



Design & Technology

Why study Design & Technology: Product Design?

This creative qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers. Especially those in the creative industries. They will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put their learning in to practice by producing prototypes of their choice. Students will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

Course Outline

A Level Design and Technology: Product Design requires students to engage in both practical and theoretical study. Students will gain knowledge and understanding of a range of technical principles alongside design and making principles. This course aims to develop an insight into the creative, engineering and/or manufacturing industries.

Students will be encouraged to be open to taking design risks, showing innovation and enterprise whilst considering their role as responsible designers and citizens. Students are to develop intellectual curiosity about the design and manufacture of products and systems, and their impact on daily life and the wider world by working collaboratively to develop and refine their ideas. The course endeavors to develop an in-depth knowledge and understanding of materials, components and processes associated with the creation of products that can be tested and evaluated in use.

The course will encourage students to work safely and skillfully to produce high-quality prototypes/products. Within the course students will develop a critical understanding of the wider influences on design and technology, including cultural, economic, environmental, historical and social factors. Students will be expected to develop the ability to draw on and apply a range of skills and knowledge from other subject areas, including the use of math and science for analysis and informing decisions in design.

Assessment

Students are assessed by two written papers at the end of Year 13 worth 50%, plus 50% awarded for a Non Exam Assessment, which is a practical project.

Head of Learning

Mrs M Starkie

Departmental Staff

Mr C Seggie
Mr M Longhi (Technician)

Exam Board

AQA A Level Design and
Technology: Product Design

Potential careers this course could lead to?

- Product Designer
- Architect
- Civil Engineer
- Mechanical Engineer
- Aerospace Engineer
- Cad Technician
- CNC Machinist
- Interior And Spatial Designer
- Furniture Designer
- Cabinet Maker
- Material Engineer
- Construction and Building Services
- Graphic Designer
- Petroleum Engineer
- Secondary School Teacher



Paper 1: Technical principles

This is a written 2 hours and 30 minutes exam. Paper 1 30% of the A Level. The questions are based on technical principles of Design & Technology: Product Design.

Paper 2: Designing and making principles

This is a written 1 hour and 30 minutes exam. Paper forms 20% of the A Level. Paper 2 is a two-section examination paper. Section A of paper 2 is based on Product Analysis. Section B of paper 2 based on commercial manufacture.

Non Exam Assessment (NEA)

This is a substantial design and make project. The NEA is worth 100 marks, which forms 50% of the A Level. This will be assessed by a written or digital design portfolio and photographic evidence of final prototype.

Frequently Asked Questions

Q. Is any previous knowledge required to study this subject?

You should have a minimum of either:

- GCSE Design & Technology grade 6 or above, or
- GCSE Engineering grade 5 or above, or
- Level 2 Technical Award in Materials Technology (Distinction) with GCSE Maths grade 6 or above and GCSE Science grade 5 or above, or
- GCSE Maths grade 6 or above and GCSE Science grade 5 or above and GCSE Art grade 6 or above.

Interest and enthusiasm for the subject are essential. Whilst some technical expertise is desirable, interest in wider aspects of the subject is also expected, as is a positive and committed approach. All students are required to meet the General Entry Requirement of a minimum of 4 GCSEs at grade 6 with at least GCSE grade 4 in English Language and Maths.

Q. What facilities are there?

There is a well-equipped Design & Technology Room on the Chatburn Road site with space to work on a large scale. A wide range of materials will be made available to you. The facilities include 5 3D printers (including a dual extrusion 3D printer), CNC Router, 2 laser cutters, vinyl cutter, 2 pillar drills, low temperature casting, strip heaters, 3 hot wire cutters, 3 heгна saws, disc sander and a range of traditional tools and equipment. It is also recommended that you bring an apron to protect your clothing. You will also have access to ICT facilities for portfolio work.

Exam Board Specification

AQA A Level Design and Technology: Product Design (7552)
www.aqa.org.uk

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