**Ester Formation WS** Name KEY

1) An ester forms from the condensation of a alcohol and an organic acid.

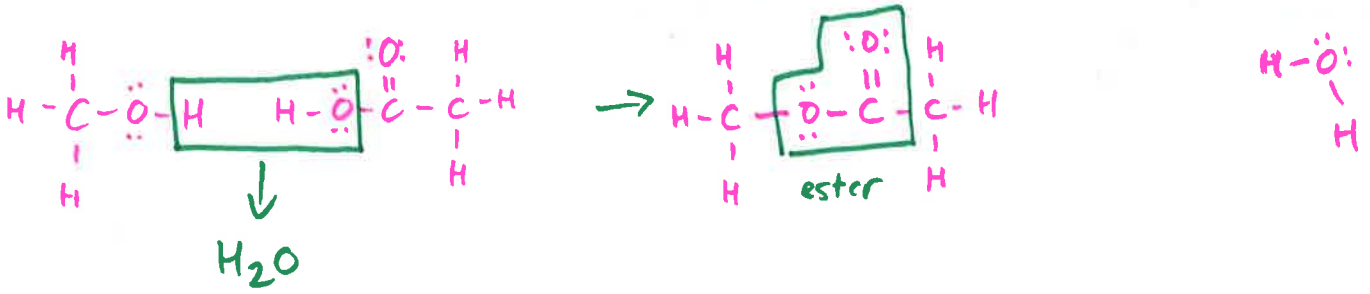
2) Esters are naturally occurring organic molecules that have a distinct odor.

3) An odor is a molecule that binds to your olfactory receptors. These receptors can detect up to 10,000 different odors.

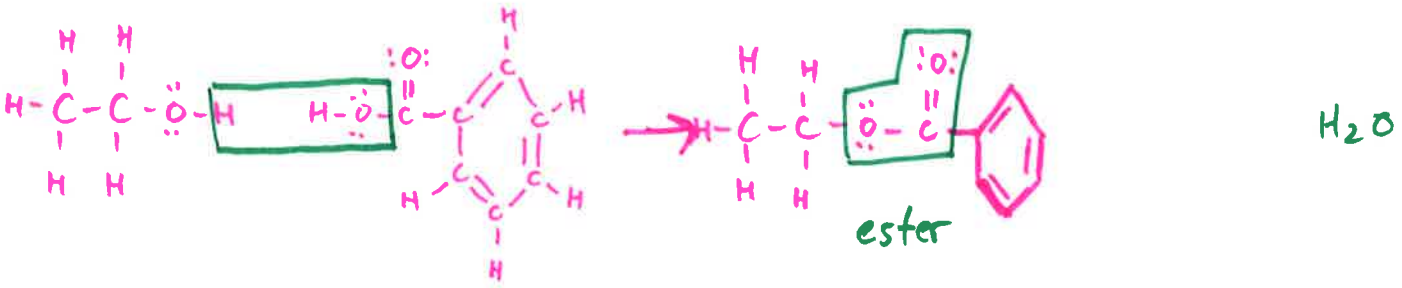
4) Where are the majority of these receptors located? top of nasal cavity Why is the sense of taste so closely related to the sense of smell? When chewing, volatile molecules evaporate up into your nose, then are absorbed into your olfactory receptors.

Drawing Structures: (draw all hydrogens!!)

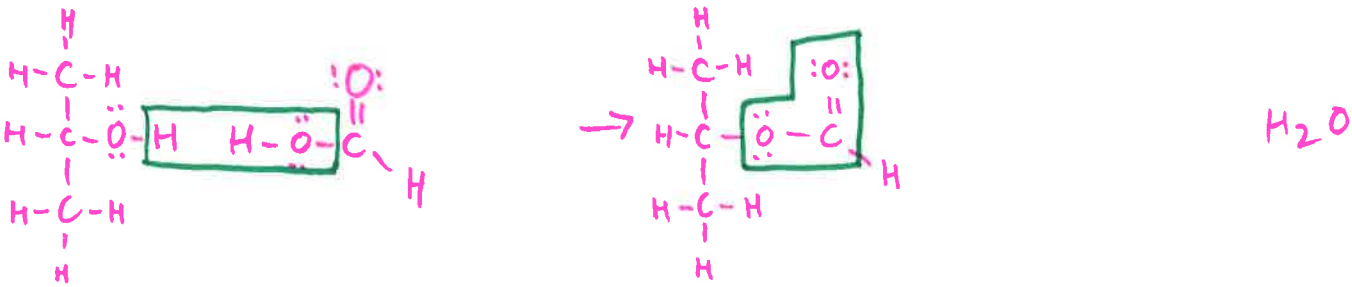
| Alcohol | + | Organic Acid | → | Ester | + | Water |
|---|---|---|---|---|---|---|
| 1) methanol | + | ethanoic acid | | methyl ethanoate (glue stick) | + | water |




2) ethanol + benzoic acid → ethyl benzoate (grape) + water

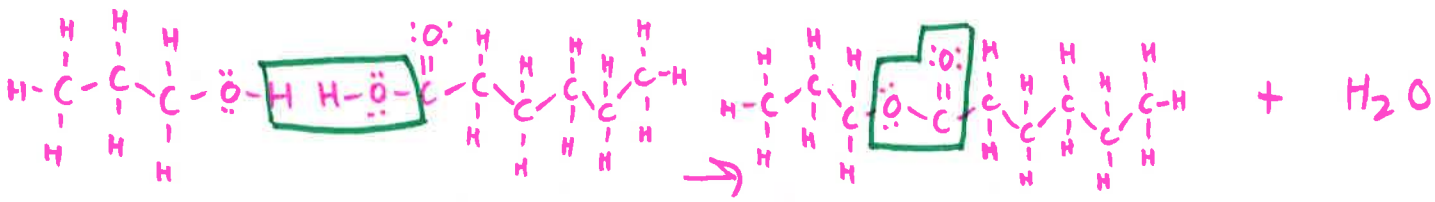



3) 2-propanol + methanoic acid → 2-propyl methanoate (apple) + water




OVER:

4) propanol + hexanoic acid → propyl hexanoate (blackberry) + water



5) methanol + benzoic acid → methyl benzoate (vanilla) + water