, and Amines <input type="checkbox"/> 25.2.2 Carbonyl-Containing Functional Groups	

Week 36 Chapter 25: Organic Chemistry Chapter 25 Test Chapter 26: Biochemistry	
Assignments	Notes
<u>Week 36, Day 1</u> <input type="checkbox"/> 25.3.1 Organic Polymers <input type="checkbox"/> 25.3.2 CIA Demonstration: The Synthesis of Nylon	
<u>Week 36, Day 2</u> <input type="checkbox"/> Chapter 25 Practice Test	
<u>Week 36, Day 3</u> <input type="checkbox"/> Chapter 25 Test	Chapter 25 Test Score: _____
<u>Week 36, Day 4</u> <input type="checkbox"/> 26.1.1 Proteins <input type="checkbox"/> 26.1.2 Nucleic Acids	
<u>Week 36, Day 5</u> <input type="checkbox"/> 26.1.3 Carbohydrates <input type="checkbox"/> 26.1.4 Lipids	

Week 37 Chapter 26 Test Final Exam	
Assignments	Notes
<u>Week 37, Day 1</u> <input type="checkbox"/> Chapter 26 Practice Test	

<u>Week 37, Day 2</u> <input type="checkbox"/> Chapter 26 Test	Chapter 26 Test Score: _____
<u>Week 37, Day 3</u> <input type="checkbox"/> Study for Final Exam	
<u>Week 37, Day 4</u> <input type="checkbox"/> Study for Final Exam	
<u>Week 37, Day 5</u> <input type="checkbox"/> Final Exam	Final Exam Score: _____