

## CHAPTER 5: Stuff to Know & Study Suggestions

This chapter covered a ton of concepts that you need to memorize and learn to apply. Here are some examples of what you have learned in this chapter and what you need to know for the test.

- ❑ Make sure you know all the vocabulary, the bold-faced and italicized words
- ❑ Be able to explain the roles of Cannizzaro, Mendeleev, and Moseley in the development of the periodic table.
- ❑ Know the major divisions of the periodic table and be able to identify the block an element is in and they type of element that it is (metal, nonmetal or metalloid).
- ❑ Using only electron configuration, be able to identify an element's period, block, group, and type
- ❑ For each major group of elements and for individual elements we covered in class make sure you know the physical properties, chemical properties, occurrence, and uses.
- ❑ Be able to discuss (but it will be in the multiple choice):
  - ❖ The role of major elements in your body and disorders that occur if they are not present
  - ❖ How fireworks work
  - ❖ Hg poisoning – how you can get it, what they symptoms are, where the phrase “mad as a hatter” came from
  - ❖ Gemstones – their color and the element that gives them that color
  - ❖ Alloys – know the names of the major alloys and the elements in them (you don't have to know percents)
- ❑ Define atomic radii, ionization energy, electron affinity, ionic radii, and electronegativity and tell what happens to each as you go across a period and down a group. Be able to list a given set of elements in increasing or decreasing order of atomic radii, ionization energy, electron affinity, and electronegativity.
- ❑ Write the equation for an atom losing an electron and for gaining an electron
- ❑ List the number of valence electrons for each group (and therefore for each main group element). List the possible ion charge of the elements by group.

### Study Hints:

- ✧ For a pre-test, put away your notes and test yourself by answering the Standardized Test Prep at the end of the chapter – *no peeking in the book*. After you are finished, check your answers in your book and notes and correct the ones you missed.
- ✧ Read the Chapter Summary out loud. Write down and memorize the definitions of all the VOCABULARY.
- ✧ Go through the chapter and re-work the Sample Problems, Practice Problems, and Sections Reviews. Write the answers down. Go back and re-memorize and re-study any of the sections that you think will cause you a problem.
- ✧ Go to the “Visual Concepts” section of the online textbook and go through every section. Answer the section quizzes – no peeking for answers in the chapter! Go back and re-memorize and re-study any of the sections that you think will cause you a problem.
- ✧ Go back to the Element Handbook section and review the information to make sure there isn't anything you've missed. (For example, review the captions under the pictures for important information.)
- ✧ Review the answers to the REVIEWING CONCEPTS, PROBLEMS, and CRITICAL THINKING questions from your homework. If there are any you still cannot answer, get help from someone.
- ✧ Memorize the answers to the “Most Abundant” questions on your syllabus.
- ✧ **Take Chapter 5 sample test. NO PEEKING FOR ANSWERS IN THE CHAPTER! If you can write the answers for yourself, you can probably write the answers on the test!**
- ✧ **Give yourself plenty of time to study.** Do not try to complete all of these suggestions in one night. It is too much for you to keep straight. I would suggest a **minimum** of 3 hours of study time (not all at once).