

CHAPTER 9 LEARNING OBJECTIVES

1. Predict the molecular geometry of a molecule or ion from its Lewis structure and assign values to the bond angles using VSEPR.
2. Explain why lone pairs of electrons exert a greater repulsive interaction.
3. Apply VSEPR to molecules with more than one central atom to predict geometry and bond angles.
4. Recognize names, shapes, and orientation of hybrid orbitals.
5. Distinguish between σ bonds and π bonds.
6. Predict using molecular shape and electronegativities whether a molecule can have a dipole moment.
7. Describe the various types of intermolecular forces and state the kinds of intermolecular forces expected for a substance given its molecular structure.

Review the “In Closing” and “Key Terms” sections of Chapter 9 (pages 421-422).