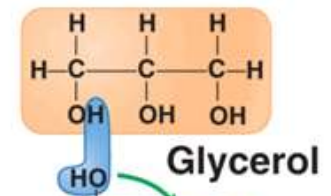
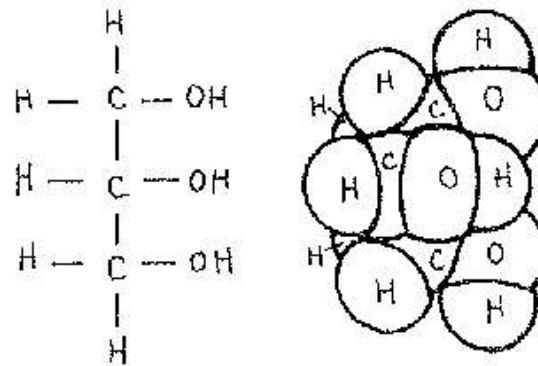


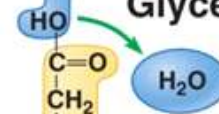
Saturated vs unsaturated?

- What can a fatty acid be "saturated" with?
- How do we recognize "unsaturated" fatty acids?
- Size, Shape, and Chemical Properties are related!

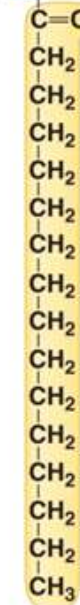
Glycerol



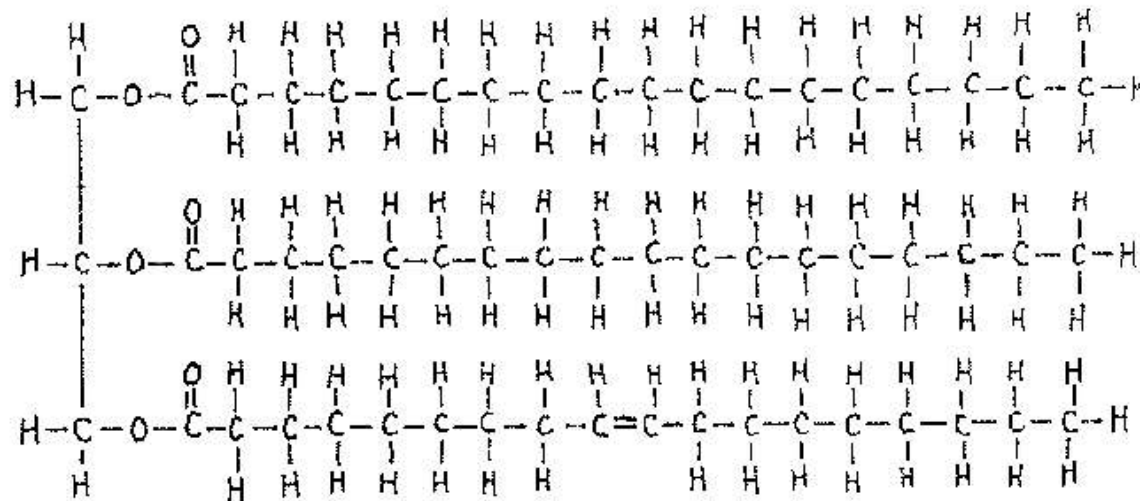
Glycerol



Fatty acid



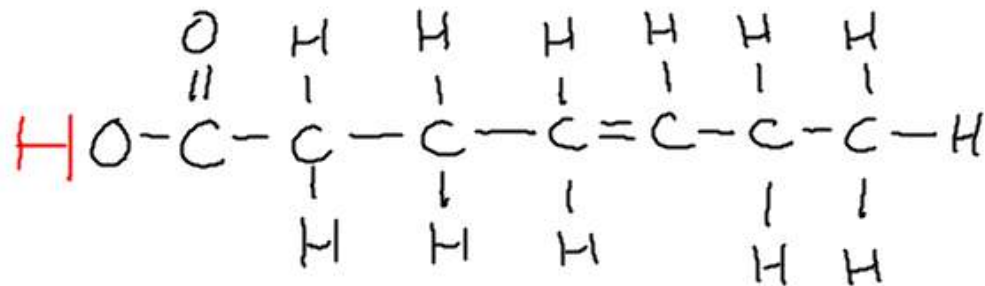
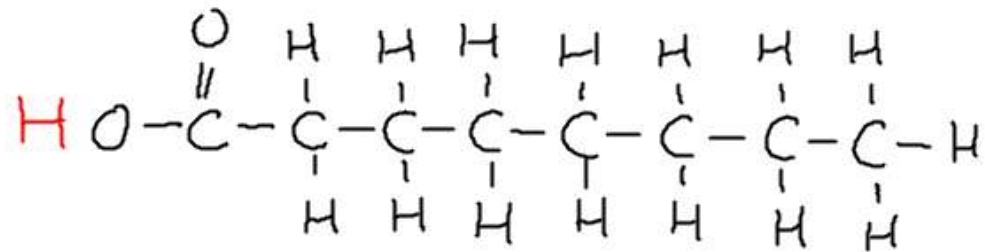
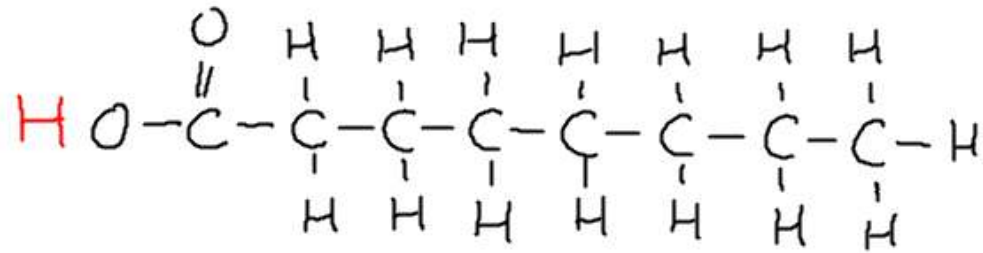
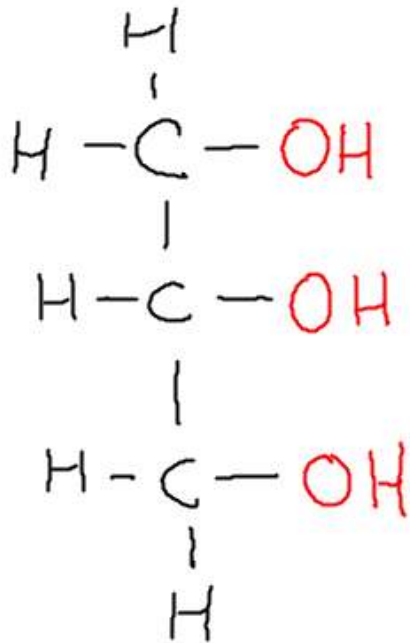
A Triglyceride



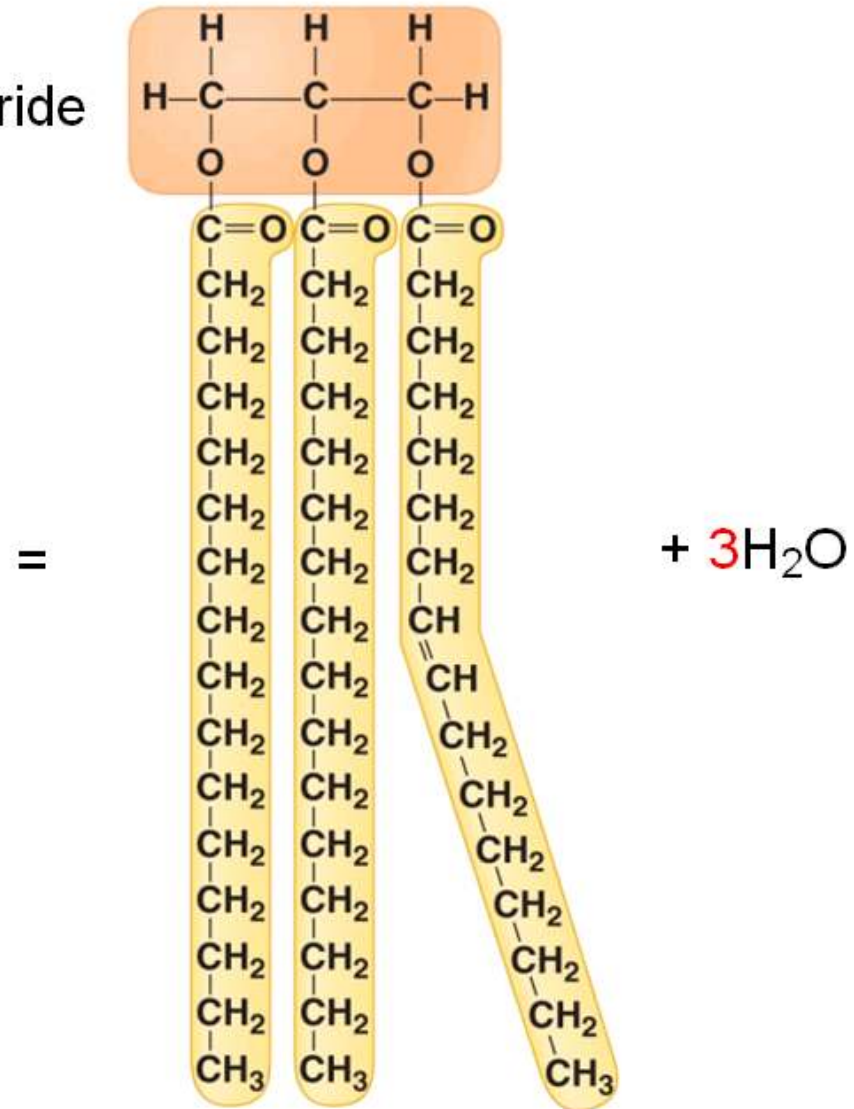
Glycerol

+

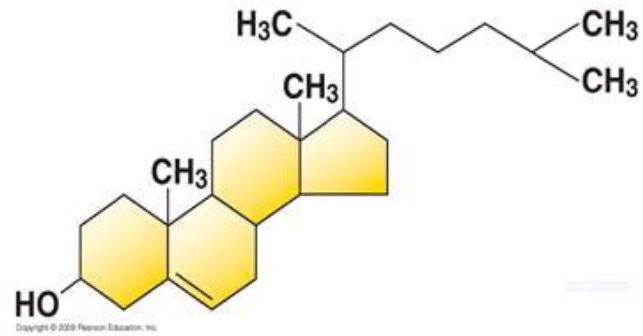
3 Fatty Acids



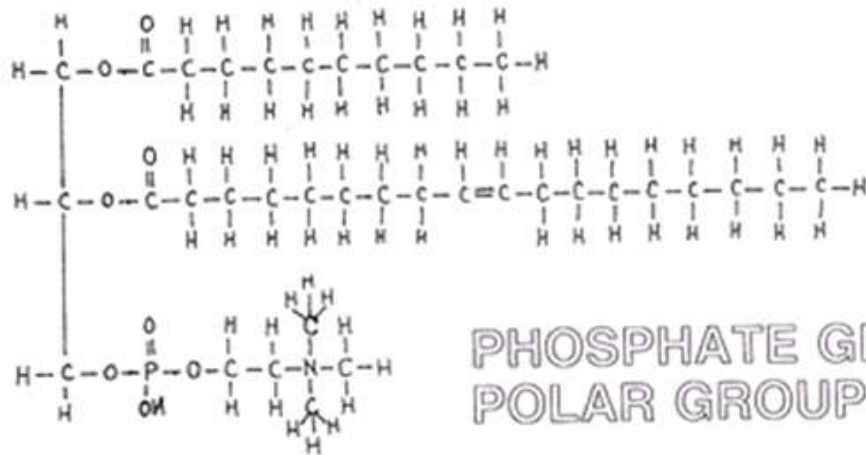
Triglyceride



Cholesterol

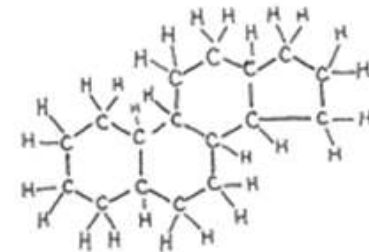


PHOSPHOLIPID



PHOSPHATE GROUP
POLAR GROUP

STEROID



Trans fats

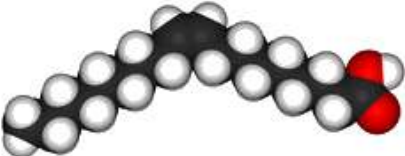
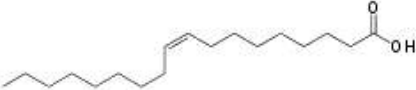
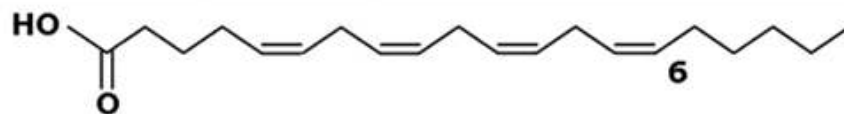
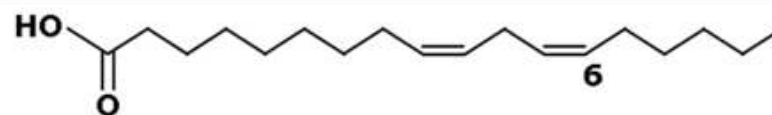
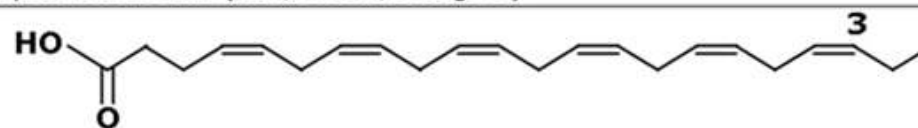
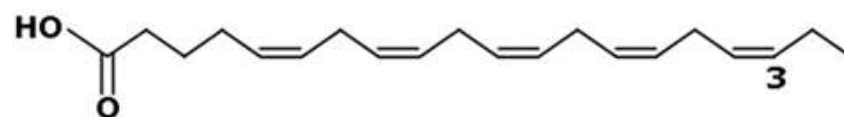
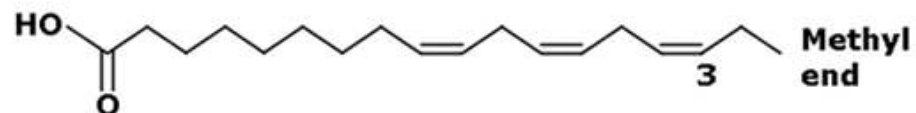
Trans (Elaidic acid)	Cis (Oleic acid)	Saturated (Stearic acid)
Elaidic acid is the principal <i>trans</i> unsaturated fatty acid often found in partially hydrogenated vegetable oils. ^[22]	Oleic acid is a <i>cis</i> unsaturated fatty acid that comprises 55–80% of olive oil. ^[23]	Stearic acid is a saturated fatty acid found in animal fats and is the intended product in full hydrogenation. Stearic acid is neither <i>cis</i> nor <i>trans</i> because it has no double bonds.
		
		
These fatty acids are <i>geometric isomers</i> (structurally identical except for the arrangement of the double bond).		This fatty acid contains no double bond and is <i>not</i> isomeric with the previous two.

FIG. 1 OMEGA-3 AND OMEGA-6 FATTY ACIDS



Group Concept Map

How can we arrange the following vocabulary into a concept map that shows the relationships among these terms?

Lipids Fatty acids triglyceride fat unsaturated
saturated phospholipids steroids cholesterol
glycerol dehydration hydrolysis energy storage
structure/structural support control/regulation