The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 13 DT: Product Design A Level
Learning Programme 2

The LORIC skill focus for his LP is: ORGANISATION

The Moral Virtues focus for this LP are: COMPASSION and HONESTY

Compassion - the quality of feeling pity and concern for the sufferings or misfortunes of others.
Honesty - the quality of being truthful.

What will I be learning about in this Learning Programme?

How designers use different approaches for design development. How to review ideas against user requirements. How to iteratively develop design ideas to meet user requirements. How to create iterative models using digital and physical prototyping. How to select appropriate materials for NEA ideas. The implications of wider issues on the designing, development and manufacture of products.

Where have I seen this learning before?

During Year 12 D&T you will have designed and prototyped a series of ideas, applying the cyclic iterative design process. You will have applied digital design tools to present, test and evaluate your design ideas. You will have considered the wider and environmental issues that can affect product design during your GCSE in Design & Technology.

What could I use it for?

You will apply your knowledge in the A Level D&T examination and will utilise your design skills & understanding in the A Level NEA, the Iterative Design Project.

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 LP2.1, I will know: 19/10/26 - (WK 2)	Key Vocabulary	Homework
how to initiate the production of physical prototypes for my first selected idea; the factors to consider whilst investigating design possibilities; how the life cycle assessment is used by designers to evaluate environmental impact from cradle to grave; the source and origin of materials and their ecological and social footprint (3.1).	Life cycle assessment	Life cycle assessment. Write up prototype evaluations.
In LP2.2, I will know: 02/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
the effects and depletion of using natural sources of energy and raw materials; will know the environmental and social impact of recycling and the circular economy (3.1); how to continue to iterate ideas by prototyping, testing and evaluating.	Depletion	Circular economy. Write up prototype evaluations on my NEA.
LP2 RLW, I will: 09/11/26 - (WK 2)		
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.	Revision	Use revision techniques to prepare for the summative assessment.
In LP2.3, I will know: 16/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
the impact of planned obsolescence on the environment and society; what environmental incentives and directives exist to protect the environment (3.1); how to continue to iterate ideas by prototyping, testing and evaluating. Extended Task.	Directives	Environmental incentives and directives. Write up prototype evaluations on my NEA.
In LP2.4, I will know: 23/11/26 - (WK 2)	**Key Vocabulary**	**Homework**
what factors to consider when developing design solutions for manufacture; the principles of designing for manufacture and assembly (3.2); how to review my iterated ideas against design requirements and primary user feedback.	DFMA	Design for manufacture and assembly. Gather primary user feedback for NEA.
In LP2.5, I will know: 30/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
what factors to consider when manufacturing products and achieving optimisation (3.3); how to use CAD to further iterate my selected ideas.	Optimum	Optimum use of materials and components. Evaluate CAD iterations of selected ideas.
In LP2.6, I will know: 07/12/26 - (WK 2)	**Key Vocabulary**	**Homework**
what factors to consider when distributing products to markets (3.4); how to use CAD to further iterate my selected ideas. Extended Task.	Distribution	Material acquisition and product distribution.
In LP2.7, I will know: 14/12/26 - (WK 1)	**Key Vocabulary**	**Homework**
how intellectual property legislation protect ideas and innovation (3.4); how to review the progress of my NEA Iterative Design Project and plan my next steps.	Intellectual property	Intellectual property. Design development section presentation.

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.mr-dt.com; www.bbc.co.uk/bitesize. Product design maker YouTube tutorials www.productdesignermaker.com; Jude Pullen's Lockdown Lectures from Bangor University - YouTube.

FFET Award Challenge for this Learning Programme:

Complete a computer aided design challenge and presentation board.