The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 8 Systems - CAD CAM Lighting
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?
Electronic systems and their input, process and output. The function of electronic components. How to solder safely to produce a functioning light. How to use CAD/CAM to manufacture.

Where have I seen this learning before?
In KS2 design & technology you will have used simple electronic components to make electrical systems in a product.

What could I use it for?
You can use electronic components to manufacture electronic systems in design & technology over your next 5 years; you will apply your knowledge of electronic systems in the GCSE Design & Technology exam.

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**
what all systems consist of - input, process, output; how to use diagrams to show how electronic circuits work.		Input	3 systems in your home, identify the input, and outputs.
In LP2.2, I will know:	**02/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to explore the CAD CAM Light project context; how to identify the needs and wants of your primary user.		Technical Specification	Design research.
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.		Revise	Use revision techniques to prepare for summative assessment.
In LP2.3, I will know:	**16/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to produce a series of design options for my CAD CAM light project. Extended Task.		Design Fixation	Sensors in systems.
In LP2.4, I will know:	**23/11/26 - (WK 2)**	**Key Vocabulary**	**Homework**
how to solder safely; how to precisely solder components onto my PCB.		Soldering	Soldering Iron Safety.
In LP2.5, I will know:	**30/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to use CAD and CAM to manufacture my light.		CAD (Computer aided design)	Advantages and Disadvantages of CAD and CAM.
In LP2.6, I will know:	**07/12/26 - (WK 2)**	**Key Vocabulary**	**Homework**
the main stages of the vacuum forming process; how to safely use the vacuum former to form the base of my light. Extended Task.		Vacuum	Vacuum forming stages.
In LP2.7, I will know:	**14/12/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to assemble, test and evaluate my final manufactured light.		Evaluate	Primary user feedback.

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.

FFET Award Challenge for this Learning Programme:
Create a safe soldering fact sheet for pupils to use as a guide when soldering.