

## Forces and momentum

Specification reference	Checklist questions	
3.4.1.6	Can you apply the equation $\text{momentum} = \text{mass} \times \text{velocity}$ ?	<input type="checkbox"/>
3.4.1.6	Can you explain the conservation of linear momentum?	<input type="checkbox"/>
3.4.1.6	Can you apply the principle of conservation of linear momentum to problems in one dimension?	<input type="checkbox"/>
3.4.1.6	Can you explain force as the rate of change of momentum?	<input type="checkbox"/>
3.4.1.6	Can you explain that impulse = change in momentum?	<input type="checkbox"/>
3.4.1.6	Can you apply $F\Delta t = \Delta(mv)$ , where $F$ is constant?	<input type="checkbox"/>
3.4.1.6	Can you explain the significance of the area under a force–time graph?	<input type="checkbox"/>
3.4.1.6	Can you describe forces that vary with time?	<input type="checkbox"/>
3.4.1.6	Can you explain that impact force is related to contact time, and apply this to problems involving kicking a football, crumple zones and packaging?	<input type="checkbox"/>
3.4.1.6	Can you define and explain elastic and inelastic collisions, and explosions?	<input type="checkbox"/>
3.4.1.6	Can you explain momentum conservation issues in the context of ethical transport design?	<input type="checkbox"/>