



Design & Technology

Aims

- To enable pupils to design and make quality products, which are the outcome of knowledge and understanding of design and technology and economic awareness.
- To encourage pupils to mature through the intellectual process of problem solving.
- To encourage pupils as and where appropriate to apply knowledge and skills from other subjects, particularly science, mathematics, art and information technology.
- To encourage pupils' critical and aesthetic abilities by helping them to understand some of the effects and implications of both design and technology on the world in which we live – in our domestic, commercial and industrial environments.

Objectives

- To fulfil the requirements of the National Curriculum at Key Stage 3 for all pupils (aged 11-14) in Design and Technology: knowledge, skills and understanding.
- To fulfil the requirements of the National Curriculum at Key Stage 4 for those pupils who take Design and Technology as an elective subject in Years 10 and 11, in preparation for the GCSE examination.
- To prepare students taking Design and Technology in the Sixth Form for GCE AS and A Level examinations.

Organisation

One full-time Head of Department and a full-time technician manage a fully equipped Design and Technology suite, offering facilities for designing and manufacturing projects in resistant materials (wood, plastic and metal), and also incorporating a multi-media area for graphics and electronics.

Key facilities include :

- Fully equipped workstations
- One resistant materials workshop
- One lecture room and drawing office
- CAD/CAM milling centre and computer
- Centre lathe
- Band saw
- Drilling machines
- Jig saws
- Router
- Pedestal Grinder
- Vacuum Former x2 off
- Buffing Machine

The Department has its own TV, DVD and video, together with an extensive technical library of books, videos and CD-ROMs.

Who studies what and when?

Year 7

After a comprehensive safety induction, all pupils actively problem solve using wood and plastics. Projects include the design and manufacture of: (1) a clock (thermoplastics and softwood) and (2) a continuity tester (plastics and electronics)

Year 8

Projects include the design and manufacture of toys incorporating mechanisms (gears, pulleys, levers, cams) in wood and plastic, and a storage device in aluminium.

Year 9

Multi-media projects intended to broaden skills and experience include the design and manufacture of a steady hand game involving woodworking, metal working and electronics.

Year 10

Students commence a course of study for the Edexcel GCSE (first teaching from September 2009). Students prepare for the DESIGN element of their GCSE coursework portfolio.

Year 11

Students commence the MAKE element of their GCSE portfolio, which they submit with the DESIGN element completed in Year 10.

LVI and UVI

Students follow the Product Design (Resistant Materials) route for the AS/A Level Design and Technology qualifications.

Each year has 2 modules (see Public Examinations), and the AS can be taken as a stand-alone course or can be extended to A Level.