Birches Head Academy

Part of the Frank Field Education Trust

Year 7 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?
In KS3, pupils studying forces learn about different types of forces, including gravity, and explore how they affect motion, as well as investigate relationships such as Hooke's Law. In separating mixtures, they explore pure substances, mixtures and solutions, and develop practical skills in filtration, evaporation, distillation and chromatography.

Where have I seen this learning before?
In Key Stage 1, pupils have explored simple material properties and basic forces including push and pull. In Key Stage 2, they develop this further by learning about mixtures, solutions, and separation methods such as filtering, sieving, evaporation, and using magnets, alongside deeper study of forces including gravity, friction, air and water resistance, and some introductory simple machines.

What could I use it for?
Both of these topics will be explored at a deeper level at GCSE. Beyond specialist careers, both topics also support everyday problem-solving such as choosing the right tools, understanding how objects move, using simple machines, or separating materials safely and efficiently. Overall, these foundational concepts support scientific literacy, practical decision-making, and many future pathways in STEM.

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 a force and an interaction pair. how to describe and explain the different types of forces. how to investigate how surface type affects the frictional force acting on a moving object - IGNITION	Newton meter	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 analyse results from investigating how surface type affects the frictional force on a moving object. how to understand how area and shape affect drag. how to explain how friction and drag forces can be reduced.	Friction	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 understand the force of gravity and calculate weight. how to describe how forces deform objects and what is meant by a 'linear relationship' how to plan a practical investigation looking at Hooke's Law	Deformation	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 investigate force and extension using Hooke's Law how to plot and interpret graphical representations of Hooke's Law how to identify examples and explain contact and non-contact forces Extended Task.	Interaction Pair	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 explain the properties of pure substances and mixtures how to explain how substances dissolve using the particle model how to plan an investigation into how temperature affects solubility	Mixture	Complete your weekly homework on https://sparxmaths.com/
In LP3.6, I will know: **09/02/26 - (WK 1)**	**Frayer Model Words**	**Homework**
how to investigate how temperature affects solubility how to analyse data collected and create a solubility curve how to separate mixtures using filtration	Solvent	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.	Solubility	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 investigate why evaporation and distillation works to separate a particular mixture how to investigate and describe how chromatography separates substances how to complete an independent assessment and PRT to demonstrate learning Extended Task.	Distillation	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:
Create a fact sheet explaining methods used to separate mixtures, including how and where they are used in everyday life and industry.