Bohr Models + Element Reactivity

A Bohr Model is a way to model valence electrons and make predictions about an element's reactivity.

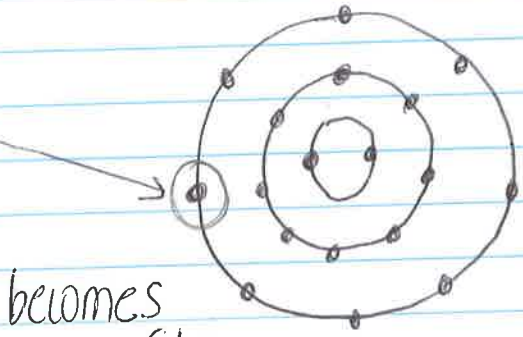
Example Hydrogen

H (1p)

becomes H^+

Example Chlorine

Cl (17p)



becomes Cl^-

$$H^+ + Cl^- = HCl \text{ (hydrochloric acid)}$$

Hydrogen wants to give up an electron to become stable.

Chlorine wants to accept an electron to become stable.

Group 1 or alkali metals are highly reactive because they just need to lose one electron to have a stable outer shell.

Halogens or Group 7/17 are also highly reactive because they just need to gain one electron to become stable or have a full outer orbital.