

# Design Technology (Product Design and Manufacture)

## What is this course about?

Design Technology at Longcroft School prepares students to participate in an ever increasingly technological world. You will be more aware of and learn from, wider influences on design and technology, including historical, social/cultural, environmental and economic factors. The course seeks to explore both technical and creative aspects of the technological world we live in.

During the course you will gain knowledge and understanding of a wide range of materials such as papers, cards, metals, woods, polymers and natural and synthetic fabrics. You will also build on your experience of different manufacturing processes in order to design and make prototypes in response to issues, needs, problems and opportunities.

The focus is on problem solving through using the most appropriate materials and processes, using your creativity and imagination.

## What skills will students gain?

Over the three years, you will develop your awareness of technical principles, and exercise your designing and making principles within the range of Design Technology areas previously studied in years 7 and 8, but most importantly you will learn how to use key machinery, tools, processes and Computer Aided Design and Manufacture competently and safely. Year 9 will act as a 'Foundation Studies' year where classes will be introduced to the various specialisms within Design Technology in order to broaden practical skills from KS3.

In year 10 you will focus on 'Product Design and Manufacture' and undergo a mock Controlled Assessment in which you will research, design, model, make and evaluate.

Year 11 will see students begin a 'non exam assessment' project which will be set by the exam board, followed by a 'Design Technology' exam, which will be the final unit of the course.

## What skills are needed?

A wide range of competences are required, including: problem solving; investigation of a design problem including client and user needs; analysing and development of ideas through 3D conceptual thinking; time management; CAD & CAM; manufacturing and ICT. Therefore eligible students should already have the ability to keep up to date with deadlines and take pride in all work produced. You should possess the drive to question design decisions and justify your choices and should be willing to work both independently and as part of a group.

The underlying skill in all design work is a willingness to innovate and invent and being able to communicate ideas through drawings, annotation and modelling.

Ideas should be driven by solutions, as opposed to the materials available.

## How is this course assessed?

### Break down of assessment between controlled assessment and exam:

**The Non Exam Assessment:** 50% - Currently the major assessed project is based upon the design and manufacture of a product working within the students' chosen specialism. You will have the freedom to select the product to be designed, manufactured and in some cases marketed.

The context for this will be supplied by the exam board at the beginning of year 11.

**The Exam:** 50% - Externally accessed exam sat in the final summer term, 2 hours long.

**Qualification Received:** GCSE

**Grade Range:** 9 to 1.

## What career or further education opportunities does this course lead to?

A GCSE in Product Design will help students pursue higher education or careers in many design related fields, some of which include:

- Industrial/Product Design
- Packaging Design
- Architecture
- Software engineer
- Graphic Design
- Interior Design
- Design Project Management
- Engineering
- Teacher/Lecturer of Design and Technology