Ions and Bonding Basics
Notes from www.chem4kids.com

From Ions Page:
• The atomic number of an element tells you the number of __________ in an atom
• In a __________ atom, the number of __________ and __________________ are equal
Example: __________ has ___ protons and ____ electrons
(Atomic mass – protons = _____ neutrons)
• __________ have either extra electrons or missing electrons
• The goal of an atom is to have a full outer/valence ___________ (like the noble gases)

From Bonding Page:
• Happy Atoms: Atomic __________ like to be full
• If you have 1-2 extra electrons in your outer shell, you want to __________ your electrons
• ____ electrons fill the first shell/energy level
• ____ electrons fill the second shell/energy level
• ____ electrons fill the third shell/energy level
Examples of elements that want to ____ electrons

SODIUM
11 total electrons
2 filled shells
[extra electron]

MAGNESIUM
12 total electrons
2 filled shells
[extra electrons]

Examples of elements that want to ____ electrons

OXGEN
8 total electrons
1 filled shell
[missing electrons]

FLUORINE
9 total electrons
1 filled shell
[missing electron]

• Two Main Types of Bonds
  ◦ __________ Bond (share electrons)
  ◦ __________ or Electrovalent Bond (borrow electrons, held together by electric forces)
    • The atom with an ________ electron gives it up to the atom that needs one to fill its outer shell
    • Opposite charges __________ each other like magnets