The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 10 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?
The factors that affect the selection of materials. How materials have different characteristic properties. The source and categories of materials, their types and properties (timbers, papers, textiles and metals). How to present a range of ideas using drawing techniques, labelling and annotation.

Where have I seen this learning before?
In KS3 you will have worked with a range of materials 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 to design timber and polymer prototypes for GCSE and beyond. You will identify the timbers and polymers used to manufacture a range of products you may use in your everyday life.

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
which factors affect the selection of materials (5.2c, 8.1a); how materials have different characteristic properties (5.2a).	Properties	Material selection & properties.
In LP3.2, I will know: 13/01/25 - (WK 1)	**Key Vocabulary**	**Homework**
how to test and compare the characteristic properties and workability of a range of materials; the source of timbers and how they are processed into stock forms (5.3, 5;4); how timbers are categories and the use of different timber types (5.1b).	Workability	Processing trees into timber & timber types.
In LP3.3, I will know: 20/01/25 - (WK 2)	**Key Vocabulary**	**Homework**
the source of polymers and how they are processed into stock forms (5.3, 5;4); how polymers are categorised and the use of different polymer types (5.1d); how polymers can affect the ecosystem.	Thermosetting	Processing polymers & polymer categories.
In LP3.4, I will know: 27/01/25 - (WK 1)	**Key Vocabulary**	**Homework**
how paper and boards are categories and the use of different paper and board types (5.1a); how textiles are categorised and the use of different textiles types (5.1e); how metals are categories and the use of different metal types (5.1c). Extended Task.	Corrugated	Papers & textiles types.
In LP3.5, I will know: 03/02/25 - (WK 2)	**Key Vocabulary**	**Homework**
how to apply 2D and 3D sketching skills to design a timber and polymer desk lamp (4.1a); how to ensure structural integrity when designing products (6.1a,b).	Structural integrity	Metal categories and types
In LP3.6, I will know: 10/02/25 - (WK 1)	**Key Vocabulary**	**Homework**
how to develop the desk lamp design to incorporate both timbers and polymers.	Annotation	Annotate and label design ideas.
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 plan out the component parts of the desk lamp and calculate the dimensions of the materials required (8.1). Extended Task.	Planning	Production planning.

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:

Complete a Sketch Up computer aided design challenge.