

Chemistry

Instructor:

Mrs. Shephard
shepharda@graceacademyonline.org

Time and Location:

Semester One (2010-2011): Fourth and Fifth Period
Room 26 and 31

Course Overview:

What is chemistry? Chemistry is "the study of *matter*, its properties and the changes it undergoes." Well then what is *matter*? It is all the stuff that comprises the world around us. Therefore chemistry is "everything, what everything does and is made of and how everything becomes everything else." The broadness of this statement contributes to the difficulties some students have studying chemistry, but also speaks to the utility of this course for every student.

Major topics of study include: macro- and microscopic study of matter, structure of matter, periodic table and properties of elements, properties of gases, chemical compounds, chemical nomenclature, chemical reactions, acids/bases, chemical calculations and equations, processes involved in chemical reactions.

Prerequisites:

Algebra I

Enduring Understandings (Objectives):

The student will understand:

- Chemistry is the study of matter and the changes it undergoes.
- Atomic theory is the foundation for the study of chemistry.
- Macroscopic observations reflect the submicroscopic structure of matter.
- Properties of matter can be divided into chemical and physical changes.
- The Kinetic Molecular Theory explains the properties of solids, liquids and gases.
- Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions or molecules and the forces between them.
- The properties of elements and their organization in the periodic table reflect the valence electron configurations of the elements.
- Periodic trends in the properties of atoms allow us to predict physical and chemical properties.
- Changes in matter are accompanied by changes in energy.
- Chemical bonding occurs as a result of attractive forces between particles.
- Chemical reactions are predictable and occur all around us.

Assessments:

Grades will be based on class participation, homework assignments, lab exercises and reports, projects, quizzes, unit tests and a final exam.

Edline will be used to communicate grades to students and parents. Assignments will also be posted on Edline.

Required Student Materials:

Textbook: Chemistry, Third Edition, BJU Press

Lab Notebook: A bound composition notebook is required for laboratory experiments.

Class notebook or binder.

Quadrille paper

Calculator

Pens

Attendance Policy:

Your attendance and participation in each unit and lesson of this course is crucial.

Expectations:

Students are expected to:

- Be on time to class.
- Be prepared to discuss any assigned readings or homework.
- Complete homework assignments on time.

Late assignments will be assessed a penalty of 15% for the first day and 10% each subsequent. Of course, a reduced grade is better than a zero.

If you miss class, the Grace Academy student policies will apply.

Parent Signature: _____

Parent E-mail: _____

Student Signature: _____

Student E-mail: _____