

General Course Information

Course Name: Chemistry	
Department: Science	Grade Level(s): 10-12
Duration/Credits: 1 year/1 credit	Prerequisites: Successful Completion of Algebra I, with the ability to complete the following skills: Algebraic Manipulations of 3-variable Equations Dimensional Analysis with units Exponential Relationships
BOE Approval Date: December 2022	Course Code: H3060
Course Description:	
This course involves the study of the laws, concepts, and principles governing the composition and changes of matter. Emphasis is placed on critical thinking skills, problem solving, and laboratory activities.	
Course Rationale:	
In a world filled with the products of scientific inquiry, scientific literacy is a necessity for everyone in order to use scientific information to make wise choices. Today, the job market demands advanced skills requiring people to be able to learn, reason, think creatively, make decisions, and solve problems. An understanding of science and the processes of science contribute in an essential way to these skills. These skills will prepare students for: STEM-based careers	

ACT prep
College preparedness

Chemical elements and compounds surround us everywhere to how we look-in our clothes, our food, even our bodies. Chemical reactions are used in burning fuels, cooking, and shaping the world around us. By studying these chemicals and their reactions, students gain a better understanding of how and why the world works the way it does.

Course Objectives:

1. The student will communicate the molecular, atomic, and ionic make-up of different substances including appropriate formulas and names of these substances in conjunction with the Periodic Table to predict properties of elements that make up these substances. (A+: Speaking)
2. The student will communicate the relationship between wavelength, frequency, and energy and relate these concepts to electron configuration. (A+: Speaking)
3. The student will describe and determine types of bond, reaction, energy, and stoichiometry in different kinds of chemical and nuclear reactions. (A+: Reading)
4. The student will read and write procedures for simple experiments while creating and analyzing graphs, tables, patterns, and relationships in support of meaningful conclusions. (A+: Reading)
5. The student will research and review data on the states of matter, types of mixtures, properties of solutions, concentration of solutes and pH of different solutions, and describe how these concepts relate to real world solutions. (A+: Research)