



Year 9 Design & Technology curriculum – 2024-2025

	Autumn Term	Spring Term	Summer Term
	Project 1	Project 2	Project 3
Key Concepts	<p>Food Technology Development of key skills</p> <p>Students will explore various aspects of food technology including pastry making, preparation techniques, special diets and STEM.</p>	<p>Materials Wooden Box - Woods</p> <p>Students will design and make a wooden box using wood joints, They will develop more advanced accurate marking skills and deepen their knowledge of woods.</p>	<p>Materials Keyrings - Metal</p> <p>Students will design and make 2 keyrings, one using silver soldering to create a design and one using metal bending and riveting. They will deepen their knowledge on metals.</p>
<p>Knowledge & Understanding (National Curriculum) <i>Skills are across the whole year.</i></p>	<p>Students know and understand how to:</p> <p>Design</p> <ul style="list-style-type: none"> • Use research and exploration, such as the study of different cultures, to identify and understand user needs. • Identify and solve their own design problems and understand how to reformulate problems. • Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. • Use a variety of approaches to generate creative ideas and avoid stereotypical responses. • Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. • Students will be given more autonomy to design their own dishes and make decisions about which ingredients to select based on the target market. <p>Make</p> <ul style="list-style-type: none"> • Select from and use the brazing hearth, silver solder, rivet guns and rivets, mortise gauges, tenon saws, bench hook, coping saws, hegner saws, belt sander, pillar drill, glass paper, pyrography pens, hand drill precisely and the laser cutter. • Select from MDF, plywood, pine, hardwood, Hips, brass & copper taking into account their properties. 		



	<p>Evaluate</p> <ul style="list-style-type: none"> Analyse the work of past and present professionals and others to develop and broaden their understanding. Investigate new and emerging technologies. Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups. Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists. Evaluate performance in practical lessons in order to develop skill set and outcomes <p>Technical Knowledge</p> <ul style="list-style-type: none"> Understand and use the properties of metals and woods and the performance of structural elements to achieve functioning solutions. develop use of wood joints and their differing strengths. Extend the use for technical and scientific understanding of ingredient properties <p>Cooking and nutrition</p> <ul style="list-style-type: none"> Understand and apply the principles of nutrition and health. This is seen through links to specific dietary requirements. Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet. Students will spend some time focusing on main meals in order to enhance their understanding of savoury meals. 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]. Understand the source, seasonality and characteristics of a broad range of ingredients. This can be explored through special diets and STEM.
<p>Skills</p>	<p>R Develop RESILIENCE</p> <p>★ <i>Practical subjects often involve trial and error, where failure is a natural part of the learning process. Whether it's a food technology experiment that doesn't work as expected or a materials project that needs adjustments, students learn to view setbacks as opportunities to improve rather than as insurmountable obstacles. This builds resilience by fostering a mindset that mistakes are part of growth.</i></p>



	<p>A Possess AMBITION</p>	<p>★ <i>Mastering new tools involves learning new skills and expanding students' knowledge base. This growth in expertise can boost confidence and ambition, as the student will feel more competent and capable of handling complex tasks and challenges. The sense of progress and achievement fuels a desire to continue advancing.</i></p>	
	<p>I Demonstrate INTEGRITY</p>	<p>★ <i>Understanding special diets / customer needs often means recognising and respecting the diverse needs and beliefs of others. This respect is a cornerstone of integrity, as it involves acknowledging and honouring differences in a thoughtful and considerate manner.</i></p>	
	<p>S Embed Self-Discovery</p>	<p>★ <i>Engaging in design work often involves exploring various themes, styles, and mediums. This exploration can help individuals identify their personal interests and passions, leading to a deeper understanding of what truly excites and motivates them.</i></p>	
	<p>E Display EMPATHY</p>	<p>★ <i>Nutrition elements of food technology include information about how certain diets affect health conditions like diabetes, coeliac disease, or heart disease. Understanding these connections helps students empathise with those who must manage their diets carefully to maintain their health.</i></p>	
<p>Curriculum Links</p>	<p>Students can take their experiences from year 7 and 8 food technology into year 9. They will be repeating practical skills they have already mastered, as well as using these as platforms to develop higher order techniques. They will also draw on their knowledge of using design briefs and</p>	<p>This project is wood based and gives the students a deeper knowledge and understanding of the material whilst allowing them to use more specialist equipment. Students continue to work more independently now being confident in the workshop using skills and knowledge from year 7&8.</p>	<p>This project is metals based and gives the students a deeper knowledge and understanding of the material. Students develop further workshop skills of joining metals in different ways, introducing them to more complex tools and equipment.</p> <p>Faculty staff use the rotational timetable to review which projects students have completed and discuss</p>



	customer profiles to understand specific dietary requirements.	Faculty staff use the rotational timetable to review which projects students have completed and discuss previous learning differently in each rotation. Tasks are approached differently	previous learning differently in each rotation. Tasks are approached differently.
Assessment	Designing - special diets main meal Making - Bakewell Tart	Designing - Isometric Drawing Making - The box	Designing - Design ideas Making - 2 keyrings
Aspirations & Careers	<ul style="list-style-type: none"> • Discussion of many careers in the design and technology industry such as product designer, engineer, web developer, animator, information architect, robotics engineer, 3D modeller, industrial designer. • Discussion of many careers in the food technology industry such as chef, nutritionist, product development specialist, food scientist, microbiologist, supply chain manager, environmental health officer. • Students will watch demos from professionals on class video clips which are embedded into SOW. • Further discussions regarding selecting the subjects as an option choice in year 10 - information about what the course includes and how it can support career choices. • More complex practical skills will allow discussions to develop around skills based employment 		