

Year 11 Physics (separate)

Learning Programme 3

The LORIC skill focus for his LP is: RESILIENCE The Moral Virtues focus for this LP are: RESPECT and JUSTICE		Literacy: <ul style="list-style-type: none"> Capital letters must be used at the start of sentences and for the first letter of proper nouns Full stops must be used at the end of a sentence Question marks must be used at the end of a question Apostrophes should only be used for possession or omission Days of the week and months must be spelled correctly Key words must be spelled correctly
Respect - treat others how you would wish to be treated yourself. Justice - our College rules are fair and reasonable.		
What will I be learning about in this Learning Programme? Forces and their effects Waves		
Where have I seen this learning before? You have explored basic forces and motion at KS3 and in primary school. During LP1 and 2 we studied forces and we will be further developing this understanding. You have explored the basics of waves at KS3.		
What could I use it for? Understanding forces is crucial for mechanical and civil engineering, sport, building/construction, astrophysics and architecture. Understanding waves is crucial for electronics, astrophysics and astronomy.		

In LP3.1, I will know:	06/01/25 - (WK 2)	Key Vocabulary	Homework
How to analyse motion graphs, including distance-time and velocity-time graphs; how to explain Newton's Laws and recognise examples of Newton's 1st and 3rd law in action; how to describe the relationship between Force, mass and acceleration - Newton's 2nd Law.		Displacement Velocity Acceleration	Acceleration worksheet

In LP3.2, I will know:	13/01/25 - (WK 1)	Key Vocabulary	Homework
How to explain why an object reaches terminal velocity in terms of the forces involved and acceleration; how to investigate the acceleration of an object by varying the force or mass; how to describe and explain the factors that affect both thinking distance and braking distance. Describe an experiment used to estimate reaction times.		Terminal velocity	Terminal velocity exam question

In LP3.3, I will know:	20/01/25 - (WK 2)	Key Vocabulary	Homework
How to interpret graphs of stopping distances. Estimate the forces required to produce a deceleration on a typical road, and the distance required for road vehicles to stop in an emergency; how to define momentum, apply and rearrange the equation $p=mv$ and describe the conservation of momentum in closed systems (collisions or explosions).		Momentum	Revision

In LP3.4, I will know:	27/01/25 - (WK 1)	Key Vocabulary	Homework
How to explain when a force acts on an object that is moving a change in momentum occurs by relating the equation $F = (mv - mu)/t$; LP3 formative assessment 1; my strengths and areas for developments following the LP3.1 formative assessment and PRT; Extended Task.		Momentum	Revision

In LP3.5, I will know:	03/02/25 - (WK 2)	Key Vocabulary	Homework
How to use the words wavelength, frequency and amplitude; how to distinguish between longitudinal and transverse waves.		wavelength, frequency, amplitude, transverse, longitudinal	Waves basics questions

In LP3.6, I will know:	10/02/25 - (WK 1)	Key Vocabulary	Homework
How to use the wave speed equation; how to investigate the relationship between wave speed, frequency and wavelength; how to name the parts of the electromagnetic spectrum, in order.		Wave speed	Wave speed calculations

LP3 RLW, I will:	24/02/25 - (WK 2)		
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.			

In LP3.7, I will know:	03/03/25 - (WK 1)	Key Vocabulary	Homework
How to describe the uses of the electromagnetic spectrum; LP3 formative assessment 2; my strengths and areas for development following the LP3.1 formative assessment and PRT; Extended Task.		Electromagnetic spectrum	Revision

Resources to support learning: Knowledge organiser, topic booklet, GCSE BBC bitesize, www.physicsandmathstutor.com			
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FFET Award Challenge for this Learning Programme: LP3 Year11 Science: Complete a practice paper independently			
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