**Chemical Formulas and Chemical Compounds Unit Objectives**

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|  | Objective/ Question | Assignment |
|  | Review Objectives:   1. What things do you need to show in a calculation? |  |
|  | 1. What is the difference between an ionic and molecular compound? |  |
|  | 1. What charge does each element develop when it becomes an ion? | Periodic table |
|  | 1. Why do elements form ions? |  |
|  | 1. What is the difference between a cation and anion? |  |
|  | New Objectives:   1. How do you name monatomic ion? (There is a difference in how cations and anions are named.) |  |
|  | 1. Name binary ionic compounds. |  |
|  | 1. What is a polyatomic ion? |  |
|  | 1. Given a cation and an anion, write the correct formula. |  |
|  | 1. Name binary molecular compounds. |  |
|  | 1. Name acids and bases. |  |
|  | 1. Explain the difference between an ionic charge and oxidation numbers. |  |
|  | 1. Be able to assign oxidation numbers to compounds. |  |
|  | 1. How can you tell how many moles are in a substance given the formula? |  |
|  | 1. Explain the difference between molecular mass, formula unit, and formula mass. |  |
|  | 1. Calculate formula mass. |  |
|  | 1. Explain the difference between formula mass and molar mass. |  |
|  | 1. Calculate molar mass. |  |
|  | 1. Convert from moles to grams. Convert from grams to moles. |  |
|  | 1. What is percent composition? |  |
|  | 1. Calculate percent composition. |  |
|  | 1. What is an empirical formula? |  |
|  | 1. How do you convert from percent composition to mass composition? |  |
|  | 1. How can you calculate an empirical formula using percents? |  |
|  | 1. What do you do when your mole ratio does not come out a whole number? |  |
|  | 1. How can you calculate an empirical formula given grams? |  |
|  | 1. Explain how to calculate the molecular formula. |  |

**Chemical Formulas and Chemical Compounds Vocabulary**

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| Word | Definition | Sentence or Picture |
| 1. **Acid** |  |  |
| 1. **Base** |  |  |
| 1. **Binary Compound** |  |  |
| 1. **Empirical formula** |  |  |
| 1. **Formula mass** |  |  |
| 1. **Monoatomic ion** |  |  |
| 1. **Nomenclature** |  |  |
| 1. **Oxidation number** |  |  |
| 1. **Oxidation state** |  |  |
| 1. **Percentage composition** |  |  |
| 1. **Salt** |  |  |