

Technology and Design

GCE Student Guide

The world we live in is populated with products, some simple, some complex, which we make use of each day of our lives in a wide range of contexts. We use products to help us in our work, to relax, to communicate with each other and in practically every part of our existence.

All of these have had to be designed from an initial idea or developed from an existing idea or product. This specification promotes the concept of design allied with the application of scientific principles to realise solutions to real-life problems and everyday situations.



Why study Technology and Design?

This specification gives you the opportunity to get involved in the world of design. It will equip you with the skills required to take an initial idea through the process of design, utilising a range of scientific and engineering principles, with the ultimate goal of realising a practical outcome.

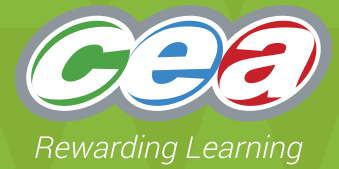
In particular this specification will allow you to:

- develop creative and innovative ideas;
- develop higher order thinking skills;
- recognise and overcome challenges;
- use skills from other subject areas as necessary;
- develop design and making skills;
- study a specialist area of technology and design in depth;
- develop an understanding of contemporary design and technology practices; and
- develop ICT skills in communication, graphics and making.

This specification will allow you to develop a range of skills which you will be able to use in your other subjects and in your career after school, whether in the world of work, or in study at a higher level.

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What will I study?

Unit	Areas of Study
AS 1: Design and Materials and Systems and Control or Product Design	In this unit you will: <ul style="list-style-type: none"> • study a common core of design and materials; and • study a specialised area of either Electronic and Microelectronic Systems, or Mechanical and Pneumatic Systems, or Product Design.
AS 2: Internal Assessment – Product Development	In this unit you will: <ul style="list-style-type: none"> • apply knowledge and skills covered in Unit AS 1; and • carry out a product development exercise on an existing product or an aspect of it involving the production of a design folder and a developed product outcome.
A2 1: Systems and Control or Product Development	In this unit you will: <ul style="list-style-type: none"> • study in greater detail than at AS level a specialised area of either Electronic and Microelectronic Systems or Mechanical and Pneumatic Systems, or Product Design.
A2 2: Internal Assessment – Product–System Design and Manufacture	In this unit you will: <ul style="list-style-type: none"> • apply knowledge and skills covered in all units but your work must reflect the specialist area of study chosen in Unit A2 1; and • carry out a design and make exercise involving the production of a design folder and a product outcome.

How will I be assessed?

Unit	Assessment Description	Weighting
AS 1: Design and Materials and Systems and Control or Product Design	External written examinations Paper 1: Core area of study Paper 2: Specialist area of study Each paper is one hour long. There will be a 20 minute break between papers.	50% of AS 20% of A level
AS 2: Product Development	Internal assessment You will produce a design folder and a practical outcome. Externally moderated	50% of AS 20% of A level
A2 1: Systems and Control or Product Development	External written examination You will answer two questions on your specialist area of study. The paper is two hours long.	30% of A level
A2 2: Product-System Design and Manufacture	Internal assessment You will produce a design folder and a practical outcome. Externally moderated	30% of A level

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What can I do with a qualification in Technology and Design?

A qualification in Technology and Design can provide you with a basis for study in further or higher education in a wide range of disciplines such as engineering, product development and product design.

The qualification could also be used as an entry route into an apprenticeship in a career such as engineering.

The range of career options open to you is very wide due to the nature of GCE Technology and Design as it involves problem-solving, application of scientific principles to the design of products, the process of design itself and the use of materials and techniques such as computer-aided design. This can provide you with a useful basis for entry into careers such as product design, engineering, graphic design, teaching and architecture.

To find out more, visit the **CCEA Website** for the latest support and updates for this subject.

