

Year 8 Systems - CAD CAM Lighting Learning Programme 1

The LORIC skill focus for his LP is: LEADERSHIP The Moral Virtues focus for this LP are: COURAGE and HUMILITY.		Literacy Non-Negotiables: • 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 • Vocabulary to be taught using the Frayer model	
Courage - Acting with bravery and overcoming fears. I will show courage by answering a question in class even when I'm not 100% sure of the answer.			
Humility - Having a modest view of oneself. I will show humility by admitting mistakes and asking for help when needed.			
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.			
In LP1.1, I will know: what all systems consist of - input, process, output; how to use diagrams to show how electronic circuits work.	01/09/26 - (WK 1)	Key Vocabulary	Homework
		Input	3 systems in your home, identify the input, and outputs.
In LP1.2, I will know: how to explore the CAD CAM Light project context; how to identify the needs and wants of your primary user.	07/09/26 - (WK 2)	Key Vocabulary	Homework
		Technical Specification	Design research.
In LP1.3, I will know: how to produce a series of design options for my CAD CAM light project.	14/09/26 - (WK 1)	Key Vocabulary	Homework
		Design Fixation	Sensors in systems.
Extended Task.			
In LP1.4, I will know: how to solder safely; how to precisely solder components onto my PCB.	21/09/26 - (WK 2)	Key Vocabulary	Homework
		Soldering	Soldering Iron Safety.
In LP1.5, I will know: how to use CAD and CAM to manufacture my light;	28/09/26 - (WK 1)	Key Vocabulary	Homework
		CAD (Computer aided design)	Advantages and Disadvantages of CAD and CAM.
In LP1.6, I will know: the main stages of the vacuum forming process; how to safely use the vacuum former to form the base of my light.	05/10/26 - (WK 2)	Key Vocabulary	Homework
		Vacuum	Vacuum forming stages.
Extended Task.			
In LP1.7, I will know: how to assemble, test and evaluate my final manufactured light.	12/10/26 - (WK 1)	Key Vocabulary	Homework
		Evaluate	Primary user feedback.
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.			

PRT Task 1

PRT Task 2