## **Functional Groups Worksheet**

Relatively small, familiar clusters of atoms often determine the characteristics of larger biomolecules. These mini-molecules are known as <u>functional groups</u> and are useful chemical "vocabulary words" toward learning the language of biochemistry.

Name of Functional Group	Properties Imparted to Molecule	Circle the Functional Group
Hydroxide Group	Polar Increases solubility <i>Alcohol</i>	H H H H H
Carbonyl Group	Polar Ketone/aldehyde	H-C-H H-C-H H-C-H
Carboxyl Group	Polar Acts as an acid Carboxylic acid/organic acid	$H - C O + H^+$
Amino Group	Polar Acts as a base <i>Amine</i>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Name of Functional Group	Properties Imparted to Molecule	Circle the Functional Group
Sulfhydryl Group	Weakly polar Linkages (especially in hair, proteins) <i>Thiol</i>	OH CH2 SH
Phosphate Group	Polar 1- or 2- charge Organic Phosphate	H-C-C-C-O-D-O-O-O-O-O-O-O-O-O-O-O-O-O-O-O
H - C - H H H Methyl Group	Unreactive Deactivation Methylated compound	NH <sub>2</sub> C C C C H H