

# WHY PRODUCT DESIGN ?

## Students are encouraged to:

Develop and sustain their own innovation, creativity and design and technology capability, to recognise constraints and to produce high quality products.

Develop a critical understanding of the influences of the processes and products of design and technological activity from a historical perspective and in current practice.

Apply essential knowledge of understanding and skills of design production processes to a range of technological activities and develop an understanding of industrial practices.

Use information and communications technology (ICT) to enhance their design and technological capability.

Recognise the social, moral, spiritual and cultural values inherent in design and technological activity, and develop critical evaluation skills in technical, aesthetic, ethical, economic, environmental, social and cultural contexts.

Develop as discerning consumers able to make informed choices.

Develop positive attitudes of cooperation and citizenship working collaboratively.

## Entry Requirements:

This course is suited to candidates who have studied any Design and Technology course at GCSE, but is most appropriate for those who have studied Graphics, Resistant Materials and Product Design. Students need to have gained a B grade or above at GCSE to study this course successfully.

## Higher Education:

There are a wide range of courses and careers available to students who have studied Product Design. Universities such as Loughborough offer courses in Product Design, Automotive Design and Engineering.

For further information contact Mr S Goodall, Subject Leader.

In the Design and Technology Department we follow the AQA Product Design specification. It has been designed to encourage candidates to take a broad view of technology and design, to develop their capacity to design and make products and to appreciate the complex relations between design, materials, manufacture and marketing.

3D Design is intended to reflect the wide-ranging activities of professional designers and covers a wide range of materials. Candidates are encouraged to manufacture products in wood, metal and plastic, but other materials such as ceramics and textiles and other areas such as electronics and mechanisms can be incorporated to produce exciting coursework. Graphics are an integral part of any Design and Technology work and candidates learn to communicate their thinking clearly and represent their ideas graphically.

Design and Technology offers candidates the opportunity to gain personal satisfaction and a positive experience from working with a variety of materials. The practical problem solving processes will encourage independent learning, creativity and innovation.

## Assessments 3 Units in year 13.

### Paper 1

Technical principles.

Written exam: 2.5 hours—120 marks

30% of A-level.

### Paper 2

Designing and making principles.



**A2 Product Design**      **22**      **Portfolio**

**Materials Development**

Materials used to make the product must be considered and compared, both aesthetically and regarding their properties.

Idea 5 with a padded seat added for comfort as specified by client, to overcome poor options available currently.

Above is a colour coded version of idea 5 to show where the different materials are located, and which materials could be used for each section.

I then took a sample of each material and examined their properties, and hence which would become the most suitable for my product in order to create a solution that conforms to spec as well as possible. Below is range of textured CAD models of the product to show the aesthetic qualities of a range of material combinations.

SEAT MATERIAL	EVALUATION
Black Leather	Tough wearing material, good for regular use. Fits with any outer shell material.
Cotton Cloth	Thin, but easy to work with and inexpensive compared to leather, similarly fits with most other materials.
Seating Foam	Quick and easy to apply with an adhesive, however not heat sensitive or fit the aesthetic as well as leather or cloth.

Written exam: 1.5 hours—80 marks

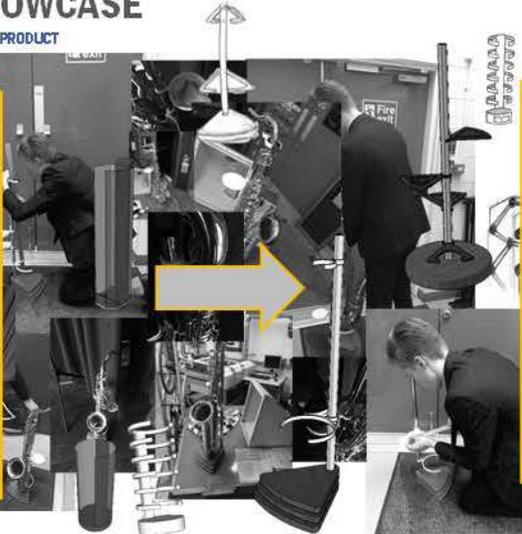
75% of A-level



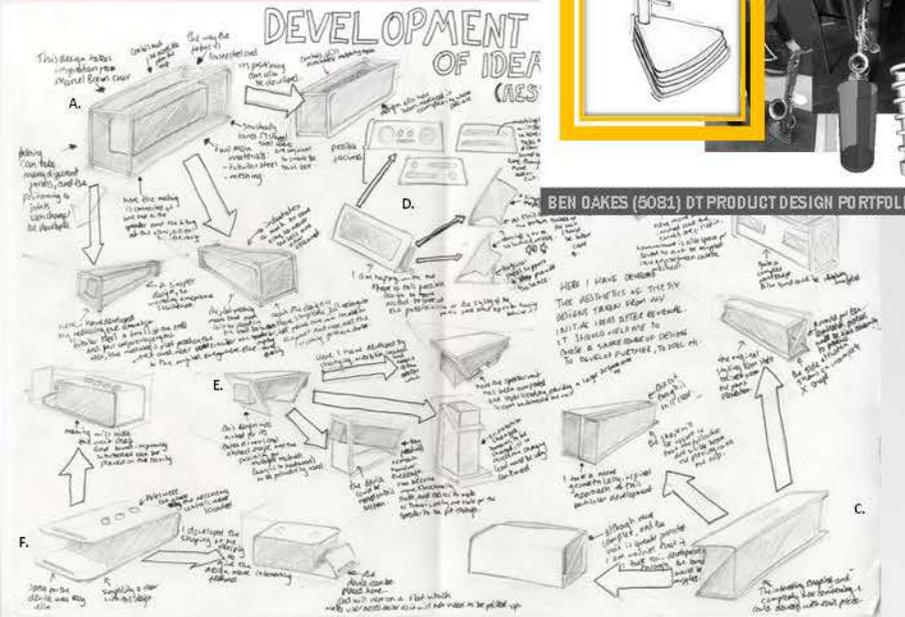
**PRACTICALS**

**PRODUCT SHOWCASE**

A MASHUP SHOWING CONCEPT TO PRODUCT



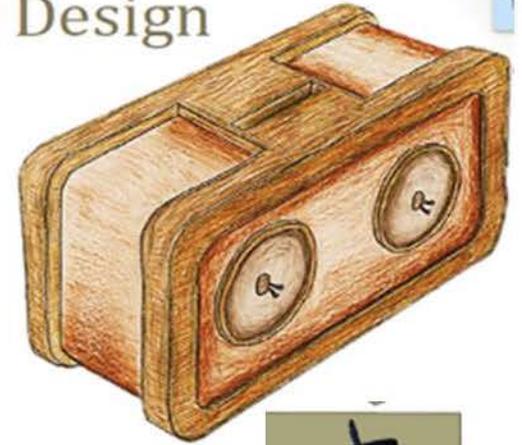
**AS Product Design**



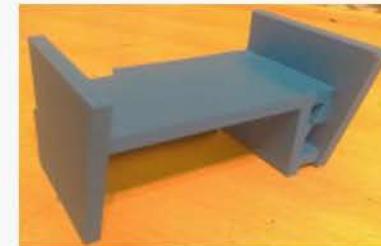
BEN OAKES (5081) DT PRODUCT DESIGN PORTFOLIO

INTRO RESEARCH DESIGN DEVELOP MAKING REVIEW

**Final Rendered Design**



**DIGITAL PORTFOLIO**



**A LEVEL COURSEWORK EXAMPLES**