

Design and Technology Curriculum Intent - the knowledge and skills to be gained

KS3 Design and Technology builds on the skills and knowledge students have already learnt at primary school. The Design and Technology curriculum area's vision is to engage young people in design and technology and develop designers and informed consumers of the future. We create a stimulating and exciting learning environment where the teaching is both challenging and supportive. By empowering students to learn independently we allow them to flourish and achieve to the best of their ability.

The D&T department aims to educate our students to become citizens of a technological world and perhaps inspire some to become future designers, technologists and engineers. We hope to motivate students to consider the social, cultural and moral issues related to products. We aim to teach them to use technological knowledge and skills with confidence and accuracy and to enhance their education.

Each year group has a broad range of skills that challenge all abilities and allow for incremental progress through the year and through each unit of work. All students are encouraged to work independently in a variety of contexts including food, graphics, resistant materials and textiles. Each subject offers unique challenges that encourage individual, peer, team and whole class participation whilst having an awareness of safety for themselves and others. Students enjoy practical lessons that encourage participation and gain a satisfaction in producing their own unique product. Throughout the key stage students develop a confidence with tools and equipment and share new skills with others while continually applying their ever growing knowledge.

Key skills help to develop confidence in problem solving, researching and evaluating, some pupils will continue with Design and Technology at GCSE and others will stop studying D&T and opt for Food Preparation and Nutrition.

KS4 - We provide a high-quality design and technology education that should give students opportunities to create, innovate, design, make and evaluate a variety of high quality products that are fit for purpose. Students will continue to work on the technical skills and craftsmanship to execute practical tasks, thereby developing confidence to increase their skills, knowledge and competence in using materials, machinery, techniques and processes. Students develop their practical skills and use these safely with a range of resistant and non-resistant materials, drawing media tools and equipment, in both 2D and 3D. They are shown how to communicate their ideas and designs skilfully and accurately in 2D and 3D, using a variety of techniques, including digital technology, manufacture in a range of material areas and CAD. They should know about good design, everyday products and use correct technical terminology with Design & Technology literacy. They will be allowed to investigate and analyse the rich history of design and technological innovation and the work of others, including iconic designs, to inform their own work. They will be shown developments in design and technology and the responsibilities of designers, including environmental responsibilities.

Design and Technology is a subject and must be studied by all students until they leave school. There are two pathways of study offered at KS4 within the D&T department, both routes follow AQA specifications. In year 10 students start their GCSE studies. We are very privileged to have a highly qualified team of graphic, resistant materials, textiles and food teachers; therefore, we can offer all our pupils specialist teachers in each subject area.

- Design and Technology
- Food Preparation and Nutrition

For more details on each of the GCSEs we offer including specification (knowledge and skills needed) and final assessment details, please follow the links below.

- GCSE Design and Technology –

<https://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552>

Extra-curricular opportunities

Use of workshops with teacher supervision, Tournaments and AGT/ Masterclass events.

Food Preparation and Nutrition Curriculum Intent - the knowledge and skills to be gained

KS3 -Food technology constitutes a distinct and compulsory element throughout key Stage 3 Design and Technology with the aim of ensuring that all students understand and apply the principles of nutrition, balanced diets and learn how to cook. The programme of study asserts that instilling a love of cooking in students will open a door to one of the greatest expressions of human creativity. Learning how to cook is a crucial life skill that enables students to feed themselves and others affordably now and in later life. Ultimately pupils should be able to cook a range of mainly savoury balanced dishes that they will then feed themselves and their own families in the future. To do this pupils must learn to appreciate the use of seasonal foods and how the use of certain foods affect the environment.

Globally there is a clear agenda from the United Nations and The Rights of Every Child which focuses on nutrition education. The intent of Food Technology in schools to support this important agenda.

Food teaching contributes to a wide range of curriculum outcomes including those focused on health and well-being, those focused on national curriculum D&T and those focused on cooking and nutrition:

- with links into humanities subjects with topics such as sustainability and provenance, or global food culture;
- with links to science with food chemistry and properties, microbiology and nutrition, and food technology and future food
- with links to religious studies with food beliefs and choices, with links to history on changes to eating patterns and food availability KS4 Food and Nutrition

KS4 Food Preparation and Nutrition

Through GCSE food and nutrition, students will demonstrate effective and safe cooking skills by planning, preparing and cooking using a variety of food commodities, cooking techniques and equipment. Students develop knowledge and understanding of the functional properties and chemical processes as well as the nutritional content of food and drinks.

The subject focuses on understanding the relationship between diet, nutrition and health, including the physiological and psychological effects of poor diet and health.

The aim is for pupils to understand the economic, environmental, ethical, and socio-cultural influences on food availability, production processes, and diet and health choices.

All these areas are also covered practically where pupils explore a range of ingredients and processes from different culinary traditions (traditional British and international), to inspire new ideas or modify existing recipes

- GCSE Food –

<https://www.aqa.org.uk/subjects/food/gcse/food-preparation-and-nutrition-8585>

Design and Technology Curriculum Implementation

Our D&T curriculum area is one of the largest in school with seven teaching staff, four well equipped specialist rooms and a supportive technician.

Pupils in year 7, year 8 & year 9 have specialist teachers or staff supported by specialist teachers for all lessons. They are taught graphics, resistant materials, textiles and food topics. Pupils in year 7 have 3 one hour lessons a fortnight and pupils in year 8 and year 9 have 4 one hour lessons a fortnight.

The pupil's knowledge is assessed regularly in a variety of ways throughout Key Stage 3 based upon their mastery of principles of designing, making, evaluating and technical knowledge they undertake two assessments in each area of technology, one for a theory or design area and one demonstrating skills in prototype product. The assessments are differentiated and will allow access to all abilities. All assessed work is kept in folders in the department, therefore pupils have eight assessed pieces of work each year.

We deliver a 3-year KS3 programme of study, incorporating the National Curriculum. Pupils finish KS3 at the end of Y9 with a solid foundation of the knowledge and skills of design and technology.

SOW are on the school network along with all resources for teaching staff and pupils. Further resources for KS3 and KS4 are on the schools Synergy, Balshaws OneDrive and VLE.

Assessment

Pupils are taught in truly mixed ability groups based on KS2 data and CAT scores. The data is used to set challenging targets for all pupils. Capability is assessed through the mastery of: knowledge and understanding, designing and making and the development of informed attitudes and opinions. The wide-ranging content naturally lends itself to a variety of assessment strategies which can be used to focus teaching and support on pupil needs and in recognising achievement. Use of such assessment strategies ensures that pupils have experienced a successful and balanced experience in all four areas of mastery, each strand of the N.C is assessed twice over the Key Stage. Teachers challenge progress by using up-to-date relevant and pertinent tracking, this enables incremental progress throughout the whole academic experience in DT. Pupils are expected to 'live up to' our high expectations of all from their own unique starting points. The subject naturally cultivates several important aspects, particular critical and creative thinking, problem-solving, evaluating and decision making.

Design and Technology Curriculum Impact

Impact of Curriculum By the end of year 9 all pupils will be able to relate Design Technology to the real world, have a growing technical knowledge of Design Technology in a variety of material areas including food, graphics, resistant materials and textiles. Be able to problem solve a real contextualised brief in a variety of materials. They will also know how to critique and evaluate their own work and the work of others. The outcomes in Design Technology in design technology at the end of ks4 indicate the vast majority make at least expected progress and standards are high when compared nationally. Pupils make such progress because teachers' expectations are high of all, all pupils are fully supported, lessons are engaging, active and are highly relevant to a modern technological society. We are very proud of our facilities- each of the 4 specialist rooms is modern and very well equipped. Visitors, trainees, parents all confirm that the department offers a modern, high tech outstanding facility that motivates, inspires and offers first class T&L facilities. All pupils are made aware of all the pathways available to local colleges and apprenticeship routes with a variety of DT related careers. Progression into FE and apprenticeship has demonstrated a desire to continue. The department works closely with our careers staff and celebrate pupils' progression into the world of work, this also promotes a variety of apprenticeships in the local area. The Head (CL) and Assistant Head of DT support local secondary schools design technology departments with curriculum planning, teacher support.