

ORGANIC LAB 01a: Models & Nomenclature

1. Use the molecular model kits to make a model of an organic compound. The labels on the covers of the molecular model kit boxes will help you identify which colors represent which atoms, and the bonds that you should use to construct your compound. You may construct any models that you wish BUT be sure to follow the rules below;

RULES

- Use only a maximum of 8 carbon atoms in any one compound (you may of course use less than 8)
 - Make sure that *you* can name the compound that you have made!
2. Write your initials and the name of your compound in the table below.
 3. Attach a sticky label to your model with your initials on it and add "ROUND 1" to the label. Pass it around to all other members of the class.
 4. As models come to you, add the initials of the model maker and the name of the molecule to the table below in the "ROUND 1" column. If you think that the molecule is bogus, i.e., one that does not exist and therefore cannot be named, say so by writing "bogus" in the table.
 5. Once all members of the class have named all of the models of molecules in "ROUND 1", dismantle your model and then repeat the whole process twice more, this time labeling "ROUND 2" and "ROUND 3" respectively.

6. Consider all the models you have seen. What can be said about the number of covalent bonds, each (a) carbon atom, (b) oxygen atom and (c) hydrogen atom, made?
7. Complete the table below.

Functional group	Structure of functional group	Example compound that includes that functional group	Name of example
Carboxylic acid	$\begin{array}{c} \text{O} \\ \\ \text{R}-\text{C}-\text{OH} \end{array}$	CH ₃ CH ₂ COOH	Propanoic acid
Aldehyde			
Ketone			
Amine			
Amide			
Alkene			
Alkyne			
Alcohol			