

Introduce:	Sandbach School Design and Technology Curriculum:				
	Year 7 Design and Technology Curriculum Sequence				
	<p><u>Intent:</u> Pupils begin to consider the world around them and develop understanding of how a range of products are developed from inception to completion using a range of materials and technology. The subject embeds literacy skills through analysis and evaluation techniques. Consideration of ethical and moral issues are introduced to encompass all aspects to consider when embarking on design.</p>				
Transition Phase					
HT1 Healthy Food	HT2 Food Packaging	HT3 Water Sustainability & Imagineering	HT4 Food Provenance	HT5 Drawing & Communication	HT6 Iterative Design Process
<p>Why This Module?</p> <p>This module is an introduction to food technology and reflects current trends in learning about healthy eating and avoiding obesity in the population. It encourages students to reflect on the food they are eating in relation to nutrition and diet. The module allows students to apply their understanding and knowledge of the Eatwell guide.</p>	<p>Why This Module?</p> <p>This module is designed to introduce packaging, with a focus on food packaging, looking at the legalities, typography, design and information that is contained on food packaging. Students will design and produce nets, and create their own packaging for a food product of their choice. They will also look at logo design and different types of</p>	<p>Why This Module?</p> <p>This module introduces an essential topic that transcends all of the technology curriculum today. It challenges students to think about all aspects of sustainability in relation to the 6 Rs. It encourages students to think about their social responsibility and the impact that technology can have on the environment. It encourages students to think more broadly about the impact of their designing and decisions they make.</p>	<p>Why These modules?</p> <p>This allows students to consider a technology approach to food production and introduces a wide range of topics including the use of our ‘senses’ and sensory analysis to test food products. The module challenges students to reflect on a range of factors that influence the distribution, use and choice of ingredients such as moral, ethical and dietary needs. This provides a context for students to use and consider when designing or evaluating their own food dishes accordingly.</p>	<p>Why These modules?</p> <p>This project introduces the fundamental concepts of CAD/CAM production. It provides a commercial approach to teaching product design that transcends and supports consequent teaching in KS3, 4 & 5. It develops skills in product ‘prototyping’ and meeting a design brief (aimed at a specific target market), thus providing a context and constraints for students to work within. The project also includes wider concepts and recurrent design themes related to product packaging, graphic design and marketing. While the project helps to embed fundamental skills and knowledge, it allows for a creative and personalised approach that students will need to become independent and able to extend their learning in Year 8 and 9.</p>	<p>Why This Module?</p> <p>This topic, encourages the students to take risks with their designs. We actively want the students to become aware of how designers design, based on trend, nature, organic forms and shapes, rather than sticking to the norm. WE want the students to experiment with different techniques and come up with solutions to design problems. We also want to encourage them to develop their ideas, and start to think about construction techniques and material properties, suitable for the job within the product.</p>
<p>National Curriculum Links - Pupils will:</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health understand the source, seasonality and characteristics of a broad range of ingredients. 	<p>National Curriculum KS3 Links - Pupils will:</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health understand the source, seasonality and characteristics of a broad range of ingredients 	<p>National Curriculum KS3 Links - Pupils will:</p> <ul style="list-style-type: none"> Discover the social and cultural issues around sustainable sources of energy, with a focus on water energy. Understand how water is utilised across different countries use research and exploration, such as the study of different cultures, to identify and understand user needs 	<p>National Curriculum KS3 Links - Pupils will:</p> <ul style="list-style-type: none"> understand and apply the principles of nutrition and health understand the source, seasonality and characteristics of a broad range of ingredients 	<p>National Curriculum Links - Pupils will:</p> <p>Design –</p> <ul style="list-style-type: none"> -identify and solve their own design problems and understand how to reformulate problems given to them -develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situation -use a variety of approaches [for example, biomimicry and user-centred design] 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 	<p>National Curriculum Links - Pupils will:</p> <ul style="list-style-type: none"> identify and solve their own design problems and understand how to reformulate problems given to them and understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists
<p>Teaching this project supports the school’s health and well being policies e.g. PSHCE mental health and wellbeing modules as well as supporting the governments drive to improve the health and well being of the nation. The module establishes a foundation for future development work and broadening of knowledge in Years 8 and 9.</p>	<p>Teaching this project supports students awareness of the legal requirements of food packaging, and informs them about the nutritional information needed for them to be able to recognise allergies and different religious/dietary needs. It also enables the students to have some experience of hands on practical work, through marking out, cutting and assembling their packaging, as well as demonstrating their creativity regarding design.</p>	<p>Teaching this project supports: cross curricular knowledge of sustainability topics in science and Geography. It also supports higher achievement in coursework and examinations in KS4 and KS5.</p>	<p>Teaching this project supports the general design and technology curriculum as it develops a technical approach to food tasting and data analysis through star profiling. It also supports our careers provision as it reflects job roles in industry and approaches taken in quality control and testing products. It also ties in with the school’s PSHCE programmes related to moral and social responsibility.</p>	<p>Teaching this project supports:</p> <p>The teaching of more complex projects in KS4 and 5. It also supports the requirements needed at KS4 and 5, regarding designing and development of design. This encompasses up to 40% of their controlled assessment in Design and Technology. Exam questions in section C of their exam, always have a drawing technique question, so plays a pivotal part in preparation for this.</p>	<p>Teaching this project supports:</p> <p>Student understanding of iteration, and how designers develop their products to meet the demands of market pull. It also encourages the students to take risks with their designs and to not fixate on what they believe a design has to be , but rather what it <i>could</i> be.</p>
<p>This project feeds from KS1 and 2 experiences and requirements of the national curriculum</p> <p>Key stage 1</p> <ul style="list-style-type: none"> use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from <p>Key stage 2</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>This project feeds from KS1 and 2 experiences and requirements of the national curriculum</p> <p>Key stage 1</p> <ul style="list-style-type: none"> use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from <p>Key stage 2</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>This project feeds from:</p> <p>This is a new concept for students to investigate. It links to other cross curricular themes in Science and Geography. The topic has become a pressing issue for people to address and so the project builds on the students own awareness and understanding of sustainability and the environmental challenges faced. It also links to the introductory projects covered in Our World</p>	<p>This project feeds from KS1 and 2 experiences and requirements of the national curriculum</p> <p>Key stage 1</p> <ul style="list-style-type: none"> use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from <p>Key stage 2</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet 	<p>This project feeds on from KS2 Design and Technology teaching linked to the National Curriculum e.g.</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to 	<p>This project feeds on from KS2 Design and Technology teaching linked to the National Curriculum e.g.</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and