

Subject	Year	Term
Science	11	1
Topic		
11P1 Forces		
Content (Intent)		
Prior Learning (Topic) P5a Forces and Motion		
<ul style="list-style-type: none"> • Define acceleration and be able to use equations containing it • State what a resultant force is and be able to find the resultant force of two forces in 2D • State and use the equation “resultant force = mass × acceleration” , “$F = m a$” • State and use the equation “work done = force × distance moved along the line of action of the force” “$W = F s$” • Describe the energy transfer involved when work is done. • Define stopping distance and relate it to the speed of the vehicle • To define momentum • To apply $p = m v$ to examples • Know the law conservation of momentum and be able to apply it do real life situations to explain how things move. 		
Future Learning (Topic) A level topic 2 Mechanics		
How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p>Demos: use of skateboards/scooters/air tracks</p> <p>Practical work: Measuring velocity. RP with the air track. Measuring stopping distances.</p> <p>Written: Notes and completed worksheets in exercise books.</p>	<p>- 2 x standard homeworks (Level given. Written feedback. Response expected.)</p> <p>-1 x end of topic test (Level given. Verbal feedback to class and individuals.)</p>	
How can parents help at home?		
<p>Look at the topic specific resources on the VLE</p> <p>Use appropriate youtube channels: cognito, primrosekitten, khan academy, freesciencelessons.</p> <p>Take an interest! Ask your children what they have learnt and be curious about their learning.</p>		
Helpful further reading/discussion		
<p>Reading</p> <p>Professor Povey's Perplexing Problems: Pre-University Physics and Maths Puzzles with Solutions</p>	<p>Vocabulary Lists</p> <p>Acceleration</p> <p>Velocity (final and initial)</p> <p>Resultant force</p> <p>Inertial mass</p> <p>Work done</p> <p>Stopping distance</p> <p>Thinking distance</p> <p>Braking distance</p> <p>Momentum (and conservation)</p>	<p>Careers Links</p> <p>Physicist</p> <p>Engineer</p> <p>Environmental engineering</p> <p>Energy companies</p>

