

The DT Curriculum

The subjects offered in design and technology have strong links with real world industry. For many studying design and technology can be the first introduction into engineering; working in the creative design sector; food industry or working in care.

It is our intent to give students the confidence and skills they need to solve real life problems for a specific user. Design and technology is a subject where students create ideas and make them a reality. Whilst creating solutions to a given problem students will have to consider important factors alongside the environmental and social impact of their concepts. We as teachers want our students to design innovative ideas that look good and function effectively.

Design and technology has strong cross curricular links with other subjects in the curriculum. Concepts learnt in science and maths can be applied throughout the design process developing student understanding. Good literacy skills are essential in the subject. The subject is rich in subject specific vocabulary and analysis and evaluation are key activities in design. Students learn how to take other peoples' perspectives into account and how to criticise the work of others in a constructive manner which is a key skill for working in the future. ICT skills are developed in all subject areas within design and technology to help communicate ideas and many software packages are of industry standard. There is a strong emphasis on designing for a better future where social, cultural and environmental perspectives are taken into account linking to geography. We want to make our students socially and environmentally responsible and be aware of how they can improve the future of others.

It has always been our intention to focus on the process of design rather than the item that has been created. The subject is one of a few in the curriculum where failing is an important stepping stone for success. The ability to re-evaluate and learn from past experience develop important life skills such as resilience.

KS3

At KS3 we will build on the skills students have acquired at their middle schools where they will have all studied textiles, resistant materials and food and nutrition. Key strands of the design and technology curriculum will be studied in each subject such as design briefs, specifications, design ideas and evaluations. This will help refresh student's knowledge and understanding and ensure that students are consistently building on their skills and making links between different areas of design and technology.

Our KS3 schemes of work have been planned to ensure students can see the value of design and technology and are enthused to opt for the subject at GCSE. Expectations and skills are repeated giving students the opportunity to reflect on what they have done and refine their efforts the next time they complete it. It is also hoped that giving students some autonomy to design and make their own products will allow students to practise higher level learning.

KS4

Year 10 is used to set expectations and deliver the theory content of the course. This is done through a range of theory based activities, focussed practical tasks and design and make tasks, building on the skills they have acquired at KS3. We will cover the theory content of the course using a range of different activities, developing the knowledge learned at KS3, and learning new

knowledge. Towards the end of the Year 10 programme of study students will focus on using the iterative design process to design and solve a problem. This will give students experience of the key activities of the design and technology that will be completed as part of the NEA. This will include research, writing briefs and specifications, designing, development, making and evaluations.

Allowing students to practise these skills will help refresh student's knowledge and understanding from KS3 and help prepare them for year 11. The KS4 programme of study has been designed to allow students to repeat skills and reflect on what they have done. This allows students to refine their skills in the future. It is also hoped that giving students some autonomy to design and make their own products will allow students to practise higher level learning.

KS5

A range of design and technology subjects are offered at KS5.

The A level curriculum offers further development of the design process and has aspires to allowing students to reach a level they might find during the first year of a degree. Designs are encouraged to be as ambitious as possible and the range of considerations involved in the process is as wide as possible. The department also works to allow students to use a particularly wide range of techniques.

Justifications in the process become more complex and students are given new strategies in developing their work.

The curriculum is intended to allow students to perform at a professional level.

Enrichment

The DT department runs after school sessions almost every day and gives particular support to completing products to the highest possible level.

The department is also involved in offering students STEM opportunities beyond the curriculum and running trips that give students the chance to see inspirational design first hand.