Rules for Naming Ionic and Covalent Compounds and Acids

Look at the first element in the compound.

Starts with a Metal (Ionic)

How many elements does it contain?

- **2 (Binary)**: ends in "ide"
- **3 (Ternary)**: ends in "ate" OR "ite"

Does it contain a transition metal?

Add a Roman numeral to the name!

Starts with a Nonmetal (Covalent)

ends in "ide"

use prefixes -mono
di
tri
tetra
pent
hex
hept
oct
non
dec

Note: do **NOT** use mono on the first element

Starts with a Hydrogen (H) (Acid)

How many elements does it contain?

- **2 (Binary)**: "hydro" __ "ic" acid

  Ex: HCl is hydrochloric acid

- **3 (Ternary)**: "ate" becomes "ic" acid

  "ite" becomes "ous" acid

  Ex: H_2SO_4 is sulfuric acid

  Ex: H_2SO_3 is sulfurous acid