

Prior Learning		At KS3, students have learned about the effects of forces and including pressure when force is applied on an area. At KS4, students have developed more advanced mathematical skills including manipulating equations and plotting/analysing graphs.		
Lesson Number	AQA Spec	Title	Content	Assessment
1		4.5	<ul style="list-style-type: none"> <li>Estimate the results of simple calculations.</li> <li>Round numbers to make an estimate.</li> <li>Calculate order of magnitude.</li> </ul>	
2	4.5.6.1.1 4.5.6.1.2 4.5.6.1.4	Speed	<ul style="list-style-type: none"> <li>Calculate speed using distance travelled divided by time taken.</li> <li>Calculate speed from a distance–time graph.</li> <li>Measure the gradient of a distance–time graph at any point.</li> </ul>	
3	4.5.6.1.3 4.5.6.1.5	Acceleration	<ul style="list-style-type: none"> <li>Describe acceleration.</li> <li>Calculate acceleration.</li> <li>Explain motion in a circle.</li> </ul>	
6	4.5.6.1.1 4.5.6.1.3 4.5.6.1.5	Velocity–time graphs	<ul style="list-style-type: none"> <li>Draw velocity–time graphs.</li> <li>Calculate acceleration using a velocity–time graph.</li> <li>Calculate displacement using a velocity–time graph.</li> </ul>	<b>Assessment 1:</b> Multiple choice Quiz 25 Marks  Feedback: Auto/Self-assessed

7	4.5.7.1	Momentum	<ul style="list-style-type: none"> <li>Trilogy students do not need to know and understand the content in the middle section: Changes in momentum, or the calculations in the last section: Conservation of momentum, although the idea of conservation of momentum is required (qualitatively).</li> <li>Explain what is meant by momentum.</li> <li>Apply ideas about rate of change of momentum to safety features in cars.</li> <li>Use momentum calculations to predict what happens in a collision.</li> </ul>	<b>Assessment 2:</b> Written assessment 15 Marks  Feedback: Teacher
	4.5.7.2			
	4.5.7.3 <b>Higher tier only</b>			
8	4.5.6.1.5	Calculations of motion	<ul style="list-style-type: none"> <li>Describe uniform motion.</li> <li>Use an equation for uniform motion.</li> <li>Apply this equation to vertical motion.</li> </ul>	
9	4.5.6.3.1 4.5.6.3.2 4.5.6.3.3 4.5.6.3.4	Keeping safe on the road	<ul style="list-style-type: none"> <li>Explain the factors that affect stopping distance.</li> <li>Explain the dangers caused by large deceleration.</li> <li>Estimate the forces involved in the deceleration of a road vehicle.</li> <li>Apply the idea of rate of change of momentum to explain safety features.</li> </ul>	
<b>End of Unit test Assessment: Teacher</b>				
<b>Where we will use these ideas again</b>		P8 - Orbits of planets, moons and artificial satellites.		