

Announcements – Lecture XI – Thursday, Oct 9^h

1. Third Lab – Saturday, October 11th ... 1-4pm ... ISB 155/160 (A-E)

a) *Print lab prior to coming to lab -- use the 'Print Friendly Version' located on the top left hand side of the page – this is the version that contains the 'Data Sheet' that you will hand in upon completing the lab.*

b) *Second set of Lab Owls will appear in Owl after this lab. There are a total of 4 sets of Lab Owls and they are worth 25% of the Lab Grade.*

2.



iClicker:

Choose any letter: A-E

3.

No class – Tuesday, October 14th – an Academic Monday

3.7

What Is a Covalent Bond and How Does One Form?

C

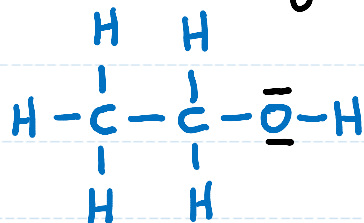
Drawing Lewis Structures of Covalent Compounds

Group V:

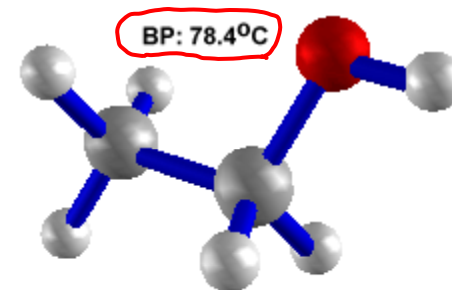
Organic Molecules



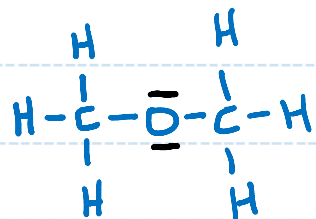
↳ Alcohol functional group



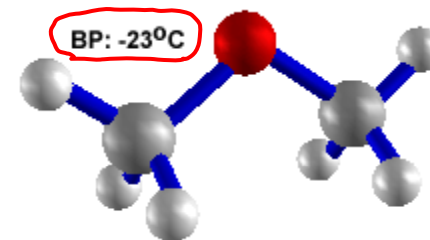
Ethanol.



↳ ether



Dimethyl ether



3.7

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C

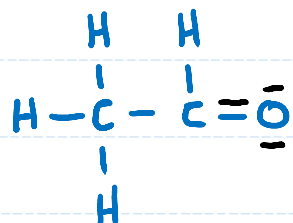
Drawing Lewis Structures of Covalent Compounds

Group V:

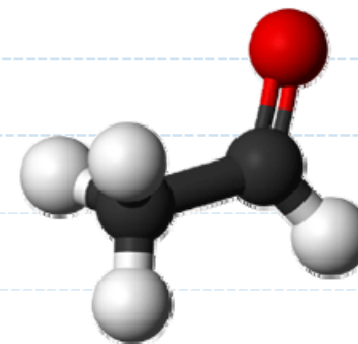
Organic Molecules



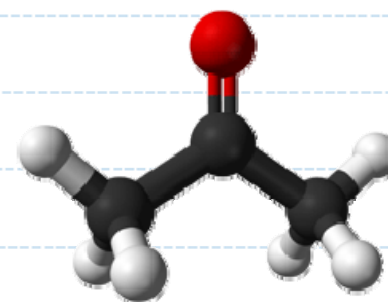
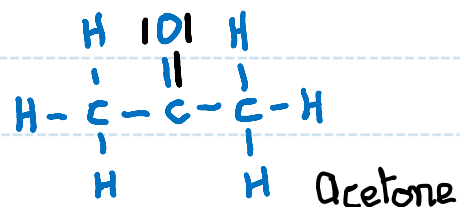
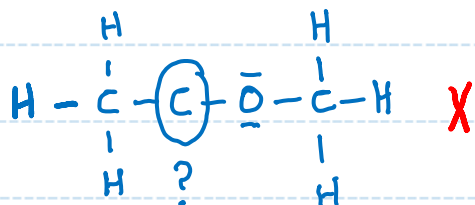
↳ aldehyde



Acetaldehyde



↳ Ketone



3.7

C

Group V:

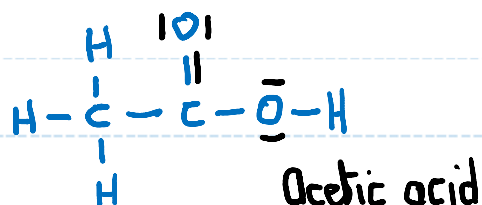
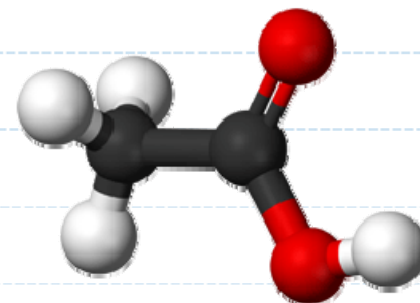
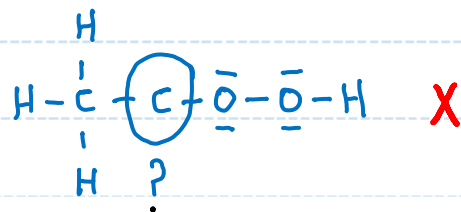
What Is a Covalent Bond and How Does One Form?

Drawing Lewis Structures of Covalent Compounds

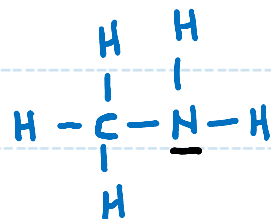
Organic Molecules



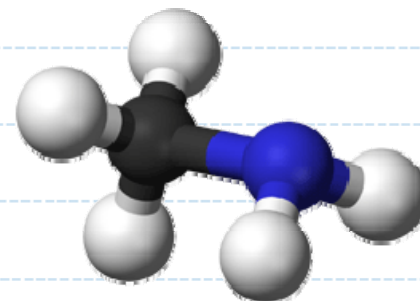
Carboxylic acid



Amine (base)

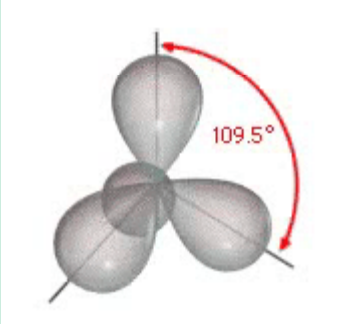
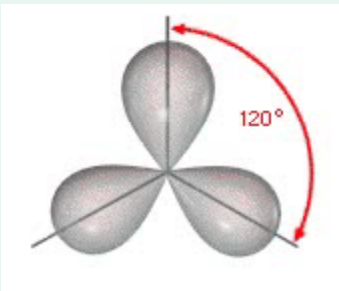
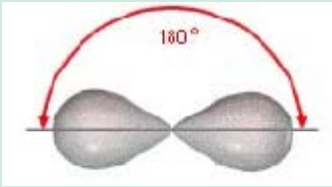


Methylamine



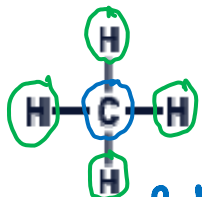
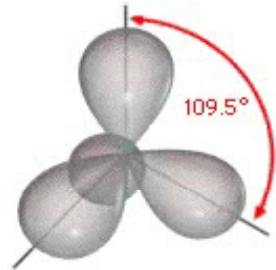
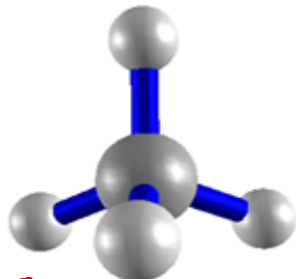
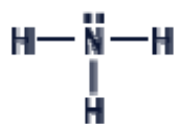
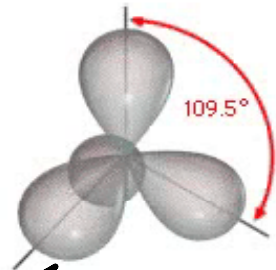
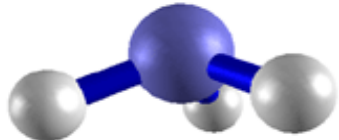

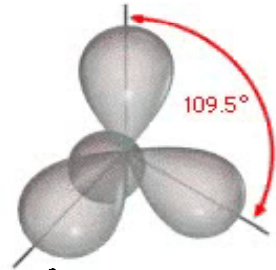
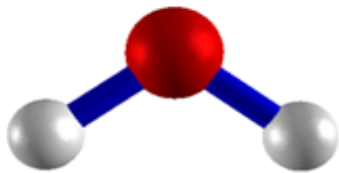
3.10 Molecular Geometries

Balloons – Shapes – Angles

No of Balloons	Shape	Name	Angle
4		TETRAHEDRON	$\sim 109^\circ$
3		TRIGONAL PLANAR	120°
2		LINEAR	180°

3.10 Molecular Geometries and Bond Angles → ELECTRON PAIR GEOMETRY

Molecular Geometry Worksheet Fall 2008 ... Whelan ... Page 1

Lewis Structure	Classification	X+E	Parent Geometry	Molecular Geometry	Bond Angle	Polarity
<p>CH₄</p>  <p>A: Central atom X: Attachments on A E: Lone pairs on A</p>	<u>AX₄E₀</u>	<u>4</u>	 <p>TETRAHEDRON</p>	 <p>TETRAHEDRON</p>	<u>~109°</u>	
<p>NH₃</p> 	<u>AX₃E₁</u>	<u>4</u>	 <p>TETRAHEDRON</p>	 <p>TRIGONAL PYRAMID</p>	<u>~109°</u>	
<p>H₂O</p> 	<u>AX₂E₂</u>	<u>4</u>	 <p>TETRAHEDRON</p>	 <p>ANGULAR/BENT 109°</p>	<u>~109°</u>	