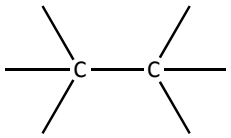
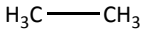
2.13 Functional Group Study Cards

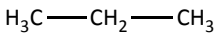
On the next few pages are to help you study your functional groups. Print out these pages and cut out each card and study them. Carry them around with you until you know them inside and out. Memorize these right now. Don't delay.

Name: **Alkane**
IUPAC Suffix: **-ane**
Examples:



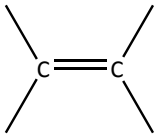


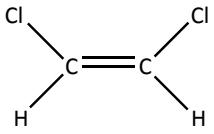
ethane



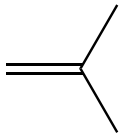
propane

Name: **Alkene**
IUPAC Suffix: **-ene**
Examples:



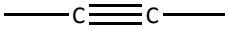


cis-1,2-dichloroethene



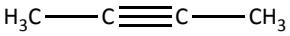
2-methylpropene

Name: **Alkyne**
IUPAC Suffix: **-yne**
Examples:



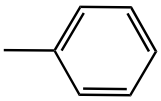


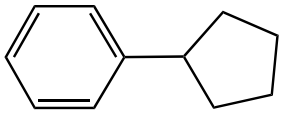
propyne



2-butyne

Name: **Aromatic**
Func. Grp.: **phenyl group**
Sometimes written: **-Ph**
Example:

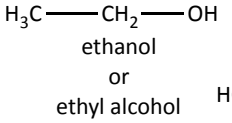




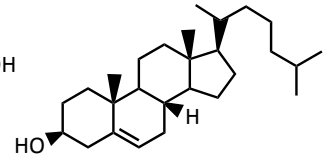
phenylcyclopentane
or cyclopentylbenzene

Name: **Alcohol**
IUPAC Suffix: **-ol**
Common Suffix: **-alcohol**
Func. Grp: **-hydroxyl (-OH)**
Examples:



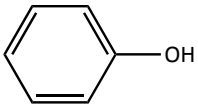


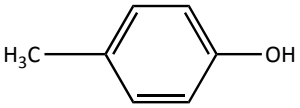
ethanol
or
ethyl alcohol



cholesterol

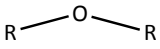
Name: **Phenol**
IUPAC Suffix: **-phenol**
Example:

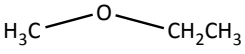




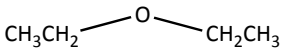
4-methylphenol

Name: **Ether**
IUPAC Suffix: **-oxy**
Common Suffix: -**ether**
Examples:





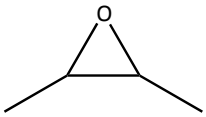
methoxyethane



ethyl ether or
ethoxy ethane

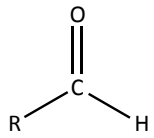
Name: **Epoxide**
IUPAC prefix: **epoxy-**
Common Suffix: **-oxide, -oxirane**
Example:

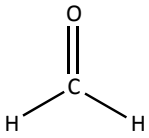




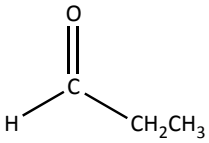
1,2-epoxybutane

Name: **Aldehyde**
IUPAC Suffix: **-al**
Common Suffix: **-aldehyde**
Sometimes written: **RCHO**
Examples:



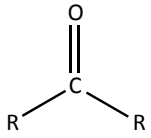


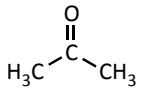
formaldehyde



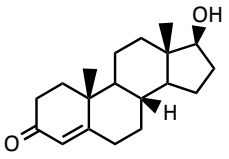
propanal or
propionaldehyde

Name: **Ketone**
IUPAC Suffix: **-one**
Common Suffix: **-ketone**
Examples:



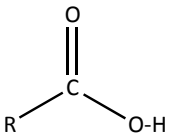


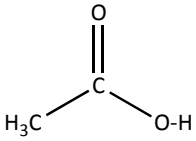
acetone or
2-propanone



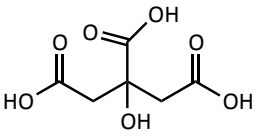
testosterone

Name: **Carboxylic Acid**
IUPAC Suffix: **-ic acid**
Func. Grp: **carboxyl group**
Sometimes written: **RCOOH**
Examples:



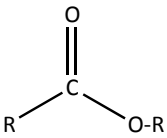


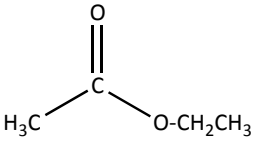
acetic acid or
ethanoic acid



citric acid

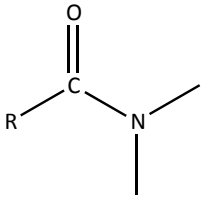
Name: **Ester**
IUPAC Suffix: **-ate**
Common Suffix: **-ester**
Sometimes written: **RCOOR**
Example:

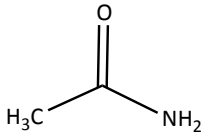




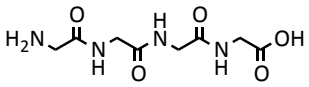
ethyl acetate
nail polish remover

Name: **Amide**
IUPAC Suffix: **-amide**
Examples:



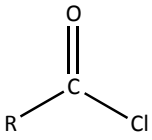


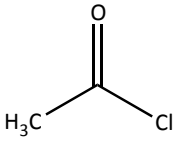
acetamide



a peptide
(part of a protein)

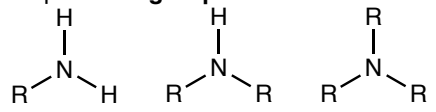
Name: **Acid Chloride**
Example:





acetyl chloride

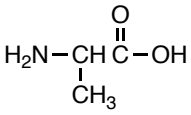
Name: **Amine**
IUPAC Suffix: **-amine**
Func. Grp: **amino group**



Primary, 1° amine | Secondary, 2° amine | Tertiary, 3° amine

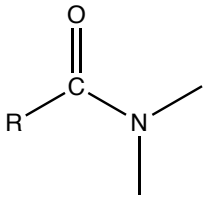
Examples:

$H_3C—NH_2$
methylamine



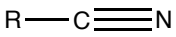
alanine, an amino acid

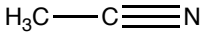
Name: **Amide**
IUPAC Suffix: **-amide**



See in the carbonyl chart, above.

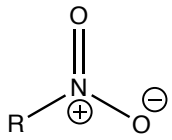
Name: **Nitrile**
IUPAC Suffix: **-nitrile**
Func. Grp: **cyano group**
Sometimes written: **RCN**
Example:

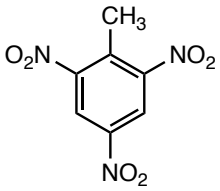




acetonitrile

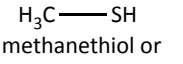
Name: **Nitro**
IUPAC Prefix: **nitro-**
Sometimes written: **RNO_2**
Example:



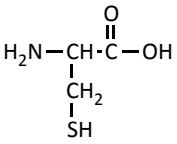


trinitrotoluene (TNT)

Name: **Thiol**
IUPAC Suffix: **-thiol**
Common Suffix: **mercaptan**
Examples:

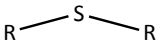


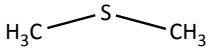
methanethiol or
methyl mercaptan
(bad breath smell)



cysteine, amino acid

Name: **Sulfide or Thioether**
IUPAC Suffix: **-sulfide**
Common prefix: **thio-**
Example:





Dimethylsulfide