Honors Chemistry

Unit	Semester/Quarter	Topics	NGSS Standards
Chapter 0 Lab Safety/Equipment	S1/Q1	• Lab Safety • Lab Equipment	
Chapter 1-2 Chemistry and Measurement	S1/Q1	• Metric Conversions • Sig Figs • Scientific Notation • Dimensional Analysis • Density • Temperature Conversions	
Chapter 4 Atoms and Elements	S1/Q1	• Elements and Symbols • Periodic Table • Atoms • Isotopes • Ions	
Chapter 5 Electronic Structure of Atoms and Periodic Table Trends	S1/Q2	• Electromagnetic Radiation/Light • Atomic Energy Levels • Sublevels/Orbitals • Electron Configuration • Orbitals • Periodic Table Trends	HS-PS1-1 HS-PS4-1 HS-PS4-3 HS-PS4-4 HS-PS4-5.
Chapter 6 Ionic and Molecular Compounds	S1/Q2	• Ionic Compounds • Naming and Writing Formulas • Polyatomic Ions • Molecular Compounds	HS-PS1-2
Chapter 10 Bonding Properties	S3/Q3	• Lewis Structures • VSEPR Theory • Electronegativity • Bond Polarity • Intermolecular Forces	HS-PS1-2 HS-PS1-3 HS-PS1-4
Chapter 8 Chemical Reactions	S2/Q3	• Chemical Reactions • Chemical Equations • Balancing Chemical Equations • Types of Chemical Equations • Reactions in Water • Oxidation-Reduction	HS-PS1-2 HS-PS1-7
Chapter 7 Chemical Quantities	S2/Q3	• The Mole • Molar Mass • Mass Percent • Empirical Formulas • Molecular Formulas	HS-PS1-6 HS-PS1-7

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Chapter 9 Chemical Quantities in Reactions	S2/Q4	• Conservation of Mass • Mole Relationships • Mass Calculations • Limiting Reactants • Percent Yield	HS-PS1-6 HS-PS1-7
Chapter 14 Acids and Bases (If time allows)	S2/Q4	• Acids and Bases • Bronsted-Lowry Acids and Bases • Strengths of Acids and Bases • Dissociation of Weak Acids • Dissociation of Water • pH Scale • Reactions of Acids and Bases • Buffers	
Chapter 16 Nuclear Chemistry	S2/Q4	• Radioactivity • Nuclear Reactions • Half-Life • Nuclear Fission/Fusion	HS-PS1-8