

On the move

Specification reference	Checklist questions	
3.4.1.3	Can you define displacement, speed, velocity, and acceleration?	<input type="checkbox"/>
3.4.1.3	Can you explain and use the formulae $v = \frac{\Delta s}{\Delta t}$ and $a = \frac{\Delta v}{\Delta t}$?	<input type="checkbox"/>
3.4.1.3	Can you calculate average and instantaneous speeds and velocities?	<input type="checkbox"/>
3.4.1.3	Can you draw a diagram to represent methods of uniform and non-uniform acceleration?	<input type="checkbox"/>
3.4.1.3	Can you explain the significance of areas of velocity–time and acceleration–time graphs, and gradients of displacement–time and velocity–time graphs for uniform and non-uniform acceleration?	<input type="checkbox"/>
3.4.1.3	Can you explain and use the equations for uniform acceleration: $v = u + at$, $s = \left(\frac{u+v}{2}\right)t$, $s = ut + \frac{at^2}{2}$, and $v^2 = u^2 + 2as$?	<input type="checkbox"/>
3.4.1.3	Can you explain acceleration due to gravity, g ?	<input type="checkbox"/>
3.4.1.3	Have you carried out a practical to determine g by a freefall method?	<input type="checkbox"/>
3.4.1.4	Can you explain the independent effect of motion in horizontal and vertical directions of a uniform gravitational field?	<input type="checkbox"/>
3.4.1.4	Can you solve problems using the equations of uniform acceleration?	<input type="checkbox"/>
3.4.1.4	Can you define and explain the effects of friction?	<input type="checkbox"/>
3.4.1.4	Can you explain the effects of lift and drag forces?	<input type="checkbox"/>

Specification reference	Checklist questions	
3.4.1.4	Can you define and describe terminal speed?	<input type="checkbox"/>
3.4.1.4	Can you explain that air resistance increases with speed?	<input type="checkbox"/>
3.4.1.4	Can you explain the effect of air resistance on the trajectory of a projectile and on the factors that affect the maximum speed of a vehicle?	<input type="checkbox"/>