

Periodic Trend Notes

Periodic Table of Elements- chart of all the chemical elements arranged with columns (groups) of elements with similar chemical properties similar

Families/Groups-columns of the periodic table

Periods/Series- rows of the periodic table

Alkali Metals- Group 1 elements

Alkaline Earth Metals- Group 2 elements

Transition Metals- Group 3-12 elements (d sublevel)

Halogens- Group 17 elements

Noble Gases- Group 18 elements

Main Group Elements- Group 1, 2, 13-18 elements

Rare Earth Elements- f sublevel block

Valence Electrons- an electron in the outer most energy levels of an atom, where it can participate in bonding

Octet Rule- the tendency for main group elements to gain or lose electrons so that their s and p orbitals are full with 8 electrons

	Group 1	Group 2	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18
Electron Ending	s ¹	s ²	s ² p ¹	s ² p ²	s ² p ³	s ² p ⁴	s ² p ⁵	s ² p ⁶
Valence Electrons	1	2	3	4	5	6	7	8
Gain or Lose electron	Lose 1 electron	Lose 2 electrons	Lose 3 electrons	Lose or Gain 4 electrons	Gain 3 electrons	Gain 2 electrons	Gain 1 electron	Gain or Lose 0 electrons
Common Charge	+1	+2	+3	+/- 4	-3	-2	-1	0

Ionic Compounds (salts)- compounds that form due to the transfer of electrons, usually bonding a metal to a non-metal, smallest unit is called a formula unit.

Covalent (Molecular) Compounds- compounds that form due to the sharing of electrons between elements, usually bonding non-metals to non-metals, smallest unit is called a molecule.

Main Group Elements (Group 1,2, 13-18) readily form ions to have an electron configuration like the stable Noble Gases. Main Group Elements become isoelectronic with the nearest Noble Gas.