

Year 11 Science Learning Programme 2

The LORIC skill focus for this LP is: ORGANISATION.

The Moral Values foci for this LP are: COMPASSION and HONESTY.

Compassion - sympathy and concern for the suffering or misfortunes of others
Honesty - being truthful and refraining from cheating or lying

What will I be learning about in this Learning Programme?

In this learning programme, you will explore exciting topics across Physics, Biology and Chemistry. You will learn about forces, motion, energy, waves, momentum and stopping distances, as well as practical investigations. In Biology, you will study inheritance, genetic engineering, selective breeding and evolution. In Chemistry, you will explore pure substances, formulations, chromatography and testing for gases. You will also develop your problem-solving, practical and scientific skills.

Where have I seen this learning before?

You will build on learning from the KS3 Science curriculum, including forces, motion, energy, waves, cells, reproduction, inheritance, variation and substances. This programme develops these ideas further, helping you connect your KS3 knowledge to more detailed GCSE concepts and practical investigations.

What could I use it for?

Studying these topics can open up lots of exciting career opportunities in the future. Physics could be useful for careers such as engineering, architecture, aerospace and technology, while Biology can lead to careers in medicine, veterinary science, genetics and environmental science. Chemistry is important for careers including pharmacy, forensic science, chemical engineering and medicine. These subjects also develop skills such as problem-solving, analysing information and practical investigation, which are useful in many different careers.

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

Investigation, which are useful in many different careers.			
In LP2.1, I will know:	19/10/26 - (WK 2)	Frayer Model Words	Homework
IGNITION -how to carry out the Hooke's Law required practical. how to calculate work done. how to apply the formula $F=ke$		Elasticity	Sparx Science
In LP2.2, I will know:	02/11/26 - (WK 1)	Frayer Model Words	Homework
the difference between scalars and vectors. how to explain the effect of forces on motion. how to calculate speed.		Vector	Sparx Science
LP2 RLW, I will:	09/11/26 - (WK 2)	Frayer Model Words	Homework
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.			Sparx Science
In LP2.3, I will know:	16/11/26 - (WK 1)	Frayer Model Words	Homework
how to calculate acceleration. how to interpret distance-time and velocity-time graphs. how to apply Newton's Laws.		Velocity	Sparx Science
Extended Task.			
In LP2.4, I will know:	23/11/26 - (WK 2)	Frayer Model Words	Homework
how to complete a knowledge check. how to complete a PRT. how to explain factors affecting stopping distances.		Momentum	Sparx Science
In LP2.5, I will know:	30/11/26 - (WK 1)	Frayer Model Words	Homework
how to explain genetic inheritance and genetic disorders using a genetic cross. how to explain the difference between a pure substance and a formulation. how to carry out the chromatography required practical .		Formulation	Sparx Science
In LP2.6, I will know:	07/12/26 - (WK 2)	Frayer Model Words	Homework
how to describe a wave. how to calculate wave speed. how to carry out the waves required practical .		Wavelength	Sparx Science
Extended Task.			
In LP2.7, I will know:	14/12/26 - (WK 1)	Frayer Model Words	Homework
how to describe variation and its causes. how to explain evidence of evolution. how to explain the classification system .		Classification	Sparx Science
Resources to support learning:			
SPARX Science			
FFET Award Challenge for this Learning Programme:			
"Design a Safer Car" project. Use speed, acceleration, resultant forces, Newton's laws, momentum, stopping distances and braking forces to investigate how a car can be made safer. Then use genetic engineering and selective breeding to explore how science can improve materials or organisms, and waves and chromatography to investigate technologies used in car safety and testing. Present your findings as a poster, model, presentation or written report, explaining the science behind your ideas.			

PRT Task 1

PRT Task 2