**Unit 5: Chemical Reactions – Webquest**

[https://tinyurl.com/3zvjdqg](http://tinyurl.com/zqwmpdv)

1. What is a chemical reaction?

<http://tinyurl.com/bcm37>

1. What are the ten signs that a chemical reaction has occurred?

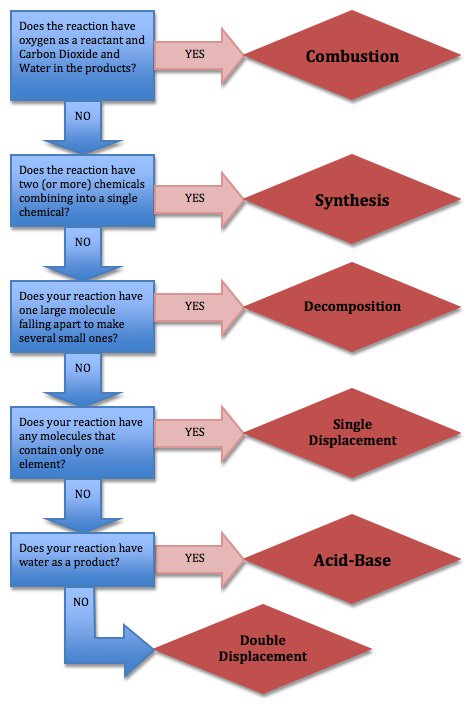
<http://tinyurl.com/gq2p7ed>

1. What nine factors can influence the rate of a chemical reaction?

<http://tinyurl.com/zfrsr3h>

1. Describe each of the five types of chemical reactions below.
   1. **Synthesis** (addition or combination) Reactions
      1. Definition
      2. Example
      3. General (Generic) Formula/Equation
   2. **Decomposition** (dissolution) Reactions
      1. Definition
      2. Example
      3. General (Generic) Formula/Equation
   3. **Single** **Replacement** (displacement) Reactions
      1. Definition
      2. Example
      3. General (Generic) Formula/Equation
   4. **Double** **Replacement** (displacement) Reactions
      1. Definition
      2. Example
      3. General (Generic) Formula/Equation
   5. **Combustion** **Reactions**
      1. Definition
      2. Example
      3. General (Generic) Formula/Equation
2. Visit: **https://tinyurl.com/jm7rhcj (Note:** scroll down to “Reaction Type 6: Acid-Base”)
   1. **Acid-Base (Neutralization) Reactions**
      1. Definition
      2. Example
      3. Generic Example

The following chart is a flow chart that helps one determine the type of reaction based on a chemical equation.



**Continued 🡪**

* Visit any one of the following websites to practice balancing chemical equations. **When you successfully balance a reaction record the results below, include the type of reaction.**

Option 1 – <http://tinyurl.com/c2ogkmg>

Option 2 – <http://tinyurl.com/ktuuhrb> **Note**: for option 2 & 3 you must “click to enable flash player”

Option 3 - <http://tinyurl.com/jxvl2em>

|  |  |
| --- | --- |
| **Type of Reaction** | **Balanced Chemical Equation** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

What does the Law of Conservation of Mass say about a chemical reaction?

Continued 🡪

Balance each equation below and indicate the type of reaction.

1.           \_\_\_\_N2 + \_\_\_\_H2 🡪 \_\_\_\_ NH3  Type of Reaction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 2.           \_\_\_\_Al2O3     +   \_\_\_\_Fe   🡪  \_\_\_\_ Fe3O4    +      \_\_\_\_ Al  Type of Reaction \_\_\_\_\_\_  
 3.             \_\_\_\_KClO3     🡪  \_\_\_\_ KCl   +  \_\_\_\_ O2  Type of Reaction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 4.            \_\_\_\_K + \_\_\_\_MgBr2  🡪 \_\_\_\_KBr + \_\_\_\_Mg Type of Reaction \_\_\_\_\_\_  
 5.            \_\_\_\_P + \_\_\_\_O2 🡪 \_\_\_\_P2O5   Type of Reaction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 6.            \_\_\_\_Ag2O 🡪 \_\_\_\_Ag + \_\_\_\_O2  Type of Reaction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 7.            \_\_\_\_Al      +    \_\_\_\_ H2SO4     🡪     \_\_\_\_Al2(SO4)3      +    \_\_\_\_ H2  Type of Reaction \_\_\_\_  
 8.            \_\_\_\_ Be2C   +     \_\_\_\_H2O     🡪    \_\_\_\_Be(OH)2      +     \_\_\_\_CH4  Type of Reaction \_\_\_\_  
 9.     \_\_\_\_NaClO3 🡪 \_\_\_\_\_ NaCl + \_\_\_\_O2  Type of Reaction \_\_\_\_\_\_\_\_\_  
 10.          \_\_\_\_NH3   +  \_\_\_\_ CuO  🡪   \_\_\_\_Cu   +   \_\_\_\_ N2   +   \_\_\_\_ H2O  Type of Reaction \_\_\_\_  
 11.       \_\_\_\_Al + HgCl2 🡪 \_\_\_\_AlCl3 + \_\_\_\_Hg Type of Reaction \_\_\_\_  
12. \_\_\_\_Cu + \_\_\_\_AgNO3 🡪 \_\_\_\_Cu(NO3)2 + \_\_\_\_Ag Type of Reaction \_\_\_\_\_\_\_