CHEM 32 **OBJECTIVES SHEET 1** **Spring 2009**

Reading: Chapter 2

Objectives: By the time you have finished your work on this material, you should know the following information:

1) The differences between homogeneous and heterogeneous samples.
2) How to classify a homogeneous substance as a mixture, a compound, or an element.
3) The organization of the periodic table into groups and periods.
4) The differences between metals and nonmetals, and where each type of element is found on the periodic table.
5) The names and symbols of the elements on the handout "Elements You Need to Know".
6) How to express the mass of an atom.
7) The three subatomic particles, their masses and charges, and their locations within an atom.
8) The relationships between the numbers of subatomic particles and the atomic number and mass number of an atom.
9) How isotopes are related to one another.
10) The difference between atomic weight and mass number.
11) How to write and interpret a chemical formula.
12) The significance of electron shells. (You do not need to know what an orbital is.)
13) How to write an electron arrangement for any atom from H to Ar.
14) The relationship between the position of an element on the periodic table, the number of valence electrons, and the chemical behavior of the element.

Homework Assignment 1 (due August 25):
Page 2-8: problems 2.1, 2.3, 2.5, and 2.6
Page 2-12: problems 2.7, 2.8 and 2.9
Page 2-14: problems 2.10 and 2.11
Pages 2-20 and 2-21: problems 2.13, 2.14, 2.15, 2.16, 2.17 and 2.18
Page 2-22: problems 2.19, 2.20 and 2.21
Page 2-24: problems 2.22 and 2.23
Page 2-28: problems 2.24 and 2.25
Page 2-32: problems 2.27 and 2.28
Page 2-36: problems 2.29, 2.30, 2.31, and 2.32
Page 2-43: problem 2.83
(You may use the periodic table to do these problems.)

You are required to do the homework problems assigned above and to turn them on a separate sheet of paper. Refer to the syllabus for additional information on homework grading. *Note: Solutions to all assigned homework problems are posted on the class website. Please recognize that you will get the most benefit from these assignments if you attempt all problems before looking at the answer key.*

Chem32 website URL for my section: **http://www.ccsf.edu/Departments/Chemistry/pauly/index.htm**

Reminder:
We will not be covering Chapter 1 during the lecture, but you will be expected to know the material on metric units, unit conversions, precision, temperature and density (sections 1.1, 1.2, 1.3, 1.4, 1.6, and 1.7). This material will be covered in lab during Experiments A and B.