

**Work, energy, and power**

Specification reference	Checklist questions	
3.4.1.7	Can you explain that energy transferred, $W = F s \cos \theta$ ?	<input type="checkbox"/>
3.4.1.7	Can you use the formulae: <i>rate of doing work = rate of energy transfer</i> , $P = \frac{\Delta W}{\Delta t} = Fv$	<input type="checkbox"/>
3.4.1.7	Can you explain variable forces?	<input type="checkbox"/>
3.4.1.7	Can you explain the significance of the area under a force–displacement graph?	<input type="checkbox"/>
3.4.1.7	Can you use the formula efficiency = $\frac{\text{useful output power}}{\text{input power}}$ ?	<input type="checkbox"/>
3.4.1.8	Can you explain the principle of conservation of energy?	<input type="checkbox"/>
3.4.1.8	Can you use the formula $\Delta E_p = m g \Delta h$ and $E_k = \frac{1}{2} m v^2$ ?	<input type="checkbox"/>
3.4.1.8	Can you explain and apply energy conservation to examples involving gravitational potential energy, kinetic energy, and work done against resistive forces?	<input type="checkbox"/>