

GCSE DESIGN AND TECHNOLOGY (MATERIALS)



COURSE CONTENT

In Year 10, pupils will undertake a number of mini projects that will allow them to understand and practise practical skills including using hand tools, machining and the use of power tools, using Computer Aided Design/Computer Aided Manufacture (CAD/CAM) systems, quality control and maintaining accuracy. These will be complemented by a series of relevant theory and design lessons.

In Year 11, pupils will undertake a non-examined assessment (NEA) that showcases the skills they have developed in year 10 and the knowledge they have developed through the theory lessons. It will be a substantial 'design and make' task covering investigation of design possibilities, producing a design brief and specification, generating and developing design ideas, making, analysing and evaluating.

Paper 1 is an external exam in which pupils will be assessed on their knowledge and understanding of the following:

Core technical principles covering paper/card, timber, metal, polymers, textiles, electrical/mechanical systems

Specialist technical principles covering at least one of the above materials category. In this course we will focus on timber, metal and polymers

Design and making principles

ASSESSMENT

Paper 1 (50%):

Section A – core technical principles (20 marks)

Section B – specialist technical principles (30 marks)

Section C – designing and making principles (50 marks)

NEA (project) (50%): Practical application (100 marks) in 30-35 hours approx.

PROGRESSION & FUTURE CAREERS

This GCSE course provides a good grounding for pupils thinking about any engineering, construction, architectural or product design careers. It complements vocational qualifications and creative GCSEs, as well as the more academic subjects. Pupils can progress onto Technical Certificates, apprenticeships or A-level courses.

It provides the opportunity to develop practical skills, which are extremely useful in later life. It also demonstrates that you can manage and carry out an extended project, a skill often sought after by employers. Transferrable skills include an understanding of commercial processes, problem solving, time management, in-depth knowledge of materials and their properties, communication and teamwork.