

Types of Chemical Reactions

There are five major types of chemical reactions that we will examine this year.

a) Synthesis

- Two or more reactant combine to form a single product.
- General formula is

Example:

Magnesium combines with oxygen.

Sodium combines with chlorine gas.

b) ***Decomposition***

- A single compound is broken down into multiple products.
- Reverse of a synthesis reaction.
- General reaction is:

Example:

Electrolysis of water.

c) ***Single Displacement***

- One element replaces another similar element in a compound.
- The general form is

Example:

Magnesium reacts with hydrochloric acid.

Sodium iodide reacts with fluorine gas.

d) ***Double Displacement***

- Two reactants combine to form two new compounds
- The general formula is

Example

Potassium iodide reacts with lead (II) nitrate.

e) Combustion

- A hydrocarbon reacts with oxygen gas to create carbon dioxide and water.

Example