



What will I learn in DT (Years 7, 8 & 9)

Keystage 3 Curriculum Overview of the 'Bigger Picture'

Year 7 Design Technology 'Inspire' Curriculum

During year 7 pupils will study all 4 areas below through the year. Each unit of work will be for a duration of approximately 9 weeks. Each area studied will allow for incremental challenge and progression and will be taught by subject specialist teachers.

Textiles Technology	Product Design	Food Technology Food and cooking	3D Materials Technology
<p>Introduction to practical hand sewing</p> <p>Using the sewing machine</p> <p>Developing a product based upon a template.</p> <p>Decorative Techniques Manufacture of drawstring bag.</p> <p>Detailed testing and evaluating outcome. End of unit test.</p>	<p>Health and Safety.</p> <p>Identifying workshop tools and equipment.</p> <p>Shaping and forming materials using a variety of hand tools and equipment</p> <p>Sources and origins of materials: timber.</p> <p>Practical assembly and product testing.</p> <p>Critically evaluating outcomes.</p> <p>End of unit test.</p>	<p>Develop their knowledge and understanding of ingredients and healthy eating.</p> <p>Develop their knowledge food provenance.</p> <p>Acquire food preparation and cooking techniques. Acquire and demonstrate principles of food hygiene and safety. Develop knowledge of consumer food and drink choice.</p> <p>Apply knowledge to make informed choices.</p> <p>Develop the creative, technical and practical expertise to perform everyday tasks confidently.</p> <p>Build and apply repertoire of knowledge, understanding and skills to create high quality dishes for a range of people.</p> <p>Evaluate and test their ideas and the work of others.</p> <p>End of unit test.</p>	<p>Introduction to designing.</p> <p>Sketching, (CAD) researching and investigation into 3d printing.</p> <p>Using 2d and 3d software- introduction.</p> <p>Designing and manufacturing a unique 3D printed prototype.</p> <p>Evaluating outcomes. End of unit test.</p>

Year 8 Design Technology 'Develop' Curriculum

During year 8 pupils will study all 4 areas below through the year. Each unit of work will be for a duration of approximately 9 weeks. Each area studied will allow for incremental progression and will be taught by specialist teachers.

Textiles Technology	Engineering Systems/Control	Food Technology Diet and health	Materials Technology CAD/CAM
<p>Project focus on Sustainability.</p> <p>Design and manufacture a wearable garment using a variety of machine and hand skills.</p> <p>Develop a variety of techniques and skills to embellish and decorate the finished product with links to 3D Printing and Laser Cutting.</p> <p>Testing/Evaluating and improvements.</p> <p>End of unit test</p>	<p>Building on 3D CAD techniques</p> <p>Understanding how forces effect flight vehicles Design and develop CAD CAM product</p> <p>Understanding controlled systems Input/Output/Process</p> <p>Team work and programming challenge.</p> <p>Disassembly of drone investigation</p> <p>Testing and evaluating End of unit test.</p>	<p>Deepen their knowledge and understanding of food and nutrition.</p> <p>Deepen knowledge on food provenance.</p> <p>Further develop food skills and techniques.</p> <p>Further develop and demonstrate principles of food hygiene and safety.</p> <p>Deepen and apply knowledge of consumer food and drink choice.</p> <p>Develop the creative, technical and practical expertise with starch based ingredients.</p> <p>Evaluate and test their ideas and the work of others.</p> <p>End of unit test.</p>	<p>Understanding Structures Structures team based challenge.</p> <p>CAD/CAM project night light.</p> <p>Using CAD accurately to develop a product with dimensional accuracy. (2D and 3D)</p> <p>Product Testing and modification.</p> <p>CAM manufacture and testing. Using the laser</p> <p>Critical evaluation of the process and product.</p> <p>End of unit test.</p>

Year 9 Design Technology 'Embed' Curriculum

During year 9 pupils will study all 4 areas below through the year. Each unit of work will be for a duration of approximately 9 weeks. Each area studied will allow for incremental progression and will be taught by specialist teachers.

Textiles Technology	Engineering	Food Technology Making choices	Graphics
<p>Contextual research into existing products.</p> <p>Creating pattern templates and construction techniques.</p> <p>Developed decorative techniques and application with links to 3D Printing and Laser Cutting.</p> <p>Design and manufacture a phone/table/laptop case. Product evaluation. End of unit test.</p>	<p>Focus on precision and accuracy during manufacturing Investigating passive amplifiers.</p> <p>Design constraints impact.</p> <p>CAD modelling and template Manufacturing using a variety of hand tools and machines.</p> <p>Sustainability and types of wood</p> <p>Product Testing</p> <p>Evaluating and feedback.</p> <p>End of unit test</p>	<p>Extend their knowledge and understanding of food, diet and health.</p> <p>Extend food preparation and cooking techniques.</p> <p>Cooking a variety of dishes with safety and considering dietary needs. Investigating a number of scientific techniques including aeration, gelatinization and shortening. Team based cooking challenges.</p> <p>Evaluate and test their ideas and that of others, and make recommendations for improvements. End of unit test.</p>	<p>Understanding a contextual brief.</p> <p>Graphical research and modelling using paper and card Using graphical software.</p> <p>Investigating the work of other designers. Colour theory and typography.</p> <p>Augmented Reality. CAD designing and developing.</p> <p>Laser prototyping. Product manufacture and assembly.</p> <p>End of unit test.</p>

Key Stage 4 Curriculum – Option choices

At KS4, outline of course -

KS4 Course	Exam Board	Outline	Award
Design Technology	AQA	50% Exam 50% NEA This qualification focuses on developing practical skills within a particular material area, allowing pupils to manufacture high quality outcomes. They'll learn about commercial processes and careers in related industries, as well as developing core transferable skills, such as collaboration and communication. This new GCSE places greater emphasis on understanding and applying iterative design processes. Pupils will use their creativity and imagination to design and make prototypes that solve real and relevant problems, considering their own and others' needs, wants and values.	GCSE
Engineering	NCFE	40% Exam 60% NEA Throughout this qualification, pupils will gain valuable knowledge of: <ul style="list-style-type: none"> • engineering disciplines • the science and mathematics that is applied in engineering • how to read engineering drawings • properties and characteristics of engineering materials and know why specific materials are selected for engineering applications • engineering tools, equipment and machines • production planning techniques • processing skills and techniques applied to materials for a manufacturing task equipment. 	V-CERT
Food Prep & Nutrition	WJEC	By studying food preparation and nutrition pupils will: <ul style="list-style-type: none"> • be able to demonstrate effective and safe cooking skills by planning, preparing and cooking a variety of food commodities whilst using different cooking techniques and equipment • develop knowledge and understanding of the functional properties and chemical characteristics of food as well as a sound knowledge of the nutritional content of food and drinks • understand the relationship between diet, nutrition and health, including the physiological and psychological effects of poor diet and health • understand the economic, environmental, ethical and socio-cultural influences on food availability, production processes, diet and health choices • demonstrate knowledge and understanding of functional and nutritional properties, sensory qualities and microbiological food safety considerations when preparing, processing, storing, cooking and serving food • understand and explore a range of ingredients and processes from different culinary traditions (traditional British and international) to inspire new ideas or modify existing recipes. 	GCSE
Hospitality & Catering	WJEC	By studying Hospitality & Catering pupils will: <ul style="list-style-type: none"> • The Hospitality and Catering Industry • Hospitality and Catering in Action 	V-CERT