

## Ion Formation

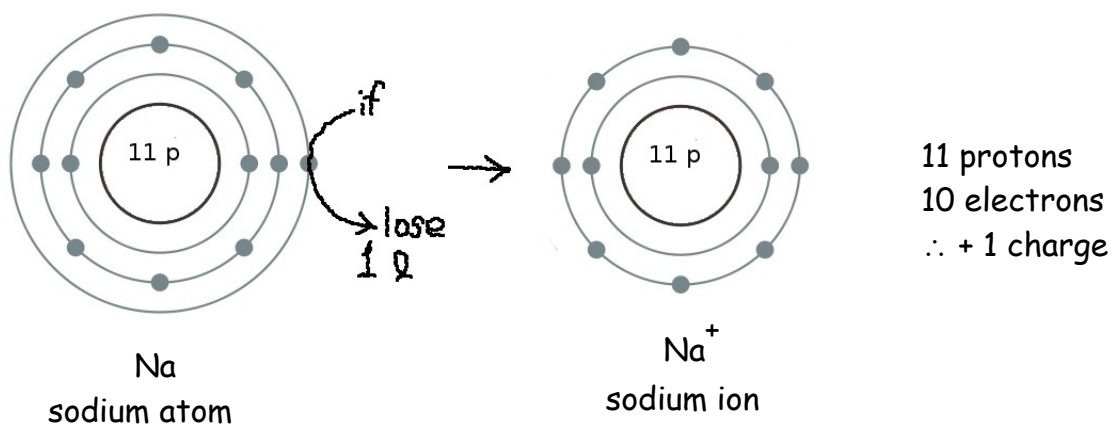
ion - a "charged" atom

- positive ions form when atoms lose e's, negative ions form when atoms gain e's

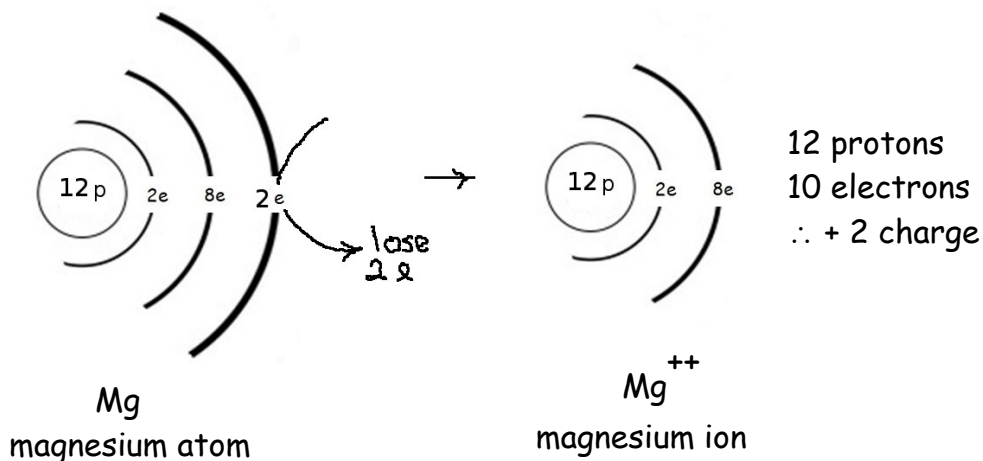
### Metals

- low IE therefore readily lose e's and form positive ions

e.g. sodium

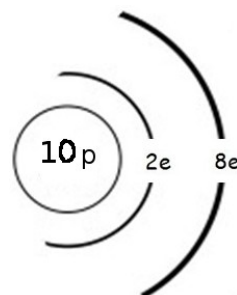


e.g. magnesium



Compare Na<sup>+</sup> and Mg<sup>2+</sup> to Ne, the closest Noble gas

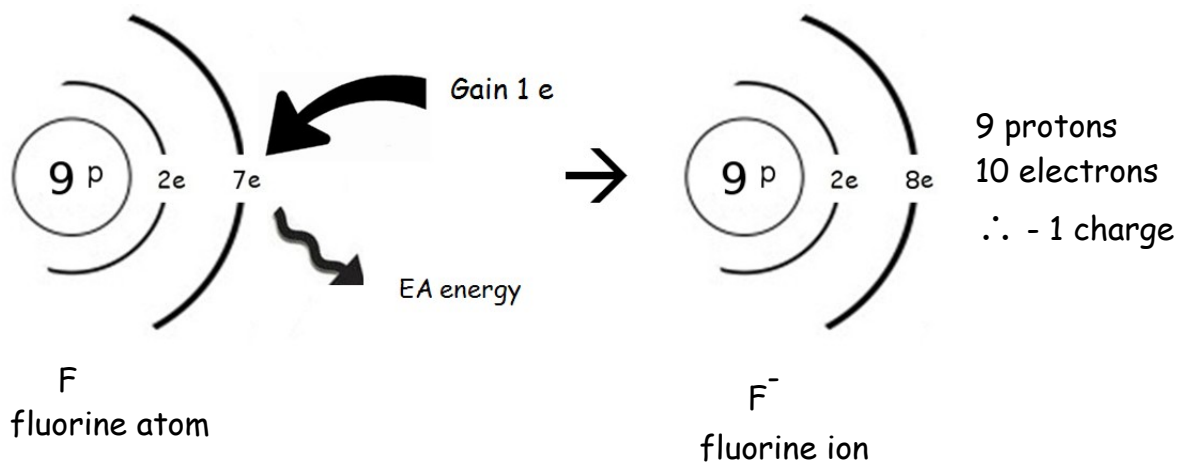
Metals lose their valence e's to obtain the same e configuration as the nearest Noble gas.



## Non-Metals

- high EA therefore readily gain e's and form negative ions

e.g. fluorine



Same e configuration as Ne, its closest Noble gas.