Naming Compounds Flow Chart

Does the Formula begin with H

NO

YES

Does it begin with a metal which has more than one oxidation number? (e.g.; Fe, Ni, Cu, Sn, Hg)

NO

YES

It is an Acid (must be aqueous)

Does the acid contain a polyatomic ion?

YES

NO

Ending of polyatomic ion

-ate

-ite

Name the polyatomic ion, replacing the –ate ending with –ic. Add the word acid.

Name the polyatomic ion, replacing the –ite ending with –ous. Add the word acid.

Name the first element, then the polyatomic ion. If two elements are present, name both, then the polyatomic ion. (e.g.; NaHCO₃ is sodium hydrogen carbonate)

Write the prefix hydro, then the name of the second element with –ic ending. Add the word acid.

Name the first element, Then the second element With the –ide ending.

Are both elements nonmetals?

NO

YES

Name the first element, using the proper prefix. (never mono-). Name the second element with the proper prefix (including mono- and –ide ending.

1 mono-
2 di-
3 tri-
4 tetra-
5 penta-
6 hexa-
7 hepta-
8 octa-
9 nano-
10 deca-

Name the first element, followed by its oxidation number (Roman numeral)

Does the formula contain a polyatomic ion?

NO

YES

Name the first element, followed by its oxidation number (Roman numeral)

Name the first element, then the second element With the –ide ending.