



Impact:

Our pupils experience a range of aspects of D&T, gaining a good understanding of the breadth of this subject. Pupil’s engage in plenty of hands-on, practical learning as well as developing their skills in research, design and evaluation.

Our pupils understand how their learning gin D&T contributes to a vast range of other sills in other subjects as well as the skills required for many future careers.

Design & Technology Curriculum Map

Terms:			Autumn: Our Locality		Spring: Our UK		Summer: Our World	
			Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
‘Learning to Live, Living to Learn’ Concepts and Skills:			<ul style="list-style-type: none"> ➤ Our Christian School Vision ➤ Get Heartsmart ➤ Creativity ➤ Democracy 	<ul style="list-style-type: none"> ➤ People and community ➤ Friendship ➤ Too much selfie isn't healthy ➤ Empathy ➤ Founder's Day 	<ul style="list-style-type: none"> ➤ Resilience ➤ Trust ➤ Don't forget to let love in ➤ Rule of Law 	<ul style="list-style-type: none"> ➤ Forgiveness ➤ Problem-solving ➤ Don't hold on to what is wrong ➤ Tolerance 	<ul style="list-style-type: none"> ➤ Communication ➤ Environment ➤ Thankfulness ➤ Fake is a mistake ➤ Mutual Respect 	<ul style="list-style-type: none"> ➤ Peace ➤ No way through isn't true ➤ Thinking ➤ Individual Liberty ➤ World sporting events
Year	Objectives throughout the year	Cycle	Skills, techniques and objectives					
Yr 1 (and YrR)	<ul style="list-style-type: none"> ➤ I can create a simple design for my product. ➤ I can use pictures and words to describe what I want to do ➤ I can ask simple questions about existing products and those that I have made. 	A	Cooking and Nutrition: Nadia Hussain and seasonal food	Structures: Towers – Big Ben		Mechanisms: Wheels and Axels		
			<ul style="list-style-type: none"> ➤ I can talk about what I eat at home and begin to discuss what healthy foods are. ➤ I can use simple tools with help to prepare food safely 	<ul style="list-style-type: none"> ➤ I can build structures, exploring how they I can be made stronger, stiffer and more stable. ➤ I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. ➤ I can use a range of simple tools to cut, join and combine materials and components safely 	<ul style="list-style-type: none"> ➤ I can use wheels and axles in a product. ➤ I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. ➤ I can use a range of simple tools to cut, join and combine materials and components safely 			
		B	Structures: Dams – Thames Barrier	Mechanisms: Levers, moving pictures		Cooking and Nutrition: Gino D’Campo and Flavour		
			<ul style="list-style-type: none"> ➤ I can build structures, exploring how they I can be made stronger, stiffer and more stable. 	<ul style="list-style-type: none"> ➤ I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. 	<ul style="list-style-type: none"> ➤ I can say where some food comes from and give examples of food that is grown. 			



			<ul style="list-style-type: none"> ➤ I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. ➤ I can use a range of simple tools to cut, join and combine materials and components safely 	<ul style="list-style-type: none"> ➤ I can use a range of simple tools to cut, join and combine materials and components safely ➤ I can explore and use mechanisms such as levers, wheels and axles in products. 	<ul style="list-style-type: none"> ➤ I can use simple tools with help to prepare food safely
Yr 2	<ul style="list-style-type: none"> ➤ I can design useful, pleasing products for myself and other users based on a design brief ➤ I can evaluate and assess existing products and those that I have made using a design criteria. 	A&B	Structures: Bridges – Medway Bridge, Bridges across the M2	Cooking and Nutrition: Jamie Oliver and cooking with plants	Mechanisms: Sliders
			<ul style="list-style-type: none"> ➤ I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. ➤ I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT. ➤ I can choose tools I would like to use and select materials based on my knowledge of their properties. 	<ul style="list-style-type: none"> ➤ I can understand the need for a variety of food in a diet. ➤ I can understand that all food has to be farmed, grown or caught. ➤ I can use a wider range of cookery techniques to prepare food safely. 	<ul style="list-style-type: none"> ➤ I can use sliders in a product. ➤ I can explore and use mechanisms such as levers, wheels and axles in products. ➤ I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and IT. ➤ I can safely measure, mark out, cut and shape materials and components using a range of tools
Yr 3/4	<ul style="list-style-type: none"> ➤ I can use my knowledge of existing products to design a functional and appealing product for a particular purpose and audience. ➤ I can create designs using exploded diagrams ➤ I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them. ➤ I can use my knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them. 	A	Cooking and Nutrition: Paul Hollywood and Bread, Roman Bread, digestion, food for muscles and nutrition	Mechanisms: Pneumatics (invented during the Victorian times) pneumatics as a force	Structures: Buildings – 3D around the world (e.g. pyramids)
		B	<ul style="list-style-type: none"> ➤ I can understand that food has to be grown, farmed or caught in Europe and the wider world. ➤ I can understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active ➤ I can use a wider variety of ingredients and techniques to prepare and combine ingredients safely. ➤ I can read and follow recipes which involve several processes, skills and techniques 	<ul style="list-style-type: none"> ➤ I can understand how mechanical systems such as pneumatic systems create movement ➤ I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes ➤ I can safely measure, mark out, cut, assemble and join with some accuracy 	<ul style="list-style-type: none"> ➤ I can apply techniques I have learnt to strengthen structures and explore my own ideas. ➤ I can strengthen frames with diagonal struts. ➤ I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes ➤ I can use techniques which require more accuracy to cut, shape, join and finish my work e.g. Cutting internal shapes, slots.
			Structures: Tunnels – Train line, channel tunnel, types of tunnels, tunnels under water	Cooking and Nutrition: Mary Berry, changes of state	Mechanisms: Linkages and electrical systems, circuits within mechanisms



	<ul style="list-style-type: none"> ➤ I can investigate and analyse existing products and those I have made, considering a wide range of factors. ➤ I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user. 		<ul style="list-style-type: none"> ➤ I can apply techniques I have learnt to strengthen structures and explore my own ideas. ➤ I can strengthen frames with diagonal struts. ➤ I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes ➤ I can safely measure, mark out, cut, assemble and join with some accuracy 	<ul style="list-style-type: none"> ➤ I can understand seasonality and the advantages of eating seasonal and locally produced food ➤ I can talk about the different food groups and name food from each group. ➤ I can use a wider variety of ingredients and techniques to prepare and combine ingredients safely. ➤ I can read and follow recipes which involve several processes, skills and techniques 	<ul style="list-style-type: none"> ➤ I can understand and use electrical systems in my products. ➤ I can understand how mechanical systems such as sliders, levers and linkages create movement. ➤ I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes ➤ I can use techniques which require more accuracy to cut, shape, join and finish my work e.g. Cutting internal shapes, slots
Yr 5/6	<ul style="list-style-type: none"> ➤ I can use my research into existing products and my market research to inform the design of my own innovative product. ➤ I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design ➤ I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. ➤ I can use my technical knowledge and accurate skills to problem solve during the making process. 	A	Structures: Shelters – WW2 Kent	Cooking and Nutrition: Nigella Lawson and nutrition, what we didn't have during the war	Mechanisms: Cams and Electrics, forces, space models
			<ul style="list-style-type: none"> ➤ I can use a wide range of methods to strengthen, stiffen and reinforce complex structures and I can use them accurately and appropriately. 	<ul style="list-style-type: none"> ➤ I can understand the main food groups and the different nutrients that are important for health ➤ I can use information on food labels to inform choice. ➤ I can confidently plan a series of healthy meals based on the principles of a healthy and varied diet ➤ I can select appropriate ingredients and use a wide range of techniques to combine them. 	<ul style="list-style-type: none"> ➤ I can understand how to use more complex mechanical and electrical systems. ➤ I can make careful and precise measurements so that joins, holes and openings are in exactly the right place. ➤ I can create prototypes to show my ideas.
		B	Cooking and Nutrition: Gordon Ramsey - creativity	Mechanisms: Computer programming mechanics	Structures: Architecture – Ancient World Maya
			<ul style="list-style-type: none"> ➤ I can research, plan and prepare and cook a savoury dish, applying my knowledge of ingredients and my technical skills ➤ I can select appropriate ingredients and use a wide range of techniques to combine them. ➤ I can understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat. 	<ul style="list-style-type: none"> ➤ I can apply my understanding of computing to program, monitor and control my products ➤ I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques. 	<ul style="list-style-type: none"> ➤ I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger or more stable. ➤ I can use research I have done into famous designers and inventors to inform my designs ➤ I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.

	<ul style="list-style-type: none"> ➤ I can make detailed evaluations about existing products and my own considering the views of others to improve my work. 			
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--

Skills and Knowledge Progression Sequence

	Pre-Requisite	Year R	Year 1	Year 2	Year 3 and 4 (over 2-years)	Year 5 and 6 (over 2-years)
Vocabulary	<ul style="list-style-type: none"> ➤ Move ➤ Work together ➤ Share ➤ work 	<ul style="list-style-type: none"> ➤ Build ➤ Make ➤ Choose ➤ Creation 	<ul style="list-style-type: none"> ➤ Design ➤ Tools ➤ Equipment ➤ Cut ➤ Join ➤ Combine ➤ Wheels and axels 	<ul style="list-style-type: none"> ➤ Design brief/ criteria ➤ Template ➤ Materials ➤ Evaluate ➤ Mechanism ➤ Structure ➤ Levers 	<ul style="list-style-type: none"> ➤ Balanced ➤ Substances ➤ Seasonality ➤ Processes ➤ Strengthen ➤ Linkages ➤ Pneumatic system 	<ul style="list-style-type: none"> ➤ Innovation ➤ Nutrients ➤ Palatable ➤ Reinforce ➤ Prototype ➤ Architecture ➤ Precise
Cooking and Nutrition	<ul style="list-style-type: none"> ➤ I know that food has to be prepared and/or cooked 	<ul style="list-style-type: none"> ➤ I can tell you about favourite foods ➤ I know where some food comes from 	<ul style="list-style-type: none"> ➤ I can talk about what I eat at home and begin to discuss what healthy foods are. ➤ I can say where some food comes from and give examples of food that is grown. 	<ul style="list-style-type: none"> ➤ I can understand the need for a variety of food in a diet. ➤ I can understand that all food has to be farmed, grown or caught. 	<ul style="list-style-type: none"> ➤ I can talk about the different food groups and name food from each group. ➤ I can understand that food has to be grown, farmed or caught in Europe and the wider world. ➤ I can understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active ➤ I can understand seasonality and the advantages of eating seasonal and locally produced food 	<ul style="list-style-type: none"> ➤ I can understand the main food groups and the different nutrients that are important for health ➤ I can understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat. ➤ I can use information on food labels to inform choice.



			<ul style="list-style-type: none"> ➤ I can use simple tools with help to prepare food safely 	<ul style="list-style-type: none"> ➤ I can use a wider range of cookery techniques to prepare food safely. 	<ul style="list-style-type: none"> ➤ I can use a wider variety of ingredients and techniques to prepare and combine ingredients safely. ➤ I can read and follow recipes which involve several processes, skills and techniques 	<ul style="list-style-type: none"> ➤ I can confidently plan a series of healthy meals based on the principles of a healthy and varied diet ➤ I can select appropriate ingredients and use a wide range of techniques to combine them. ➤ I can research, plan and prepare and cook a savoury dish, applying my knowledge of ingredients and my technical skills
Structures	<ul style="list-style-type: none"> ➤ Collaborate with others to manage large items, such as moving a long plank safely, carrying large hollow blocks. ➤ Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. 	<ul style="list-style-type: none"> ➤ I can build structures, exploring how they I can be made stronger, stiffer and more stable. 	<ul style="list-style-type: none"> ➤ I can investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. 	<ul style="list-style-type: none"> ➤ I can apply techniques I have learnt to strengthen structures and explore my own ideas. ➤ I can strengthen frames with diagonal struts. 	<ul style="list-style-type: none"> ➤ I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger or more stable. ➤ I can use a wide range of methods to strengthen, stiffen and reinforce complex structures and I can use them accurately and appropriately. 	
Mechanisms	<ul style="list-style-type: none"> ➤ Explore how things work. 	<ul style="list-style-type: none"> ➤ I can use wheels and axles in a product. 	<ul style="list-style-type: none"> ➤ I can explore and use mechanisms such as levers, wheels and axles in products. 	<ul style="list-style-type: none"> ➤ I can understand how mechanical systems such as sliders, levers and linkages or pneumatic systems create movement. ➤ I can understand and use electrical systems in my products. 	<ul style="list-style-type: none"> ➤ I can understand how to use more complex mechanical and electrical systems. ➤ I can apply my understanding of computing to program, monitor and control my products 	
Design and Research	<ul style="list-style-type: none"> ➤ Explore collections of materials with similar and/or different properties ➤ Explore different materials freely, to develop their ideas about how to use them and what to make. 	<ul style="list-style-type: none"> ➤ I can create a simple design for my product. ➤ I can use pictures and words to describe what I want to do ➤ 	<ul style="list-style-type: none"> ➤ I can design useful, pleasing products for myself and other users based on a design brief ➤ I can generate, develop, model and communicate my ideas through talking, drawing, 	<ul style="list-style-type: none"> ➤ I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes ➤ I can use my knowledge of existing products to design a functional and appealing 	<ul style="list-style-type: none"> ➤ I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 	



				templates, mock-ups and IT.	product for a particular purpose and audience. ➤ I can create designs using exploded diagrams	➤ I can use my research into existing products and my market research to inform the design of my own innovative product. ➤ I can create prototypes to show my ideas. ➤ I can use research I have done into famous designers and inventors to inform my designs
Tools and techniques	<ul style="list-style-type: none"> ➤ Use one-handed tools and equipment, for example, making snips in paper with scissors ➤ Join different materials and explore different textures. 	<ul style="list-style-type: none"> ➤ Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons 	<ul style="list-style-type: none"> ➤ I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. ➤ I can use a range of simple tools to cut, join and combine materials and components safely 	<ul style="list-style-type: none"> ➤ I can choose tools I would like to use and select materials based on my knowledge of their properties. ➤ I can safely measure, mark out, cut and shape materials and components using a range of tools 	<ul style="list-style-type: none"> ➤ I can safely measure, mark out, cut, assemble and join with some accuracy ➤ I can make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them. ➤ I can use techniques which require more accuracy to cut, shape, join and finish my work e.g. Cutting internal shapes, slots. ➤ I can use my knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them. 	<ul style="list-style-type: none"> ➤ I can make careful and precise measurements so that joins, holes and openings are in exactly the right place. ➤ I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques. ➤ I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. ➤ I can use my technical knowledge and accurate skills to problem solve during the making process.
Evaluation		<ul style="list-style-type: none"> ➤ Return to and build on their previous learning, refining ideas and developing their ability 	<ul style="list-style-type: none"> ➤ I can ask simple questions about existing products and those that I have made. 	<ul style="list-style-type: none"> ➤ I can evaluate and assess existing products and those that I have made using a design criteria. 	<ul style="list-style-type: none"> ➤ I can investigate and analyse existing products and those I have made, considering a wide range of factors. ➤ I can consider how existing products and my own finished products might be improved and how well they meet the needs of the intended user. 	<ul style="list-style-type: none"> ➤ I can make detailed evaluations about existing products and my own considering the views of others to improve my work. ➤ I can use my knowledge of famous designs to further explain the effectiveness of existing products and products I have made.



		to represent them.				
End of Key Stage NC end points	<p>ELGs:</p> <ul style="list-style-type: none"> ➤ Use a range of small tools, including scissors, paint brushes and cutlery ➤ Begin to show accuracy and care when drawing ➤ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function ➤ Share their creations, explaining the process they have used ➤ Make use of props and materials when role playing characters in narratives and stories 	<ul style="list-style-type: none"> ➤ I can design purposeful, functional, appealing products based on design criteria ➤ I can generate, develop, model and communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology ➤ I can select from and use a range of tools and equipment to perform practical tasks ➤ I can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics ➤ I can explore and evaluate a range of existing products ➤ I can evaluate ideas and products against design criteria ➤ I can build structures, exploring how they can be made stronger, stiffer and more stable ➤ I can explore and use mechanisms ➤ I can use the basic principles of a healthy and varied diet to prepare dishes ➤ I understand where food comes from. ➤ ➤ 	<ul style="list-style-type: none"> ➤ I can 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 ➤ I can generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design ➤ I can select from and use a wider range of tools and equipment to perform practical tasks accurately ➤ I can select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities ➤ I can investigate and analyse a range of existing products ➤ I can evaluate ideas and products against my own design criteria and consider the views of others to improve my work ➤ I can understand how key events and individuals in design and technology have helped shape the world ➤ I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures ➤ I understand and use mechanical systems in my products [for example, gears, pulleys, cams, levers and linkages] ➤ I understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ➤ I can apply my understanding of computing to program, monitor and control my products. ➤ I understand and apply the principles of a healthy and varied diet ➤ I can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques ➤ I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 			



Cycle Pathways Progression

