Alcohols

## Foldable Instructions

## * Cut Here

| 1)Identify the number of carbons. <br> 2) Use the appropriate IUPAC prefix with the ending $\qquad$ | 1)Draw the number of $\qquad$ identified by the IUPAC prefix. Attach them each by a $\qquad$ bond. <br> 2) $\qquad$ each carbon using a $\qquad$ . |
| :---: | :---: |
| EXAMPLES <br> Name: $\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{3}$ $\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{3}$ | EXAMPLES <br> Draw: <br> pentane <br> octane |
| - Alkanes are characterized by a $\qquad$ <br> - Alkanes are $\qquad$ an <br> - Alkanes always end with ' $\qquad$ | $\qquad$ carbon-carbon bond. contained no double or triple bonds. |

## Foldable Instructions

## * Fill in the Blanks Here



## Carboxylic Acids

* Carboxylic acids are characterized by a carboxyl group.
* Carboxylic acids always end with 'OIC ACID'



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## * Fill in the Blanks Here

| 1)Identify the number of carbons. <br> 2) Use the appropriate IUPAC prefix with the ending $\qquad$ | 1)Draw the number of $\qquad$ identified by the IUPAC prefix. Attach them each by a $\qquad$ bond. <br> 2) $\qquad$ each carbon using <br> a $\qquad$ |
| :---: | :---: |
| EXAMPLES <br> Name: $\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{3}$ | ExAMPLES <br> Draw: <br> pentane <br> octane |
| - Alkanes are characterized by a $\qquad$ <br> - Alkanes are $\qquad$ an <br> - Alkanes always end with ' $\qquad$ | $\qquad$ carbon-carbon bond. contained no double or triple bonds. |

## Naming Carboxylic Acids

* Identify the number of carbons.
* Use the appropriate IUPAC prefix with the ending OIC ACID.
* Locate the carboxyl group. This will always be carbon 1 .
* Name any additional side chains with the same numbering system.

Examples

$$
\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{C}=\mathrm{O}
$$

I
OH

$$
\begin{array}{cc}
\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{C} & =0 \\
\mathrm{I} & \mathrm{I} \\
\mathrm{CH}_{3} & \mathrm{OH}
\end{array}
$$

## Examples $\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{C}=\mathrm{O}$

I

## Butanoic acid

$$
\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{C}=\mathrm{O}
$$

I
$\mathrm{CH}_{3}$
OH
4-methylhexanoic acid

## Foldable Instructions

## * Fill in the Blanks Here



## Drawing Carboxylic Acids

* Draw the number of carbons identified by the IUPAC prefix. Attach them each by a single bond.
* Draw the carboxyl as identified.
* Add any additional side chains.
* Saturate each carbon using a hydrogen.


## Examples octanoic acid

## $\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{C}=\mathrm{O}$ <br>  <br> OH

2,3-dimethylpentanoic acid

$$
\begin{gathered}
\mathrm{CH}_{3}-\mathrm{CH}_{2}-\mathrm{CH}-\mathrm{CH}-\mathrm{C}=\mathrm{O} \\
\mathrm{CH}+\mathrm{CH}_{3} \mathrm{OH}
\end{gathered}
$$

## Examples ethan-1-ol

$$
\begin{gathered}
\mathrm{CH}_{3}-\mathrm{CH}_{2} \\
\mathrm{OH}
\end{gathered}
$$

## 4-ethylheptan-2-0l

$$
\begin{gathered}
\mathrm{CH}_{3}-\mathrm{CH}_{\mathrm{H}}-\mathrm{CH}_{2}-\mathrm{CH}_{\mathrm{H}}-\mathrm{CH}_{2}-\mathrm{CH}_{2}-\mathrm{CH}_{3} \\
\mathrm{CH}_{2}-\mathrm{CH}_{3} \\
\mathrm{O}_{2}
\end{gathered}
$$

