



D&T PRODUCT DESIGN

Product design is important to our economy and our way of life. We live in a very design orientated world, with technology advancing at a very fast pace. Every day, humans interact with a myriad of products. Each product has been designed and made and there are huge amounts of jobs involved in the creation and production of those items. Design & Technology subjects generate people who can think creatively and solve real world problems. Those skills are in high demand.

What will I learn?

Component 1: Core technical principles and specialist knowledge

Students will increase their understanding of a broad range of materials and components and will examine the issues that a designer must solve, including environmental and sustainability of products and their manufacture and methods in which materials and components can be manipulated to produce products.

Students will develop further skills in Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) and use Ergonomics and anthropometric data to ensure the product meets the needs of the end user, including inclusive design, consumer safety and the life cycle of a product. Classifying materials and identifying, testing and comparing their application to product manufacture; the implications of Health and Safety as an element of design activity; examination of alternative designs and redesigning existing products; use of natural resources, materials utilisation, conservation, waste disposal/ management, pollution, recycling; Appreciation and understanding of the use of CAM for industrial production; Moral, economic, social and environmental responsibilities of the designer; Planning production procedures and methods.

Qualification

A-Level

Start Date

September 2020

Finish Date

June 2022

Component 2: Learning Through Designing and Making: Coursework

Students will use their knowledge and understanding of the materials and components to design and develop their own projects, which should involve approximately 50 hours of work.

The portfolio of work will be presented in PowerPoint format. Students will be encouraged to study existing designs, including ways of improving them, in order to develop their understanding of the core principles of design. They will develop a range of 2-D and 3-D graphic skills to enable them to present their own ideas appropriately.

How will I be assessed?

Final summative assessment will be in the form of:

Component 1: Core technical principles and specialist knowledge—50% of overall grade.

This component is assessed via written examination. A mixture of short answer, multiple choice and extended response questions.

Component 2: Learning Through Designing and Making: Coursework—50% of overall grade.

This component is assessed internally via a substantial design and make task.

Interim formative assessments will be in the form of:

Design and make activities, focussed practical activities, written assessments, group work, presentations, written tests.

Entry Requirements

Grade 5 in GCSE Design and
Technology

OR

Grade 5 in GCSE Design and
Technology

OR

A 'Merit' grade in a relevant Level
2 qualification (eg a BTEC Level 2
in Engineering)

OR

BOTH Grade 6 in GCSE Art
AND Grade 5 in Maths, or Grade 5
in Physics, or Grade 5-5 in GCSE



D&T PRODUCT DESIGN continued

Future opportunities

This course prepares the learner for Higher Education and employment.

Career prospects include:

Product Designer, Mechanical Engineer, Graphic Designer, CAD Technician, Design Engineer, Architect, Technical Designer and Interior Designer

Is this course right for me?

This course is particularly suitable for those who have an interest in designing, making and problem solving. It could lead to a career in some very creative and exciting industries.

Cost

Students may be asked to purchase a text book as a useful reference to support their A-Level studies.

Head of Department:

Mr G Richards

Tutors:

Mr S Jones

Mrs Lowey-Lieb



*STUDENTS AND
PARENTS ARE
EXTREMELY
POSITIVE
IN THEIR VIEW
OF THE SCHOOL.*

Ofsted



Entry Requirements

Grade 5 in GCSE Design and
Technology

OR

A 'pass' grade in a relevant Level 2
qualification (eg a BTEC Level 2 in
Engineering)

OR

BOTH Grade 6 in GCSE Art
AND Grade 5 in Maths, or Grade 5
in Physics, or Grade 5-5 in GCSE
Science (AQA Trilogy/Edexcel
Combined/OCR Gateway)