**Chem4Bio Module 5 Worksheet**

1. **Classify** each of the reactions below as a **synthesis**, **decomposition**, **exchange,** or **combustion** reaction.
2. HCl + KOH → KCl + H2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. C6H12O6 → 2 C2H5OH + 2 CO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. NH3 + HCl → NH4Cl (*s*) \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Mg + 2 HCl → MgCl2 + H2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. C2H5OH + O2 → CO2 + H2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. 2 Fe2S3 → 4 Fe + 3 S2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Consider the following Redox reactions. For each reaction, identify the **oxidizer (oxidizing agent)** and the **reducer (reducing agent)**:

1. CH4 + 2 O2 → CO2 + 2 H2O

**Oxidizer is: \_\_\_\_\_\_\_\_\_\_\_**

**Reducer is: \_\_\_\_\_\_\_\_\_\_\_\_**

1. 2 Na + Cl2 → 2 NaCl

**Oxidizer is: \_\_\_\_\_\_\_\_\_\_\_**

**Reducer is: \_\_\_\_\_\_\_\_\_\_\_\_**

1. C6H12O6 → 2 C2H5OH + 2 CO2

**Oxidizer is: \_\_\_\_\_\_\_\_\_\_\_**

**Reducer is: \_\_\_\_\_\_\_\_\_\_\_\_**

1. 6 CO2 + 6 H2O → C6H12O6 + 6 O2

**Oxidizer is: \_\_\_\_\_\_\_\_\_\_\_**

**Reducer is: \_\_\_\_\_\_\_\_\_\_\_\_**