CHEMICAL FORMULAE & EQUATIONS

Valency	The number of electrons lost, gained or shared by an atom.
Chemical formula	The formula that represents the number & type of the atoms in a molecule.
Atomic groups	A set of atoms joined together that behave like one atom during a chemical reaction and they have their own valency & can't exist solely.
Chemical equations	A set of symbols and chemical formulae, representing the reactants, products and the conditions of the reaction as well.
Reactants	The starting materials in a chemical reaction.
Products	The substances formed from a chemical reaction.
Valence shell	Outermost shell.
Valence electron	Electrons of the outermost shell (group number).
Period number	Number of shells.

1) **GROUP NUMBERS: I II III IV V VI VII VIII.**
2) **Noble gases have zero valency (no gaining, losing or sharing electrons).**
3) **Prefix: Tells you how many atoms of each element in a formula.**
1. Mono- 2. Di- 3. Tri- 4. Tetra- 5. Penta- 6. Hexa- 7. Hepta- 8. Octa- 9- Nona- 10. Deca- .
4) **Non-metal ions take the suffix (ide).**
Chloride / Nitride / Oxide.
5) **Methane --> CH_4.**
6) **Zinc has a valency of 2.**

ATOMIC GROUPS

ATOMIC GROUP	SYMBOL	CHARGE	VALENCY
Hydroxide	OH	-ve	1
Hydrogen carbonate	HCO_3	-ve	1
Nitrite	NO_2	-ve	1
Nitrate	NO_3	-ve	1
Ammonium	NH_4	+ve	2
Carbonate	CO_3	-ve	2
Sulfate	SO_4	-ve	2
Sulfite	SO_3	-ve	2
Phosphate	PO_4	-ve	3
Phosphite	PO_3	-ve	3

MOLES

Moles	A unit of measurement used in chemistry to express the amounts of a chemical substance.
Moles	The quantity of a substance that contains $6x10^{23}$.
Moles	The number of particles which is equal to the number of atoms in 12g Carbon.
Moles	The mass in grams which contains the **Avogadro's constant** number of particles.
Avogadro's constant	The number of particles in one mole of a substance.
Relative atomic mass	The average mass of the isotopes of elements.
Relative molecular mass	The sum of atomic masses of the elements in a compound.