Design & Technology Curriculum Map

Core Technical principles:

New and emerging technologies

Materials:

- New
- Modern
- Smart
- composite



NEA task submitted to exam board in May

Complete NEA:

Design, Make & Evaluate, final product and portfolio is 50% of overall grade

Prepare for final written exam worth 50% of overall grade.

Learning:

- Technology push
- Market pull
- Trends
- People
- Society
- Culture
- Ergonomics
- Anthropometric data



Inspiration:

Students will work through an externally set NEA task from a previous AQA contextual challenge.



- Electronic components.
- Soldering.

Learning:

- Quality indicators.
- Material finishes.
- Hand and machine

Core Knowledge: Energy, systems & devices

Year 9:

Year 9 brings together the design and practical skills from Years 7 & 8 into one project and also introduces electronics and polymers.

Mock NEA:

Design, Make & Evaluate product and portfolio.





- Investigation
- Primary data
- Secondary data
- Design ideas
- Prototype development



Year





Specialist Technical principles:

Electrical components

Year 8 will look to expand on workshop skills, by creating joints and looking at mechanisms. Graphics will build on the nets knowledge and require you to create your own during modelling.

Practical Skills:

Tolerances & marking out for joints, accuracy in cutting, modelling

Learning:

- User needs and product requirements.
- Risks, hazards and control measures.
- Sources and origin of timbers and stock forms.

Learning:

- Joining methods and techniques.
- Working with accuracy and precision.
- Use surface finishing
- Critically evaluate outcomes and suggest potential improvements



Practical Skills:

Development of CAD skills, using the laser cutter.



Learning:

- User requirements for a product.
- Groups of timbers.
- Groups of plastics.
- Material sources and sustainability.



Core Knowledge:

Health & Safety Refresher, user requirements, sustainability





Year





Graphics Practical Skills

Introduction to CAD, rendering, modelling.



YFAR 7

In Year 7 you will focus on Timbers with an introduction to Health & Safety and the workshop, in addition to this you will explore Graphics and a CAD introduction. Each project will investigate a designer or design movement.

Graphics Core Knowledge:

2D Design, nets, rendering

Learning:

- Responding to and analysing a Design Brief
- Timbers core knowledge
- Safely using a range of hand tools machinery.
- **Problem Solving**
- Design Ideation
- Quality assurance and iterative working.





Health & Safety in the

workshop, Timbers and their

working properties.





Year







Timbers Practical Skills:

Selection of materials, working with tools and machinery.



Learning:

- Introduction to CAD
- Papers & Boards Core Knowledge
- Modelling
- Rendering
- Looking at the work of others

















Curiosity

Collaboration

Endeavour