

Name _____ Date _____ Hour _____

Chemistry Guided Reading 6-2 and 6-3

Section 6-2 (pgs 182-185)

1. What are valence electrons?
2. List one of the most important relationships in chemistry.

3. Complete the following chart using figure 7

Group Number	Number of Valence electrons	Group Number	Number of Valence electrons
1		15	
2		16	
13		17	
14		18 (except helium)	

4. Which groups or sections belong to each of the “blocks” on the P. T?

Section 6-3

1. Why can't we determine the actual size of the electron cloud? How do we determine the size of an atom?
2. Examine figure 11 and 12, how does the size of an atom change as we move down a group? How does the size of the atom change as we move across a period?
3. Which atom would have the largest atomic radius, magnesium (Mg), silicon (Si) or sulfur (S)?

4. Determine which element in each pair would be the largest (have the biggest atomic radius)
 - a. Element in period 2 group 1, or the element in period 3 group 18
 - b. Element in period 3 group 18, or the element in period 5 group 2
 - c. Element in period 4, group 18, or the element in period 2 group 16
5. What is an ion? What happens to an atom's size as it loses electrons? When they gain electrons?
6. Define ionization energy?
7. How can we think of ionization energy in simpler terms? What does it mean when an element has a high ionization energy? Low ionization energy?
8. Examine figure 17, what are the trends for ionization energy as we move down a group and across a period?
9. What does the octet rule tell us?
10. Which elements tend to form positive ions, which elements tend to form negative ions?
11. Define electronegativity.
12. Examine figure 18. Describe the trends in electronegativity that occur as we move down a group and across a period