The Ellesmere Port C of E College

Part of the Frank Field Education Trust

# Year 9 Science
# Learning Programme 4

The LORIC skill focus for his 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?**
Different forces and how they can be linked together. The effects of different forces on everyday objects and life.

**Where have I seen this learning before?**
Forces are measured in Newtons and can be both contact and non contact.

**What could I use it for?**
GCSE science: forces and motion, how forces impact movement of objects and car safety features.

**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 |
|---|---|---|
| what is diffusion and how to describe it;<br>how to Complete summative assessment;<br>how to REVIEW summative assessment; | Diffusion | Complete Sparx Science task |
| **In LP4.2, I will know: 16/03/26 - (WK 1)** | **Frayer Model Words** | **Homework** |
| how to describe active transport and explain the factors that affect it;<br>how to describe osmosis and its effects on animal cells;<br>how to plan and write a method to carry out an osmosis practical. | Stem cell | Complete Sparx Science task |
| **In LP4.3, I will know: 23/03/26 - (WK 2)** | **Frayer Model Words** | **Homework** |
| how to carry out an investigation into osmosis of potatoes/carrots;<br>how to EXPLAIN which pairs of forces are acting on an object;<br>how to EXPLAIN how forces deform objects in a range of situations.<br><br>Extended Task. | Meristem | Complete Sparx Science task |
| **In LP4.4, I will know: 13/04/26 - (WK 1)** | **Frayer Model Words** | **Homework** |
| how to investigate the relationship between a force and the extension of a spring using the equation F=ke;<br>how to investigate the relationship between a force and the extension of a spring;<br>how to complete a formative assessment and PRT. | Newton | Complete Sparx Science task |
| **In LP4.5, I will know: 20/04/26 - (WK 2)** | **Frayer Model Words** | **Homework** |
| how to EXPLAIN the effect of drag forces and friction in terms of forces;<br>how to APPLY the effects of forces at a distance to different fields;<br>how to calculate the weight of an object using w=mg. | Forces | Complete Sparx Science task |
| **In LP4.6, I will know: 27/04/26 - (WK 1)** | **Frayer Model Words** | **Homework** |
| how to DESCRIBE the difference between balanced and unbalanced forces;<br>how to EXPLAIN factors that affect gas pressure;<br>how to EXPLAIN how liquid pressure changes with depth.<br><br>Extended Task. | Friction | Complete Sparx Science task |
| **In LP4.7, I will know: 04/05/26 - (WK 2)** | **Frayer Model Words** | **Homework** |
| how to calculate more complex questions using pressure equation by rearranging;<br>how pressure is increased/decreased by simple machines;<br>how to complete a formative assessment and prt. | Weight | Complete Sparx Science task |

PRT Task 1

PRT Task 2

**Resources to support learning:**
Knowledge Organiser, Science booklets on Synergy, BBC bitesize

**FFET Award Challenge for this Learning Programme:**
Plan and carry out an investigation to find out what is the 'elastic limit' of a strawberry lace sweet.