

## Expectations and Outcomes

Grade Level/Course: 9-12

Content Area: Science

Unit Title	Guarantees
Unit 1: Chemistry Properties of Matter	Measure Properties of Matter with Precision Use kinetic energy to explain changes in state
Unit 2: Chemistry Ideal Gas Law	Relate physical phenomena to predictable mathematical patterns. Solve basic algebraic expressions or computations; to systems of two or three components;
Unit 3: Chemistry Solutions	HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the concentration of the reacting particles
Unit 4: Chemistry Acids and Bases	Students will identify acids as hydrogen donors and bases as hydrogen acceptors. Students will be able to model an acid/base reaction
Unit 5: Periodic Table and Trends	Identify and model periodic table trends. Use information from the periodic table to explain why elements behave the way they do.
Unit 6: Chemistry Bonding and Naming	Use electron shell data to explain how molecules form. Use period trends to explain chemical molecule nomenclature.
Unit 7: Chemistry Chemical Reactions Part 1	Model a chemical reaction and show that matter can be rearranged.  Predict the amount of product that can be produced.
Unit 8: Chemistry Chemical Reactions Part 2	Use models to predict products of a chemical reaction. Determine the amount of product and yield after comparing multiple input ingredients.
Unit 9: Chemistry Energy in Reactions	Use the term particles to model energy flow in a Chemical reaction.
Unit 10: Chemistry Oxidation and Reduction	Use oxidation values to predict products in a chemical reaction.