Curriculum Vision

Faculty	Design & Technology	Subject	Food & Design Technology

Our Vision

Faculty Vision
To develop students into creative, skilled, motivated learners by broadening their skills and developing their technical knowledge whilst instilling pride in their own work. Providing students with a real-life and relevant context for learning, considering their own and others' needs, wants, and values.

Our Design and technology curriculum aims to provide children with a broad, inspiring, and rigorous academic programme by closely following the National Curriculum and inspiring students' aspirational careers.

Our provision is a coherent and carefully sequenced (knowledge engaged) curriculum based on the principles of cognitive science. There is a focus on the development of literacy and the application of acquired knowledge to ensure children access the curriculum at a depth to ensure a deep and enduring understanding in discrete subject areas. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

The content and experiences within our curriculum are designed to accumulate and address the gaps in cultural capital of all our students in particularly the disadvantaged.

At John Willmott we inspire pupils to be creative and innovative when considering social, moral, and environmental issues. We approach design through problem solving and help pupils develop designing and making skills in line with the national curriculum. Pupils will research, analyse, design, make and evaluate in both food and design and technology.

Future aspirations:
Pupils will be coherent in a range of CAD software to suit a modern and rigorous design and technology curriculum. Manufacturing processes will be used which are environmentally focused to encourage pupils to be aware of their carbon footprint and their own personal impact on the planet. This will include selecting specialist materials such as HDPE plastic to melt and reform into sheets for making, using environmentally friendly resins, considering waste, tessellation and additive manufacture to embed the theory knowledge into the skillset pupils are building.

Curriculum Intent

Empowering students to be creative, considerate of wider issues and capable of realising their own innovative designs. Developing the creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. To critique evaluate and test products and ideas and apply the principles of nutrition and learn how to cook.

DT Curriculum Design and Rationale:

- We have a KS3 overview that tracks projects against skills and knowledge acquisition, sequencing skills through KS3. Developing lifelong skills such as collaborations, problem solving and creativity, and career skills such as innovation, technology and global awareness.

- We provide time in the curriculum for students to develop practical skills and apply technical principals to develop students to be confident young people who have a range of skills that make theme employable.

- We utilise new technologies and acquisition of skills through computer aided design and computer aided manufacture.

- We have devised a wide range of project-based work which embeds core content of the GCSE course and allows pupils to work with a wide range of materials and specialisms in a safe and purposeful way ensuring students risk assess their own actions.

- Two- and three-dimensional Computer Aided Design packages allow us to develop an understanding of the techniques, skill and opportunities, empowering students to experiment. Building on inspiration from chosen designers to influence work.

- We teach students the skill that enables them to feed themselves and others affordably and well, now and in later life.

Curriculum Sequencing Rationale and Implementation

KS3
At KS3, and beyond, the intent of the Design & Technology department is to nurture pupils to develop the skills and knowledge that allow them to become independent learners and discerning consumers. Empowering students to be creative, considerate of wider issues and capable of realising their own innovative designs.

KS4 Design and Technology
At KS4, pupils build upon their KS3 knowledge of design and technology and our world. They learn about a range of materials including smart materials and the application of these materials in everyday products. Pupils learn about manufacturing processes and the journey from raw material to finished product. They study core of technical principles that include sustainability and the ecological and social footprint associated with responsible design. Pupils will learn about energy, finite and non-finite resources, and the technological advances in manufacturing a product. Pupils gain awareness and learn from wider influences including historical, social, cultural, environmental and economic factors. Pupils work creatively when designing and making and apply technical knowledge to apply to skilled practical outcomes. Pupils experience the use of advanced software packages and CAD/CAM and understand that the equipment they use is a school-based version of industrial manufacturing techniques. In Year 11 pupils produce a Non-Exam Assessment portfolio in which they showcase their ability to Identify and investigate design possibilities, develop a design brief and specification, generate and develop design ideas, manufacture a prototype and analyse and evaluate design decisions. This helps them develop realistic design proposals as a result of the exploration of design opportunities and users' needs, wants and values. It engages their imagination, experimentation and helps to make them into creative, skilled and motivated learners. The design and technology course Empowers students to be creative, considerate of wider world issues and capable of realising their own innovative designs.

Curriculum Design and Rationale:
- We provide time in the curriculum for students to develop practical skills.

- Selecting specialist materials, components, and equipment based on their properties.

- We want students to feel empowered to experiment innovative strategies including working within design movements and work in in the style of existing designer's work.

- We embed the skills needed for Design technology GCSE into our Key Stage Three curriculum.

- We have devised a wide range of project-based work which covers core content of the GCSE course and allows pupils to work with a wide range of materials and specialisms.

- Two- and three-dimensional computer aided design packages allow us to develop an understanding of the techniques, skill and opportunities, empowering students to experiment.

KS4 Hospitality and Catering

At KS4 pupils have the opportunity to study a vocational course in hospitality and catering. Learners will gain and develop comprehensive knowledge and understanding of the hospitality and catering industry including provision, health and safety, and food safety. They will undertake a coursework unit which will enable learners to develop and apply knowledge and understanding of the importance of nutrition and how to plan nutritious menus in response to a brief. They will learn the skills needed to prepare, cook and present dishes. They will also learn how to review their work effectively.

Curriculum Design and Rationale:

- Understand and apply the principles of nutrition and learn how to cook
- As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.
- Cook a repertoire of predominantly savoury dishes so that they can 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.
- Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity.
- Use research and exploration, such as the study of different cultures, to identify and understand user needs.
- Students learn and explain the process of risk assessment both in a kitchen and workshop environment.