

# Year at a Glance

Chemistry I—Regular Level

Readiness, Supporting, and Process TEKS

All Process TEKS C.1 –C.3 are taught throughout the year



C&I  
approved

1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter
<p><b>Math Review (TEKS C.2F-G)</b></p> <ul style="list-style-type: none"><li>• Accuracy</li><li>• Precision</li><li>• Multiplication/Division of Fractions</li><li>• Solve for “x”</li><li>• The difference between solving proportions and following a formula</li><li>• Scientific notation</li><li>• Significant figures</li><li>• Dimensional analysis</li></ul> <p><b>Theme: Matter</b></p> <ul style="list-style-type: none"><li>• Kinetic Theory, Matter vs Energy (TEKS C.9C)</li><li>• States of Matter in terms of compressibility, structure, shape, and volume (TEKS C.4C)</li><li>• Phys/Chem Properties and Changes (TEKS C.4A)</li><li>• Intensive/Extensive properties (TEKS C.4B)</li><li>• Mixtures/Pure substances (TEKS C.4D)</li><li>• History of Periodic Table (TEKS C.5A), (TEKS C.3F)</li><li>• Families on Periodic Table: alkali metals, alkaline earth metals, halogens, noble gases, transition metals, (TEKS C.5B)</li><li>• Trends of Periodic Table: atomic radii, electronegativity, ionization energy (TEKS C.5C)</li><li>• Atomic theory: Dalton, Thomson, Rutherford, Bohr (TEKS C.6A), (TEKS C.3F)</li><li>• Electromagnetic Spectrum with relationship to energy, frequency, and wavelength (TEKS C.6B-C)</li><li>• Calculate average atomic mass using Isotopes (TEKS C.6D)</li><li>• Define mole (TEKS C.8A)</li><li>• Calculate number of atoms/moles in sample (TEKS C.8B, TEKS C.2G)</li></ul>	<p><b>Theme: Compounds</b></p> <ul style="list-style-type: none"><li>• Atomic arrangement in Lewis dot structures (TEKS C.6E, TEKS C.7C)</li><li>• Electron configuration (TEKS C.6E)</li><li>• Bonding: properties of each and predict types (TEKS C.7C, TEKS C.7D)<ul style="list-style-type: none"><li>➢ Ionic</li><li>➢ Covalent</li><li>➢ Metallic</li></ul></li><li>• Electron dot structures to illustrate bonding (TEKS C.7C)</li><li>• VESPR: linear, trigonal planar, tetrahedral (TEKS C.7E)</li><li>• Mole (review) and Molar Mass (TEKS C.8A, TEKS C.8B, TEKS C.2G)</li><li>• Name ionic and covalent compounds (TEKS C.7A)</li><li>• Write ionic and covalent formulas (TEKS C.7B)</li><li>• Empirical formula (TEKS C.8C)</li><li>• Percent composition (TEKS C.8C)</li></ul>

3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<p><b>Theme: Solutions Chemistry</b></p> <ul style="list-style-type: none"> <li>• Role of water in solutions (polarity) (TEKS C.10A)</li> <li>• Solubility Rules (TEKS C.10B)</li> <li>• Types of solutions: electrolyte, nonelectrolyte, saturated, unsaturated, super saturated (TEKS C.10E)</li> <li>• Rate of dissolving (TEKS C.10F)</li> <li>• Calculate Molarity of solutions (TEKS C.10C)</li> <li>• Use molarity to calculate dilutions (TEKS C.10D)</li> <li>• Acids/Bases (TEKS C.10G) <ul style="list-style-type: none"> <li>➤ Definitions</li> <li>➤ Arrhenius</li> <li>➤ Bronsted-Lowry</li> </ul> </li> <li>• Define and calculate pH (TEKS C.10I)</li> <li>• Strengths and Concentrations of Acids and Bases (TEKS C.10J)</li> <li>• Name acid/base compounds (TEKS C.7A)</li> <li>• Write formulas for acids and bases (TEKS C.7B)</li> </ul> <p><b>Theme: Reactions/Stoichiometry</b></p> <ul style="list-style-type: none"> <li>• Types of Reactions (TEKS C.10H) <ul style="list-style-type: none"> <li>➤ Double Replacement: Acid-base and Precipitation</li> <li>➤ Oxidation-reduction: Synthesis, Decomposition, Single Replacement &amp; Combustion</li> </ul> </li> <li>• Predict products in acid-base reactions that form water (TEKS C.10G)</li> <li>• Balance equations/Law of Conservation of Mass (TEKS C.8D)</li> <li>• Stoichiometric calculation (TEKS C.8E)</li> <li>• Mass relationships between reactants and products (TEKS C.8E)</li> <li>• Limiting reagents (TEKS C.8E)</li> <li>• Percent yield (TEKS C.8E)</li> </ul>	<p><b>Theme: Gas Laws</b></p> <ul style="list-style-type: none"> <li>• Ideal Gas vs Non Ideal gas (TEKS C.9A)</li> <li>• Boyle's, Charles', Gay-Lussac's, Avogadro's, Dalton's Laws and Ideal Gas calculations (TEKS C.9A)</li> <li>• Gas Stoichiometry (TEKS C.8E)</li> </ul> <p><b>Theme: Energy</b></p> <ul style="list-style-type: none"> <li>• Types of Energy (TEKS C.11A)</li> <li>• Law of Conservation of Energy/Heat transfer (TEKS C.11B)</li> <li>• Identify and measure energy in chemical reactions/ Endothermic and exothermic (TEKS C.11C)</li> <li>• Calculations: specific heat equation &amp; calorimetry (TEKS C.11D-E)</li> <li>• Nuclear energy (TEKS C.12A) <ul style="list-style-type: none"> <li>➤ Alpha radiation</li> <li>➤ Beta radiation</li> <li>➤ Gamma radiation</li> </ul> </li> <li>• Fission and Fusion (TEKS C.12C)</li> <li>• Radioactive decay/Balance (TEKS C.12B)</li> </ul>

Process TEKS will be taught throughout the entire year.