Honors Chemistry

Mehlville School District
Science
Grades 10 - 11, Duration 1 Year, 1 Credit

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.

Chemical elements and compounds surround us everywhere 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 Description

This course provides the student with a more rigorous study of chemistry. The class 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.

Prerequisites

Prerequisite: Both semesters of Algebra II (H2300) with a "C" or higher.

Open to: 10, 11

Course Objectives

1. The student will orally describe the molecular, atomic, and ionic make-up of different complex 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 with 80% accuracy. Locally assessed. (A+: Speaking)

2. The student will describe and determine types of bonds, reaction, energy, and stoichiometry in the different kinds of chemical and nuclear reactions with 80% accuracy. Locally assessed. (A+: Writing)

3. The student will read and write detailed procedures for experiments while creating and analyzing graphs, tables, patterns, and relationships in support of a meaningful conclusion with 80% accuracy. Locally assessed. (A+: Reading)

4. The student will research and determine (using data the states of matter, types of mixtures, properties of solutions, concentration of solutes and pH of different solutions) how these concepts relate to real world situations with 80% accuracy. Locally assessed. (A+: Research)

BOE: 11-19-15