

GCSE Design Technology

Learning journey

Systems & Electronics

- Systems approach
- Core electronic principals
- Components

Polymers

- Types
- Working properties and uses
- Manufacturing processes
- Vacuum forming practical

Motion & Mechanisms

- Mechanical devices
- Changing one type of motion into another.
- Identify specific mechanisms such as levers, linkages and rotary systems.

Energy

- Renewable and non-renewable resources
- Nuclear energy
- Energy storage
- Kinetic pumped storage systems
- Alkaline and rechargeable batteries

CAD/CAM

- 2D & 3D CAD
- Laser cutting and CNC milling
- FPT: Dog tags

New & Emerging Technology

- Critical evaluation of new and emerging technologies – planned obsolescence
- Design for maintenance
- Ethics
- The environment
- Sustainability and the environment



Smart & modern Materials

- Developments in new materials (modern, smart, composite and technical textiles)

NEA

The NEA (Non-Exam Assessment) represents 50% of your final grade in Design Technology. Students will undertake a single 'design and make' activity, which will arise from investigating one of three Contextual Challenges set by AQA.

Designing

- The work of others
- Design strategy
- Communication of ideas
- Environmental, social and economic challenge
- Specialist tools and equipment

Timbers

- Wood working properties
- Selection of materials
- Material properties and manufacturing processes
- Practical including jointing, tools, machines, finishing

New & Emerging Technology

- Robotics, automation and production
- Production techniques and systems – automation
- Enterprise
- Market pull and technology push
- People, society and culture
- Sustainability and the environment

