**Guided Reading Chapter 16 Section 1**

1. How do chemical bonds occur?
2. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_ bond occurs when two atoms share electrons to form compounds called molecules.
3. Using the water molecule on page 354, what is the ratio of Nitrogen to Hydrogen in the chemical formula, NH4?
4. When an atom loses or gains an electron, it is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. An \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_is formed when electrons are transferred between atoms.
6. What is chemical reactivity?
7. Why are the noble gases sometimes called the “inert” gases?
8. How many electrons does chlorine have in its highest energy level?
9. What are the highest energy level electrons of an atom called?
10. Valence \_\_\_\_\_\_\_\_\_\_\_\_ are important because they are the reason elements bond with each other.
11. protons b) electrons c) neutrons
12. Draw figure 16.5 on page 357.
13. How many electrons does Oxygen need to fill its outermost energy level?
14. 4 b) 8 c) 2
15. Draw figure 16.8 on page 359. Make sure to label!
16. When an atom receives an electron(s), it becomes more
17. negative b) positive c) neutral
18. When ionic bonds form compounds, each atom has a stable octet and is electrically \_\_\_\_\_\_\_\_\_\_\_.
19. positive b) negative c) neutral