

## Year 8 Design & Technology - Systems, CAD CAM Lighting Learning Programme 4

<p>The LORIC skill focus for this LP is: INITIATIVE. The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.</p> <p>Integrity - Having strong moral principles. I will show integrity by taking responsibility for my actions. Gratitude - Feeling and expressing thanks. I will show gratitude by saying please and thank you.</p>		<p><b>Literacy Non-Negotiables:</b></p> <ul style="list-style-type: none"> <li>• Capital letters must be used at the start of sentences and for the first letter of proper nouns</li> <li>• Full stops must be used at the end of a sentence</li> <li>• Question marks must be used at the end of a question</li> <li>• Apostrophes should only be used for possession or omission</li> <li>• Days of the week and months must be spelled correctly</li> <li>• Key words must be spelled correctly</li> <li>• Vocabulary to be taught using the Frayer model</li> </ul>	
<p><b>What will I be learning about in this Learning Programme?</b> 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.</p> <p><b>Where have I seen this learning before?</b> In KS2 design &amp; technology you will have used simple electronic components to make electrical systems in a product.</p> <p><b>What could I use it for?</b> You can use electronic components to manufacture electronic systems in design &amp; technology over your next 5 years; you will apply your knowledge of electronic systems in the GCSE Design &amp; Technology exam.</p>			
<p><b>In LP4.1, I will know:</b> 09/03/26 - (WK 2)</p> <p>what all systems consist of - input, process, output; how to use diagrams to show how electronic circuits work.</p>			
	Frayer Model Words	Input	Homework
<p>3 systems in your home, identify the input, and outputs.</p>			
<p><b>In LP4.2, I will know:</b> 16/03/26 - (WK 1)</p> <p>how to explore the CAD CAM Light project context; how to identify the needs and wants of you primary user.</p>		Frayer Model Words	Homework
	Technical Specification	Design research.	
<p><b>In LP4.3, I will know:</b> 23/03/26 - (WK 2)</p> <p>how to produce a series of design options for my CAD CAM light project.</p> <p>Extended Task.</p>		Frayer Model Words	Homework
	Design Fixation	Sensors in systems.	
<p><b>In LP4.4, I will know:</b> 13/04/26 - (WK 1)</p> <p>how to solder safely; how to precisely solder components onto my PCB.</p>		Frayer Model Words	Homework
	Soldering	Soldering Iron Safety.	
<p><b>In LP4.5, I will know:</b> 20/04/26 - (WK 2)</p> <p>how to use CAD and CAM to manufacture my light;</p>		Frayer Model Words	Homework
	CAD (Computer aided design)	Advantages and Disadvantages of CAD and CAM.	
<p><b>In LP4.6, I will know:</b> 27/04/26 - (WK 1)</p> <p>the main stages of the vacuum forming process; how to safely use the vacuum former to form the base of my light.</p> <p>Extended Task.</p>		Frayer Model Words	Homework
	Vacuum	Vacuum forming stages.	
<p><b>In LP4.7, I will know:</b> 04/05/26 - (WK 2)</p> <p>how to assemble, test and evaluate my final manufactured light.</p>		Frayer Model Words	Homework
	Evaluate	Primary user feedback.	
<p><b>Resources to support learning:</b> The following websites contain extensive revision material and information to increase design &amp; technology subject knowledge: <a href="http://www.technologystudent.com">www.technologystudent.com</a>; <a href="http://www.mr-dt.com">www.mr-dt.com</a>; <a href="http://www.bbc.co.uk/bitesize">www.bbc.co.uk/bitesize</a>.</p>			
<p><b>FFET Award Challenge for this Learning Programme:</b> Create a safe soldering fact sheet for pupils to use as a guide when soldering.</p>			

