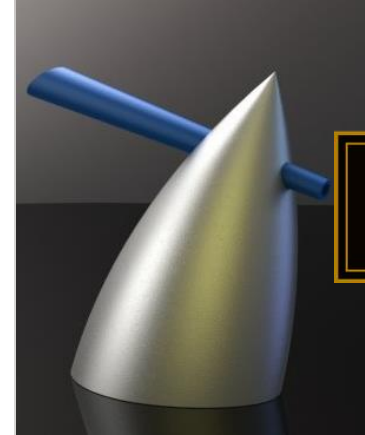


SIXTH FORM INDUCTION



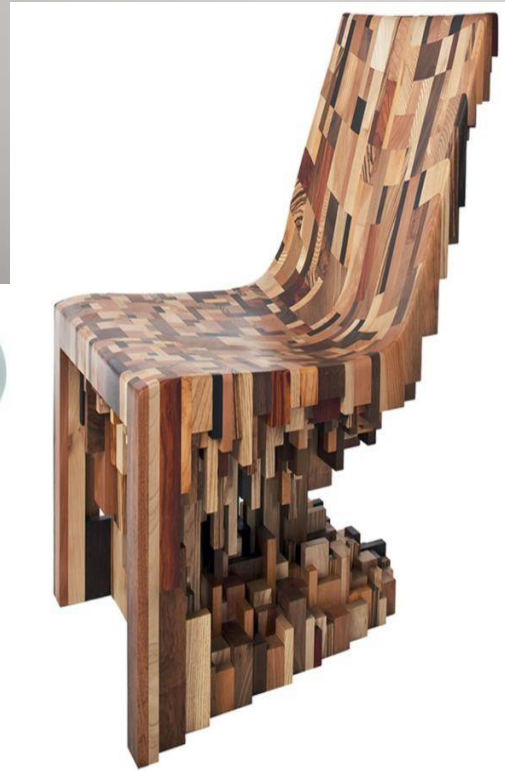
EAST LEAKE
ACADEMY
AND SIXTH FORM

A LEVEL PRODUCT DESIGN

By

Mrs Khan

2020



Introduction to A level Product Design



Why take A level product design?

Do you like being creative, solving problems, learning how things are manufactured?

This subject is the middle ground between the creative Arts, Science and maths.

Do you like new inventions, cars, toys, electronic, electric and mechanical products? If you look around you, your everyday objects are constantly changing and developing.

The latest products are reducing in size, lighter and more ergonomically designed with the development of the latest technology and the newest materials. What gadgets do you like, what fascinates you? Are you interested in the opportunity in developing new solutions to existing problems or creating a product that has never been done?

Do you want to develop more environmentally friendly designs?

As an A level product design student you have the opportunity to learn about the world of technology, materials and communication and then apply this information to bring your ideas to life.

Introduction to A level Product Design

Who can take A level product design?

Product design is a STEM subject and the natural progression for any GCSE Engineering or 3D Design students. But this is also available to any creative student with grade 6 in maths and science.

Product design A level is suitable if you are interested in a career/ Degree / Apprenticeships in any of the following areas-

- A wide number of Engineering fields
- Any creative design field
- Product design
- Architecture
- Retail / Marketing/ Advertising
- Business/ manufacturing
- Any art and design career
- Teaching
- Computer aided design (CAD/CAM) field



Introduction to A level Product Design



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How does A level product design fit?

Product design can combine with a wide range of subjects, in science, maths, business, computing and even Art and design subjects.

With the Product design A level – the 50% coursework component allows you to bank part of this qualification before the end of you're A level, therefore less pressure at the end and the opportunity to achieve a really high grade.

How have previous students achieved in Product design?

All A level Product design students have always achieved at or above their target grade (100% A-C for the past few years). This has been achieved through the individualised support and feedback provided by experienced Product design teachers. At ELA all the A level Product design teachers are qualified Product designers themselves. Students thoroughly understand how they are achieving in each of their components, throughout in the 2 years and also what they need to do to improve.

Introduction to A level Product Design



Willing to solve problems and think outside the box

Be creative in developing new ideas based on a design era of your/your client's choice

Work as a team

Willing to develop your technical drawing skill in isometric and orthographic

Willing to learn new CAD/CAM programs

Develop skilful use of a wide variety of tools, equipment, machinery and processes

Have an in-depth understanding of health and safety

Skills you need to willing to develop

Understand and apply more sustainability into your designs

Willing to learn independently and act upon advice

Organise a client to help provide feedback throughout your project

Develop an understanding of new and emerging technologies

Learn about different design eras & designer and their influences on products

Be organised with your theory and also your coursework project deadlines

Be prepared to learn and be tested on all theory topics

Willing to further develop the use of CAD programs into their designs

Develop your understanding of the iterative design process and apply this to your project

Assessment



A Level:

Component 1 –

Principles of Design and Technology - **50%** of qualification.

Written Exam 2hrs 30 mins- 120 marks

Component 2 –

Independent Design and Make Project - **50%** of qualification

Project- Non-examined assessment- 120 marks

The project is internally assessed and externally moderated.

Component 1

A level Theory topics



The majority of topics 1 to 7 are covered in year 12



Topics 8 to 12 are covered in year 13

- 1: Materials
- 2: Performance characteristics of materials
- 3: Processes and techniques
- 4: Digital technologies
- 5: Factors influencing the development of products
- 6: Effects of technological developments
- 7: Potential hazards and risk assessment
- 8: Features of manufacturing industries
- 9: Designing for maintenance and the cleaner environment
- 10: Current legislation
- 11: Information handling, Modelling
- 12: Further processes and techniques.

You will be tested regularly on each topic.

2 out of the 5 lessons a week will be theory

You will need to produce revision cards regularly

We use past paper questions regularly to help with your ability to pass the exam

You will need to purchase an A level textbook for you theory, dividers, revision cards & a large A4 folder for your theory work

Overview

- The purpose of the project is to undertake a substantial design, make and evaluate project which will test your skills in designing and making a product.
- You will be required to individually and in consultation with a client/end user identify a design possibility and then develop a range of potential solutions and then produce one through practical making activities.
- You will need to produce an appropriate full-sized working solution to a need or want that is sufficiently developed to be tested and evaluated
- The project must allow you to develop your design and making skills- fully matching your potential.



Overview cont'd

- The project needs to creativity and imaginatively applying the iterative design processes to develop and modify designs, and to design and make prototypes that solve real world problems, considering others' needs, wants and values.
- Only limit to project selection is time and resources available.
- You are expected to take ownership of your project and will be fully supported to meet your target assessment criteria and to maximise your achievements.
- you will need to understand the commercial design approach to reflect the professional designer approach.



