

# Curriculum Map

<b>Course Title: Chemistry</b>	<b>Quarter:</b>	<b>Academic Year:</b>
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**Essential Questions for this Quarter:**

1. How do you determine if an object is living or nonliving? 2. What impact does the environment have on a population?

Unit/Time Frame	Standards	Content	Skills	Assessment	Resources
Intro to Chemistry	--	Safety equipment, safety procedures, definition of chemistry, specific disciplines of chemistry	Learn safety procedures, learn safety equipment and what chemistry is and disciplines within chemistry.		
Analysis of Data	--	Accuracy, precision, significant figures, scientific notation.	Distinguish between accuracy and precision in measurements, determine the number of significant figures in a number, write numbers in scientific notation, determine significant figures and apply in calculations.		
Matter – Properties and Change	--	Matter, states, changes and chemical and physical properties	Describe the characteristics of three common states of matter, Describe physical and chemical changes giving examples, Distinguish between element and compound, substance and mixture, homogenous and heterogeneous		
The Structure of the Atom	--	Progress of atomic model, subatomic particles, mass number, atomic number, isotopes and atomic mass, Pauli Exclusion Principle and Aufbau principle	List principles of Dalton’s atomic theory, describe evidence for existence of electrons protons and neutrons, discuss atoms of elements in terms of electrons, protons, neutrons atomic number, mass number, Write electron configuration by using Pauli Exclusion Principle and Aufbau principle		
The Periodic Table and Periodic Law	--	Arrangement of elements of the periodic table, groups, regions, periods,	Describe the development and organization of the periodic table, locate families and groups of		

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		chemical symbols, periodicity, electron configuration, ionization energy, atomic radius, electronegativity ion size and electron affinity.	elements. Describe periodic trends in ionization energy, atomic radius, electronegativity ion size and electron affinity.		
Ionic Compounds and Metals	--	Electron configuration, Chemical reactivity, ionic Bonding, Cations, Anions, Chemical formulas	Relate electron configuration to chemical reactivity, describe process of ionic bonding, Name cations, anions and ionic compounds, write chemical formulas for ionic compounds		
Covalent Bonding	--	Covalent formulas, polar and non-polar covalent bonds, Lewis structures, resonance, VESPR Theory	Explain role of electrons in covalent bonds, Distinguish between polar and nonpolar covalent bonds, Draw Lewis structures to show arrangement of valence electrons, Explain single, double and triple covalent bonds, Draw Resonance structures, Predict shape of molecule using VESPR Theory, Write Covalent formulas		
Chemical Reactions	--	Chemical formulas, Types of reactions, Net Ionic Reactions, balance equations	List evidence to show a chemical reaction has occurred, describe a chemical reaction using a word equation and a formula equation, balance equation using law of conservation of mass, classify reaction, identify spectator ions and write net ionic equations.		



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