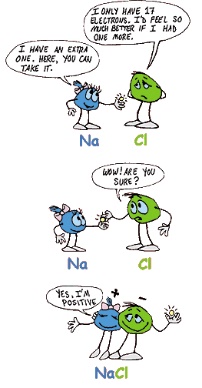
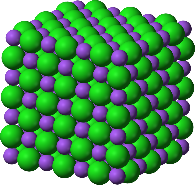
1. Ionic compounds - cation and anion combinations
   1.  Single-charge cations with elemental anions
      1. The single charge cations include:
         1. groups 1, 2, 13, Ag1+, and Zn2+
      2. To name, given the formula: NaCl
         1. Use name of the cation: (Sodium)
         2. Use the name of the anion dropping the ending and add -ide: (Chloride)
            1. Ex: NaCl = Sodium Chloride
      3. To write the formula, given the name: Calcium Iodide
         1. Write the symbols for the two ions: Ca2+ and I1-
         2. Balance the charges to write the formula.
      4. Note: the names that end in -ide are talking about a specific element, the names that do not are usually talking about a polyatomic ion.
   2. Multiple-charge cations with elemental anions
      1. The multiple charge cations include:
         1. Pb2+/Pb4+, Sn2+/Sn4+, transition metals (except Ag and Zn)
         2. Need to know roman numerals for this
         3. To name, given the formula: FeO
            1. Figure out the charge of the cation

(you know the charge of the anion) --> Fe? and O2-

* + - * 1. You know the ratio of Fe to O is 1:1 and the charge of O is 2 negative, then Fe must be 2 positive.
        2. Write the name of the cation: Iron
        3. Write roman numerals in ( ) to show the charge of the cation: Iron (II)
        4. Write the name of the anion with -ide ending
        5. FeO = Iron(II) Oxide
      1. To find the formula, knowing the name: Cobalt(III) Chloride
         1. write the symbols of the ions: Co3+ and Cl1-
         2. balance the charges to write the formula

1. Covalent compounds – non-metals
   1. between non-metals - forget the charge
   2. What to do:
      1. Use Greek prefixes to indicate how many atoms of each element.
         1. If the first type of atom only has one atom, mono is not needed.
      2. The last element ends in -ide.
2. Acid nomenclature
   1. **binary acids** - acids with hydrogen and one other element
      1. How to name, given the formula:
         1. write the prefix "hydro"
         2. write the prefix of the other element followed by "-ic acid"
      2. How to write the formula, given the name:
         1. write the atomic symbols of the atoms in acid
         2. the charge of the other element tells you how many hydrogens you need
   2. **oxy-acids** - acids containing hydrogen, oxygen, and another element
      1. common oxyanions: (NO3)1-, (PO4)3-, (SO4)2- , (CO3)2-
         1. polyatomic ions that contain oxygen combine with hydrogen to form oxyacids
      2. How to name, given the formula:
         1. write the prefix of the oxyanion followed by "-ic acid"
      3. How to write the formula, given the name:
         1. write the atomic symbols of the atoms in acid
         2. the charge of the oxyanion tells you how many hydrogens you need