



Key Stage 3 Curriculum: Design & Technology

Year 7: Students are given opportunities to explore a wide variety of skills and techniques, by undertaking six projects throughout the year. Projects cover a range of topics, including Food preparation and nutrition, resistant materials (two projects using timber and metal), graphics and textiles.

In Food Preparation and Nutrition, students learn the value of a healthy diet through both theory tasks and practical activities where they are taught basic cooking skills. During the project they are required to develop designs for a healthy cereal bar for a child, based on their knowledge and understanding of healthy eating and the Eat Well Plate..

Resistant Materials is broken down into two areas: wood based tasks, and metal work. Students will undertake design and make assignments and focussed practical tasks to design a hanging basket bracket made from steel and a coat hook made using softwoods. They will gain a broad range of skills in the workshop through working with a variety of tools, equipment and machinery to make high quality products. Each project includes tasks to build students' knowledge and understanding of the theory side of Design & Technology, such as sustainable design, and structures and forces.

In Textiles, students will design and make a felt bookmark, where they will gain valuable skills in using fabric to make high quality products. Students are taught basic sewing skills, including a range of different stitches.

The graphics project introduces students to rendering skills and the process of vacuum forming in order to make a blister pack for a small product of their choice. They will gain knowledge and understanding of a range of manufacturing processes used with plastics, in particular, vacuum forming to manufacture the window of the package.

Year 8: Students undertake six design and make tasks, taught through Food Preparation and Nutrition, Graphics, Systems & Control, Resistant Materials and Textiles.

In Food Preparation and Nutrition students will continue to develop their knowledge and understanding of a healthy diet, and design a pizza for client with specific dietary needs. Throughout the project they will also be taught various cooking skills/methods of preparation to allow them to make a range of healthy sweet and savoury items.

In Graphics, the project is designed to further develop understanding of Graphics within Design & Technology and allows students to develop their knowledge and understanding of a range of industrial practices used in graphic design. Students will use their knowledge and understanding, as well as creative design skills, to generate ideas for a greetings cards that includes cardboard mechanisms/kinetic spreads.

Resistant Materials continues to build students' skills in working with metal, as well as develop their research and design skills, through making a keying cast in pewter. Students use Computer-Aided Design to develop their product, gaining valuable skills in ICT within the subject, as well as hand tools to file and polish the pewter. The second project in this area sees students use CAD/CAM to manufacture a small storage item or desk tidy using acrylic. The product is designed using Techsoft 2D Design following investigation through modelling. It is then laser cut before being shaped/formed by the student.

In Textiles, students design and make a phone case using felt and fleece. They will develop knowledge and understanding of materials, including recycled fabrics, as well as build upon the practical skills gained in Year 7. The project allows students to show creative design skills and leads to the production of a high quality product which they can use and enjoy.

Year 9:

Design & Technology

This side of the Design & Technology curriculum enables students to develop a broad range of skills in both designing and making (within a workshop environment) including using IT facilities. Alongside theory lessons, students will undertake an extended design and make task, as well as focussed practical tasks throughout the year. Projects cover a wide variety of skills required for all disciplines within GCSE Design & Technology, and will form a good basis for any D&T course chosen for Years 10-11.

In addition, students will be taught drawing techniques to allow them to develop technical drawings of their ideas. They will gain skills in modelling and subsequently developing their ideas, effective use of CAD/CAM (Computer Aided Design and Manufacture) facilities within the department, evaluation and research techniques.

Design & Technology (Food Preparation and Nutrition)

Food Preparation and Nutrition in Year 9 is taught through design and make assignments, one-off practical tasks, and theory lessons, developing knowledge and understanding of the science behind the cooking, as well as topics such as International Cuisine and Raising agents.

In preparing students for the new GCSE course, we cover a wide variety of topic areas, where by students will gain a better understanding of why ingredients are required in the production of specific foods/meals, as well as looking at where ingredients come from, how International cuisines have developed over time, and continue to build on the topic of Healthy Eating.