

Course Title: Honors Chemistry
Credit / Hours: 1 credit

Board Approval Date: June, 2010

Course Description:

This course focuses on mastery of the PA Academic Standards for Science and. Students will investigate the composition, structure, and properties of matter and how substances interact and transform. Through classroom demonstrations, laboratory activities, and discussions, students will learn about the chemical makeup of the world and applications of chemistry. To prepare for college-level chemistry courses, a high concentration of content will be covered. Students will be required to complete some sections of the course independently with teacher guidance. To be successful in this course, a student must have a superior ability for independent learning, a desire to achieve to high levels, and intellectual curiosity not motivated by grades alone.

Learning Activities / Modes of Assessment:

Large group instruction
Tests and Quizzes
Laboratory experiments
Checklists / Teacher Observation
Small group work
Projects with Rubrics
Computer simulations
Lab Journals / Write-ups

Instructional Resources:

- Text: *Chemistry* (Prentice Hall, 2005)
- Laboratory Manuals: *Chemistry* (Prentice Hall, 2005)
- *Advanced Chemistry with Vernier*: Experiments for AP, IB, and College General Chemistry; Randall, Jack; Vernier Software & Technology; 2004.
- *Laboratory Experiments for Advanced Placement Chemistry*; Vonderbrink, Sally Ann; FlinnScientific, Inc.; 1995.

Online Resources:
Class Wiki
Virtual Lab Sites

Course Pacing Guide

Course: Honors Chemistry

Course Unit (Topic) (Days/Periods)	Length of Instruction
1. The Methods of Chemistry	16 periods
2. Atomic Structure and Nuclear Chemistry	18 periods
3. Electrons and Periodic Behavior	20 periods
4. Bonding	20 periods
5. Conservation of Mass and Stoichiometry	40 periods
6. Gases and Kinetic Molecular Theory	10 periods
7. Solids, Liquids, and Solutions	20 periods
8. Kinetics and Thermodynamics	20 days