

**Technology at Cox Green
Curriculum Plan
Key Stage 5
Year 3D AQA Specification**

Coursework	Exam		
<i>Product Design</i>	<i>Product Design</i>		
<p><u>Coursework year 12</u></p> <p>Assessment: all coursework sections and exam questions.</p> <p>Skills: developing and putting into practice their knowledge of the design process. They are producing a portfolio consisting of two design and make products. These 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><u>Coursework year 13</u></p> <p>Assessment: all coursework sections and exam questions.</p> <p>Skills: developing and putting into practice their knowledge of the design process. They are producing a portfolio consisting of one design and make product. This will be a product that solves a problem and is a viable product in the real world. The portfolio 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>	<ul style="list-style-type: none"> • <u>Exam</u> • Revision topics: • Materials, components and application • Plastics • Elastomers • Composite materials • Metals • Non-ferrous metals • Alloys and alloying • Wood • Veneers, laminates and composites • Glass • Ceramics • Papers and boards • Printing • Smart and Modern materials • Hand and commercial processing • Joining processes • Joining polymers • Joining ceramics 	<ul style="list-style-type: none"> • Corrosion, decay and degradation • Finishes and finishing processes • Properties and materials testing • Design, environment and ergonomics • Environmental and sustainability issues • Ergonomics and anthropometrics • Inclusive design • Consumer safety • Design and manufacture • Materials and components • Industrial materials testing • Design and market influences • Roles in the design process 	<ul style="list-style-type: none"> • The marketing function • Design methods • Design activity within organisations • The design process • Development • Testing and evaluation • Patents • Communications and representation of design ideas • Sustainability and environmental concerns • Safety • Human needs and human factors • Major developments in technology • Product life cycles and historical influences • The work of past and present designers • Selecting a process • Modern manufacturing systems • ICT in manufacturing • ICT applications in product design and manufacture

SMSC/British Values:

Industrial processes, sustainability, designing for a real world market and time management and organisation.

Enrichment/Extra Curriculum:

- *Tuesday and Thursday support sessions to catch up on or improve coursework/revise for examinations.*