



*The De Montfort School*

UNLOCKING YOUR CHILD'S POTENTIAL

Programme of Learning

# Design & Technology

## Key Stage 5 – A-Level Product Design – Years 12 & 13

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## Product Design

Course Content	Assessment	Independent Study
<b><i>Year 12 Term 1</i></b>		
<p>After an introduction to the course and some foundation skills building activities students will start their first piece of assessed coursework. ‘Product Study’ involves the analysis, re-design and improvement of an existing product. The students will be expected to complete the designing stage during this term. In order to do this they will improve and develop their knowledge of analysis techniques, drawing and presentation techniques (including computer aided design), research, materials and manufacturing theory. They will also need to consider the sustainable aspects of designing and manufacturing products.</p> <p>Alongside the coursework unit students will be learning how to develop their creativity and be innovative. This is in preparation for their ‘Advanced Innovation Challenge’ Exam. Preparation for this unit will involve practising exam style challenges,</p>	<p>The coursework is marked in accordance with OCR exam board criteria. Written, developmental feedback will be given on any other work.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"> <li>• Source their products for analysis.</li> <li>• Practise analysing products.</li> <li>• Practise presentation techniques.</li> <li>• Carry out further reading on materials theory.</li> <li>• Carry out research.</li> <li>• Keep on top of their coursework.</li> <li>• Source inspirational items for their “job bag” that will be taken into their exam.</li> <li>• Complete past exam paper work.</li> </ul>
<b><i>Year 12 Term 2</i></b>		
<p>The bulk of this term will be spent manufacturing the models to illustrate and develop their designs for the ‘product study’. In order to do this the students will develop their knowledge of modelling materials and processes and learn the practical skills relevant to their design. They will also have to design and build a method for formally testing an aspect of their design so that they can record and analyse the results. Preparation for the ‘Advanced Innovation Challenge’ will continue in this term. A mock exam will be sat where they have 6 hours to design and model an innovative product.</p>	<p>The coursework is marked in accordance with OCR exam board criteria. Written, developmental feedback will be given on any other work.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"> <li>• Carry out further reading on manufacturing theory.</li> <li>• Keep on top of their coursework by attending catch-up sessions.</li> <li>• Source inspirational items for their “job bag” that will be taken into their exam.</li> <li>• Complete past exam paper work.</li> </ul>

<b><i>Year 12 Term 3</i></b>		
<p>During this term students will complete their 'product study' where feedback will be given on the work so far so that they can achieve the highest grades. Students will be given the opportunity to make improvements to their work. They will then evaluate their design concepts and suggest further improvements. Students will sit their 'Advanced Innovation Challenge' and a reflection paper a couple of weeks later. Once all AS units are complete students will start to identify a need for a new product that they will design in Year 13.</p>	<p>The coursework is marked in accordance with OCR exam board criteria. Written, developmental feedback will be given on any other work.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"> <li>• Carry out further reading on manufacturing theory.</li> <li>• Keep on top of their coursework by attending catch-up sessions.</li> <li>• Source inspirational items for their "job bag" that will be taken into their exam.</li> <li>• Complete past exam paper work.</li> </ul>
<b><i>Year 13 Term 4</i></b>		
<p>Students now start their second piece of assessed coursework. 'Design, Make &amp; Evaluate' is an opportunity to build on what was learnt during their Design and Technology study so far. The students are given more freedom in this project in terms of what they make but also in the techniques they use to design it. They will be expected to select the techniques and strategies that work best for them. The designing and planning stage will be completed during this term.</p>	<p>The coursework is marked in accordance with OCR exam board criteria. Written, developmental feedback will be given on any other work.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"> <li>• Practise Pro Desktop designing.</li> <li>• Carry out further reading on materials theory.</li> <li>• Carry out research.</li> <li>• Keep on top of their coursework.</li> </ul>
<b><i>Year 13 Term 5</i></b>		
<p>Most of this term will be spent manufacturing the product designed in term 4. In order to do this the students will develop their knowledge of materials and processes and learn the practical skills relevant to their design. This project is a chance to try skills and techniques that have not been used before; this helps to build subject knowledge for the final exam. They then reflect on the project and evaluate their outcome; they will also devise a marketing campaign for their product.</p>	<p>The coursework is marked in accordance with OCR exam board criteria. Written, developmental feedback will be given on any other work.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"> <li>• Carry out further reading on manufacturing theory.</li> <li>• Keep on top of their coursework by attending catch-up sessions.</li> <li>• Complete past exam papers</li> </ul>

***Year 13 Term 6***

<p>During this term students will revise all that has been learnt in the course for an external exam. This will involve learning about materials, their uses, how they are processed and finished. It is also an opportunity to cover any theory work that has not featured in their coursework.</p>	<p>Past paper materials will be marked in accordance with OCR exam board criteria.</p>	<p>Students will be expected to:</p> <ul style="list-style-type: none"><li>• Learn the key information from the revision materials.</li><li>• Revise the topics from the revision list.</li><li>• Complete past paper questions.</li></ul>
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