The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 11 Physics
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.
Gratitude - Feeling and expressing thanks.

What will I be learning about in this Learning Programme?
Magnetism. Electromagnetism. GCSE revision.

Where have I seen this learning before?
You have studied basic magnets at KS3 and KS2. The rest of the LP will be spent revisiting learning from Y10 and Y11 in preparation for your GCSE exams.

What could I use it for?
Electromagnetism is the phenomenon behind motors and generators; all modern electrical systems rely on them. Understanding electromagnetism is crucial for electrical and mechanical engineers and electricians

Literacy:
- 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

In LP4.1, I will know: 04/03/24 - (WK 1)	Key Vocabulary	Homework
how to construct accurate ray diagrams to illustrate reflection and refraction of waves at a surface. Construct a wave front diagram for refraction.	electromagnet	PPQ on lens diagrams

In LP4.2, I will know: 11/03/24 - (WK 2)	Key Vocabulary	Homework
how to describe uses of electromagnets how to use Fleming's Left Hand Rule to deduce the direction of force/current/magnetic field. Apply and rearrange the equation F=BIl. how to explain how a motor works, using Fleming's Left Hand Rule to predict it's direction of motion. how to explain the generator effect is used in alternators, dynamos loudspeakers and microphones.	alternating	PPT magnetism

In LP4.3, I will know: 18/03/24 - (WK 1)	Key Vocabulary	Homework
how to explain how a transformer works. Use the transformer equation to calculate increase/decrease in p.d/current; Extended Task.	generator	PPQ transformers

PRT Task 1

In LP4.4, I will know: 25/03/24 - (WK 2)	Key Vocabulary	Homework
how to explain what a solar system is. how to describe the life cycle of a star for stars the size of the Sun and much larger than the Sun. Explain how forces within a star change as it moves through its life cycle; how to describe the relationships between centripetal force, orbital radius and velocity in relation to satellites.	satellite	PPQ stars

In LP4.5, I will know: 15/04/24 - (WK 1)	Key Vocabulary	Homework
how to explain how Red Shift and the Cosmic Microwave Background Radiation provides evidence for the Big Bang.	radiation	PPQ redshift

In LP4.6, I will know: 22/04/24 - (WK 2)	Key Vocabulary	Homework
Revision Energy Extended Task.		past exam papers

PRT Task 2

In LP4.7, I will know: 29/04/24 - (WK 1)	Key Vocabulary	Homework
revision Electricity revision Particle Model revision Radioactivity		past exam papers

In LP4.8, I will know: 06/05/24 - (WK 2)	Key Vocabulary	Homework
Revision Forces		past exam papers

Resources to support learning:
Carousel Learning, Physics Booklets from lesson (both content and revision). All on TEAMS

FFET Award Challenge for this Learning Programme:
LP4 Year 11 Science: Complete a Practice paper independently