

# Chemical Nomenclature Decision Tree

START

Is the compound binary?  
(just two elements)

Yes  
(binary)

No  
(tertiary)

Does the compound  
begin with a metal?

No  
(nonmetal)

Does the compound  
begin with hydrogen?

Yes

Compound is  
binary acid.  
Write the name  
by adding  
*hydro-*,  
changing *-ide* to  
*-ic*, and adding  
the word *acid*.

No

Does the compound  
contain only carbon  
& hydrogen?

Yes

Compound is a  
hydrocarbon.  
Write the name  
by adding  
“cyclo-(if ring)”  
then the “stem”  
& finally “ane”,  
“ene” or “yne”.

No

Write the  
compound  
name by using  
Greek prefixes  
& end the  
name with the  
suffix *-ide*.

Yes  
(metal)

No  
(hydrogen)

Can the cation form  
more than one charge?  
(see P.T. & charge table)

Yes

Determine the charge  
on the cation.

Write the name with  
cation charge  
written in parentheses as  
a Roman numeral & end  
with the anion name.

No

Write the name by  
determining both the  
cation & anion  
names.

Does the compound  
begin with hydrogen?

Yes  
(hydrogen)

Compound is an oxyacid.  
Write the name by  
changing *-ate* to *-ic*, or *-ite*  
to *-ous* and adding the  
word *acid*.

Does the compound contain water?

Yes

Finish naming the compound by adding another word  
that uses Greek prefixes and the suffix *-hydrate*.

No

Do nothing more.