Honors Chemistry I Name: _____
Mrs. Cameron
Lincoln High School Period: _____

**Unit 3 - *Molecular, Ionic and Organic Compounds***
***- Formulas and Nomenclature***

Lincoln High School Core Values:

- Resiliency and perseverance in the face of obstacles are keys to student success
- Students will be thoughtful communicators who read, write, listen and speak effectively in preparation for careers and/or post-secondary education
- Students will be creative and practical problem solvers

Next Generation Science Standards:

**HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.**

**HS-PS1-2. Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.**

**(Chapter 2.6-2.8 – Atoms, Molecules and Ions)**
**Objectives:**
Upon completion of this unit the student will be able to:

**1**. Determine the number of protons, neutrons and electrons in an atom or ion.

**2**. Explain how an ion differs from an atom.

**3**. Contrast anions and cations.

**4.** Define polyatomic and monatomic ions and give examples of each.

**5.** Describe the distinguishing characteristics of an ionic bond.

**6.** Define and describe the characteristics of a covalent bond.

**7.** Predict whether a compound is likely to be ionic or molecular based upon its formula and the position of its component elements on the periodic table.

**8.** Compare and contrast the physical and chemical properties of molecular and ionic compounds.

**9.** Identify and describe organic molecular compounds and their functional groups.

**10.** Understand the central place carbon has among all the elements in organic chemistry, polymer science, and biochemistry.

**10.** Determine if a formula unit is neutral.

**12.** Determine if the formula unit is in the simplest whole number ratio.

**13.** Memorize the formulas for several common polyatomic ions.

**14.** Define the term hydrate and the term anhydrous.

**15.** Define the term acid and describe how an acid is named.

**16.** Write names for ionic, binary molecular (two non-metals), hydrate compounds and the acids when given the formula of the compound.

**17**. Write the formulas for ionic, binary molecular (2 non-metals), hydrate compounds and the acids when given the name of the compound.

**18.** Define and use the key terms for this unit. (Page 61)