ACID-BASE REACTIONS

Bronsted-Lowry acid is proton (H+) donor, and **Bronsted-Lowry base** is proton (H+) acceptor

Conjugate Acid	Conjugate Base
HF	F-
H_2S	HS-
NH ₄ +	NH ₃
HCO3-	CO ₃ -2
$HC_2H_3O_2$	C ₂ H ₃ O ₂ -
H ₂ PO ₄ -	HPO ₄ -2
CH ₃ NH ₃ +	CH ₃ NH ₂
HSO ₄ -	SO ₄ -2
Often involves form Always involves for	ation of H_2O , but no mation of an ionic c

- Involve transfer of electrons from one sub e 🐱 another
 - → Opticity that loses electrons is **Oxidized**
 - Oxidation number goes up
 - → Species that gains electrons is reduced
 - Oxidation number goes down

Oxidation number of **fluorine (F)** is always -1 in all compounds

Other halogens (CI, Br, I) are usually -1, but have a positive oxidation number when bonded to oxygen (O) or fluorine (F)

Hydrogen (H) is +1 when bonded to other nonmetals, but -1 when bonded to metals Oxidation number of oxygen (O) is usually -2, except in compounds known as peroxides that contain O₂-2 ion, when oxidation number for oxygen is -1

In a **polyatomic ion**, sum of oxidation numbers of all atoms is equal to charge on ion

Oxidation half-reaction shows loss of electrons

Reduction half-reaction shows gain of electrons

If you add two half reactions together, number of electrons lost should equal number of electrons gained

→ Check to make sure charges on left and right side are equal