

BOND ANGLES

NAME _____

SECTION _____

1. a. Estimate the O–C–O bond angle in the following molecules, in which the central atom is carbon and the terminal atoms are oxygen.



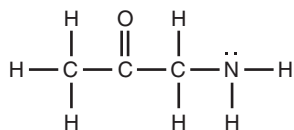
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- b. Write the formula for each species depicted above.
2. a. Draw the Lewis electron dot structure for CCl_4 and identify all the bonding pairs and nonbonding pairs of electrons on the central atom.
- b. What is the Cl–C–Cl bond angle?
3. Draw the Lewis electron dot structure for NF_3 and identify all the bonding pairs and nonbonding pairs of electrons.

4. Complete the following table:

Sketch Geometry	Compound	Number of Bonding Groups on Central Atom	Number of Non-bonding Pairs on Central Atom	Name of the Molecular Geometry	Bond Angle(s)
	SO ₃				
	SO ₃ ²⁻				
	NO ₂ ⁻				
	I ₃ ⁻				
	ICl ₃				

5. Indicate the geometry about each of the “central atoms” in the molecule shown below.



6. Indicate the geometry about each of the “central atoms” in the molecule CH₃CH₂OH.