

## Unit 2 Review Chemistry

- Contrast inference and observation
- Contrast qualitative and quantitative qualities
- Five signs of a chemical change
- Physical and chemical properties of metals and non metals
- Periodic Table
  - Identify metals and non-metals
  - Identify alkali metals, halogens, alkaline earth metals and noble gases
  - Compare and contrast groups and periods
- Drawing Atoms
  - What are the three subatomic particles in an atom?
  - How do you can you determine the number of each of the subatomic particles?
  - Draw Bohr-Rutherford and Lewis diagrams of various atoms
- Compounds
  - Describe both ionic and covalent bonds
  - An ionic compound is between which two types of atoms?
  - Identify the charges on various types of atoms.
  - A molecular compound is between which two types of atoms?
  - Name ionic compounds and write the formula for ionic compounds.
  - Name molecular compounds and write the formula for molecular compounds.
  - Name compounds containing polyatomic ions and write the formula for compounds containing polyatomic.
  - Name compounds containing multivalent and write the formula for compounds containing multivalent.
- Balancing
  - State the law of conservation of mass
  - Why must we balance equations?
  - Be able to balance equations
- Types of reactions
  - Name the five types of reactions covered in class
  - State the general equation of each type of reaction
  - Identify various types of reactions
- Acids and Bases
  - Define an acid and a base
  - Identify and acid, identify a base
  - How do acids react with metals? Carbonates?
  - How do carbonates react in water? What do they turn into?
  - Recognize the general equation for both acids and bases
    - Define pH scale and be able to sketch
  - Define indicators
  - Plot acidic and basic substances on a pH scale
  - What is neutralization
    - What are the products of a neutralization reaction?
- Putting it all together
  - Take word equations and write them as chemical equations
  - Balance and identify type of reaction
  - HOFBrINCl

## Practice Questions

- 1) Predict the ionic charges of
  - Ca, S, K, Al
- 2) Write the chemical formula for
  - magnesium chloride, aluminum sulfide, tin (II) sulfate, iron (III) oxide, silver phosphate, chlorine dioxide, dinitrogen monoxide
- 3) Name the compounds
  - $K_2O$ , CuS,  $Na_3PO_4$ ,  $Pb(OH)_2$ , CO, NO
- 4) Element X forms a compound with magnesium with the formula  $Mg_3X_2$ . What would be the formula of the compound that the element X forms with lithium?

Additional practice questions:

p. 302 # 1, 3, 4, 8, 10, 13, 14, 15, 16, 19, 20

p. 308 # 4, 6, 7, 8, 9, 10, 13, 15, 17