

## PRODUCT DESIGN Year 12 Curriculum Overview

<b>What is the Year 12 Product Design curriculum aiming to achieve?</b>		
What do we want our Year 12 Technologists to be like?	How are we building on prior learning?	How can parents/carers support their child's learning?
<ul style="list-style-type: none"> <li>• Ambitious in the use of CAD</li> <li>• Embracing change and personal development</li> <li>• Seeking opportunities to enhance skills</li> <li>• Finding joy in designing</li> <li>• Applying - knowledge from other A Levels being studied</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities to gain deep experiences</li> <li>• Techniques taught in KS4 are modelled upon recommended (Eduqas) KS5 approaches</li> <li>• Use of key phrases such as PARK, RAID, DRIVE ON</li> <li>• Approaches employed when designing</li> </ul>	<ul style="list-style-type: none"> <li>• Visit centres promoting discussion such as design museums</li> <li>• Discuss feedback provided</li> <li>• Create a workspace that enables/promotes creativity</li> <li>• Function as a client for their NEA</li> <li>• Look at how products in the home are constructed and materials used</li> </ul>

<b>How are we organising the Year 12 Product Design curriculum?</b>									
	Autumn 1		Autumn 2		Spring 1		Spr. 2	Summer 1	Summer 2
<b>Topics</b>	Induction Constructing key components	Chair Flair Generating innovative designs	Chair Flair Manufacturing the design proposal	Pringles Design	Mock prep.	Pringles Manufacture	Mock prep.	Launch of NEA	Employing iterative approach
<b>Threshold Concepts</b>	Applying 3 dimensional skills	Appreciation- the work of others	Role of a manufacturing specification and project log	Sustainability Responsibility of the designer	Knowledge and understanding	Standards required when prototyping	Knowledge and understanding	Understanding and effective communication of design opportunities	Effective use of techniques
<b>Skills</b>	Accuracy construction working principles	Use of Mind Maps, idea generation techniques	Working safely Accuracy employing tools	Materials- an appreciation of the impact choices make	Applying K & U	Accuracy in representing design intentions	Applying K & U	Demonstrating intelligent and informed design choices	Ability to generate innovative designs
<b>Enrichment within the curriculum</b>	Visits to the Gordon Russell Design Museum, Broadway, Design Museum + V&A, London, Birmingham Design Festival, Digbeth, WJEC/Eduqas innovations exhibition, Cardiff, Worcester Bosch & Yamazaki Mazak.								
<b>Cross curricular links</b>	Mathematics – calculating values (converting units, percentages, scales, areas of shapes i.e., circles, and volumes) Physics – understanding properties of materials, energy generation and storage, smart materials Business Studies - industry and enterprise, investigation, primary and secondary data Geography - sustainability and the environment Art - the work of others								
<b>Extra-curricular opportunities</b>	Schools in F1, CREST Gold award through the Engineering Education Scheme and links with STEAM ambassadors								

<b>What are the intended outcomes of the Year 12 Technology curriculum?</b>						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Opportunities to show progress (Assessments)</b>	Generation of innovative design proposals	Manufacturing design proposals	PPE – application of CAD	Outcomes – (Design and Manufacture) to a recognised need	NEA assessment (Eduqas) mind maps Written examination	Application and demonstration of iterative design process
<b>Impact on personal development (SMSC)</b>	Within the product design curriculum students will explore the work of others (artists and designers including cultures) that could inspire their work further providing a context of design history movements. Belief that design boots the emotional intelligence of those that experience it, giving them empathy exposing them to the ideas of others.					
<b>Preparation for the next stage of education</b>	A greater understanding of the responsibility of a designer requirement of working towards a truly sustainable world. Platform to progress successfully in higher education. Application and linking of other subjects such as science. Opportunities through visits to see application of learning and subject in an industrial context.					