

Year 12 Mathematics - Mechanics

Learning Programme 4

The LORIC skill focus for this LP is: INITIATIVE.

The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.

Integrity - Having strong moral principles. I will show integrity by taking responsibility for my actions.

Gratitude - Feeling and expressing thanks. I will show gratitude by saying please and thank you.

What will I be learning about in this Learning Programme?

In LP4 I will be learning about motion and forces.

Where have I seen this learning before?

GCSE: distance-time graphs, speed calculations.

What could I use it for?

The knowledge and skills I will learn in this learning programme will allow me to solve kinematics problems. These skills are important for future courses and careers in engineering.

Literacy Non-Negotiables:

- 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
- Vocabulary to be taught using the Frayer model

In LP4.1, I will know:	09/03/26 - (WK 2)	Frayer Model Words	Homework
how to use models in mechanics; how to work with vectors in mechanics.		Vector	Vectors in Mechanics
In LP4.2, I will know:	16/03/26 - (WK 1)	Frayer Model Words	Homework
how to draw and interpret velocity-time graphs.		Velocity	Velocity-Time Graphs
In LP4.3, I will know:	23/03/26 - (WK 2)	Frayer Model Words	Homework
how to solve problems with the constant acceleration formulae.		Acceleration	Constant Acceleration Formulae
In LP4.4, I will know:	13/04/26 - (WK 1)	Frayer Model Words	Homework
how to solve problems involving vertical motion.		Gravity	Vertical Motion
In LP4.5, I will know:	20/04/26 - (WK 2)	Frayer Model Words	Homework
how to solve problems involving forces in equilibrium.		Equilibrium	Equilibrium
In LP4.6, I will know:	27/04/26 - (WK 1)	Frayer Model Words	Homework
how to solve problems with forces by using vectors.		Resolve	Resolving Forces
In LP4.7, I will know:	04/05/26 - (WK 2)	Frayer Model Words	Homework
how to solve problems using Newton's Laws of motion.		Force	Newton's Laws

Resources to support learning:

Use your knowledge organisers to support with revision and recall. Here are some online resources to further support you in your Mathematics revision beyond the classroom. All weekly homework tasks are based on the exercises from the book. In addition to homework, Pupils should use questions not used in class plus the review exercises to help support learning from outside the classroom. Online Resource for homework and exam practice: <https://www.dr frostmaths.com/>. Topic based exam questions - <https://www.mathsgenie.co.uk/>

FFET Award Challenge for this Learning Programme:

Submit a presentation on how areas of Mechanics are used within industry.

