

Name: _____

Chemistry Section: _____

Lab Partner: _____

Exercise Date: _____

Lewis Structures and Molecular Shapes

1. H₂S

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		Molecular Shape:
Any polar bonds in the molecule? Yes No	Molecular Polarity: Polar Non-Polar	

2. COCl₂

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		Molecular Shape:
Any polar bonds in the molecule? Yes No	Molecular Polarity: Polar Non-Polar	

3. SiI₄ – use a black ball for silicon when constructing this model

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		Molecular Shape:
Any polar bonds in the molecule? Yes No	Molecular Polarity: Polar Non-Polar	

4. HCN

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		Molecular Shape:
Any polar bonds in the molecule? Yes No	Molecular Polarity: Polar Non-Polar	

5. NO_2^{-1}

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

6. H_3O^{+1} – use a yellow ball for oxygen (not red) when constructing this model

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

7. CHBr_3

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

8. OF_2

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

9. CO_3^{-2}

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

10. CS_2

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

11. PF_3 – use a blue ball for phosphorus when constructing this model

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

12. NOCl

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
	Molecular Shape:	
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

13. _____

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
Molecular Shape:		
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

14. _____

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
Molecular Shape:		
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

15. _____

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
Molecular Shape:		
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar

16. _____

Total # of Valence Electrons:	3-D Model Sketch	Bond Angles
Lewis Structure (show all resonance structures if applicable)		
Molecular Shape:		
Any polar bonds in the molecule? Yes No	Molecular Polarity:	Polar Non-Polar