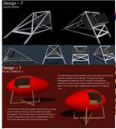


DESIGN

ITERATIVE DESIGN PROCESS

PROTOTYPE

EVALUATE



**A02 -** After completing the models and getting final feedback design work and developments students then create a final Design presentation of the product that you are hoping to manufacture. This should include further testing to make the product will work and suitable materials are selected for the design. Students then need to complete a manufacturing plan and manufacture final working prototypes using a range of materials and processes. A manufacturing diary will also map the manufacturing stages within the design. This should also include any on going testing

T2

EVALUATION



T3

**A03 -** Students will be finalising their prototype final products and completing final testing and an evaluation. This should include evaluating against their brief and specification. A comprehensive critical evaluation of their final prototype, clearly identifying how modifications could be made to improve the outcome.

Students will be completing theory lessons linked to the different projects as they progress through Year 12 and 13. Students at a Paper 2 mock in the summer of Year 12 and Paper 1 in Year 13. Students will also be learning through practical application. This allows students to understand some theory concepts with first hand experience.



Year 13

T3

**Architecture Project -** Students have been asked to design a concept sustainable dwelling/ wilderness lodge where a family can escape on holiday. The building needs to complement its surroundings and work with the environment and landscapes it is situated in. This includes looking at architects, design presentations and elevations, CAD designs and modelling methods.

**A01 - Research and Initial thoughts -** students start the iterative design process so will depend on their progress. Students will ensure they have completed the majority of the research prior to the summer. The research will be expected to employ a variety of both primary and secondary methods of investigation. These might include visits organised by you or others, surveys and questionnaires could be used to inform.

**V and A Designer design -** Students are to visit the V&A and the Design Museum in London as part of an educational visit. Students will choose and gather research on a chosen design movement product with preparation. Students will be designing a chair for mass production. Types of production, production and machining processes for metal, wood and plastic. Recapping plastic and wood in theory contexts.

**Concrete speaker -** students will complete a product analysis as well as target market gathering of information to approach a mini design and make project. Iterative design process will be gone through to encourage students to consider key research and design tasks. Composite materials and their working properties. Students will only be allowed to produce a design folder through practical modelling.



T2

T1



V&A



FINHAM PARK

**A01: Identify, investigate & outline design possibilities**

**A02 Design & make prototypes that are fit for purpose**

**A03: Analyse & evaluate**

**Written Exams Paper 1:**  
 What's assessed: Technical principles  
 How it's assessed: Written exam: 2 hours and 30 minutes  
 120 marks 30% of A-level  
 Questions  
 Mixture of short answer and extended response.  
**Paper 2:**  
 What's assessed: Designing and making principles  
 How it's assessed: Written exam: 1 hour and 30 minutes  
 80 marks 20% of A-level  
 Questions  
 Mixture of short answer and extended response questions.  
 Section A: Product Analysis: 30 marks  
 Up to 6 short answer questions based on visual stimulus of product(s).  
 Section B: Commercial manufacture: 50 marks  
 Mixture of short and extended response questions

Design Technology

Finham Park School  
PRODUCT DESIGN



**A Level Outline:**

During Year 12. Students will learn key areas of the course through different mini projects with both individual and design team outcomes preparing you both theoretically and practically for the NEA and written exams in Year 13. Mini Projects include: Upcycling, Chair Design, Concrete Speaker, Architecture Project, Laser cut lamp. Design for a concept super yacht and others which all allow you to build a design portfolio alongside your theoretical studies.

Students are taken through the controlled assessment elements of the course with theory and exam knowledge being covered once a week from the start of the year. Student will learn the theory needed to prepare them for the exam both through introduction of elements of their controlled assessment as well as the standalone theory lessons as they progress. Standalone theory lessons will be recorded and carried out with exercise books and CA will be mostly computer generated and handed in electronically. Regular assessment and feedback will allow us to track the students on both elements throughout, however, NEA guidelines must be adhered to. Main focus for the exam will be on designers, evolution of design, marketing of products etc.

**NEA Ready:**

**Research and investigation**  
 You will understand a range of different research methods that are used by designers to gather information. Product Analysis, Product Disassembly, Questionnaires, Working with a client, Understanding Target Markets, Anthropometrics and Ergonomics, Product Testing, Understanding Materials, Mood boards, Mind Maps

**Designing**

Design using a range of skills that will hone throughout the course; Sketching, Technical Drawing, CAD work on a range of software packages. Looking at presentation, layout, how to create a design portfolio, Annotating Design work, using the iterative design process, Modelling making and development.

**Manufacture**

Manufacturing using a range of traditional and modern technologies. Understand a range of hand tools, power tools and CAD/CAM technologies such as Laser cutting, 3D Printing, Testing different materials and processes to see which would be most suitable for the desired outcomes you intend to manufacture. You will be able to gain and build on your pre-existing practical knowledge.

**Evaluation**

Evaluate and analyse different areas of the project to help design and develop quality outcomes for a range of different design briefs throughout year 12 and 13. Consider the clients wants and needs throughout the design process to create appropriate products for the needs of the consumer. Evaluate the quality of the outcomes and test designs against the design brief and specification.

**Exam Preparation**

Exam technique  
 Weaker areas of knowledge  
 Difficult areas of knowledge  
 Layout and organisation of paper.



A LEVEL JOURNEY