

## CHAPTER OVERVIEW

### 10: Linear Momentum and Collisions

In this section, we develop and define another conserved quantity, called **linear momentum**, and another relationship (the **impulse-momentum theorem**), which will put an additional constraint on how a system evolves in time. Conservation of momentum is useful for understanding collisions, such as that shown in the above image. It is just as powerful, just as important, and just as useful as conservation of energy and the work-energy theorem.

[10.1: Prelude to Linear Momentum and Collisions](#)

[10.2: Linear Momentum](#)

[10.5: Conservation of Linear Momentum \(Part 1\)](#)

[10.6: Conservation of Linear Momentum \(Part 2\)](#)

[10.3: Impulse and Collisions \(Part 1\)](#)

[10.4: Impulse and Collisions \(Part 2\)](#)

[10.7: Types of Collisions](#)

[10.8: Collisions in Multiple Dimensions](#)

[10.9: Center of Mass \(Part 1\)](#)

[10.10: Center of Mass \(Part 2\)](#)

[10.11: Rocket Propulsion](#)

[10.E: Linear Momentum and Collisions \(Exercises\)](#)

[10.S: Linear Momentum and Collisions \(Summary\)](#)

**Thumbnail:** *A pool break-off shot. (CC-SA-BY; No-w-ay).*

#### Contributors and Attributions

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