

# GENERAL CHEMISTRY STANDARD 5.2

**5.2 Use the octet rule to write Lewis structures for compounds**

# LEWIS STRUCTURES

- Lewis Structures (also known as Lewis Dot Diagrams) are used to represent an element with its valence electrons
  - Start with the chemical symbol of the element
  - Dots around the element represent valence electrons
  - Maximum of eight valence electrons – maximum of eight possible dots
  - Don't pair electrons up until there are no open spots left (fifth valence electron)



# LEWIS STRUCTURE FOR NITROGEN

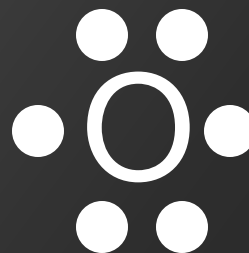
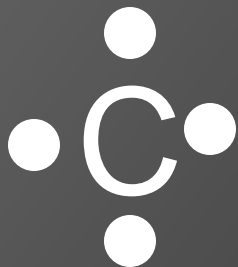
- Nitrogen has five valence electrons
  - First, write the elemental symbol for Nitrogen (N)
  - Then add one electron at a time to each side, until they are forced to pair up



# TRY THESE LEWIS STRUCTURES

- Na
- Mg
- C
- O
- F
- Ne
- He

# LEWIS STRUCTURE EXAMPLES



# LEWIS STRUCTURE EXAMPLES

