

High School Chemistry

Matt Sanders

Course Philosophy

Science is most exciting (and most truthful) when it is taught and learned in the context of our awesome Creator. His creation reflects the majesty, wisdom, and power of God. Unfortunately, secular science is often taught in such a way as to become a stumbling block to the development of our faith. Science can instead be a stepping-stone to faith – the evidence for design is everywhere! This will be highlighted in almost everything we study.

Course Overview

This course is taught from a Creation/Design perspective. Topics will include the metric system, atoms, molecules, elements, the periodic table, bonding, stoichiometry, ions, solutions, gas laws, acid/base reactions, thermodynamics, kinetics, and equilibrium. Each week we will have a lecture/discussion period (using Keynote slides), followed by a lab period.

The lab period will alternate between Chemistry labs and a math tutoring time. Students often have difficulty understanding the math that goes with each chapter, so we will focus on math every other week. We will still do at least one lab with each chapter. All lab materials and the lab manual are included in the course tuition.

Books (2)

Discovering Design with Chemistry, Berean Builders (ISBN 978-0-9962784-6-1)

Answer Key and Tests, Berean Builders (ISBN 978-0-9962784-7-8)

Grading Plan

10% Attitude
30% Homework
30% Lab Work
30% Tests

ThinkWave – we will use this excellent website for homework and grades. Students and parents can always see what is assigned, when it is due, which assignments are finished or not, grades that have been earned on all assignments and tests, and the student's cumulative grade.

ClassMarker – we will use this website for testing, since our class time is so limited. There will be a test on each chapter, approximately every two weeks. Parents are expected to monitor test-taking to avoid cheating. After the test, students and parents can see the score, as well as the correct answers on any missed questions.

(Chem Syllabus, p. 2)

Course Plan

<u>Week of</u>	<u>Topic</u>
Sept 9 and 16	Measurement
Sept 23 and 30	Matter
Oct 7 and 14	Atoms and Elements
Oct 21 and 28	Modern Atomic Theory
Nov 4 and 11	Covalent Compounds and their Geometry
Nov 18	Physical and Chemical Change
Nov 25	(Thanksgiving Break)
Dec 2	Physical and Chemical Change
Dec 9 and Jan 6	Stoichiometry I
Jan 13 and 20	Stoichiometry II
Jan 27 and Feb 3	Solutions
Feb 10	Gases
Feb 17	(Break)
Feb 24	Gases
Mar 2 and 9	Acids and Bases
Mar 16 and 23	Oxidation and Reduction
Mar 30 and Apr 6	Thermochemistry
Apr 13	(Break)
Apr 20	Thermodynamics
April 27 and May 4	Kinetics
May 11 and 18	Chemical Equilibrium