

Course Title (Qualification/s)	GCSE Design & Technology
Outline of course	<p>GCSE Design & Technology builds on the skills students have learnt since Year 7, but will expose them to more advanced skills, knowledge and understanding required to undertake the iterative design process of exploring, creating and evaluating.</p> <p>In Year 10, all students will learn:</p> <ul style="list-style-type: none"> • Core technical principles that cover new and emerging technologies, energy generation and storage, developments in new materials, mechanical devices, materials and their working properties. • Specialist technical principles taught using a variety of materials such as papers and boards, timber based materials, metal based materials, polymers, textile based materials, electronic and mechanical systems. • Designing and making principles that apply to all design and technology activities. <p>In Year 11, students will embark on a Non Exam Assessment (NEA). This is a 30-35 hour design and make project, with a supporting design portfolio of about 20 pages. It will start in the final term of Year 10 in order that research can be carried out over the summer. The NEA will allow the student to specialise in a material and context that suits their interests and knowledge.</p> <p>A two hour exam will be sat at the end of Year 11 covering Core technical principles, Specialist technical principles, Designing and making principles.</p>
Topics covered in the course	<p>A range of topics are studied including: designing, making, prototype development, ergonomics, manipulating materials, specialised tools and processes, smart materials, electronic components, technical textiles, designing and making circuits, CAD/CAM, modelling and prototyping, mechanisms, manufacturing, hand tool skills, material selection, drawing techniques, environmental considerations, industrial practices, design movements. Students must also demonstrate mathematical and scientific knowledge and understanding, in relation to design and technology.</p>
Organisation of assessment	<p>Students will be assessed throughout Year 10 in the form of homework, class tests and specific projects. They will sit a mock exam in the summer of Yr10.</p> <p>In Year 11, students will use new skills to produce a high quality prototype for the NEA. This is worth 50% of the final GCSE.</p> <p>A two hour written exam will be sat at the end of Year 11; this is worth 50% of the GCSE and will assess knowledge of Core technical principles, Specialist technical principles, and Designing and making principles.</p> <p>Main elements of the NEA will be assessed at key points throughout the year, with feedback given by the subject teacher.</p>
Homework requirements	<p>In Year 10, students will be set at least one hour of homework each week. Homework tasks include: research, independent study and evaluation work.</p> <p>In Year 11, it is expected that students spend at least one hour a week on NEA work. This will be carried out at home for certain elements, but more will need to be done at school under supervision as the project progresses.</p>
Learning environment	<p>You will learn through various methods, including: Analysis and research projects, workshop-based practical work, testing and modifying work.</p>
Opportunities for continuing study	<p>Students studying GCSE D&T may progress to A-Level in Product Design. Students could also attend full-time design courses at colleges such as Rycotewood (OCVC) or Engineering and Design Apprenticeships at colleges such as Abingdon & Witney College.</p>
Associated career opportunities	<p>Future careers include product design, architecture, engineering, teaching, model-making, set design, electrical engineering, electrician, automotive industry, armed services.</p>