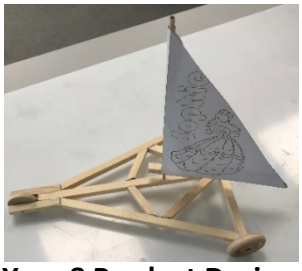
Key Stage 3 Product Design

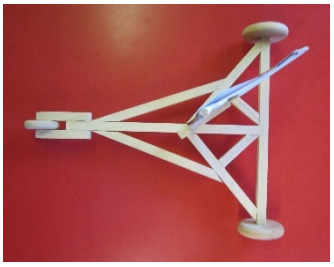
General Information

At Key Stage 3, all pupils in Design and Technology follow a carousel system throughout the year experiencing Product Design, Food Technology and Textiles alongside Art and Computer Science. Pupils undertake a range of design activities and practical tasks that develop a wide range of innovative, creative designing and making skills. Work is assessed in each focus area and this is used to formulate their end of year Technology level.

Year 7 Product Design:

In Year 7 pupils create and test structures and build an environmentally friendly land yacht toy, experiencing hand tools, workshop machinery and CAD CAM technology.

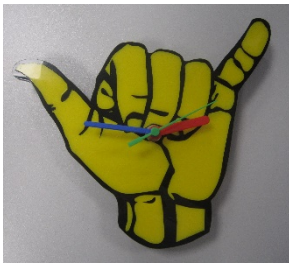





Year 8 Product Design:

In Year 8 skills and knowledge are progressed as pupils use Computer Aided Design to design a clock on a program called '2D Design Tools V2'. This is then cut out using the laser cutter and assembled together along with a clock mechanism to make a fully functioning wall hanging clock.





Year 9 Product Design:

In Year 9 pupils are developing their skills and knowledge aiming to achieve their highest end of Key Stage 3 level across the areas. In Product Design pupils' pewter cast a piece of Celtic jewellery that they have designed using a CAD/ CAM mould. Pupils also construct a display case which includes a vacuum formed internal tray for the jewellery to sit in.




GCSE Product Design

General Information

Technology covers a wide range of activities and has natural links with science and art teaching. In Technology, understanding and applying scientific principles is just as important as the development of 'making skills'. Our aim is to reflect the complex abilities required to gain control over the man-made world. The common activities in all Technology courses are 'designing and communicating', 'making', 'testing', and 'evaluating'.

Technology has a vital part to play in your education if you are to be prepared for living and working in an industrial society. In activities such as 'designing or adapting', then 'making', you will respond to problems which are often unfamiliar. In producing a solution, you will have to make decisions bearing in mind the restraints of time, available resources and your own skills.

All areas of Technology are taught through a 'problem solving' approach. This approach encourages pupils to think about and experience scientific, aesthetic, social, ethical and mathematical issues and concepts.

Project work developed through 'problem solving' can be of two types:

- CONSTRUCTIONAL: The construction of an artefact, device or system as the solution to the problem.
- INVESTIGATIONAL: These projects require pupils to conduct a series of investigations and propose likely solutions.

The end product of the 'problem solving' approach is suitable **only** if it is well made or investigated and functional.

Our Technology courses involve the use of the best materials and equipment available including plastics, constructional kits, the more traditional materials. Computers are also used in the design and investigational stages of work, as a tool for controlling mechanical devices and to develop pupil skills in CAD/CAM.

Syllabus

A study of a common core to support each area will give you an overview of technological processes which must be applied within problem solving activities.

The core involves the following:

- Designing and communication skills
- Knowledge of materials and making skills
- Evaluation
- Products and application
- Systems and control
- Awareness of the environmental, moral and social implications of technological activities.

GCSE Product Design

Product Design is an exciting, creative subject leading to a range of potential careers including Architecture, Fashion, Engineering and Design. Pupils will follow a 2 year GCSE course where the emphasis is on working in a variety of different areas including graphics, systems and control and resistant materials. Pupils will analyse existing products and design and make a range of 3-dimensional products using a wide variety of materials. Assessment is through Written Examination (50%) and Controlled Assessment (50%), which must include a Design Folder, and 3-dimensional products and both are completed in Year 11.

Controlled Assessment requires strong evidence of the use of ICT, and in-depth knowledge and use of industrial practices.

NOTE: A positive approach and commitment to all Design Technology subjects is essential throughout the course. Pupils will be expected to put in 'extra time' if necessary to keep up with coursework deadlines.

Year 11 GCSE controlled assessment practical work