

Product Design GH6 Learning Journey

Skills

Year 13

"Are you Fit for FEET?"

- Respond to a personal design context and brief
- Know how to conduct primary + secondary research on a theme
- Develop visual communication skills through design
- Being able to use CAD/CAM effectively
- Oevelop prototypes + models
- Experiment with processes + materials
- An understanding of sustainability + ethical design
- An in-depth knowledge of socio and economic influences on design
- ✓ Understand H&S in industry
- Maths volumes/percentages



Year 12

"Introduction to A-Level Mindset"

- Understand mechanical + physical properties
- Be able to identify different materials and their classifications
- Understand and be aware of different printing methods
- Understand and be able to describe different design movements
- Know how to silk screen
- Know how to analyse a product effectively
- Understand how to design and construct a product using CAD/CAM
- Be able to explain who Dyson is
- Understand different manufacturing processes



Knowledge

Biopolymers

Maths
Volumes/percentages et

Theory Revision

Future Education, Employment & Training

Health & Safety in Industry

Festival of Britain
History of Design

History of Microelectronics Finishing processes in manufacturing

User feedback on design ideas

Manufacturing Final Product Testing against specification Sustainability + Ethical Design

Manufacturing Specification Experimentation with materials and processes

Iterative Design
Process

Modelling and Prototyping

Key Product Designer Analysis

Drafting a design specification

Visual CommunicationDeveloping design ideas

CAD Virtual Modelling

Conducting primary + secondary research Drafting their own

Responding to a design context



Metal manufacturing Processes

Polymer Manufacturing Processes

Dyson Engineering Research + Analysis

Working from a technical drawing

Cardboard Modelling Development CAD/CAM Final Chair Manufacture Woods manufacturing processes

Ergonomics + Anthropometrics **Design Development** Initial Ideas + Isometric Drawing Product Analysis

Design movements + their historical context

Silk Screen Printing Design Movement Poster History of Chair Design Timeline

Printing Methods

Lithographic, flexographic, digital, and silk screen

Papers and Boards
Uses + properties.

Testing Materials in the Workshop



Assessment of prior knowledge and skills accumulated during KS3 & KS4

Mechanical + Physical Properties Materials Classification
Woods, Metals and Polymers