

## **Design and Technology at King Ecgbert School**

DT provides students with the knowledge and skills to equip them to improve the lives of others through critical thinking and problem solving in a variety of different design contexts. They will explore the physical and working properties of different materials, ingredients, products and equipment to build and apply a repertoire of knowledge, understanding and skills. They will create high-quality prototypes and products using a combination of hand skills and digital processes.

We present students with current issues to explore and consider the impact of their behaviour as consumers and members of a big society. By engaging with the work of past and current designers students are able to be inspired by the work of professionals and extend their cultural capital. DT is a progressive subject and we provide opportunities for students to analyse and use the latest technology and software and also consider the impact on society.

As they progress through KS3 into KS4 we provide more opportunities for individual and independent responses that draw on prior learning and they are encouraged to be innovative and experiment through modelling and testing. At KS4 we offer a variety of specialised routes of study: GCSE Design and Technology, GCSE Food Preparation and Nutrition, GCSE Fashion and Textiles and the Level 1/2 course Designing the Built Environment. Each subject is taught by a specialist expert and the course is designed to consolidate the knowledge students need and prepare them for practical tasks and applications. As a department, we have embedded retrieval practice in our lessons to ensure that this key knowledge is secured.

The design, engineer, construct course at KS5 enable our students to explore the different professional roles in the built environment from architecture to quantity surveying. A local project is identified by students based on the Sheffield plan and the students design a building to meet a 'real life' challenge. Professionals are invited into school throughout the course to both challenge the students and their work and inform them of possible career routes through both academic and vocational pathways. Knowledge is tested through retrieval practice, case studies and examinations and used to inform their projects to ensure they meet current professional methodologies.

Assessment is used to enable pupils to recognise their strengths and weaknesses and they have frequent opportunities to respond and improve their work. Their knowledge and technical vocabulary is tested at the end of each unit of work to ensure that students are able to communicate their ideas fluently and accurately.

Above all we aim to encourage a caring and innovative environment which allows students to investigate and experiment in a safe, supportive and positive atmosphere, enabling all students to reach their full potential.

### **Extra-Curricular Success this Year:**

Y12 DEC students: Post 16 national winners MOBIE design challenge

Y12 DEC students: Hyperloop challenge in London

Y10 DT students: Get up to Speed competition

Y8 Big Picture: Recycled poppies and Fast fashion

Y8/9 Textiles: Blankets for Children's hospital intensive care

Y8/9 STEM group: EDT challenge with Arup, Stations of the Future

## **Key Stage 3**

At KS3 students are taught DT throughout the year with 2 single one-hour periods devoted to covering the many different materials area which constitute this subject. Entitled 'Product Design' throughout KS3 our students cover the main focus areas of Electronics, Food, Resistant Materials and Textiles.

Normally students will undertake design and make assignments (DMA) in each of the four areas: Electronics, Food, Resistant Materials and Textiles. Graphics is taught discreetly throughout all the four major areas. These DMA's will usually result in a high quality finished product.

Some activities may take a term or more to complete with others being just a couple of lessons. There is a great variety of experience offered at KES and projects are regularly updated or replace making it easy to respond to topical themes and ensure DT is more relevant.

## Key Stage 4

GCSE Design and Technology is an option at KS4. Students opt to study a full GCSE course in one of the three DT specialist areas: Design and Technology, Food Preparation and Nutrition or Fashion and Textile Design. There is also a Level 2 certificate offered covering the Built Environment and one covering Construction. These courses have five dedicated one hour periods split across the duration of the KS4 course.

Each specialist area offers 'out of hours' learning support, particularly at the Controlled Assessment stage.

All GCSE courses follow the same format with a Controlled Assessment (practical) component worth 50% of the grade and the Terminal Examination based upon a theoretic component which is worth 50% of the total grade. The Controlled Assessment can be completed at any time in the duration of the course but the Terminal Examination must be completed at the end of Year 11. The Design and Technology suite of examinations are single tier papers. They are differentiated to give students access to all grades A\* to G

[Design and Technology – Specification OCR](#)

[Food Preparation and Nutrition – Specification 8585 AQA](#)

[Fashion and Textiles – Specification 8204 AQA](#)

DEC at Level 2 certificate is graded across 4 levels from A\*- C. The coursework component is worth 30% of the grade and the Terminal Examination based upon a theoretic component is worth 70% of the total grade. There are 3 examination windows offered within Year 11.

[Designing, Engineering and Constructing a Sustainable Built Environment - Specification TLM](#)

## **Key Stage 5**

At KS5 we offer a Level 3 qualification in Designing Engineering and Constructing a Sustainable Built Environment (DEC). Students following this course receive five one hour lessons, blocked in groups of three and two.

The DEC course offers either a Certificate (180 points) or a Diploma (360 points) through a series of units which are externally accredited.

[Designing, Engineering and Constructing a Sustainable Built Environment - Specification TLM](#)