Curriculum Map

7

Basic Timber Theory (Secret Storage)

Learn the three main groups of timber (hardwoods, softwoods and manmade boards) and the basic differences between them.

Timbers (Secret Storage)

Pupils learn the basic tools for measuring, marking and cutting timber. They develop their accuracy when using these.

Workshop Health and Safety

Pupils learn the expectations and develop health and safety knowledge in the workshop. They then complete a workshop license.

Design Movements (Memphis Clock)

Investigate the Memphis design movement and the designer Etorre Sotsass. Design their own clock based on the Memphis movement.

Basic Practical Skills (Memphis Clock)

Pupils learn basic coping saw skills and edge finishing. Use of CAD/CAM and 2D design.

8

Desk Tidy Project

Pupils learn more advanced tools for measuring, marking, cutting and processing materials. Including Timber and Acrylic. Develop their accuracy marking and cutting.

Hand Skills (Timbers and Plastics)

3D Lightbox Project

The 3D lightbox project introduces pupils to the iterative design process to familiarize themselves with the year 11 NEA process.

9

Timber Joining Methods

Pupils develop their isometric drawing technique, producing rendered wood joint drawings by hand and using CAD.

Pupils develop knowledge of both permanent and temporary joining methods including various wood joints and knock down fittings.

Plastics Theory Thermoplastics, Thermosetting

Pupils learn about the two different groups of plastics and the differences between them and some of their properties and uses.

The Iterative Design Process

Design and annotation skills

Pupils analyse a design brief, produce some client research, existing product analysis and then produce their own design specification from their findings.

- A Aesthetics
- C Cost
- C Customer
- E Environment
- S Size
- S Safety
- F Function
- M Material

CAD/CAM Skills

Pupils develop their design skills producing some initial ideas for their lightbox. They then model and develop their design into a final idea.

Pupils develop their CAD/CAM skills producing accurate drawings of their final design on 2D design. They then use the laser cutter to produce their design.

Core Systems Knowledge (Electronics)

Pupils develop their core knowledge on Systems and Electronics.

10

Timber Skills Projects

Pupils complete a series of skills based tasks using timber including a number of joints and a wooden puzzle task to improve measuring, marking and cutting accuracy.

Specialist Timber Knowledge

Alongside completing the skills based tasks, pupils cover the Timber specialist technical principles.

Core Technical Principles

Pupils cover new and emerging technologies, systems approach to designing, sustainability and design decisions.

11

NEA Context

On June 1st in Year 10 AQA release the Contextual Challenges. Pupils begin brainstorm these and the possibilities.

NEA Designing

Students investigate the context of their choice to identify a problem, user/client, write their own design brief and specification.

NEA Developing

Generation of fully annotated initial ideas

NEA Making

Students conduct a range of testing, modelling, sketching and evaluation to develop solution to their design brief.

NEA Evaluation

The final prototype is manufactured independently and documented in making diary.

Students use their design brief, specification and user/client feedback to evaluate their prototype.

Exam Theory Recap

Practice Iterative design task based on previous years contexts. Covering research, design strategies and communication techniques, modelling, practical skills and evaluating.

Practice NEA task

Pupils research key designers and companies and present their research. They then design and make a small product inspired by one of them.

Investigating the work of others

Students prepare for the exam recapping theory and using revision and exam practice.

Past Papers

Exam