

## Year 9 Science Learning Programme 3

Reading texts that pupils will study during  
the learning programme

Loric for LP3 is Resilience

The values we are learning about are respect and justice

Week 1: force, Week 3: pressure, Week 5: Speed

Respect - a feeling of deep admiration for someone or something elicited by their abilities, qualities or achievements  
Justice - fair behaviour or treatment

What will I be learning about in this Learning Programme?

This LP is a major part of the combined GCSE so following this LP closely is imperative, Pressure and speed are covered extensively during the course so a good understanding of the topic is important. The speed section involves a number of calculations.

Where have I seen this learning before?

This LP develops knowledge of Pressure and speed which has previously been introduced in year 7.

What could I use it for?

Those wishing to go on and study science beyond GCSE will greatly benefit from this LP, careers working in engineering, building, mechanical engineering and avionics are just some of the roles which use this learning.

In LP3.1, I will know :	06/01/2025 - (WK 2)	Behaviour to support the values: STEPS/SLANT	Homework
what happens to an object when the resultant force is zero; how forces deform objects - RP; how to use Hooke's law to link extension and force - RP.		I will show respect by actively listening to others	Homework tasks are located in the Knowledge Organisers
In LP3.2, I will know :	13/01/2025 - (WK 1)	Behaviour to support the values: STEPS/SLANT	Homework
what is meant by a moment; how to calculate the moments of a force; how fluids exert a pressure in all directions.		I will show justice by speaking up when something is not right	Homework tasks are located in the Knowledge Organisers
In LP3.3, I will know :	20/01/2025 - (WK 2)	Behaviour to support the values: STEPS/SLANT	Homework
how liquid pressure changes with depth; what is meant by stress; how to test my understanding and complete Assessment 1. Extended Task		I will show respect by being punctual and not wasting the time of others	Homework tasks are located in the Knowledge Organisers
In LP3.4, I will know :	27/01/2025 - (WK 1)	Behaviour to support the values: STEPS/SLANT	Homework
the unit of force; what is meant by an interaction pair; what happens when the resultant force is not zero.		I will show justice by being inclusive and accepting everyone regardless of our differences	Homework tasks are located in the Knowledge Organisers
In LP3.5, I will know :	03/02/2025 - (WK 2)	Behaviour to support the values: STEPS/SLANT	Homework
how to use force diagrams to represent interactions of forces; how to state and use the formula for speed - RP; how to explain relative motion.		I will show respect by taking care of the school property	Homework tasks are located in the Knowledge Organisers
In LP3.6, I will know :	10/02/2025 - (WK 1)	Behaviour to support the values: STEPS/SLANT	Homework
how to describe a journey using a time-distance graph; how to calculate speed using a time distance graph; how gravity varies on different planets. Extended Task		I will show justice by supporting others of seeking help when required	Homework tasks are located in the Knowledge Organisers
LP3 RLW, I will:	24/02/2025 - (WK 2)	Behaviour to support the values: STEPS/SLANT	Homework
review my learning, recalling and applying key knowledge, focus on closing any gaps in my knowledge and prepare effectively for the upcoming assessments.		I will show respect by actively listening to others	Homework tasks are located in the Knowledge Organisers
In LP3.7, I will know :	03/03/2025 - (WK 1)	Behaviour to support the values: STEPS/SLANT	Homework
how gravitational force varies with mass and distance; how to review learning from this learning programme; how to test my understanding and complete Assessment 2.		I will show respect by recognising and celebrating the achievements of myself and others	Homework tasks are located in the Knowledge Organisers

Resources to support learning:

Kerboodle, BBC Bitesize

**FFET Award Challenge for this Learning Programme:**

Year 9 Challenge: Forces

Challenge Title: "Racing to the Future!"

Design and propose a futuristic vehicle powered by innovative uses of forces (e.g., magnetism, friction, or air resistance).

Task:

Create a vehicle for a specific purpose, such as racing, rescue missions, or exploring difficult terrains.

What to Create:

A detailed sketch or 3D model of your vehicle with explanations of how forces are harnessed or minimized.

A one-page advertisement or presentation promoting your vehicle.

Judging Criteria:

Creativity in design, scientific accuracy, and visual appeal of the final submission.

