

CHAPTER OVERVIEW

9: Gases

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General Chemistry

In this chapter, we examine the relationships between gas temperature, pressure, amount, and volume. We will study a simple theoretical model and use it to analyze the experimental behavior of gases. The results of these analyses will show us the limitations of the theory and how to improve on it.

9.1: Gas Pressure

9.2: Relating Pressure, Volume, Amount, and Temperature - The Ideal Gas Law

9.3: Stoichiometry of Gaseous Substances, Mixtures, and Reactions

9.4: Effusion and Diffusion of Gases

9.5: The Kinetic-Molecular Theory

9.6: Non-Ideal Gas Behavior

9.E: Gases (Exercises)

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- Thumbnail: As long as black-body radiation (not shown) doesn't escape a system, atoms in thermal agitation undergo essentially elastic collisions. On average, two atoms rebound from each other with the same kinetic energy as before a collision. Five atoms are colored red so their paths of motion are easier to see. (Public Domain; [Greg L](#) via [Wikipedia](#))

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