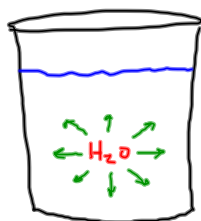
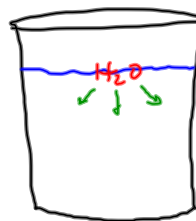


## Liquids and Surface tension



a water mc in the middle of the beaker is pulled equally in all directions



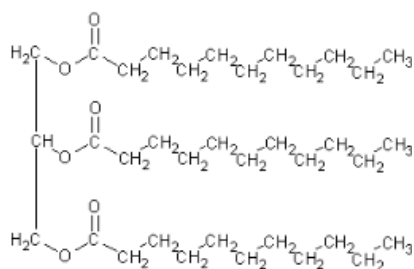
a water mc on the surface is pulled down and in (not up and out).

as a result, the surface mc's are closer together forming a dense "skin"

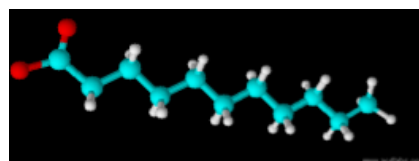
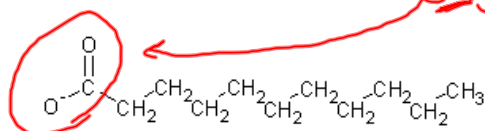
electrostatic attractions are stronger with shorter distance, so the attraction in that top layer are stronger than elsewhere in the liquid.

## Soap

soap is made when a fat, like this triglyceride...



is cooked with lye (NaOH). This breaks the chains apart and attached an ion to one end of the long non-polar chain.



In the end, a soap or detergent is a long, non-polar chain with one end that is ionic or polar so that it attracts water.