

Curriculum at a Glance

Chemistry

Level: 300

Grades 10 - 12

This course is to provide students with the opportunity to explore the microscopic world of chemistry. Students will engage in hands-on lab experiments that will have real-world applications. Inquiry and critical thinking skills will be emphasized to create an engaging and active learning environment. Students will be asked to integrate and apply their knowledge and skills to new, unique situations to pursue the solution to a problem or question through creative, critical, scientific thought.

Unit Name / Description	Essential Content
Composition and Structure of Matter	<ul style="list-style-type: none">● Atomic Structure● Periodic Table of Elements● Electron Configuration
Determining Properties of Matter	<ul style="list-style-type: none">● Bonding● Intermolecular Forces of Attraction● Phase Changes of Matter● Gases, Liquids and Solids
Rearrangement of Matter	<ul style="list-style-type: none">● Formulas and Nomenclature● Types of Reactions● Mole Concept● Stoichiometry
Energy changes in Matter	<ul style="list-style-type: none">● Nuclear Equations and Energy● Enthalpy of Reactions

	<ul style="list-style-type: none">● Thermodynamics of Reactions● Kinetics of Reactions● Potential Energy Diagrams
Matter in aqueous solutions	<ul style="list-style-type: none">● Solution Stoichiometry● Equilibrium of Reactions● Acids and Bases