

DESIGN & TECHNOLOGY

Design is about making things better; it is about pre-empting the problems of tomorrow and finding solutions today. These are just some of the ways Design and Technology can be defined. To do so, however, is to take a hugely diverse subject that calls upon those studying it to apply creativity, initiative, independence of thought and action in the pursuit of producing ideas of value and originality. To do this well is not easy but can be hugely rewarding.

Everything around us has been designed. Our demand for new technology has never been greater and our expectations never higher, creating a need for the next generation of innovators who can solve the problems of the future. The skills and knowledge learnt on this course equip pupils to pursue a wide range of careers both in and out of the creative sector.

What will I learn about on this course?

Pupils choosing this option will study topics ranging from the performance of materials to the technological developments that impact design; they will have the opportunity to put their learning into practice by producing prototypes and products. Pupils will gain an understanding of what it means to be a designer, alongside learning knowledge and skills that complement a range of other GCSE subjects.

How will my work be assessed?

The assessment will be evenly split between examination and non-examination components.

Examination Board: Pearson

Component 1: Written Paper

- Written examination: 2 sections (A & B)
- 1 hour and 45 minutes
- 50% 100 marks

Component 1: Section A: Core Knowledge

This section is 40 marks, the topics are as follows.

- The impact of new and emerging technologies
- How energy is generated and stored
- Developments in modern and smart materials, composite materials
- The functions of mechanical devices
- How electronic systems provide functionality. The use of programmable components to embed functionality into products
- Properties and structure of common materials
- Environmental, social and economic challenges
- The work of past and present professionals and companies

Component 1: Section B: Specialist Material Area Questions

This section is 60 marks and contains a mixture of different question styles; including graphical, calculation and extended-open-response questions, testing pupils' understanding of a specialist material area.

Component 2: Design and Make Project

This unit is portfolio based (non-examination assessment) and is 50% of the qualification, 100 marks. Pupils will undertake a project based on a contextual challenge released by the examination board a year before certification. The project will test pupils' skills in investigating, designing, making and evaluating a prototype of a product. The task will be internally assessed and externally moderated, marks are awarded for each part as follows:

- Investigate (16 marks)
- Design (42 marks)
- Make (36 marks)
- Evaluate (6 marks)

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What kind of pupil is this course suitable for?

As a fundamental part of their course, pupils will design and make products. Design and Technology develops pupils' interdisciplinary skills and their capacity for imaginative, innovative thinking, creativity and independence.

What could I go on to do at the end of my course?

Design and Technology is obviously an ideal preparation for Product Design A Level. It is, however, important to note that Design and Technology is a flexible qualification and has been chosen in the past to complement a wide range of GCSE options.

Mr S L Egan
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