



# DESIGN and TECHNOLOGY (PRODUCT DESIGN)

A Level Subject Information

- Product Design



# Design and Technology (Product Design)

## Syllabus

A-level Design and Technology: Product Design - AQA (7552)

Design & Technology: Product Design is purposeful, as well as being fun and exciting! This course follows on from Design & Technology studied at GCSE. You will build on knowledge and skills to design and make new and better solutions to real problems - on your own and with others. Students can choose from a range of material disciplines including woods, metals, plastics, textiles, papers and boards, and other electronic and systems approaches.

Design & Technology: Product Design is suitable for students who enjoy the creativity of the design process, coming up with new ideas, the technical side of drawing, working with materials and manufacturing methods. Your D&T teachers are experts in their fields and deliver excellent teaching that challenges students to think, act and speak like those working in the field would.

Design and Technology is currently going through an exciting renovation that will bring the environment and facilities into the 21<sup>st</sup> Century, making it a modern and stimulating department befitting the present day and beyond. We want to inspire and develop the engineers, architects and designers of the future and within our plans, we expect to have a new CAD/CAM hub with further computer driven production techniques and equipment that will enable students to create prototypes much more quickly.

Our department currently has facilities from traditional workshop equipment to more modern computer design programs; including the opportunity to experiment and use the latest equipment such as the laser cutter, 3D scanner and 3D printer.

This course opens the door to a wide range of careers in the creative, engineering and manufacturing industries. It is also excellent preparation for careers in many other fields. Whatever career you choose, the knowledge and skills you learn, particularly those concerned with rapidly developing technologies, will be extremely valuable. You will also develop skills such as creative problem solving and time management, which are highly prized by employers.

This qualification complements many other subjects on the curriculum, physics, mathematics, electronics, computing, art and other practical and creative subjects. It will open the door to careers such as Product Design, 3D Design, Computer Aided Design/Manufacturing, Engineering, Industrial Design, Architecture, Manufacturing, Textiles, Interior Design, Furniture Design, Graphic Design and other relevant Art and Design courses.

In the past we have offered multiple subject related trips. Students have enjoyed trips to London and Jaguar Land Rover; we regularly look for opportunities to offer new and exciting trips.



## A Level Units

A-level Design and Technology: Product Design helps students take a broad view of design and technology, develop their capacity to design and make products and appreciate the complex relations between design, materials, manufacture and marketing. The specification provides students with the opportunity to design and make a product with considerations for all aspects from beginning to end.

The course has a 50 percent coursework/Non-exam assessment (NEA) weighting; pupils should have the independence to work on a major project, which can span over a year.

Paper 1
<b>What's assessed</b> Core technical principles and core designing and making principles.
<b>How it's assessed</b> <ul style="list-style-type: none"><li>• Written exam: 2 hours</li><li>• 100 marks</li><li>• 25% of A-level</li></ul>
<b>Questions</b> Mixture of short answer, multiple choice and extended response.

Paper 2
<b>What's assessed</b> Specialist knowledge, technical and designing and making principles.
<b>How it's assessed</b> <ul style="list-style-type: none"><li>• Written exam: 2 hours</li><li>• 25% of A-level</li></ul>
<b>Questions</b> Mixture of short answer, multiple choice and extended response questions.
<b>Section A:</b> <ul style="list-style-type: none"><li>• Product Analysis.</li><li>• Up to 6 short answer questions based on visual stimulus of product(s).</li></ul>
<b>Section B:</b> <ul style="list-style-type: none"><li>• Commercial manufacture.</li><li>• Mixture of short and extended response questions.</li></ul>

Non-exam assessment (NEA)
<b>What's assessed</b> Practical application of technical principles, designing and making principles and specialist knowledge.
<b>How it's assessed</b> <ul style="list-style-type: none"><li>• Substantial design and make task</li><li>• 45 hours</li><li>• 100 marks</li><li>• 50% of A-level</li></ul>
<b>Evidence</b> Written or digital design portfolio and photographic evidence of final prototype.

## Is Product Design for you?

Skills and qualities required but also gained. All highly desirable by employers/institutions and excellent for applications, interviews and references.

*Identified by UCAS.*



### *Technical ability*

Skills and specialist knowledge of how things work or need to be designed and built.

### *Problem solving*

Creative thinking to recognise problems and their causes, identify a range of possible solutions and then assess and decide the best way forward.

### *Organisation*

Plan and schedule work, including prioritisation.

### *Communication*

Verbal and visual communication of ideas, presentations, persuasiveness.

### *Creativity*

Design skills, good imagination to come up with creative solutions to challenges, innovative ideas.

### *Analytics*

Collect and examine information in detail to arrive at a solution, to answer a key question or make an informed decision.

### *Customer service*

Contact with clients, users, target market and the public.

### *Discipline*

Organisation, being on time, meeting multiple deadlines. Perseverance with the task and plans until you accomplish them

## **Beyond A level**

What do Product Design students at NHGS go on to do?

The vast majority of NHGS students go on to study a degree – about 50% of D&T students study a design related subject at university, such as the ones mentioned on page 2. The rest pick other subjects where D&T is seen as an important complementary subject. Apprenticeships are becoming increasingly popular and D&T is a recognised subject by most institutions, particularly where a practical approach is required.

## **How to hit the ground running**

Studying GCSE Design and Technology can be advantageous but not essential, in absence of this revising this content before starting can give a much-needed head start. You may also wish to increase your subject awareness by looking into the world of design. Study products that you find inspirational. Research a range of historical and/or contemporary designers. Practise drawing in 3D. A working knowledge of CAD software both 2D and 3D would be advantageous.

See **Mr Walker** or **Ms Mumby** for further information or visit [www.ucas.com/job-subjects/design-technology](http://www.ucas.com/job-subjects/design-technology).