

Design Technology Curriculum content covered in Year 7:

Students complete a term in our specialist workshops supported by experienced staff and technician. This project begins with studying the characteristics of different materials, their sustainability issues and common uses. Students select from and use specialist tools, techniques, processes, equipment and machinery precisely to produce a final three dimensional product.

Design Technology Curriculum content covered in Year 8:

Students use research and exploration, such as the study of different cultures, to identify and understand user needs. Students go on to develop their drawing skills, present their ideas and make their product using a variety of materials. A wide range of manufacturing skills are developed through using various tools and pieces of equipment to produce a final three dimensional product.

Design Technology Curriculum content covered in Year 9:

The project largely focuses on research, creativity, prototyping/ manufacture and evaluating. It is an exciting brief that inspires the students and extends their technical knowledge of materials whilst developing their practical skills in a workshop. Computer aided design (CAD – 2D design) and manufacture (CAM – laser cutter) are explored and used to give a professional finish to their final three dimensional product. Students develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations.

GCSE Design & Technology.

The new GCSE places greater emphasis on understanding and applying iterative design processes. Students will use their creativity and imagination to design and make prototypes that solve real and relevant problems, considering their own and others' needs, wants and values. The GCSE is split into 3 areas; **Core technical principles**, **Specialist technical principles** and **Designing and Making principles**.

In order to make effective design choices, students will gain a breadth of technical knowledge and understanding that consists of:

- New and emerging technologies
- Energy storage and generation
- Modern and Smart materials
- Systems approach to designing
- Mechanical devices
- Materials and their working properties.

In addition to these core technical principles, students will develop an in-depth knowledge and understanding of the following specialist technical principles, these principles will be taught primarily through paper & boards, timber and polymer material categories:

- Forces and stresses
- Selection of material and components
- Scales of production
- Sources and origins
- Using and working with materials
- Ecological and social footprint
- Stock forms, types and sizes
- Specialist techniques
- Surface treatments and finishes

Students will understand how the prototypes they develop must satisfy the wants and needs and be fit for the intended use. They will demonstrate and apply knowledge and understanding of designing and making principles in relation to the following areas:

- Investigation, primary and secondary data
- Environmental, social and economic challenge
- The work of others
- Design strategies
- Communication of design ideas
- Prototype development
- Selection of materials/components
- Tolerances
- Material management
- Tools & equipment
- Techniques and processes

How it's assessed:

Written exam: 2 hours, 100 marks. 50% of final GCSE grade.

Non-exam assessment (NEA): 100 marks. 50% of final GCSE grade.

Subject: Food Preparation and Nutrition

Design and technology at key stage 3 is taught on a rotation basis and consists of 3 areas; Design Technology, Food Preparation & Nutrition, Graphics and Textiles. As part of their work with food, students are taught how to cook and apply the principles of nutrition and healthy eating. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Students are taught to:

- Understand and apply the principles of nutrition and health
- Cook a repertoire of predominantly savory dishes so that they are able to feed themselves and others a healthy and varied diet
- Become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- Understand the source, seasonality and characteristics of a broad range of ingredients

Curriculum content covered in Year 7:

Examples of recipes:

Apple Crumble

Quiche

Cous Cous

Soup/Smoothie

Flapjack

Curriculum content covered in Year 8:

Examples of recipes:

Potato Salad

Mediterranean Tart

Muffins

Pasta Bake

Frittata

Stir Fry