A-level Design & Technology

(Product Design)

THE COURSE AIMS

The EdExcel Design & Technology (Product Design) course intends to equip you with the design skills for the future. In doing so you will be able to recognise design needs and develop an understanding of how current global issues, including integrating technology, impacts on today's world. It also encourages creativity and innovation so that you will have the confidence to innovate and produce creative design solutions as you develop your own design brief with a client/end user. It provides clear progression from GCSE and beyond to HE/Careers through knowledge, understanding and design/making skills so that you will have a coherent experience of moving from the breadth of the GCSE to the specialisation depth of A level and beyond.

COURSE STRUCTURE

COMPONENT 1: *Principles of design and technology exam*

The paper includes calculations, short-open and open-response questions. as well as extended-writing questions focused on:

- Analysis and evaluation of design decisions and outcomes, against a technical principle, for prototypes made by others
- Analysis and evaluation of wider issues in design technology, including social, moral, ethical and environmental impacts

This unit is externally assessed by means of a 2 hour 30 minute exam worth 120 marks. It accounts to **50%** of the qualification.

COMPONENT 2: *Independent design and make project*

In this component you are given the opportunity to apply the skills you have gained and developed throughout this two year course. You will design and make a prototype which is the result of a problem and design context, which you identify individually and/or in consultation with a client.

The project includes the following four parts:

1. *Identifying opportunities for design*
2. *Designing a prototype*
3. *Making a prototype*
4. *Evaluating own design and prototype*

Within the project you will also need to include the use of CAD and provide evidence of modelling. You will need to incorporate issues relating to sustainability and the impact your prototype may have on the environment. You will be expected to analyse and evaluate design decisions and outcomes for prototypes/products made by you and others. You will also be expected to analyse and evaluate wider issues in design technology, including social, moral, ethical and environmental impacts.

This unit is an internally assessed, non-examined assessment marked out of 120. It also accounts for **50%** of the qualification.

WHY CHOOSE DESIGN & TECHNOLOGY?

- D&T provides opportunities to engage in activities that are challenging, relevant and motivating.
- D&T prepares you for citizenship in a technological society through investigating, disassembling and evaluating products, looking at their applications. Completing tasks that develop your skills and knowledge of; materials and components; systems and control, quality control and health and safety.
- D&T provides an excellent accompaniment to other subjects, linking closely with; mathematics, physics, art and design, media, business studies, computer science and geography etc.
- D&T provides you with great opportunities to apply valued judgements of an aesthetic, economic, moral, social, and technical nature to your work as well as the work of past and present designers.
- D&T improves your communication skills, including verbal, graphical and modelling skills, to help your thinking and ability to design successful products.
- D&T facilitates opportunities for teamwork, working together to achieve the end goal.
- D&T encourages you to work in an iterative manners; constantly striving for improvement through modelling and testing activities.
- D&T brings enjoyment, satisfaction and a sense of purpose, whilst enabling you to feel that you can play a constructive role in a technological society.

LEARNING OUTSIDE THE DEPARTMENT

You will have the opportunity to learn outside of the department during your first year of A-level study.

In the autumn term you will attend the *'Product Design In Action'* conference in London. The one day conference is engaging and interactive and takes you to the cutting edge in Design. Five renowned speakers from a diverse range of studios will give you the inside story. In previous years students have heard from British designers such as *Wayne Hemingway* (co-founder of the fashion label 'Red or Dead'), Barber Osgerby (London 2012 Olympic torch designers) and *Matthew Beaven* (Chief Exterior Designer at Jaguar).

Towards the end of the summer term you will also visit the *'New Designers'* exhibition based in the Business Design Centre, Islington. Here you will be exposed to cutting edge undergraduate work from the best design universities in the country and therefore increase your awareness of different design careers whilst improving your creative thinking.

WHERE CAN A-LEVEL PRODUCT DESIGN TAKE YOU?

Some students choose to continue their studies at degree level and having studied product design at A-level then the following courses would be available to you:

Sports product design   *Architectural engineering*   *Interior design*   *Graphic communication*   *Automotive design*

Industrial design   *Materials engineering*   *Computer aided product design*   *Design & technology education*

Alternatively you may wish to gain an apprenticeship within the design industry. This could lead onto a job within the artistic sector such as:

Design assistant/trainee   *Trainee technical graphic design assistant*   *Junior graphic designer*   *Junior product designer*

WHAT OUR STUDENTS THINK:

"Design & Technology is an amazing subject and the staff in the D&T department were the most kind and supportive. D&T was an integral part of my experience at Coopers' and I am continuing to study it now."

Rachel Appiah (past student)

"Through studying D&T at GCSE and A-Level I have been able to develop skills and qualities which will I able use not just in the world of design but in everyday expects of life from working in a team to problem solving when giving limited options. The teaching staff constantly encouraged and always pushed me to my limits, enabling me to design and create a wide variety of products through their own knowledge and experience."

Jed Rimell (past student)

"I have been able to achieve so much through studying A-level product design, such as moving to Berlin for a period of time and working at a famous design agency, producing nationwide adverts for companies like Amazon and making new lifelong experiences. Product Design was a huge outlet for me while I struggled at school and whilst I studied my other more academic subjects.."

Cameron Walker (past student)

PRIOR LEARNING/ATTAINMENT

The A-level course builds upon, the knowledge, understanding and skills of KS3 and KS4 Design & Technology. It is recommended that you have attained communication, numeracy and literacy skills at a level equivalent to GCSE Grade 5 in English and Maths.

ENTRY REQUIREMENTS

It is expected that you have achieved at least a grade **5** in *GCSE Design & Technology*.

After studying A-level D&T with us we want you to leave CCCS as modern designers who have the ability to design new creative and sustainable products.

A sign of the modern technological age in which we live is that human actions have had a negative impact on our environment. New products provide solutions rather than add to the existing problems of extraction and use of natural resources, pollution from manufacturing and disposal of large amounts of waste products. Good design is vital to our world and economy and so it is our aim to develop a passion in you for designing your future.

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