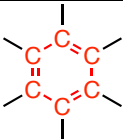
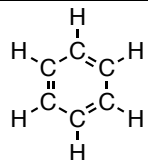


## Handout: Families of Organic Compounds

	<b>FAMILY</b>	<b>FUNCT GROUP</b>	<b>EXAMPLE</b>	<b>SUFFIX</b>
<b>Hydrocarbons</b>	Alkane	$\begin{array}{c}   &   \\ -C & -C- \\   &   \end{array} \quad \text{or} \quad \begin{array}{c} H \\   \\ H-C-H \\   \\ H \end{array}$ (only single bonds)	$H_3C-CH_3$ ethane	<i>-ane</i>
	Alkene	$\diagdown C=C \diagup$	$H_2C=CH_2$ ethylene	<i>-ene</i>
	Alkyne	$-C \equiv C-$	$HC \equiv CH$ ethyne (acetylene)	<i>-yne</i>
	Aromatic		 benzene	

<b>Compounds with single bonds only, and C bonded to electronegative atom (-X, -O, -N)</b>	Alkyl halide	$\begin{array}{c}   \\ -C-X \\   \end{array} \quad (X = F, Cl, Br, I)$	$H_3C-Cl$ methyl chloride	
	Alcohol	$\begin{array}{c}   \\ -C-O-H \\   \end{array}$	$H_3C-OH$ methanol	<i>-ol</i>
	Ether	$\begin{array}{c}   &   \\ -C & -O- & C- \\   &   \end{array}$	$H_3C-O-CH_3$ dimethyl ether	
	Amine (basic)	$\begin{array}{c}   \\ -C-N \\   \end{array}$	$H_3C-NH_2$ methylamine	<i>-amine</i>

\*We will also learn about thiols (-C-SH), sulfides (-C-S-C-), and disulfides (-C-S-S-C-).

<b>Carbonyl compounds (-C=O)</b>	Aldehyde	$\begin{array}{c} O \\    \\ -C-C-H \\   \end{array}$	$H_3C-C(=O)-OH$ ethanal (acetaldehyde)	<i>-al</i>
	Ketone	$\begin{array}{c} O \\    \\ -C-C-C- \\   &   \end{array}$	$H_3C-C(=O)-CH_3$ (acetone)	<i>-one</i>
	Carboxylic Acid (acidic)	$\begin{array}{c} O \\    \\ -C-C-O-H \\   \end{array}$	$H_3C-C(=O)-O-CH_3$ acetic acid	<i>-ic acid</i>
	Anhydride	$\begin{array}{c} O & O \\    &    \\ -C-C-O-C-C- \\   &   \end{array}$	$H_3C-C(=O)-O-C(=O)-CH_3$ acetic anhydride	
	Ester	$\begin{array}{c} O \\    \\ -C-C-O-C- \\   &   \end{array}$	$H_3C-C(=O)-O-CH_3$ methyl acetate	<i>-ate</i>
	Amide	$\begin{array}{c} O \\    \\ -C-C-N \\   \end{array}$	$H_3C-C(=O)-NH_2$ acetamide	<i>-amide</i>