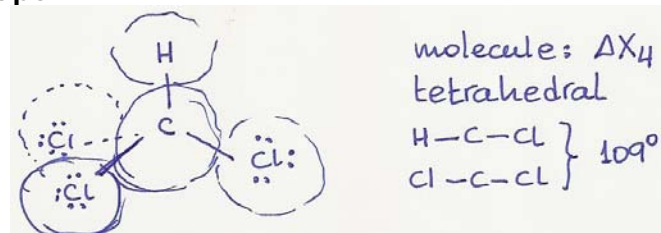
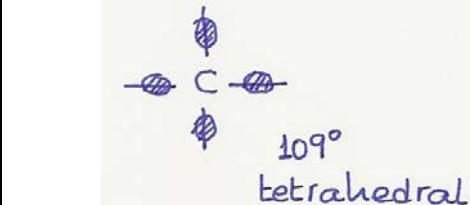
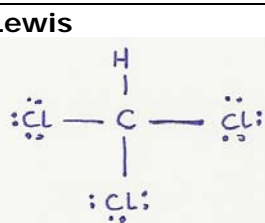
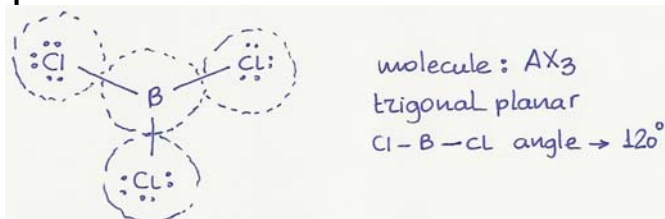
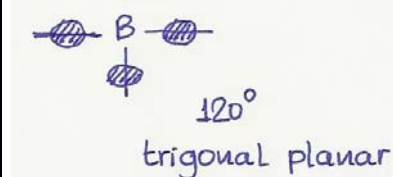
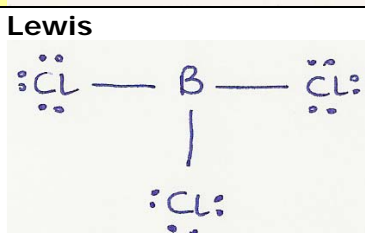
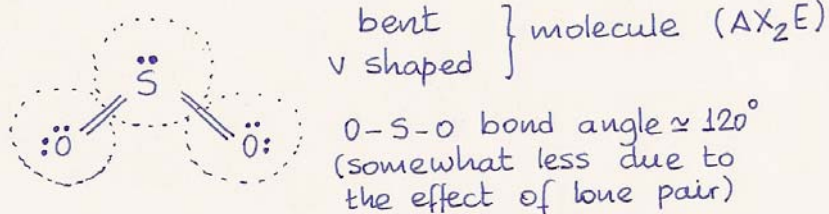
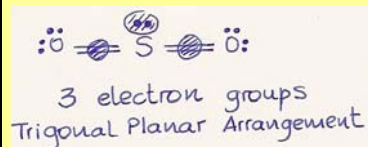
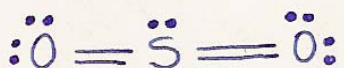
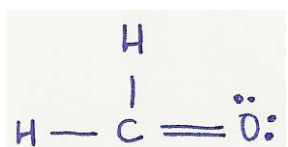
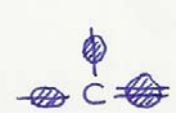
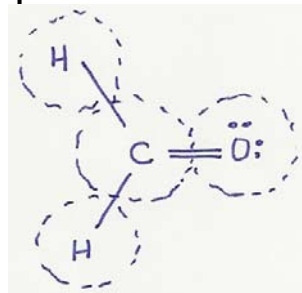
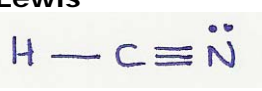
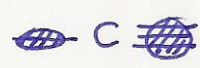
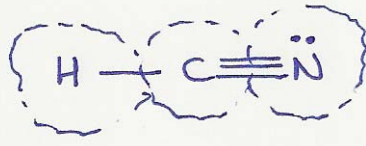
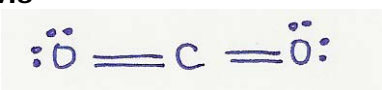
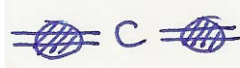
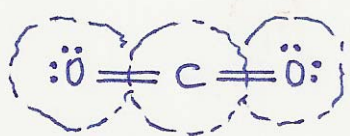
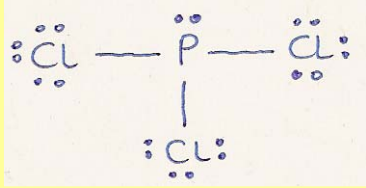
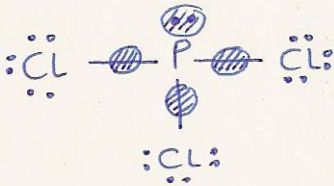
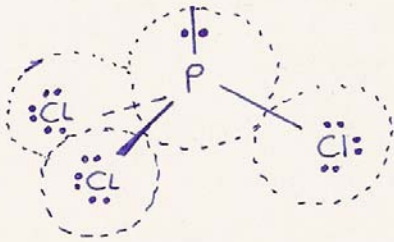
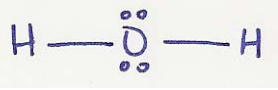
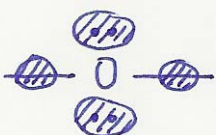
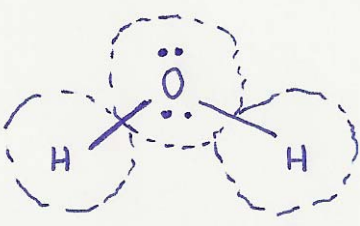
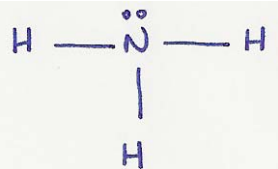
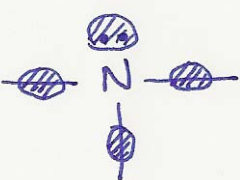
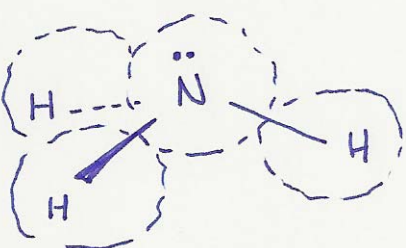


Topic:		Molecular Shape: VSEPR Theory (Valence-Shell Electron-Pair Repulsion)	
Objective:		FK_03_04	
Given a molecule the student must be capable of doing the following: <ul style="list-style-type: none"> determine its Lewis structure determine its shape and bond angles 			
Determine the Lewis structure and the molecular shape of the following compounds			
SO ₂	Lewis	Arrangement of Electron Pairs	
	Molecular Shape		
BCl ₃	Lewis	Arrangement of Electron Pairs	
	Molecular Shape		
CHCl ₃	Lewis	Arrangement of Electron Pairs	
	Molecular Shape		



	Lewis 	Arrangement of Electron Pairs  120° trigonal planar
H ₂ CO	Molecular Shape  molecule: AX ₃ trigonal planar $\left. \begin{array}{l} \text{H}-\text{C}-\text{H} \\ \text{H}-\text{C}-\text{O} \end{array} \right\} 120^\circ$	
	Lewis 	Arrangement of Electron Pairs  180° linear
HCN	Molecular Shape  molecule: AX ₂ linear $\text{H}-\text{C}-\text{N} \quad 180^\circ$	
	Lewis 	Arrangement of Electron Pairs  180° linear
CO ₂	Molecular Shape  molecule: AX ₂ linear $\text{O}-\text{C}-\text{O} \quad 180^\circ$	

PCl ₃	Lewis 	Arrangement of Electron Pairs  4 electron groups Tetrahedral Arrangement
	Molecular Shape  Trigonal pyramidal molecule (AX ₃ E) Cl-P-Cl bond angle ≈ 109.5° (somewhat less due to the effect of the lone pair)	
H ₂ O	Lewis 	Arrangement of Electron Pairs  109° tetrahedral
	Molecular Shape  molecule: AX ₂ E ₂ V-shaped H-O-H 109°	
NH ₃	Lewis 	Arrangement of Electron Pairs  109° tetrahedral
	Molecular Shape  molecule: AX ₃ E trigonal pyramidal H-N-H 109°	