**Unit 9 EOC: General Reaction Types**

1. Synthesis:
   1. write the general formula\*
   2. starting with sodium combines with chlorine gas
      1. predict the products
      2. write a balanced chemical equation
2. Decomposition
   1. Write the general formula
   2. Starting with magnesium nitride is electrolyzed
      1. Predict the products
      2. Write a balanced chemical equation
3. Single replacement
   1. Write general formula
   2. metal with a metal cation
      1. Calcium metal is placed in a solution of copper (II) nitrate)
         1. Predict the products
         2. Write BCE
   3. metal with hydrogen ion in an acid
      1. Magnesium metal is placed in solution of hydrochloric acid (HCl)
         1. Predict products
         2. Write BCE
   4. Halogen replacement
      1. Fluorine gas is bubbled through a solution of sodium chloride
         1. Predict products
         2. Write BCE
4. Double replacement
   1. Write general formula
   2. Starting with solutions of sodium carbonate and calcium chlorate are combined
      1. Predict products
      2. Write BCE
5. Combustion of hydrocarbon
   1. CH4 + 2O2 → CO2 + 2H2O
   2. Identify it as a combustion, and be able to balance
6. Balanced Equation
   1. What is the importance of a balanced chemical equation?

\*general formula: using letters A, B, C, D to represent compounds or elements

**What each category should look like in your book:**

1. Synthesis
2. A + B → AB
3. Calcium metal is placed in a flask of oxygen gas
   * 1. Products: calcium oxide
     2. 2Ca + O2 → 2CaO