**13.1 Guided Reading**

**Integrated Science – Matter Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_\_\_**

1. How do chemical bonds occur?
2. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bond occurs when two atoms share electrons to form compounds called molecules.
3. Using the example of reading a chemical formula (for water), 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 meant by *chemical reactivity?*
7. Why are the noble gases sometimes called the *inert* gases?
8. Chlorine has \_\_\_\_\_\_\_\_\_\_ electrons in its highest energy level.
9. Electrons in the highest energy level are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_electrons.
10. Which electrons are involved in chemical bonding?