The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 11 GCSE Design & Technology
Learning Programme 3

The LORIC skill focus for his LP is: RESILIENCE
The Moral Virtues focus for this LP are: RESPECT and JUSTICE

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?
How to initiate the development of a design idea. How timbers and polymers are manufactured into products in the workshop and to a larger scale in industry. How polymers are manufactured into products in the workshop and to a larger scale in industry. To know how accuracy is ensured when making prototypes and products. To know motion types and the different mechanical systems. To know electronic systems function and the application of programmable components.

Where have I seen this learning before?
In KS3 you will have worked with a range of materials, mechanisms and electronics components to make products in the design & technology workshop. You will have developed your knowledge of tools and equipment throughout KS3.

What could I use it for?
You will be able to apply your knowledge in your GCSE examination and apply your understanding in the non-examined assessment.

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 LP3.1, I will know: 06/01/25 - (WK 2)	Key Vocabulary	Homework
how polymer materials are manufactured into products (7.2); how to continue to iterate ideas using card modelling and CAD Sketch Up.	Injection moulding	Manufacturing with polymers 1.
In LP3.2, I will know: 13/01/25 - (WK 1)	**Key Vocabulary**	**Homework**
how to record, test and evaluate design developments; how polymer materials are manufactured into products (7.2).	Rotational moulding	Manufacturing with polymers 2.
In LP3.3, I will know: 20/01/25 - (WK 2)	**Key Vocabulary**	**Homework**
how to apply structural integrity into prototypes and products (6;1); how accuracy is achieved (7.3).	Structural integrity	Ensuring accuracy in manufacturing.
In LP3.4, I will know: 27/01/25 - (WK 1)	**Key Vocabulary**	**Homework**
how and why products are made to different scales of production (7;5); how to continue to iterate ideas using card modelling and CAD Sketch Up. Extended Task.	Scales of production	Scales of production.
In LP3.5, I will know: 03/02/25 - (WK 2)	**Key Vocabulary**	**Homework**
how movement and mechanisms are used to make functional products (6;3); how to present my iterations to show how my ideas are progressing.	Oscillating	Movement and mechanical devices.
In LP3.6, I will know: 10/02/25 - (WK 1)	**Key Vocabulary**	**Homework**
how electronic systems and pogrammable components are used in products (6;4); how to evaluate my iterations and suggest improvements.	Microcontroller	Electronic systems & programmable components.
LP3 RLW, I will: 24/02/25 - (WK 2)		
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.	Revision strategy	Revise for summative assessment.
In LP3.7, I will know: 03/03/25 - (WK 1)	**Key Vocabulary**	**Homework**
how to present a final design in preparation for manufacturing. Extended Task.	Final design	Learning review of NEA.

PRT Task 1

PRT Task 2

Resources to support learning:

The following websites contain extensive revision material and information to increase design & technology subject knowledge: www.technologystudent.com; www.mr-dt.com; www.bbc.co.uk/bitesize.

FFET Award Challenge for this Learning Programme:

Design suitable branding including brand name and logo for the final NEA prototype.