

## Year 12 Design & Technology Product Design Learning Programme 3

<p>The LORIC skill focus for this 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. <b>What will I be learning about in this Learning Programme?</b> To know the manufacturing processes to make final prototypes from polymers, metals and timbers. To know the manufacturing processes to make commercial products from polymers, metals and timbers.</p> <p><b>Where have I seen this learning before?</b> In KS3 D&amp;T you will have applied workshop processes to make prototypes; at GCSE level you will have learnt how timber products are manufactured.</p> <p><b>What could I use it for?</b> You will apply your knowledge to different manufacturing processes to produce prototypes for your A level exam and non-examined assessment. You will be able to identify how a range of everyday products are manufactured.</p>		<p><b>Literacy:</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> </ul>
<p><b>In LP3.1, I will know:</b> the processes and equipment used to manufacture with polymers in a workshop; what type of wasting techniques (subtraction processes) are used with polymers; plan out the production of my passive speaker.</p>	<p><b>06/01/25 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Wastage</p>	<p><b>Homework</b></p> <p>Workshop wastage techniques.</p>
<p><b>In LP3.2, I will know:</b> how to apply polymer processing techniques such as line bending, vacuum forming and thermoforming (7.2b); how polymers can be processed commercially by injection, blow moulding and extrusion (7.3a); initiate the manufacture of the passive speaker.</p>	<p><b>13/01/25 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Commercial manufacturing</p>	<p><b>Homework</b></p> <p>Workshop polymer processing methods.</p>
<p><b>In LP3.3, I will know:</b> how polymers can be processed commercially by rotational and compression moulding (7.3a); how to identify the polymer processes applied to make products (7.2b, 7.3a); how to use tools and equipment to manufacture the passive speaker.</p>	<p><b>20/01/25 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Compression moulding</p>	<p><b>Homework</b></p> <p>Commercial polymer processing methods.</p>
<p><b>In LP3.4, I will know:</b> how metals can be processed in a DT workshop (7.2b); how to use tools and equipment to manufacture the passive speaker.</p> <p>Extended Task.</p>	<p><b>27/01/25 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Sand casting</p>	<p><b>Homework</b></p> <p>Metal processing methods.</p>
<p><b>In LP3.5, I will know:</b> how metals are processed commercially to make products (7.3a); how metals can be die casted into products.</p>	<p><b>03/02/25 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Die casting</p>	<p><b>Homework</b></p> <p>Commercial metal processing methods.</p>
<p><b>In LP3.6, I will know:</b> how timbers can be processed in a DT workshop (7.2b); how timbers can be processed commercially using computer numeric control (CNC) equipment (7.3a); how to use finishing processes to protect and enhance the passive speaker.</p>	<p><b>10/02/25 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>Laminating</p>	<p><b>Homework</b></p> <p>Workshop timber processing methods.</p>
<p><b>LP3 RLW, I will:</b> review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.</p>	<p><b>24/02/25 - (WK 2)</b></p> <p><b>Key Vocabulary</b></p> <p>Revision strategy</p>	<p><b>Homework</b></p> <p>Revise for summative assessment.</p>
<p><b>In LP3.7, I will know:</b> how materials are joined together through temporary and permanent processes (7.2a); how to finalise the manufacture of the passive speaker.</p> <p>Extended Task.</p>	<p><b>03/03/25 - (WK 1)</b></p> <p><b>Key Vocabulary</b></p> <p>CNC router</p>	<p><b>Homework</b></p> <p>Commercial timber processing methods.</p>
<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>; Product design maker YouTube tutorials <a href="http://www.productdesignermaker.com">www.productdesignermaker.com</a>; Jude Pullens Lockdown Lectures from Bangor University - YouTube.</p>		
<p><b>FFET Award Challenge for this Learning Programme:</b> Assist in a DT practical lesson to support others in another year group.</p>		

PRT Task 1

PRT Task 2