

**Molecular Shape Practice**

Using your understanding of the geometries that result as a consequence of electrons repelling each other, determine the molecular geometries of the molecules below.

Name and Formula	Valence Electrons	Electron Dot (Lewis) Structure		Central Atom - REDACA and Geometry	3D Sketch (include nb pairs, AND circle outside corners)
		atoms and sharing	final sketch		
ammonia NH <sub>3</sub>	N 5 val e <sup>-</sup> H 1 val e <sup>-</sup>	(done for you)		on your final Lewis sketch: 1. highlight the central atom (CA)	CA: N REDACA: 4 geo: tetrahedral
hydrogen cyanide HCN		(C in the middle)		2. circle the nb pairs on the central atom	
acetylene C <sub>2</sub> H <sub>2</sub>		H C C H		3. circle the bonding "clumps" on the central atom	C (1) C (2)
formaldehyde CH <sub>2</sub> O		H C H O			
nitrosyl chloride NOCl		(N in the middle)			

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		atoms and sharing	final sketch		
ethene C <sub>2</sub> H <sub>4</sub>		H C C H H H		on your final Lewis sketch: 1. highlight the central atom (CA)	C (1) C (2)
methane CH <sub>4</sub>		(C in the middle)		2. circle the nb pairs on the central atom	
Freon CF <sub>2</sub> Cl <sub>2</sub>		(C in the middle)		3. circle the bonding "clumps" on the central atom	
water H <sub>2</sub> O		(O in the middle)			
formic acid HCOOH		H C O H O			C O