

### **Principle of the conservation of energy**

The principle of the conservation of energy states that energy can neither be created nor destroyed, only transferred from place to place or changed from one form to another.

A weight bouncing on the end of an elastic rope illustrates the principle well. The energy is repeatedly being transformed between elastic potential energy stored in the stretched rope, kinetic energy as the object speeds up, and gravitational potential energy as it rises.

The effects of air resistance mean that the energy is eventually lost as heat and kinetic energy to the surrounding air.