



Product Design GCSE Curriculum Overview

Rationale: The KS4 curriculum is designed to utilise the skills developed in KS3 therefore ensuring students have the plethora of skills and knowledge to tackle the GCSE specification but more importantly be able to transfer these skills to the world of work. Students will have a wide range of practical ability to tackle a complex product, be able to modify their product for the specific individuals needs and ensure it can be commercially viable.

Term/Length of Time	Outline Students practical and theoretical knowledge of	Assessment/Teacher Feedback Opportunities	Homework and Literacy resources
Y10 DESIGN STRATEGIES Sept to October	<p>Students will develop their knowledge of going through the design process and working through a design challenge; How to investigate and research specific areas.</p> <p>Understanding the needs of the client/user as the focus. Revisit 'The work of others' from Yr9 looking at specific factors in designs.</p> <p>Students will make a wide range of complex products developing skills to the GCSE spec standard.</p>	<p>Peer and Teacher assessment of ideas judged against existing work.</p> <p>Researching and investigation methods</p>	<p>Minimum homework expectation - to be set on G4S Students to select one designer and research the designers concepts and ideas to be presented.</p> <p>Optional homework tasks and Literacy resources https://www.bbc.co.uk/bitesize/guides/zfq8jty/revision/1</p>
DESIGN PROCESS October through to December	<p>Techniques to generate and record design ideas and the importance of annotating to explain thinking. Linking previous investigate and research work to own ideas</p> <p>MECHANISMS</p> <p>Types of motion and how they can be used in mechanical devices. Use of different mechanisms to gain an advantage.</p>	<p>Peer and Teacher assessment of design ideas using previous and exemplar work.</p> <p>Teacher assessment of modelling skills.</p> <p>Teacher assessment of the designing, planning and manufacturing of a practical task against set criteria.</p>	<p>Minimum homework expectation - to be set on G4S Students to ensure design work is completed and to design three further modified design ideas.</p> <p>Optional homework tasks and Literacy resources Helpful videos that will support students in the design process - https://www.bbc.co.uk/bitesize/topics/zj8yjhv</p>

<p>NEW & EMERGING TECHNOLOGIES</p> <p>January to April</p>	<p>The modern workplace</p> <p>How Culture and Society effect modern design and manufacturing.</p> <p>Trends and Customer/User demand for products.</p> <p>Practical task of making a bird box – including specific joints and accurate measurement.</p>	<p>Questioning in exercise books and Unit test.</p> <p>Ongoing practical assessments when students are completing a project.</p>	<p>Minimum homework expectation - to be set on G4S</p> <p>End of unit test to test knowledge of manufacturing and trends. Students to be provided with revision and worksheets to help them prepare for this test.</p> <p>Optional homework tasks and Literacy resources</p> <p>New and Emerging technologies - https://www.bbc.co.uk/bitesize/guides/zn4bcj6/revision/1</p>
<p>ENERGY</p> <p>May to June</p>	<p>Renewable and Non-renewable Sources of energy and the impact on the environment.</p> <p>Alternative and developing energy sources.</p>	<p>Ongoing practical project that will be assessed at the end of the unit.</p>	<p>Minimum homework expectation - to be set on G4S</p> <p>Optional homework tasks and Literacy resources</p> <p>https://www.bbc.co.uk/bitesize/guides/zf8ck2p/revision/1</p>
<p><u>NEA introduction</u></p> <p><u>June onwards</u></p>	<p>AQA will release their NEA tasks and students will complete the research aspect of this assessment for the entirety of year 10 and then ongoing into year 11.</p>	<p>Teacher verbal feedback on the NEA inline with the examination regulations.</p>	<p>Minimum homework expectation - to be set on G4S</p> <p>Students to ensure that deadlines for NEA are met – outline of the requirements for this assessment will be shared on GO4 schools.</p> <p>All research should be completed.</p> <p>Optional homework tasks and Literacy resources</p> <p>Revision for aiding students through the design process https://www.bbc.co.uk/bitesize/topics/zj8yjhw</p>