Option – GCSE Design and Technology

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GCSE Design and Technology now places greater emphasis on academic knowledge and understanding alongside applying iterative design processes. Students will use their knowledge, creativity and imagination to design and make prototypes that solve real and relevant problems, considering their own and others' needs, wants and values.

In order to make effective design choices students will need a breadth of technical knowledge and understanding that consists of:

 • New and emerging technologies
 • Energy storage and generation
 • Modern and smart materials
 • Systems approach to designing
 • Mechanical devices
 • Materials and their working properties.
 • Maths and Science will also be taught and integrated into projects throughout the course.

Exam	Non Exam based Project
What is assessed: • Core technical principles • Specialist technical principles • Designing and making principles Written exam: 2 hours 100 marks Section A – Core technical principles (20 marks) A mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding. Section B – Specialist technical principles (30 marks) Several short answer questions (2–5 marks) and one extended response to assess a more in-depth knowledge of technical principles. Section C – Designing and making principles (50 marks) A mixture of short answer and extended response questions including a 12-mark design question. Maths principles in this course include; trigonometry, area, percentages, data analysis, ratios, volume, graphs,	Task: Substantial design and manufacture task 100 Marks 30-35 Hours Assessment criteria: • Investigating • Designing • Making • Analysing and Evaluating • Students will produce a working prototype and a portfolio of evidence (max 20 pages) This requires: • Research and analytical skills • Creative and problem-solving skills • Design skills and drawing ability • The ability to make a variety of iterative models that represent design ideas. • Interactions with a client/user • Planning and manufacturing a product to a design and manufacturing specification. • Evaluation skills

Examination Board – AQA