

## CHAPTER OVERVIEW

### 9: Potential Energy and Conservation of Energy

In this chapter, we introduce the important concept of potential energy. This will enable us to formulate the law of conservation of mechanical energy and to apply it to simple systems, making solving problems easier. In the final section on sources of energy, we will consider energy transfers and the general law of conservation of energy. Throughout this textmap, the law of conservation of energy will be applied in increasingly more detail, as you encounter more complex and varied systems, and other forms of energy.

[9.1: Prelude to Potential Energy and Conservation of Energy](#)

[9.2: Potential Energy of a System](#)

[9.3: Conservative and Non-Conservative Forces](#)

[9.4: Conservation of Energy](#)

[9.5: Potential Energy Diagrams and Stability](#)

[9.6: Sources of Energy](#)

[9.E: Potential Energy and Conservation of Energy \(Exercises\)](#)

[9.S: Potential Energy and Conservation of Energy \(Summary\)](#)

Thumbnail: Roller coaster "Blue Fire" at Europa Park. (CC SA 3.0; [Coaster J](#)).

#### Contributors and Attributions

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