Curriculum Intent - Design and Technology

Design and Technology is both a knowledge rich and practical based subject. Using the key concepts of creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and other's needs, wants and values.

As technologists, we are providing our students with rich information that we feel will support them in this rapidly changing world. We hope that they will acquire a broad range of subject knowledge in **Engineering Design**, **Art Textiles**, **Graphic Design** and **Hospitality and Catering** so that they become proactive thinkers and have an appreciation of designed and manufactured products. Students will draw on their other school subjects such as maths, science, computing and art and will learn how to become resourceful, innovative, enterprising and practically skilled. Through the evaluation of past and present design and technology, students develop a critical understanding of products that impact on daily life and the wider world. Rather than contribute to a disposable society, they will be able to appreciate the effort, time and resources that every day and specialist products use.

In Key Stage 3, students study the four specialisms through a carousel system and the Design and Technology department seek to motivate and develop students who are inspired to create outstanding work consistently throughout their time at Horizon. Our knowledge rich and practical based curriculum at Key Stage 3 promotes the development of a range of manipulative skills which are essential for progression to one of the specialisms of subjects at Key Stage 4. There is also a focus on students learning how to follow key health and safety principles and work within a safe and hygienic environment. By following the aims that are stated in the National Curriculum for design and technology we aim to ensure that all pupils develop creatively, technically and practically, with the expertise needed to perform everyday tasks confidently, whilst participating successfully in an increasingly technological world. Our ambition is to build within students a repertoire of knowledge, understanding and skills that they can then apply to design and make high-quality prototypes and products for a wide range of users. With this knowledge, students will also be able to critique, evaluate and test their ideas and products and the work of others. They will also become informed and demonstrate an understanding of food so that they can and apply the principles of nutrition and learn how to cook.

As students' progress into Key Stage 4, they have the option to complete a qualification in one of the four specialisms. Each qualification offers a detailed insight into the respective area of Design and Technology and can lead to both level 1 and level 2 qualifications, and thus prepare students for progression into post-16 to further specialise in their chosen area. These can range from specialist courses in specific fields of engineering, art and design, manufacturing

and relevant catering and food courses. All these courses can then progress further to relevant degree courses.

Our current curriculum offers a range of qualifications: GCSE in Art Textiles; Cambridge National Level 1 and Level 2 in Engineering Design; NCFE Level 2 Technical Award in Graphic Design and WJEC Vocational Award in Hospitality and Catering Level 1 and Level 2.

Engineering Design students analyse and research the manufacture, design and assembly of products. This in turn leads them to using a range of design and presentation skills to illustrate design proposals. Finally, pupils will need to demonstrate planning and practical skills during 3D Design realisation where their prototype will be tested against a specification and suitable modifications suggested as to improve the product.

Graphic Design is the profession of visual communication that combines images, words and ideas to convey information to an audience. Students learn how to present visual information in such form and structure that it communicates a message. It involves designing print or electronic forms of visual information for advertisement, publication, or a website. The Level 2 Technical Award in Graphic Design is aimed at pupils who are interested in any aspect of graphic design, including sourcing ideas and design. This qualification focuses on an applied study of the graphic design sector and learners will gain a broad understanding and knowledge of working in the sector.

Our **Hospitality and Catering** course has been designed with the aim of enabling students to gain a good foundation of knowledge, understanding and skills that are required by the Hospitality and Catering industry, which is a major employer of people in the UK and other countries. Students will have the opportunity to develop a variety of skills, including food preparation and cooking skills, organisation, time management, planning, communication and problem solving.

Art Textiles students develop ideas through instigations, demonstrating critical understanding of relevant sources. They refine their work by exploring ideas, selecting and experimenting with appropriate textile media, materials, techniques and processes. They then go on to recording their own ideas and observations through drawing and annotation. Finally, students produce a personal practical response that realises intentions and demonstrates their understanding visually.

Schemes of Learning aim to develop and reinforce whole school core values such as Respect, Organisation, Resilience, Teamwork, Questioning, Pride, Kindness, Engagement, Tolerance and Independence. Teaching and learning provide challenge and engagement for all pupils. Pupils

are supported in lessons by differentiated support from the teaching staff and the technicians. Assessment covers both knowledge and practical skills; these are timely throughout the SOL and feedback is provided to pupils to aid their progression.

Lessons in Design and Technology are energetic and purposeful. Pupils are encouraged to be iterative in their design and realisation, this in turn encourages a metacognitive approach to learning. Pupils are encouraged to support one another and organise their time effectively. Expert modelling is key to demonstrating to pupils how skills and knowledge are mastered, this, supported by Progress and Progress+ and questioning ensure pupils are being challenged to retain and recall technical and subject specific terminology.

Progress is regularly checked so that pupils and teachers understand how and where the progress is happening. Feedback is timely and is given verbally, as well as written for assessed pieces of work. Practical outcomes, supporting design and written assessments are used at timely points through the curriculum to establish what pupils have understood about the skills they have been introduced to. Transferable knowledge is identified so that it can be honed and applied throughout the design and technology journey.

The aim of the Design and Technology department is to encourage pupils to become conscientious and informed practical thinkers. Empowered enough to explore and think how they can improve people's lives whilst also reducing the impact a product can have to the global environment. Therefore, becoming conscientious enough to explore and think how they can reduce the impact, but also have an impact.