

## DESIGN & TECHNOLOGY GCSE

Examination board- AQA

5 periods per 2 weeks

### Course content

This GCSE course explores a wide range of materials including textiles, paper, board, timber, metal and polymers, providing students with an insight into the world of design, engineering and manufacturing industries. All GCSE students will explore how the work of past designers has been developed and evolved to create innovative products, and will consider the impact our designs can have on society and the environment.

Core technical principles include:

- new and emerging technologies including sustainable design;
- modern and smart materials;
- materials and their working properties.

Through theory and practical lessons students will experience how different materials work and can be modified using a range of manufacturing skills and equipment. These materials include timbers, metals, polymers, fabrics, paper and board. Students will also specialise in one material area and make prototypes and products using this chosen material as part of the non-exam assessment. During year 10 all students will explore common theory topics to fully prepare them for the examination and complete a number of short skills projects to develop their practical skills.

### Assessment

There are two assessments for this course valued at 50% each, one is an internal assessment completed at the beginning of year 11.

Assessment one: 2 hour written examination taken at the end of year 11 (100 marks/50% of the final grade).

This examination will cover core technical principles related to the design and development of a wide range of technology products. There are also short answer questions based on specialist technical principles. The final part of the exam will focus on designing and making principles and includes a designing question. Students will be able to answer longer questions focused on their chosen specialist material.

Assessment two: Non-exam assessment (100 marks/50% of the final grade).

The NEA allows students to demonstrate their knowledge and understanding of specialist technical principles through the designing and manufacture of the product of their choice. Students can choose to specialise in one specialist material area for this unit e.g. timber, polymers and textiles. At the beginning of year 11 AQA will publish a small selection of design contexts which students will be able to choose from e.g. designing for a high profile event, environmental design or contemporary interiors. They will then be expected to write their own design brief based on the context provided by AQA.

The NEA consists of a 20 page portfolio including investigative work, design ideas including CAD, analysis and evaluation, and a final working prototype. Past design and technology students have developed fashion garments, costume, electronic devices, innovative lighting products, packaging and promotional products.

### Progression

Students who achieve grade 5 and above should consider further study with one of our A level courses- A level Product Design or A level Fashion and Textiles. This qualification could also lead to further study in a range of creative, manufacturing and design based courses and a wide range of career opportunities. This subject is also a good stepping stone towards apprenticeships in engineering, retail and manufacturing.

Career opportunities include: teaching, photography, product design, advertising, buying, marketing, manufacturing, engineering, architecture, construction, pattern cutting, interior design, visual merchandising, joinery, construction, animation, web design, illustration and fashion to name but a few.

### Homework

Students are set homework each week based on the topic studied at the time. It should be noted that some tasks include completion of folder work, theory notes and questions, research and investigation tasks and sourcing materials for products.

### Next steps

Students who wish to choose this option should indicate on the pathway form which material area they wish to specialise in, as follows:

- textiles based materials;
- timber, metals and polymers;
- paper and board.