Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per:\_\_\_

Identifying the 5 Types of Chemical Reactions

Identify each of the reactions below as one of the 5 types of Reactions (Rxn):

Type: Pattern:

* Synthesis Reaction ex: A + B 🡪 AB
* Decomposition Reaction
* Single Replacement Reaction
* Double Replacement Reaction
* Combustion Reaction

|  |  |
| --- | --- |
| Reactions (identify pattern below) | Name of Reaction Type |
| 1. 2 Na+ Cl2 🡪 2 NaCl   EX: A B 🡪 AB (A & B combine) | Ex: synthesis |
| 1. Pb + FeSO4 🡪 PbSO4 + Fe |  |
| 1. P4 + 3 O2 🡪 2 P2O3 |  |
| 1. 2 NO2 🡪 2 O2 + N2 |  |
| 1. Na3PO4 + 3 KOH 🡪 3 NaOH + K3PO4 |  |
| 1. C3H6O + 4 O2 🡪 3 CO2 + 3 H2O |  |
| 1. MgCl2 + Li2CO3 🡪 MgCO3 + 2 LiCl |  |
| 1. C6H12 + 9 O2 🡪 6 CO2 + 6 H2O |  |
| 1. CaCO3 🡪 CaO + CO2 |  |
| 1. 2 AgNO3 + Cu 🡪 Cu(NO3)2 + 2 Ag |  |
| 1. 2H2 + O2 🡪 2H2O |  |

**Activity: Reaction types**

(See directions at lab stations)

**Lab station 1**:

1. **Solid magnesium combines with oxygen gas to form magnesium oxide.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Solid copper combines with oxygen gas to form copper (II) oxide.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Observations: | Was there a chemical reaction? Why? | What type of reaction is this? |
| a. |  |  |
| b. |  |  |

**Lab station 2**:

**When electricity is added to water, hydrogen and oxygen gases are produced.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Observations: | Was there a chemical reaction? Why? | What type of reaction is this? |
|  |  |  |

**Lab station 3**:

1. **Hydrochloric acid added to solid zinc metal will react to form zinc chloride and hydrogen gas.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Hydrochloric acid added to solid copper metal will react to form copper(II)chloride and hydrogen gas.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Observations: | Was there a chemical reaction? Why? | What type of reaction is this? |
| a. |  |  |
| b. |  |  |

**Lab station 4**:

1. **When sodium silicate is mixed with calcium chloride it yields sodium chloride and calcium silicate.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Calcium chloride and magnesium sulfate are mixed and yields calcium sulfate and magnesium chloride.**

Write Chemical equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Observations: | Was there a chemical reaction? Why? | What type of reaction is this? |
| a. |  |  |
| b. |  |  |