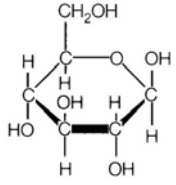
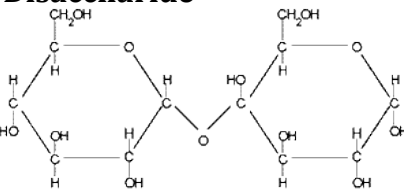
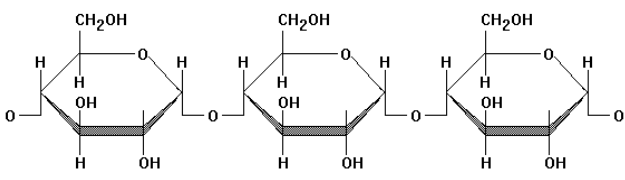
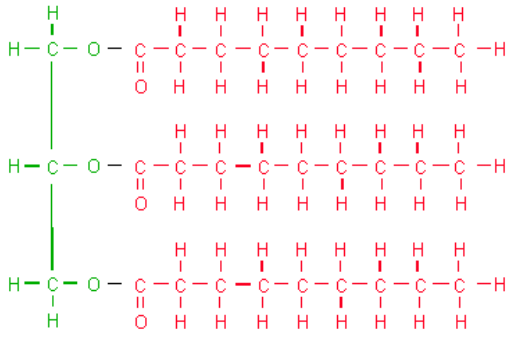
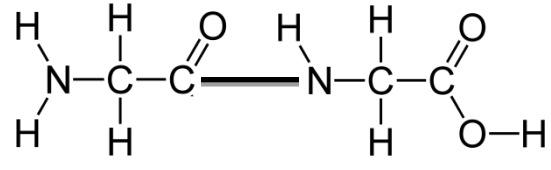


Macromolecule Structural Guide

Below, you see pictures of various macromolecules we have discussed. Be able to identify each type of macromolecule based on its structure, the atoms present, the ratio of atoms, and indicator tests.

<b>CARBOHYDRATES</b>	<p><b>Monosaccharide</b></p> 	<ul style="list-style-type: none"> <li>• Contains carbon, hydrogen, oxygen</li> <li>• 2:1 hydrogen to oxygen ratio</li> <li>• Positive Benedict's test (orange)</li> </ul>
	<p><b>Disaccharide</b></p> 	<ul style="list-style-type: none"> <li>• Contains carbon, hydrogen, oxygen</li> <li>• 2:1 hydrogen to oxygen ratio</li> </ul>
	<p><b>Polysaccharide</b></p> 	<ul style="list-style-type: none"> <li>• Contains carbon, hydrogen, oxygen</li> <li>• 2:1 hydrogen to oxygen ratio</li> <li>• Positive iodine test (purple/black)</li> </ul>
<b>LIPIDS</b>		<ul style="list-style-type: none"> <li>• Contains carbon, hydrogen, oxygen</li> <li>• Made of 1 glycerol molecule and 3 fatty acid molecules (fatty acid molecules can be saturated or unsaturated)</li> <li>• High hydrogen to oxygen ratio</li> <li>• Not soluble in water</li> <li>• Positive paper bag test</li> </ul>
<b>PROTEINS</b>		<ul style="list-style-type: none"> <li>• Contains carbon, nitrogen, oxygen, hydrogen</li> <li>• Chain of amino acids (amino acids have an amino group and a carboxyl group)</li> <li>• Positive Biuret test (purple)</li> </ul>