

# **SUMMER HOMEWORK ASSIGNMENT 1: CHEMISTRY REVIEW FOR AP BIOLOGY**

## **SUMMER HOMEWORK**

**Directions:** Using the internet or a chemistry textbook, research the answers to the questions below. Answer the questions below on a separate sheet of paper. Cite your website used.

- 1) What is the relationship between an atom and an element?
- 2) What are the 3 subatomic particles? Give characteristics of each (including size and charge)
- 3) How are atomic number and atomic mass different?
- 4) What is an isotope? What are common isotopes discussed in Biology? Why?
- 5) How is the periodic table arranged?
- 6) What causes electrons to get excited? What happens when they get excited?
- 7) What are electron orbitals? What are the types and how many electrons can they hold?
- 8) How many electrons do you need to have in your outer orbital to achieve Noble Gas outer electron shell configuration?
- 9) When do ionic bonds form? What happens with this bonding type?
- 10) When do covalent bonds form? What happens with this bonding type?
- 11) Discuss what is meant by a single, double, or triple bond.
- 12) What is a polar covalent bond? Give an example.
- 13) What is a molecule?
- 14) Describe both a combination and a disassociation reaction.
- 15) What does pH measure? Describe the pH scale.
- 16) What are properties of acids?
- 17) What are the properties of bases?