

DESIGN AND TECHNOLOGY

From September 2017, there will be a new single title GCSE in Design and Technology.

This will prepare you to participate confidently and successfully in an increasingly technological world. You will gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors. You will get the opportunity to work creatively when designing and making and apply technical and practical expertise.

Will I enjoy the course?

This is the right course for you if you enjoy:

- Solving real life problems
- Using your creativity and imagination
- Using ICT as a design tool
- Communicating ideas through sketching and modelling
- Working with a range of different materials
- Working with practical processes

How does it follow on from what I have learned before?

You have studied Design and Technology across both KS2 and KS3. The GCSE course builds upon what you have learned but allows you to develop a more in depth, specialist knowledge and understanding of the subject. You are also given the freedom to select your own design problem to solve as part of the NEA (non-examination assessment).

How it's assessed

- Written exam: 2 hours
- 100 marks
- 50% of GCSE
- Taken at the end of Year 11

This examination will assess core technical knowledge, specialist technical knowledge and designing and making principles.

Is there any controlled assessment?

Non-exam assessment (NEA): 30–35 hours approx, 100 marks

You will complete a substantial single design and make task chosen from a range of contextual challenges provided by the exam board. These will be released on 1st June in Year 10 for submission at the end of Year 11.

CASE STUDY

Jake, Year 11

I chose to take Design and Technology as a GCSE because I am more of a visual learner and a lot of the skills that you learn are practical.

I have really enjoyed woodwork as it is hands on. I have also liked learning about smart materials and how they change in certain environments.

I would like to do carpentry in the future so the skills that I learn on this course will really help me.

I would advise Year 9 students to pay attention in class, stay on top of the coursework and enjoy the practicals.

The Core technical knowledge

Students will be required to develop a broad knowledge and understanding of a range aspects relating to Design and Technology in order to make effective design choices. These include:

- New and emerging technologies
- Energy generation and storage
- Developments in new materials
- Systems approach to designing
- Mechanical devices
- Materials and their working properties.



Specialist technical knowledge

In addition to the core element, students will be required to develop a more in depth knowledge and understanding of the following areas:

- Selection of materials or components
- Forces and stresses
- Ecological and social footprint
- Sources and origins
- Using and working with materials
- Stock forms, types and sizes
- Scales of production
- Specialist techniques and processes
- Surface treatments and finishes.

This must be achieved through the study of at least one material area from papers and boards, timber based materials, metal based materials, polymers, textile based materials, electronic and mechanical systems.

Designing and making principles

Students should know and understand that all design and technology activities take place within a wide range of contexts. They should also understand how the prototypes they develop must satisfy wants or needs and be fit for their intended use. For example, the home, school, work or leisure.

What could I do next with a GCSE in Product Design?

This GCSE is designed to progress directly on to the AS and A2 GCE's in Product Design. It also provides a good foundation for the study of vocational A levels in Manufacturing or Engineering.

Product Design is an important foundation for many jobs and courses such as Product and Industrial Design, Building Trades, Modern Apprenticeships, Manufacturing, Engineering, Materials Science, Graphic Design, Computer Graphics, Architecture, Interior Design, Fashion and Textiles Technology.

CASE STUDY

*Sophie, Year 10
I chose this course because it was my favourite subject in KS3.*

My favourite part of the course has been the interaction with the woodwork process and other practicals. I also enjoyed learning about different energy sources and seeing how the introduction of different megastructures are used to process power.

The knowledge that I gain in this course will all help towards my future of wanting to become an architect.

Year 9 students should know that they do not have to pursue a career in design to be interested and wanting to study this course.



For further information contact: Mrs O'Connor