

# Design and Technology Year 7 Curriculum Overview 2022/23



## Design Technology Curriculum Overview- Year 8 2022/2023

<b>Year 8 DT Overview</b>	<p>In Year 8 students will investigate a variety of simple mechanisms with a focus on levers, linkages and CAM mechanisms. They will manufacture a wooden CAM toy as an individual activity. This will follow plans to measure, cut, finish and then assemble the individual pieces. Students will build on their practical skills within the workshop ensuring they are working safely, independently to produce a range of products.</p> <p>In developing practical skills students will understand the importance of production plans for manufacturing products, this will include producing detailed axonometric drawings, equipment checks, required parts for manufacture and material lists. This, therefore enhancing their ability to make effective design choices through core technical knowledge and understanding of manufacturing processes within the Engineering industry.</p> <p>Students will develop their design skills following a unit on branding and product packaging. They will explore nets, use of colour, aesthetics, logos and lettering to develop a drinks package. Students will develop their own logo and lettering to use on the package. They will then cut out and assemble their package ensuring accuracy of folds using scoring.</p> <p>Over the course of Key Stage 3, students will be taught the following skills and knowledge-</p> <ul style="list-style-type: none"> <li>• the Design Cycle (including design briefs, specifications and user requirements)</li> <li>• Analysis and Research (including industrial process, materials and the law)</li> <li>• Presenting design ideas (including a range of techniques, British Standards and Computer Aided Design)</li> <li>• Manufacturing (including production plans, safe working practices, use of tools and machinery and evaluation)</li> </ul>
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Week Number	Themes/ Topics	Key Knowledge & Skills	Key Assessments
1-6 (Autumn 1)	<b>Mechanisms</b>	<ul style="list-style-type: none"> <li>• Identifying and understanding the working practices of a range of different mechanisms- linkages, CAMS, levers</li> <li>• Modelling linkages to show how they work</li> <li>• CAM mechanisms and how they work</li> <li>• Development of practical skills</li> <li>• Safety in the workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Year 8 Baseline Assessment</li> <li>• Practical skills- teacher observation</li> </ul>
7-13 (Autumn 2)	<b>Mechanisms</b>	<ul style="list-style-type: none"> <li>• Safe use of the pillar drill</li> <li>• Development of practical skills</li> <li>• Identification of woods and their properties</li> </ul>	<ul style="list-style-type: none"> <li>• CAM shape manufacture</li> </ul>

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<p><b>14-18</b> <b>(Spring 1)</b></p>	<p><b>CAM Toy</b></p>	<ul style="list-style-type: none"> <li>• GANTT Charts</li> <li>• Translation of material lists</li> <li>• Independent working</li> <li>• Safe working practices</li> </ul>	<ul style="list-style-type: none"> <li>• CAM Drawing Assessment</li> </ul>
<p><b>19-24</b> <b>(Spring 2)</b></p>	<p><b>CAM Toy</b></p>	<ul style="list-style-type: none"> <li>• Making a prototype</li> <li>• Diary of making</li> <li>• Evaluation against the specification</li> <li>• Suggestions for improvement</li> <li>• Strengths and weaknesses of product manufacture</li> </ul>	<ul style="list-style-type: none"> <li>• CAM production</li> <li>• Manufactured CAM Toy</li> </ul>
<p><b>25-30</b> <b>(Summer 1)</b></p>	<p><b>Packaging</b></p>	<ul style="list-style-type: none"> <li>• Research and analysis of design brief, including use of colours</li> <li>• Illustration</li> <li>• Lettering styles and use of serif and sans serif fonts</li> <li>• Logo design and branding</li> </ul>	<ul style="list-style-type: none"> <li>• Logo designs</li> </ul>
<p><b>31-38</b> <b>(Summer 2)</b></p>	<p><b>Packaging</b></p>	<ul style="list-style-type: none"> <li>• Final illustrations</li> <li>• TV advertising and storyboards</li> <li>• Nets</li> <li>• Final packing manufacture</li> </ul>	<ul style="list-style-type: none"> <li>• Year 8 End of year exam</li> </ul>