

Source: [KBiologyMasterIndex](#)

1 | Bio-Molecules Quiz Review

1.1 | Paul's Review Sheet

... is here

And Jack's raw answers: [KBhBIO201BioMoleculesRAW](#)

"" - **Enzymes lower the activation energy by some combination of...**

Enzymes have active sites that bring substrates together and may change shape to stabilize the transition state; known as Induced Fit upon binding active site and slight change in enzyme shape.

Most enzymes are proteins, and thus their activity can be directly influenced by modifications or environmental factors, such as temperature and pH, that alter their three-dimensional structure.

Enzyme activity may be regulated/inhibited by molecules that compete with substrates to occupy the active site (competitive inhibitor) or alter enzyme shape so that substrates become unable to enter the active site (non-competitive inhibitor).

""

1.2 | Helpful review items

Bonding in organic compounds, a review.

Common nonpolar bonds

Carbon-carbon
Carbon-hydrogen
Carbon-sulfur

Common dipole interactions

Carbon-nitrogen $\delta^+ - \delta^-$ Carbon-oxygen $\delta^+ - \delta^-$
Nitrogen-oxygen $\delta^+ - \delta^-$ Hydrogen-oxygen $\delta^+ - \delta^-$

Common ionic interactions

they come from acid-base interactions.

However, sometimes they are permanent. Look at the amino acid chart for those.

Why hydrogen bonding is excellent

Hydrogen bonding allows stronger dipole-dipole bonds than dipole-dipole bonds. They are still good ol covalent bonds.

These bonds basically combines Hydrogen w/ the most electronegative atoms.



Reading a line-angle representation.



In this type of representations, start with a line. End the line at every carbon.



Now, it is assumed that carbon is not going to just be happy with $\text{C}-\text{C}-\text{C}-\text{C}$.



So, we still the missing orbitals with hydrogen.

need 2
 $\text{C}-\text{C}-\text{C}-\text{C}$ ← need 3
↑ need 2
need 3

Figure 1: Screen Shot 2020-10-09 at 11:58:55 AM.png

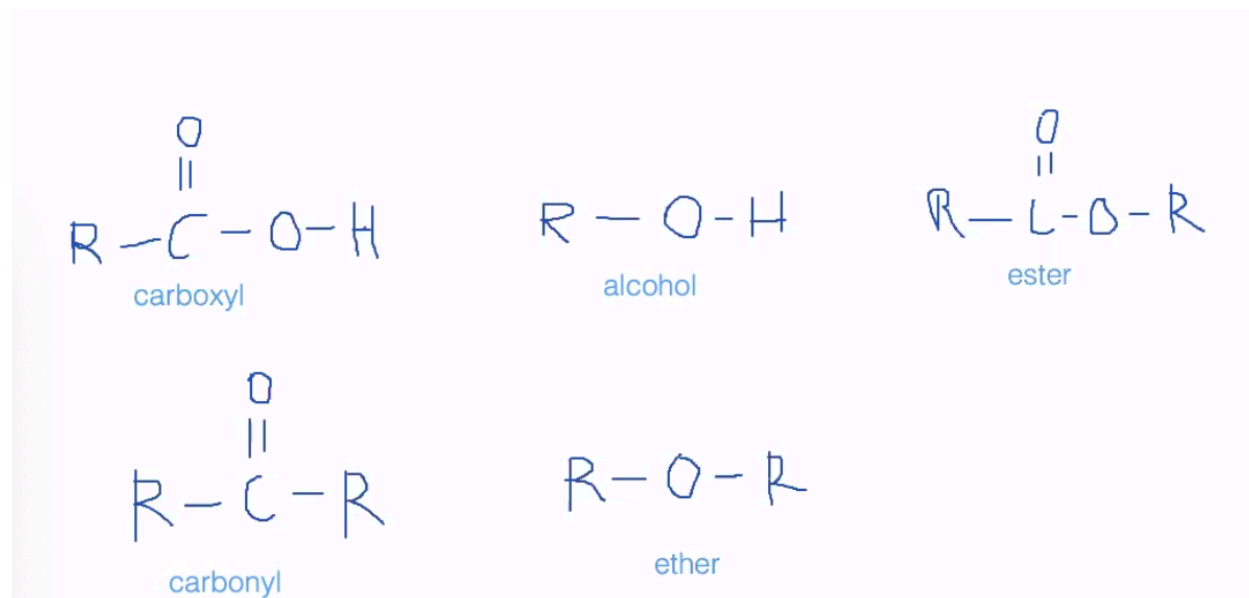


Figure 2: Screen Shot 2020-10-12 at 2.34.16 PM.png