

Dot Notation and Ion Formation Organizer

Important vocabulary:

Valence electron – An electron in the _____ energy level. An electron available for _____.

Octet – A group of _____ valence electrons

Noble gas configuration – Valence electrons equal to that of a _____ gas. For most elements, a Noble gas configuration is an _____. For a few small elements (H, Li, Be), it is two electrons, the configuration of _____ ($1s^2$)

Cation – a _____-charged ion formed when a metal _____ electrons

Anion – a _____-charged ion formed when a nonmetal _____ electrons

Metals _____ electrons, forming _____

Nonmetals _____ electrons, forming _____

	Group 1	Group 2	Group 13	Group 14	Group 15	Group 16	Group 17	Group 18
Element	Sodium Na	Magnesium Mg	Aluminum Al	Silicon Si	Phosphorus P	Sulfur S	Chlorine Cl	Argon Ar
Valence electrons								
Element dot notation								
Electrons lost or gained	Lose ___ e ⁻	Lose ___ e ⁻	Lose ___ e ⁻	_____ to form _____ bonds	Gain ___ e ⁻	Gain ___ e ⁻	Gain ___ e ⁻	Don't gain, lose or share electrons
Ion formed				X				X