



Technology at Cox Green
Curriculum Plan
Key Stage 4
Year 9 Design and Technology AQA specification

Project 1	Project 2	Project 3	Project 4
Product Design	Product Design	Product Design	Product Design
<p>Steel work</p> <p>Assessment: coursework sections design ideas, modelling and making. Section B exam questions.</p> <p>Skills: Developing knowledge and understanding of the key areas of the design process. Focus on development of idea. Introduction to industrial process including welding, bending, shaping and coating steel.</p> <p>SMSC/British Values: Industrial processes, suitability of steel and the effect on the environment.</p>	<p>Children’s Shelf</p> <p>Assessment: coursework sections design ideas, development and making. Section B exam questions.</p> <p>Skills: Developing knowledge and understanding of the key areas of the design process. Focus on wood and the sustainability of materials. As well as designing for a target market. Pupils further develop creative design techniques including laminating, joinery and finishes.</p> <p>SMSC/British Values: Sustainability of materials and how target market can effect design.</p>	<p>Introduction to new technologies</p> <p>Assessment: coursework sections research and modeling. Section B exam questions.</p> <p>Skills: Developing knowledge and understanding of the new and emerging technologies including 3D printing. Focus on rapid prototyping and modelling. Pupils develop CAD/CAM skills as well as design software skills. They will further develop modeling skills and understand how these can be link with CAD/CAM modelling. Pupils will design and model a future product using new and future processes and material concepts.</p> <p>SMSC/British Values: Up to date understanding of technology and how this is applied in industry.</p>	<p>Calendars</p> <p>Assessment: coursework sections card manufacture, printing and CAD/CAM. Section B exam questions.</p> <p>Skills: Developing knowledge and understanding of the key areas of the design process. Focus on prototyping and creative skills. Pupils develop CAD/CAM skills as well as design software skills. They develop card construction skill and develop knowledge of layering and how this can lead to higher quality finishes.</p> <p>SMSC/British Values: Recycling of card and paper, use of software in companies and how to market an idea.</p>
<p>Enrichment/Extra Curriculum:</p> <ul style="list-style-type: none"> • <i>Extended support at break and lunch times.</i> • <i>Afterschool support on Tuesday and Thursday</i> 			



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Year 10 Design and Technology AQA specification

Project 1	Project 2	Project 3	Project 4
<p><i>Resistant Materials</i></p> <p><u>Nomadic Chair</u> Assessment: coursework sections production processes and making. Section A exam questions.</p> <p>Skills: Recap learning from KS3, exploring materials processes and the production process. Develop analyzing skills and use them to analyse a product in detail. Understand how to generate a range of ideas and develop one into a final concept. Gain an understanding of batch production and the use of jigs and how these are used in industry.</p> <p>Working in a team to produce a batch of stools. The importance of accuracy and how this can be achieved with the use of jigs. Achieving and applying a high quality finish. Industrial processes including cutting a thread and machining steel.</p> <p><i>SMSC/British Values:</i> <i>Industrial processes and batch production, team work and sustainability.</i></p>	<p><i>Resistant Materials</i></p> <p><u>Technical drawing</u> Assessment: Designing. Section B exam questions.</p> <p>Skills: Understand and develop how to draw accurate isometric and orthographic projections. Develop one perspective and two perspective drawing skills. Use CAD to recreate the hand taught skills allowing pupils to choose strongest area of drawing.</p> <p><i>SMSC/British Values:</i> <i>Understanding how design is used outside of school environment.</i></p>	<p><i>Resistant Materials</i></p> <p><u>Lamp</u> Assessment: all coursework sections. Section A exam questions.</p> <p>Skills: Developing and putting into practice their knowledge of the design process. They are producing a mock portfolio which will include detailed, relevant research, design ideas, planning, making, testing and evaluation. Use isometric skills for design ideas. Research mechanism in detail they can be recreated.</p> <p>Develop working knowledge of wood joinery and identify correct tool and process use. Use research to design, develop and make a working mechanism.</p> <p><i>SMSC/British Values:</i> <i>Industrial processes, structures, mechanism and force.</i></p>	<p><i>Resistant Materials</i></p> <p><u>Start coursework</u> Assessment: all coursework sections. Section B exam questions.</p> <p>Skills: Developing and putting into practice their knowledge of the design process. They are producing a portfolio which will include detailed, relevant research, design ideas, developed ideas, modeling, planning, making, testing and evaluation.</p> <p>Practical skills include CAD/CAM, laminating, lathe work, sawing woods, metals and plastics, heat treatment including welding, drilling, hand tool and joinery skills, finishing and applying a finish.</p> <p><i>SMSC/British Values:</i> <i>Industrial processes, sustainability, designing for a real world market and time management and organisation.</i></p>
<p>Exam preparation thought-out the year in the form of past exam questions in most lessons as starters or plenaries. Revision lessons four times per term.</p>			
<p>Enrichment/Extra Curriculum:</p> <ul style="list-style-type: none"> <i>Tuesday support sessions to catch up on or improve coursework/revise for examinations.</i> 			

**Key Stage 4
Year 11 *Resistant Materials***

Coursework	Exam		
<i>Resistant Materials</i>	<i>Resistant Materials</i>		
<p><u>Coursework</u> Assessment: all coursework sections. Section A and B exam questions.</p> <p>Skills: developing and putting into practice their knowledge of the design process. They are producing a portfolio which will include detailed, relevant research, design ideas, developed ideas, modeling, planning, making, testing and evaluation.</p> <p>Practical skills include CAD/CAM, laminating, lathe work, sawing woods, metals and plastics, heat treatment including welding, drilling, hand tool and joinery skills, finishing and applying a finish.</p> <p><i>SMSC/British Values:</i> <i>Industrial processes, sustainability, designing for a real world market and time management and organisation.</i></p>	<p><u>Exam</u> Revision topics: Specification Design Design development Evaluation Woods metals and plastics Material sources Material finishes Material joinery Material uses Sustainability of materials</p>	<p>Sustainability Maintenance Tools Equipment Health and safety PPE Design eras Quality control CAD/CAM Adhesives Smart and modern materials</p>	<p>Product analysis Scale of production Basic electronics</p>
<p>Enrichment/Extra Curriculum:</p> <ul style="list-style-type: none"> <i>Tuesday and Thursday support sessions to catch up on or improve coursework/revise for examinations.</i> 			