

Ions Notes and Practice

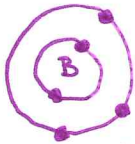
Big Idea → Elements will gain or lose electrons to become Stable, by gaining or losing electrons atoms become charged, atoms with a charge are called ion.

Let's break it down...

What does it mean to be stable?

- To be stable elements must have a full outer shell
 - o The first energy level wants 2 electrons
 - o All other will be full with 8 (8 or 18 for the 3rd energy level)
- Examples: Stable or not stable?

Boron



• NOT stable

Helium



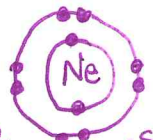
• stable

Carbon



• NOT stable

Neon



• stable

What happens with the electrons?

- Quick review – remember that protons and neutrons are found in the nucleus and have a strong force holding them together... so I can't mess around with those. (at least not right now)
- Electrons will be gained or lost based on whatever is easiest to have a full outer shell...
- Examples:

Boron



Has 3.... could
 - gain 5 electrons
 - lose 3 electrons
 easier... lose 3

Fluorine



gain 1
lose 7

Magnesium



gain 6
lose 2

What is with the charge?

- There are three types of atoms: neutral (no charge), cation (positive charge), anions (negative charge)
- Examples:

