

# Sandbach School Design and Technology Curriculum:

**Mastery:**

# Y12 Product Design Curriculum Sequence

**Intent:** To **develop** skills learnt at GCSE along with new content such as a deeper understanding of the Work of Others, Designers and Architects, Manufacturing in Industry and Research Techniques. Also an increased awareness and understanding of Exam layout, subject content and technique.

AQA Product Design

## Term 1

Performance of Woods, Sketching, Responsible Design, PD Considerations

Furniture Influenced by The Work of Others

## Term 2

**Architecture Project** - Design Processes, Polymers, Paper & Board, Design Methods

Industrial Practices, Product Design and Development

## Term 3

**NEA** – Introduction of NEA, Analysis of previous work

Research, Design Ideas

### Why start here?

Developing skills and processes learnt in GCSE. Introduce Theory at A Level and begin to develop an understanding of topics, materials and processes that unpins knowledge required in A Level Product Design

The Work of Others is a big focus at A Level, so combining this with a Furniture Project moves pupils away from designing for themselves and ensures they consider the work of others – working with Design Briefs produced by other people

### Spec links:

What's assessed - Practical application of technical principles, designing and making principles.  
How it's assessed - Substantial design and make project  
100 marks  
50% of A-level Evidence Written or digital design portfolio and photographic evidence of final prototype.  
3.1.2 – Performance Characteristics of Materials  
3.1.4 – Forming, Redistribution and Addition Processes  
3.1.5 – The use of Finishes  
3.1.6 – Modern Industrial and Commercial Practice  
3.1.8 – Product Design and Development  
3.1.9 – Health and Safety  
3.1.14 – Design Communication  
3.2.4 – Design Process  
3.2.10 – National and International Standards in Product Design

### Teaching these topics here supports:

NEA Development and Improving a range of techniques used within the NEA Subject Knowledge and embedding understating from GCSE

### These topics feed from:

GCSE Design and Technology  
NEA and Coursework at GCSE

### Why move onto these units?

Pupils required to consider the work of others and link their work to Companies – researching how companies plan their work, Company Pledges, sustainability and how they attract consumers

Pupils required to develop their own thinking and planning around the project and present their findings to the rest of the group – **Literacy Link**  
Careers Link and discussions around Post 18 Pathways and Interview Techniques and skills

### Spec links:

What's assessed - Practical application of technical principles, designing and making principles.  
How it's assessed - Substantial design and make project  
100 marks  
50% of A-level Evidence Written or digital design portfolio and photographic evidence of final prototype.  
3.1.1 – Materials and Their Applications  
3.1.3 – Enhancement of Materials  
3.1.4.5 – The Use of Adhesives and Fixings  
3.1.7 – Digital Design and Manufacture  
3.1.11 – Design for Manufacturing, Maintenance, Repair and Disposal  
3.1.12 – Feasibility Studies  
3.2.2 – Design Theory  
3.2.3 – How Technology and Cultural Changes Impact on the Work of Designers  
3.2.8 – Responsible Design

### Teaching these topics here supports:

NEA Development and Improving a range of techniques used within the NEA Subject Knowledge, embedding and developing understating from GCSE

### These topics feed from:

GCSE Design and Technology  
NEA and Coursework at GCSE

### Why move onto these units?

Pupils to develop the skills learnt in Term 1 and Term 2 and put them into practice in their NEA.  
Initial findings are undertaken and completed to help them find an area of interest and they need to state the problem they are going to investigate.  
This is their exploration and form the Research section of their NEA.

### Spec links:

**AO1 (30 marks) Identify, investigate & outline design possibilities**  
3.1.10 – Protecting Design and Intellectual Property  
3.1.13 – Enterprising and Marketing in Development of Products  
3.2.1 – Design Methods and Processes  
3.2.3.4 – Product Life Cycle  
3.2.9 – Design for Manufacture and Project Management

### Teaching these topics here supports:

NEA grade, producing formal work, links to English and Maths

### These topics feed from:

GCSE Design and Technology  
NEA and Coursework at GCSE  
Projects completed in Terms One and Two