



Curriculum Map For Technology Year 9

YEAR 9	Design & Technology	
	Half Term 1	Half Term 2
Topics	<p>To Design & Create A Scale Architectural Model of a Shipping Container House</p> <p>To Understand Ergonomics, Anthropometrics, Clients' Needs & Social Environmental & Economic Challenges</p> <p>To Understand How To Effectively Select & Analyse a Context, Profile A Client & Its Importance</p> <p>To Understand The Importance Of Analysis Of Existing Designs & The Influence They Can Have On Your Own Work & Subsequently Understand How To Effectively Create A Targeted Mood Board</p> <p>To Produce Independent Research & Analyse This To Create Architectural Designs For A Client</p>	<p>To Design & Create A Scale Architectural Model Of A Shipping Container House</p> <p>To Understand The Importance Of Prototyping & Modelling Your Ideas</p> <p>To Develop Measuring, Marking & In Turn Knife & Modelling Skills To A High Level</p> <p>To Learn How To Develop & Refine Ideas & Prototypes</p> <p>To Manufacture A Final Prototype</p>
Substantive Knowledge – The Knowledge Taught By The Teacher	<ul style="list-style-type: none"> • Health and Safety with Advanced Prototyping Equipment • Safe Use of Tools and Equipment • Correct Name for Tools and Equipment • Selection of Best Use of Tools and Equipment • Safe Working Environments • Use of Modelling Materials • Understanding of the Design Process • Designing for a Client • The Iterative Process • Use of Tessellation and Templates to Improve Sustainability and Rates of Output • Units of Measurement • Working to Tolerances 	<ul style="list-style-type: none"> • Health and Safety with Advanced Prototyping Equipment • Safe Use of Tools and Equipment • Correct Name for Tools and Equipment • Selection of Best Use of Tools and Equipment • Safe Working Environments • Use of Modelling Materials • The Iterative Process • Use of Tessellation and Templates to Improve Sustainability and Rates of Output • Units of Measurement • Working to Tolerances
Disciplinary Knowledge – How The Knowledge Will Be Developed & Applied	<ul style="list-style-type: none"> • Analysis of the work of others for external influences and inspiration. • Self-reflection and evaluation of research. • Self-reflection and evaluation of designs. • Ensure knowledge of health and safety with knives and hot wire cutters. 	<ul style="list-style-type: none"> • Self-reflection and evaluation of designs. • Put into practice health and safety knowledge with knives and hot wire cutters. • Responding to client feedback to meet their needs.

	<ul style="list-style-type: none"> Responding to client feedback to meet their needs. Understand the impact of mixed materials on the environment materials compared to natural materials. Plan for the incorporation of CAD elements into handmade models. 	<ul style="list-style-type: none"> Model being mindful of the impact of mixed materials on the environment materials compared to natural materials Incorporation of CAD elements into handmade models.
Skills	<ul style="list-style-type: none"> Developing students' skills and changing the way students approach their work from a pre-defined project to a GCSE style contextual challenge project. This develops the students research skills. Understanding of the needs of others and helping them to consider user-centred design as well as gain an understanding of the real-world iterative design approach. 	<ul style="list-style-type: none"> Students develop their design and modelling skills; they are able to use a vast range of modelling materials and use information identified at this stage to be able to select the most appropriate materials for their final prototype. Students further develop their prototyping skills to product a scale model.
Links To Prior Learning	<ul style="list-style-type: none"> Combining workshop skills from Year 7 with CAD skills from Year 8 to develop the ability to craft high quality accurate prototypes rather than 'final pieces'. Measuring to tolerances. Designing for a client. 	<ul style="list-style-type: none"> Combining workshop skills from Year 7 with CAD skills from Year 8 to develop the ability to craft high quality accurate prototypes rather than 'final pieces'. Measuring to tolerances. Designing for a client.
Literacy/ Numeracy	<ul style="list-style-type: none"> Literacy: research skills, being able to develop detailed design specification which has been concluded from research. Numeracy: accuracy of measuring and marking, tolerances and use of scale. 	<ul style="list-style-type: none"> Literacy: research skills, being able to develop detailed design specification which has been concluded from research. Numeracy: accuracy of measuring and marking, tolerances and use of scale.
Cross Curricular	<ul style="list-style-type: none"> Sustainability of materials and lifecycle assessment. Use of mathematical modelling. English language when analysing and self-reflecting. Knife skills in Food Tech. 	<ul style="list-style-type: none"> Sustainability of materials and lifecycle assessment. Use of mathematical modelling. English language when analysing and self-reflecting. Knife skills in Food Tech.
Assessment	<ul style="list-style-type: none"> Ongoing assessment of PowerPoint projects and teacher observations of practical skills. 	<ul style="list-style-type: none"> Ongoing assessment of PowerPoint projects, teacher observations of practical skills: including design, and CAD skills. Self-evaluation of measuring, marking and cutting skills using laser cut templates for comparison.

YEAR 9	FOOD	
	Half Term 1	Half Term 2
Topics	<p>To Understand Bacteria & Effects Of Food Poisoning</p> <p>To Build On Knowledge & Understanding Of Nutrition, The Importance Of Micronutrients In The Diet & How Nutritional Needs & Requirements Change Throughout Life</p>	<p>To Continue To Develop Some More Complex Practical Skills To Include The Food Science Behind Making Chelsea Buns & A Bechamel Sauce</p> <p>Pastry Making Skills To Create A Quiche</p> <p>Pasta Making & Shaping</p>

	<p style="text-align: center;">To Cook Healthy Balanced Meals That Follow The Eatwell Guide</p> <p style="text-align: center;">The Importance Of Seasonal Foods & How This Impacts Health & The Environment</p> <p style="text-align: center;">Bread Making</p> <p style="text-align: center;">To Consider The Ways We Can Use Sensory Evaluation In The Food Industry</p>	<p style="text-align: center;">To Learn About Food Choice</p>
<p>Substantive Knowledge – The Knowledge Taught By The Teacher</p>	<ul style="list-style-type: none"> • Understand about food poisoning bacteria and how temperature controls the growth of bacteria. • Health and safety in the kitchen. • Know what a micronutrient is, its sources and functions in the body. • Cook a variety of family meals using a range of culinary skills. • Plan and make a nutritional meal suitable for a specific target group. • Best use of equipment and safe use of the oven. • Bread making skills and the understanding the term fermentation. • Know about seasonal food that is grown locally. • Know how to evaluate food using sensory testing techniques. 	<ul style="list-style-type: none"> • Learn how to make shortcrust pastry and how it is used. • Make a roux sauce and understand the scientific term gelatinisation. • Know how to make homemade pasta and use the pasta machine. Shape pasta into different forms. • Make a rich bread dough and shape into a speciality product. • Know the concept behind caramelisation. • Understanding of food choice. • Consider different cultures and cuisines and identify ingredients and recipes from a range of international countries.
<p>Disciplinary Knowledge – How The Knowledge Will Be Developed & Applied</p>	<ul style="list-style-type: none"> • Analysis of the work of others for inspiration through research. • Self-reflection and evaluation of skills. • Impact of nutritional knowledge and why eating a range of micronutrients is beneficial for health. • How different dietary requirements change throughout life and responding to this through meal planning. • Responding to peer assessment and evaluation through sensory testing. How this affects future outcomes. Consider how the food industry can use sensory testing to make improvements. • Apply knowledge to own health and diet when purchasing food for yourself and others. • The impact of eating seasonal and homegrown foods on the environment. 	<ul style="list-style-type: none"> • Analysis of the work of others for inspiration through research. • Relating to different countries and cultures and finding out through research how to prepare and cook traditional international dishes. • Responding to peer assessment and evaluation through sensory testing. • Self-reflection and evaluation of research, planning, skills and evaluation. • Use knowledge learnt about how commodities react in cooking processes to inform future outcomes.
<p>Skills</p>	<ul style="list-style-type: none"> • Students are given the opportunity to make a healthy family meal and learning how to adapt recipes to meet the nutritional needs of a specific person. • They will start to use the 12 skills ready for GCSE Food preparation. This will include food presentation skills. • They will develop research skills to find 	<ul style="list-style-type: none"> • Students will learn about fermentation in bread making and gelatinisation of starch in making a bechamel sauce. • They will analyse how we make informed food choices and how this is changing over time. • Students will develop and show case the skills they have learnt over KS3 to

	<p>seasonal foods and select a recipe to make either a soup, jam or chutney.</p> <ul style="list-style-type: none"> • They will discover by taste testing how food can be evaluated and improved. 	<p>research, plan and make a dish from any international cuisine.</p>
Links To Prior Learning	<ul style="list-style-type: none"> • Most students will have completed 2 terms of Food in Years 7 and 8. Year 9 will build on the practical skills learnt and use more complex skills in the dishes they make. • Links to the Eatwell guide, macro nutrients and healthy eating learnt in Years 7 and 8. 	<ul style="list-style-type: none"> • The students will build on their confidence and knowledge and practical skills to prepare, cook and present an international dish. • Research skills.
Literacy/ Numeracy	<ul style="list-style-type: none"> • Numeracy - weighing, measuring, ratio and proportion. • Literacy - reading recipes and research skills. • Using subject specific terminology in written work. 	<ul style="list-style-type: none"> • Numeracy – weighing, measuring, ratio and proportion. • Literacy - reading recipes and research skills. • Using subject specific terminology in written work.
Cross Curricular	<ul style="list-style-type: none"> • PSHE - healthy eating and lifestyle choices. Learning the skills for the wider world. • Science - the human body and nutrition. • P.E. - Healthy mind and body relating to diet and exercise. • Geography - impact of food on the environment and global warming. 	<ul style="list-style-type: none"> • PSHE - healthy eating and lifestyle choices. Learning the skills for the wider world. • Culture and tradition in international cuisine.
Assessment	<ul style="list-style-type: none"> • Interactive quiz on bacteria and Nutrition. • Teacher observation of practical skills. • Teacher evaluation of nutritional task. 	<ul style="list-style-type: none"> • Teacher observation of practical skills. • Practical assessment task comprising using research, planning, and making of a dish from an international cuisine. • End of term multiple choice and written test.

YEAR 9	TEXTILES	
	Half Term 1	Half Term 2
	<p>Students Produce A Phone Pillow</p> <p>This Allows Them To Develop Confidence While Using The Sewing Machine & Improve Accuracy While Sewing</p> <p>This Is Followed By An Introduction To Art Textiles Where Students Explore A Range Of Embellishment Techniques Before Designing A Product Inspired By Creatures and Critters</p>	<p>The Second Half Term Provides Opportunities For Students To Develop Their Creativity Through Using A Combination Of Embellishment Techniques To Complete A Unique Design</p> <p>Independence Is Encouraged</p>
Substantive Knowledge – The Knowledge Taught By The Teacher	<ul style="list-style-type: none"> • The different types of embellishment. • Health and safety in the workshop • Safe use of tools. • Correct name for tools and equipment. • Selection of best use of tools and equipment. • Safe working environments. 	<ul style="list-style-type: none"> • Smart textiles. • Health and safety in the workshop. • Safe use of tools. • Correct name for tools and equipment. • Selection of best use of tools and equipment. • Safe working environments.

	<ul style="list-style-type: none"> • A wide range of embellishment techniques. • Understanding of the design process. • The iterative process. • Use of patterns/templates: <ul style="list-style-type: none"> ◦ Working to tolerances when using seam allowances. 	<ul style="list-style-type: none"> • A wide range of embellishment techniques. • Understanding of the design process. • The iterative process. • Use of patterns/templates. • Working to tolerances when using seam allowances.
Disciplinary Knowledge – How The Knowledge Will Be Applied	<ul style="list-style-type: none"> • Research the work of others for external influences and inspiration. • Self-reflection and evaluation of research. • Self-reflection and evaluation of designs. • Ensure knowledge of health and safety when using a wide range of equipment and techniques. • Develop knowledge of a range of embellishment technique. 	<ul style="list-style-type: none"> • Self-reflection and evaluation of designs. • Put into practice health and safety knowledge with a range of equipment and techniques. • Develop knowledge of a range of embellishment technique.
Skills	<ul style="list-style-type: none"> • Students continue to develop knowledge of the design process and their practical Textile skills through completing 2 different products - a phone pillow and a product based on Creatures and Critters. • They are able to use a wide range of Art Textiles techniques to embellish their unique design. • Development of independence and the application of skills and knowledge to develop a unique product. 	<ul style="list-style-type: none"> • Correct selection of tools and equipment. • Development of skills trialled through modelling lessons to complete a product based on Creatures and Critters. • Development of design skills through designing a product incorporating a range of smart and modern materials.
Links To Prior Learning	<ul style="list-style-type: none"> • There will be two Year 9 groups who have only had one Textiles experience and these classes spend more time on the modelling lessons to enable them to develop the relevant skills. • Other classes have relevant practical skills including pinning, cutting, machining. They have an awareness of health and safety and the design process. 	<ul style="list-style-type: none"> • There will be two Year 9 groups who have only has one Textiles experience and these classes spend more time on the modelling lessons to enable them to develop the relevant skills. • Other classes have relevant practical skills including pinning, cutting, machining. They have an awareness of health and safety and the design process.
Literacy/ Numeracy	<ul style="list-style-type: none"> • Literacy: subject-specific terminology, research skills, being able to develop detailed design specification which has been concluded from research. • Numeracy: accuracy of measuring and marking out, tolerances. Measuring, angles, parallel and perpendicular lines. 	<ul style="list-style-type: none"> • Literacy: subject-specific terminology, research skills, being able to develop detailed design specification which has been concluded from research. • Numeracy: accuracy of measuring and marking out, tolerances. Measuring, angles, parallel and perpendicular lines.
Cross Curricular	<ul style="list-style-type: none"> • When looking at modern and smart materials we look at sources of fibres and link this to environmental impact e.g. use of finite resources in the production of microfibres. 	<ul style="list-style-type: none"> • When looking at modern and smart materials we look at sources of fibres and link this to environmental impact e.g. use of finite resources in the production of microfibres.
Assessment	<ul style="list-style-type: none"> • Assessment of focused homework tasks. 	<ul style="list-style-type: none"> • End of project quiz. • Assessment of practical product.