The Ellesmere Port C of E College



Year 13 Modelling Physics

Learning Programme 2

PRT Task 1

The l	LORIC skill focus for his LP is: ORGANISATION		Literacy:
The I	Moral Virtues focus for this LP are: COMPASSION and HONESTY		 Capital letters must be used at the start of contaneous and for the first letter of
Com	passion - the quality of feeling pity and concern for the sufferings or misfortunes of others.		proper nouns
Hone	esty - the quality of being truthful.		 Full stops must be used at the end of a
How t	t will I be learning about in this Learning Programmer to describe the motion of objects moving in circular naths		sentence
How	objects undergoing simple harmonic motion behave.		Question marks must be used at the
	-)		end of a question
Wher	re have I seen this learning before?		possession or omission
You w	will have experienced some of the fundamentals of circular motion in Y12.		Days of the week and months must be
Simpl	le harmonic motion is new learning.		spelled correctly
			 Key words must be spelled correctly
What	t could I use it for?		
Circul	rcular motion is foundational knowledge to understand planetary motion, and appears in many areas of physics and engineering.		
Simpl	ie namone motion is used to understand any system with vibrations, and can be applied to music, mechanical and civil engineering	·	
In LP2	2.1. I will know: 21/10/24 - (WK 2)	Key Vocabulary	Homework
How 1	to explain the differences between linear and angular velocity;	,	Angular velocity exam questions
how t	to calculate angular velocity given the frequency or period;		
		Angular velocity	
In LP2	2.2, I will know: 04/11/24 - (WK 1)	Key Vocabulary	Homework
How 1	to explain centripetal acceleration, and how to calculate it;		Circular motion exam questions
how t	to calculate centripetal force and apply this to a range of contexts.	Centripetal,	
		acceleration, force	
LP2 R	RLW, I will: 11/11/24 - (WK 2)		
reviev	w my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.		
In LP2	2.3 Lwill know: 18/11/24 - (WK 1)	Koy Vocabulary	Hamawark
How 1	to define and calculate angular frequency:	Rey Vocabulary	Angular frequency exam questions
how t	to use explain and use the simple harmonic motion equations;	Simple barmonic	
		Simple narmonic	
		motion	
Exten	and and Tack	motion	
Exten	1ded Task. 2.4. Lwill know: 25/11/24 - (WK 2)	motion Key Vocabulary	Homework
Exten In LP2 How 1	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator;	motion Key Vocabulary	Homework Revision
Exten In LP2 How 1 LP2 si	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment.	motion Key Vocabulary	Homework Revision
Exten In LP2 How 1 LP2 st	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment.	motion Key Vocabulary Oscillator	Homework Revision
Exten In LP2 How 1 LP2 st	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment.	motion Key Vocabulary Oscillator	Homework Revision
Exten In LP2 How 1 LP2 st	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1)	motion Key Vocabulary Oscillator Key Vocabulary	Homework Revision Homework
Exten In LP2 How 1 LP2 st In LP2 How 1	aded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement;	motion Key Vocabulary Oscillator Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions
Exten In LP2 How 1 LP2 su In LP2 How 1 how t	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM;	motion Key Vocabulary Oscillator Key Vocabulary Velocity,	Homework Revision Homework Simple harmonic motion exam questions
Exten In LP2 How 1 LP2 su In LP2 How 1 how t my st	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy	Homework Revision Homework Simple harmonic motion exam questions
Exten In LP2 How 1 LP2 su In LP2 How 1 how t my st	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy	Homework Revision Homework Simple harmonic motion exam questions
Exten In LP2 How 1 LP2 su In LP2 How 1 how t my st	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2)	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions Homework
Exten In LP2 How 1 LP2 su How 1 how t my st	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations;	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions
Exten In LP2 How 1 LP2 su How 1 how t my st In LP2 How 1 how t	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions
Exten In LP2 How 1 LP2 st How 1 how t my st In LP2 How 1 how t	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions
Exten In LP2 How 1 LP2 st In LP2 How 1 how t my st In LP2 How 1 how t	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st Now t how t Exten In LP2	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1)	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t	anded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use the behaviour of gravitational fields;	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t	anded Task. 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; torengths and areas for developments following the LP2 summative assessment and PRT. 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; to describe the behaviour of gravitation; to describe the developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st	hede Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. hede Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t	nded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t my st	hede Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. hede Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT.	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t St Resou Know	hede Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. heded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. utces to support learning: ukede organiser, Isaac physics, www.physicsandmathstutor.com, text book	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t Resou Know	add Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. urces to support learning: uledge organiser, Isaac physics, www.physicsandmathstutor.com, text book	motion Key Vocabulary Oscillator Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t Resou Know	add Task. 2.4. j will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5. j will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6. j will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. vided Task. 2.7. j will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. urces to support learning: videge organiser, Isaac physics, www.physicsandmathstutor.com, text book	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t Resou Know	and ed Task. 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; unmative assessment. 2.5, 1 will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. uded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. wrces to support learning: uerces to support learning: uldege organiser, Isaac physics, www.physicsandmathstutor.com, text book Award Challenge for this Learning Programme: ear 13 Physics : Support with lower school STEM Club	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t Resou Know	aded Task. 2.4, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; ummative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the effects of gravitational fields; to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. urces to support learning: vledge organiser, Isaac physics, www.physicsandmathstutor.com, text book Awad Challenge for this Learning Programme: tear 13 Physics : Support with lower school STEM Club	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Key Vocabulary Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions questions
Exten In LP2 su How 1 LP2 su How 1 how t my st In LP2 How 1 how t Exten In LP2 How 1 how t Resou Know	aded Task. 2.1, I will know: 25/11/24 - (WK 2) to investigate the factors that affect the period of a simple harmonic oscillator; unmative assessment. 2.5, I will know: 02/12/24 - (WK 1) to use the simple harmonic motion equations to calculate velocity and displacement; to describe the interchange between kinetic and potential energy during SHM; trengths and areas for developments following the LP2 summative assessment and PRT. 2.6, I will know: 09/12/24 - (WK 2) to describe the effects of damping, and the differences between free and forced oscillations; to describe the effects of damping, and the differences between free and forced oscillations; to describe the causes of resonance, and give examples of resonance in action. anded Task. 2.7, I will know: 16/12/24 - (WK 1) to describe the behaviour of gravitational fields; to use Newton's Law of Gravitation; trengths and areas for developments following the LP2 summative assessment and PRT. wires to support learning: viedge organiser, Isaac physics, www.physicsandmathstutor.com, text book Award Challenge for this Learning Programme: ear 13 Physics : Support with lower school STEM Club	motion Key Vocabulary Oscillator Key Vocabulary Velocity, Displacement, energy Key Vocabulary Damping, resonance Gravitation	Homework Revision Homework Simple harmonic motion exam questions Homework Damping and resonance exam questions Homework Newton's Law of Gravitation exam questions