Learning Objectives for Introduction to Thermodynamics using Gases

At the end of this chapter you should be able to...

- Describe chemical processes using macroscopic, molecular, and mathematical models.
- Appropriately use the ideal gas law and understand its underlying assumptions for solving quantitative and conceptual chemical problems.
- Describe thermodynamics systems and surroundings using appropriate terminology.
- Describe the difference between real and ideal gases and use the van der Waals equation of state to solve quantitative and conceptual chemical problems.
- Describe gases using various equations of state.
- Use the compressibility factor, Z, to describe gas behavior and relate Z to interpret what is occurring on the molecular level.