

## **The joule**

The joule (J) is the modern scientific unit of energy. One joule is defined as the work done when a force of one newton moves through a distance of one metre. In other words:

$$1.0 \text{ joule} = 1.0 \text{ newton} \times 1.0 \text{ metre}$$

For example, if you lift a 100 N weight by 2.0 m, then you have done  $100 \times 2.0 = 200$  joules of work. The work you have done has increased the potential energy of the weight by exactly this amount.