

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, Moseley, Janssen, Strutt (Lord Rayleigh), Ramsey and Pauling in the development of the periodic table and what we know about the reactivity of elements
- ❑ Know the major divisions of the periodic table and be able to identify the block an element is in and the 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.
- ❑ From the Periodic Videos at <http://periodicvideos.com/> for the following elements: H, K, Hg, As, C, O, F
 - ❖ Physical properties and occurrence of the element
 - ❖ Chemical properties
 - ❖ Uses of the element
- ❑ 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.
- ❑ Be able to write noble gas notation for atoms and ions.

Study Hints:

- ❖ 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.
- ❖ Re-watch the Periodic Videos at <http://periodicvideos.com/> for the following elements: H, K, Hg, As, C, O, F
- ❖ Review the answers to the homework questions from your homework. If there are any you still cannot answer, go back and watch vodcasts for those topics.
- ❖ **Take Chapter 5 Practice Test in PowerSchool Learning.**
- ❖ **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).