**Let’s Build It!**

For each molecule, first draw the Lewis dot structure. Then build a three- dimensional molecular model, using the Lewis dot structures as a guide. Use black spheres to represent carbon, red for

oxygen, and white for hydrogen.

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| **Molecular Formula** | **Lewis Dot Structure** | **Describe/Name and Draw Shape**  **(include bond angles)** | **# of Sigma and Pi Bonds Hybridization Type**  **(for sp – sp3 only)** |
| 1. methane  CH4 |  |  |  |
| 2. water  H2O |  |  |  |
| 3. ammonia  NH3 |  |  |  |
| 4. carbon dioxide  CO2 |  |  |  |
| 5. chloromethane  CH3Cl |  |  |  |
| 6. sulfur tetrafluoride  SF4 |  |  |  |
| 7. formaldehyde  CH2O |  |  |  |

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| **Molecular Formula** | **Lewis Dot Structure** | **Describe/Name and Draw Shape**  **(include bond angles)** | **# of Sigma and Pi Bonds Hybridization Type**  **(for sp – sp3 only)** |
| 8. hydrogen cyanide  HCN |  |  |  |
| 9. phosphorous pentachloride  PCl5 |  |  |  |
| 10. sulfur hexafluoride  SF6 |  |  |  |
| 11. chlorine trifluoride  ClF3 |  |  |  |
| 12. iodine pentafluoride  IF5 |  |  |  |
| 13. xenon tetrafluoride  XeF4 |  |  |  |