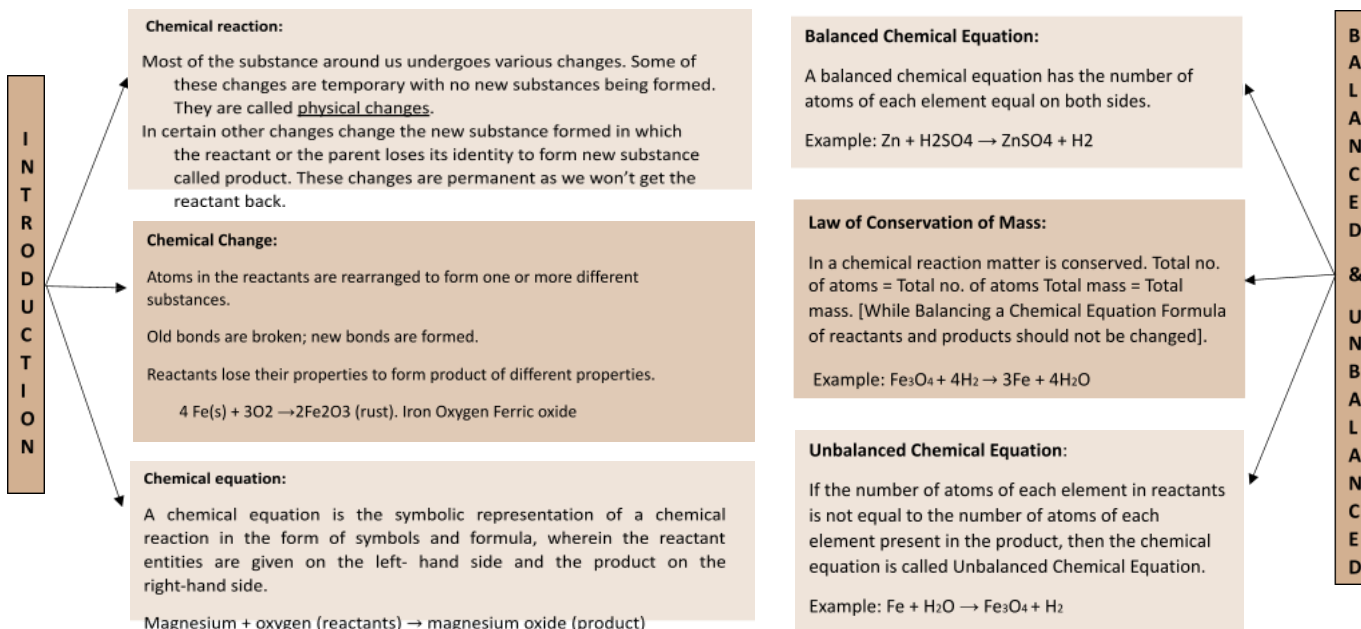
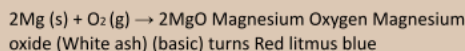


CHEMICAL REACTIONS AND EQUATIONS

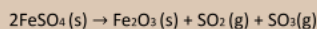


TYPES OF REACTIONS

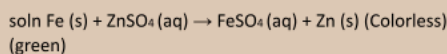
1. Combination Reaction: Two or more reactant combine to form a single product.



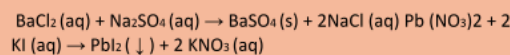
2. Decomposition Reaction: A single compound decomposes or break down to give two or more simpler substances.



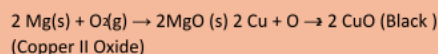
3. Displacement Reaction: A more reactive element [metal] displaces less reactive element [metal] from its aqueous salt



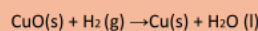
4. Double Displacement Reaction: Aqueous soln of two ionic compounds react by exchange of their ions is called double displacement Reaction



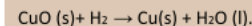
5. Oxidation Reaction: In oxidation reaction, addition of oxygen or removal of hydrogen or loss of electron takes place.



6. Reduction Reaction: In reduction Reaction addition of hydrogen or removal of oxygen or gain of electron takes place.



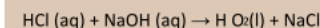
7. Redox Reaction: Reaction involving both oxidation and reduction simultaneously



8. Exothermic Reaction: Reaction in which heat is evolved.

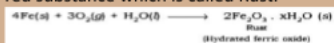


9. Neutralization Reaction: When an acid and a base react together to form salt and water.

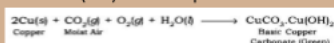


Rusting and Corrosion

Rusting: Iron when reacts with oxygen and moisture forms red substance which is called Rust.



Corrosion of Copper: Copper objects lose their lustre and shine after some time because the surface of these objects acquires a green coating of basic copper carbonate, $\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$ when exposed to air.



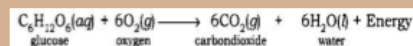
Corrosion of Silver Metal: The surface of silver metal gets tarnished (becomes dull) on exposure to air, due to the formation of a coating of black silver sulphide (Ag_2S) on its surface by the action of H_2S gas present in the air.



Exothermic Reaction & Endothermic Reaction

Exothermic Reaction: Reaction which produces energy is called Exothermic Reaction. Most of the decomposition reactions are exothermic.

Example:



Respiration is a decomposition reaction in which energy is released.



When quick lime (CaO) is added to water, it releases energy.

Endothermic Reaction: A chemical reaction in which heat energy is absorbed is called Endothermic Reaction.

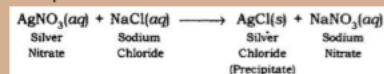
Example: Decomposition of calcium carbonate.



Precipitation Reaction & Neutralization

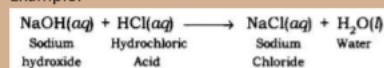
Precipitation Reaction: The reaction in which precipitate is formed by the mixing of the aqueous solution of two salts is called Precipitation Reaction.

Example:



Neutralization Reaction: The reaction in which an acid reacts with a base to form salt and water by an exchange of ions is called Neutralization Reaction.

Example:



Corrosion: It is an undesirable change that occurs in metals when they are attacked by moisture, air, acids and bases. Example, Corrosion (rusting) of Iron: $\text{Fe}_2\text{O}_3 \cdot n\text{H}_2\text{O}$ (Hydrated iron oxide)

Rancidity: Undesirable change that takes place in oil containing food items due to the oxidation of fatty acids. Preventive methods of rancidity: Adding antioxidants to the food materials, storing food in the airtight container, flushing out air with nitrogen gas and refrigeration.