Birches Head Academy

Part of the Frank Field Education Trust

Year 9 Science
Learning Programme 3

The LORIC skill focus for his LP is: RESILIENCE
The values for this LP are COMPASSION and HONESTY

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?
During this learning programme, you will explore how forces are applied in different situations and investigate the role that pressure plays in shaping the behaviour of solids, liquids, and gases. You will learn how pressure affects matter in everyday life and in scientific contexts, and understand why these principles are important in real-world applications.

Where have I seen this learning before?
At KS2, pupils learn about gravity, friction, air resistance, and water resistance. They explore how forces act on objects and how they can change motion. Pupils will also have an awareness of solids, liquids, and gases, and how materials change due to pressure.

What could I use it for?
The knowledge and skills you gain in this learning program are useful for understanding how the world works and solving real-life problems. You'll be able to explain everyday scenarios such as how bridges and buildings are designed. The concept of blood pressure from a medical perspective. Furthermore, the knowledge from this would be used in the aviation, space and environmental science industry looking at atmospheric pressure and links to studying pressure in our oceans.

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 LP3.1, I will know:	**05/01/26 - (WK 2)**	**Frayer Model Words**	**Homework**
how to describe what is meant by an interaction pair - IGNITION how to calculate a resultant force. how to use and present force diagrams.		Force	Complete your weekly homework on https://sparxmaths.com/
In LP3.2, I will know:	**12/01/26 - (WK 1)**	**Frayer Model Words**	**Homework**
how to explain what is meant by speed and how to calculate it. how to calculate speed from a distance-time graph. how to plan an investigation relating to objects and their speed.		Acceleration	Complete your weekly homework on https://sparxmaths.com/
In LP3.3, I will know:	**19/01/26 - (WK 2)**	**Frayer Model Words**	**Homework**
how to carry out a practical investigation into different objects and their speed. how to analyse data from investigating speed. how to plan an investigation into Hooke's Law.		Friction	Complete your weekly homework on https://sparxmaths.com/
In LP3.4, I will know:	**26/01/26 - (WK 1)**	**Frayer Model Words**	**Homework**
how to carry out an investigation into Hooke's Law. how to analyse data collected from investigating Hooke's Law. how to complete the practical PRT analysis for Hooke's Law. Extended Task.		Moment	Complete your weekly homework on https://sparxmaths.com/
In LP3.5, I will know:	**02/02/26 - (WK 2)**	**Frayer Model Words**	**Homework**
how to calculate the moment of a force. how to describe what is meant by fluid pressure. how to calculate fluid pressure.		Fluids	Complete your weekly homework on https://sparxmaths.com/
In LP3.6, I will know:	**09/02/26 - (WK 1)**	**Frayer Model Words**	**Homework**
how liquid pressure changes with depth. how to explain the role of upthrust in terms of objects floating or sinking. how to explain stress on solids.		Upthrust	Complete your weekly homework on https://sparxmaths.com/
LP3 RLW, I will:	**23/02/26 - (WK 2)**	**Frayer Model Words**	**Homework**
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.		Pressure	Complete your weekly homework on https://sparxmaths.com/
In LP3.7, I will know:	**02/03/26 - (WK 1)**	**Frayer Model Words**	**Homework**
how to describe what is meant by gas pressure. how to effectively revise for LP3 Assessment. how to complete PRT from LP3 Assessment. Extended Task.		Stress	Complete your weekly homework on https://sparxmaths.com/

PRT Task 1

PRT Task 2

Resources to support learning:

Kerboodle, Sparx Science, BBC Bitesize

FFET Award Challenge for this Learning Programme:

Complete some research and design a poster into how the design of ships prevents them from sinking.