

## DESIGN AND TECHNOLOGY

GCSE design and technology is a qualification that merges a range of D&T specialisms: resistant materials, graphic products, and elements of product design into one design course.



The course is split into two sections; the NEA is worth 50% of the overall grade and the formal written examination (sat in Summer 2023) makes up the other 50% of the overall grade.

Through the first two and a half terms in Year 10, the exam-based core knowledge will be taught, this will prepare students for the exams in Year 11. Students will need strong literacy and numeracy skills and be able to learn and apply a large amount of knowledge to answer complex questions.

At the end of the Summer term of Year 10, students will receive their NEA (non-examined assessment) context which will be developed through Year 11 up until the end of the spring term. The NEA consists of a practical outcome worth 20% of the project and a design portfolio worth 80% of the NEA. As manufacturing has become more automated the emphasis on practical skills has decreased and student's ability to design by finding creative solutions to problems has become more important.

Design and technology is an academic subject which requires the application of design, material and manufacturing knowledge. Students will learn how to use and understand Computer Aided Design (CAD) and Computer Aided Manufacture (CAM), in combination with traditional manufacturing processes, drawing and design skills to develop innovative ideas that directly link with current industrial practises for producing products and prototypes. The course also helps students develop their practical skills with the ability to design and make products with creativity and originality, using a range of materials, processes and techniques.

### NEA

Within the NEA, the practical work will focus on the use of wood, metal, plastics, paper and boards as a range of suitable prototyping materials. Students will use a wide range of machinery, materials, processes, hand tools and equipment throughout the course. Students will have access to the latest CAD software, with CAM facilities like 3D printing and laser cutting. Students will use a wide range of hand drawn and technical CAD drawing processes to create their designs throughout the course. The final prototype that is designed and made for the NEA will be completely individual to each student based on the context given by the exam board.



Students choosing this option need to have a real passion for creative design and be motivated to widen their skill set using a range of design media and manufacturing processes.

These GCSEs can lead to further studies in and a vast range of careers:

- Product and industrial designer
- Architecture
- Jewellery designer
- Engineer
- Film and theatre set designer
- Costume designer
- Fashion designer
- Graphic designer
- Illustrator
- Cartoonist
- Animator
- Book and magazine designer
- Construction and trade roles