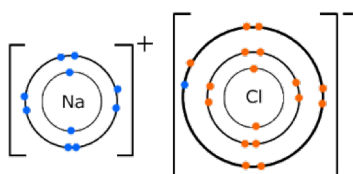
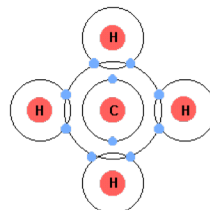
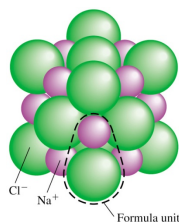
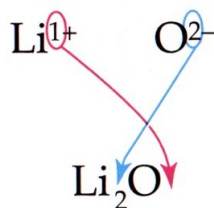


NOMENCLATURE



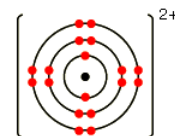
Octet Rule

Atoms will gain or lose e- to have 8 e- in their valence energy level (noble gas configuration)

- **CATIONS** are formed when atoms **LOSE** e- to complete the octet rule (**METALS**)

-Ex: Ca

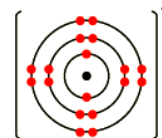
-Two valence electrons... easier to lose two than gain 6 so it forms what charge?

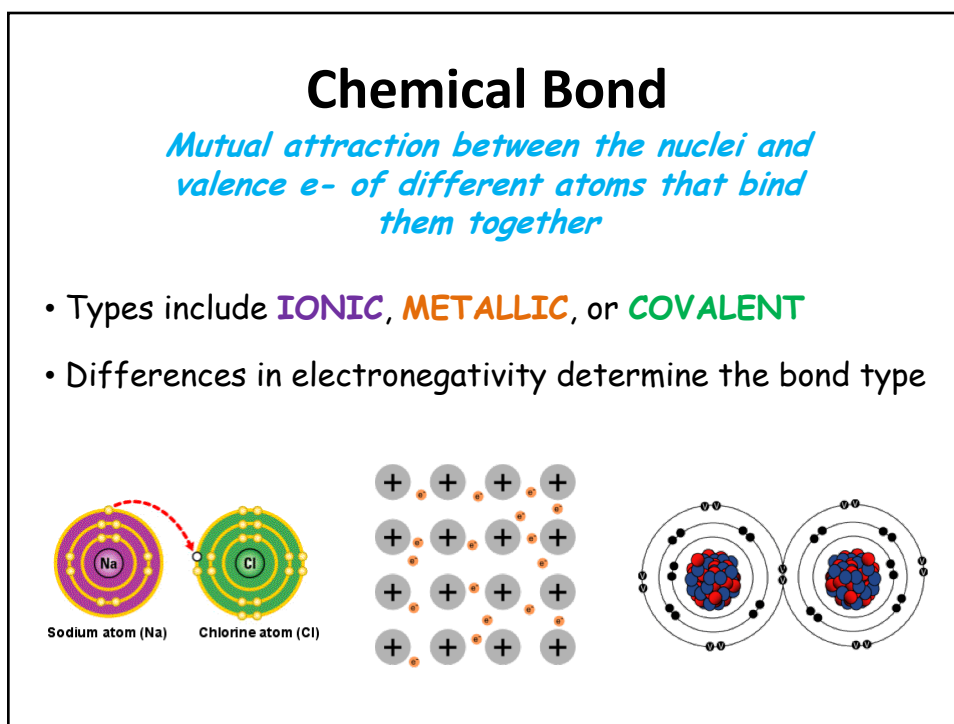
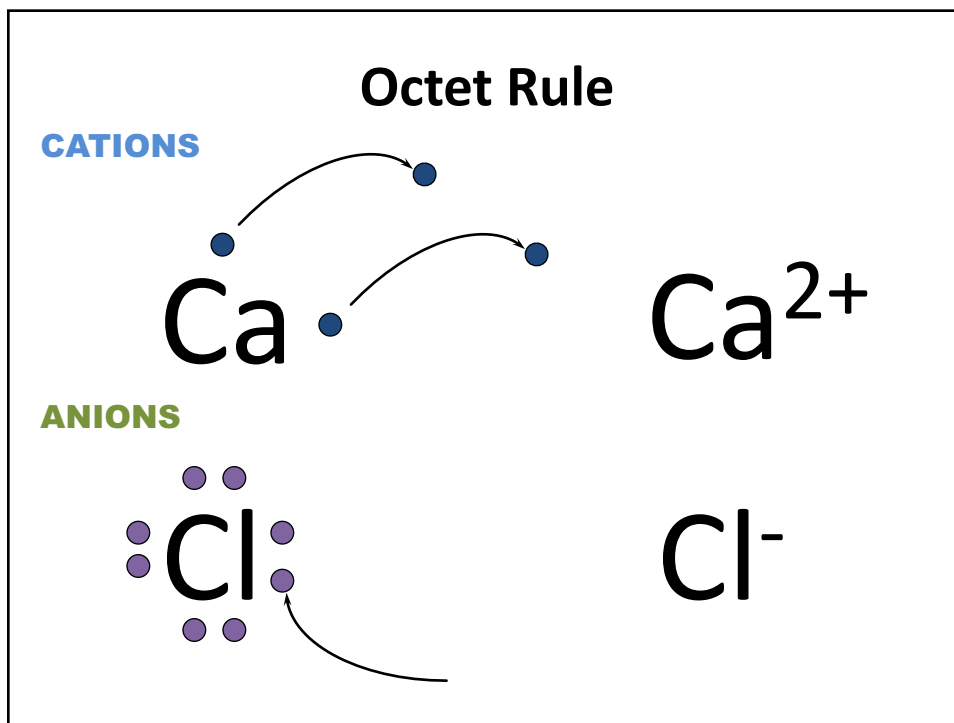


- **ANIONS** are formed when atoms **GAIN** e- to complete the octet rule (**NONMETALS**)

-Ex: Cl

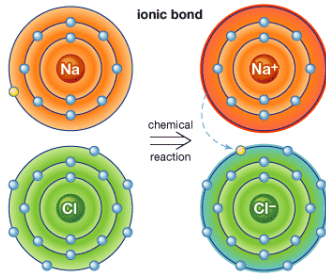
-Seven valence electrons... easier to gain 1 than lose 7 so it forms what charge?





Ionic Bond

TRANSFER of electrons between atoms forming opposite charges which attract to each other



- Each atom achieves a noble gas configuration (full valence shell)
- Usually between a **METAL** and a **NONMETAL**
- **Formula Unit**: lowest whole-number ratio of ions in an ionic compound (ex: NaCl or MgCl₂)

Monatomic Ions

Positively or negatively charged ions formed from SINGLE atom

- Indicated by the symbol of the element and its charge (Ex: O²⁻)



- Naming:

-If **POSITIVE**: Keep their names followed by "ion"
(Ex: sodium ion, potassium ion, aluminum ion)

-If **NEGATIVE**: Change ending to *-ide*
(Ex: oxide ion, sulfide ion)



Monatomic Ions

Positively or negatively charged ions formed from SINGLE atom

- **EXAMPLES:**

Write the name for the following monatomic ions.



Write the formula for the following ions.

Nitride ion

Magnesium ion

Iodide ion