

CHAPTER OVERVIEW

3: The First Law

In science, a **law** is a statement or mathematical relation that concisely describes reproducible experimental observations. Classical thermodynamics is built on a foundation of three laws, none of which can be derived from principles that are any more fundamental. This chapter discusses theoretical aspects of the first law; gives examples of *reversible* and *irreversible* processes and the heat and work that occur in them; and introduces the extensive state function *heat capacity*.

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