CBSE 7 CHEMISTRY REVISION NOTES
PHYSICAL AND CHEMICAL CHANGES

	PHYSICAL CHANGE	CHEMICAL CHANGE
Nature of change	Temporary	Permanent
Chemical composition	Remains same	Undergoes change
Mass of substance	Remains same	Masses of products may increase or decrease although overall mass remains same
Energy change	No energy change	Always accompanied by energy change
New substances	Not formed	Always formed
	Examples: Melting of water Cutting paper Hammering iron rod	Examples: Electrolysis of water Burning wood Rusting of iron

TYPES OF CHEMICAL REACTIONS

1. DIRECT COMBINATION OR SYNTHESIS

E.g. $C + O_2 \rightarrow CO_2$

e.g. $N_2 + 3H_2 \rightarrow 2NH_3$

2. DECOMPOSITION

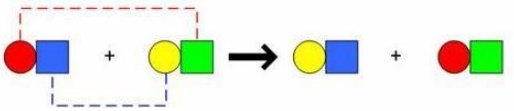
E.g. $2KClO_3 \rightarrow 2KCl + 3O_2$

3. DISPLACEMENT

E.g. $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$

$2Al + 3FeCl_2 \rightarrow 2AlCl_3 + 3Fe$

4. DOUBLE DISPLACEMENT



E.g. Neutralization and Precipitation reactions

$NaOH + HCl \rightarrow NaCl + H_2O$

$BaCl_2 + H_2SO_4 \rightarrow BaCl_2\downarrow + 2HCl$

CHEMICAL REACTIONS NEED:

- Mixing (close contact)
- Heat e.g. decomposition of copper carbonate
- Light e.g. photosynthesis
- Electricity e.g. electrolysis
- Pressure: e.g. formation of ammonia from hydrogen and nitrogen
- Catalyst: e.g. rate of decomposition of hydrogen peroxide increases in presence of manganese dioxide

BALANCING REACTIONS:

- Write the formula correctly
- Count the number of atoms of each element on both sides of equation
- Adjust the coefficient
- Check if number of atoms of each element is same on both sides