

Chemistry

Unit	Semester/Quarter	Topics	NGSS Standards
Module 0 Lab Safety/Equipment	S1/Q1	<ul style="list-style-type: none"> • Lab Safety • Lab Equipment 	
Module 1 Measurement	S1/Q1	<ul style="list-style-type: none"> • Chemistry • Measurement • Metric Conversions • Sig Figs • Scientific Notation • Dimensional Analysis • Density • Temperature Conversions 	
Module 2 Matter	S1/Q1	<ul style="list-style-type: none"> • Properties of Matter • Chemical and Physical Changes • Elements and Compounds • Mixtures 	
Module 3 Structure of the Atom	S1/Q1-Q2	<ul style="list-style-type: none"> • Early Ideas about Matter • Elements and Symbols • Periodic Table • Atoms • Isotopes • Ions • Radioactive Decay 	HS-PS1-8
Module 4-5 Electrons and the Periodic Table	S1/Q2	<ul style="list-style-type: none"> • Light/Electromagnetic Radiation • 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.
Module 6 Ionic Compounds and Metals	S2/Q3	<ul style="list-style-type: none"> • Ionic Bonds and Ionic Compounds • Names and Formulas for Ionic Compounds • Polyatomic Ions • Metallic Bonds/Properties of Metals 	HS-PS1-2 HS-PS2-6
Module 7 Covalent Bonding	S2/Q3	<ul style="list-style-type: none"> • Covalent Bonds • Naming Covalent Molecules • Lewis Structures • VSEPR Model • Electronegativity and Bond Polarity 	HS-PS1-2 HS-PS1-3 HS-PS1-4
Module 8 Chemical Reactions	S2/Q4	<ul style="list-style-type: none"> • Chemical Reactions • Chemical Equations • Balancing Chemical Equations • Types of Chemical Reactions 	HS-PS1-2

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		<ul style="list-style-type: none"> • Reactions in Water 	
Module 9 The Mole	S2/Q4	<ul style="list-style-type: none"> • The Mole • Molar Mass • Mass Percent • Empirical Formulas • Molecular Formulas 	HS-PS1-6
Module 10 Stoichiometry	S2/Q4	<ul style="list-style-type: none"> • Stoichiometry • Stoichiometric Calculations • Limiting Reactants • Percent Yield 	HS-PS1-6
Module 17 Acids and Bases (If time allows)	S2/Q4	<ul style="list-style-type: none"> • Intro to Acids and Bases • Strengths of Acids and Bases • pH Scale • Reactions of Acids and Bases 	
Module 23 Nuclear Chemistry	S2/Q4	<ul style="list-style-type: none"> • Nuclear Radiation • Radioactive Decay • Nuclear Reactions • Nuclear Fission/Fusion 	HS-PS1-8