Curriculum Skills and Progression Map Design & Technology: 2021 to 2022









The Design and Technology Curriculum and Christian Distinctiveness

at Horsford CofE VA Primary School

"The Lord has made everything for its own purpose," Proverbs 16:4

Courage – While exploring Design & Technology, we hope that children will feel courageous to explore new and challenging concepts to design, create and evaluate products that may be far from their usual interests or 'comfort zone'.

Compassion – An essential part of Design & Technology is the ability to objectively evaluate how successful our endeavours were. We recognise that not all of our attempts will turn out the way we wanted, and that this is an important part of the Design & Technology process. We encourage the children to show compassion to themselves and others as they go through this process.

Responsibility – At Horsford C.E. V.A. Primary school, we give the children all the support they need with tackling new Design & Technology challenges, and we instil that it is their responsibility to always try the best they can – whatever their initial ability might be, and to take care of the Design & Technology resources they use with increasing care and attention.

Our story of 'The Good Samaritan' teaches the children to work together and to support each other in their Design & Technology learning, even if they would not usually choose to be friends.

'Spirituality is the bitter-sweet yearning for beauty, truth, love and wonder beyond ourselves. It is a longing we pursue together and a treasure we glimpse in ourselves and one another and seek beyond us into eternity. It is life in all its fullness.'





 understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

DESIGN & TECHNOLOGY: AGE RELATED STATUTORY COVERAGE EYFS KEY STAGE ONE LEARNING KEY STAGE TWO LEARNING DESIGN DESIGN Expressive Arts and Design • Design purposeful, functional, appealing products based • Use research and develop criteria to inform the design of **EYFS Statutory Educational Programme:** The development innovative, functional, appealing products that are fit for of children's artistic and cultural awareness supports their on design criteria purpose, aimed at particular individuals or groups • Generate, develop, model and communicate their ideas imagination and creativity. It is important that children • Generate, develop, model and communicate ideas through through talking, drawing, templates, mock-ups and ICT have regular opportunities to engage with the arts, discussion, annotated sketches, cross-sectional and exploded and, where appropriate, information and communication enabling them to explore and play with a wide range of diagrams, prototypes, pattern pieces and computer-aided technology media and materials. The quality and variety of what design children see, hear and participate in is crucial for MAKE MAKE developing their understanding, self-expression, vocabulary • Select from and use a range of tools and equipment to • Select from and use a wider range of tools and equipment to and ability to communicate through the arts. The perform practical tasks [for example, cutting, shaping, joining perform practical tasks [for example, cutting, shaping, frequency, repetition and depth of their experiences are and finishing], accurately joining and finishing] fundamental to their progress in interpreting and • Select from and use a wider range of materials and • Select from and use a wide range of materials and components, including construction materials, textiles and appreciating what they hear, respond to and observe. components, including construction materials, textiles, ingredients, according to their functional properties and ingredients according to their characteristics aesthetic qualities. **DESIGN** • Talk about what they want to make **EVALUATE EVALUATE** • Explore and evaluate a range of existing products • Investigate and analyse a range of existing products MAKE • Evaluate ideas and products against their own design criteria • Evaluate ideas and products against design criteria • Use a variety of tools and materials to make models. and consider the views of others to improve their work • Understand how key events and individuals have helped shape TECHNICAL KNOWLEDGE **Creating with materials ELG** the world • Build structures, exploring how they can be made • Safely use and explore a variety of materials, tools and stronger, stiffer and more stable techniques, experimenting with colour, design, texture, **TECHNICAL** • Explore and use mechanisms [for example, levers, • Apply their understanding of how to strengthen, stiffen and form and function; sliders, wheels and axles], in their products. reinforce more complex structures • Understand and use mechanical systems in their products [for Physical development: Fine Motor Skills ELG **COOKING AND NUTRITION** example, gears, pulleys, cams, levers and linkages] • Use a range of small tools, including scissors, paint • use the basic principles of a healthy and varied diet to • Understand and use electrical systems in their products [for brushes and cutlery; competently, safely and confidently. example, series circuits incorporating switches, bulbs, buzzers prepare dishes and motorsl understand where food comes from. **EVALUATE** • Apply their understanding of computing to program, monitor • Be excited about what they have made and control products. • Share their creations, explaining the process they have **COOKING AND NUTRITION** used: • understand and apply the principles of a healthy and varied diet • Make use of props and materials when role playing • prepare and cook a variety of predominantly savoury dishes characters in narratives and stories. using a range of cooking techniques



		Skills Map – Design & Technology	
		Early Years	
		Reception Statements	
	Design	Make	Evaluate
Objectives	Talk about what they want to make, individually and collaboratively.	 Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Use a range of small tools, including scissors, paint brushes and cutlery; competently, safely and confidently. Use a variety of tools and materials to make models. 	 Be excited about what they and others have made Share their creations, explaining the process they have used; Make use of props and materials when role playing characters in narratives and stories.
Skills	 Think of their own ideas. Consider which materials to use. Plan how best to approach a task. 	 Select appropriate resources & tools. Work safely and hygienically with support. Join materials, using tape or glue. 	Describe the making process and say if their product works as they wanted it to and if they like it or not.
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Design Inquiry

Design and Technology is covered throughout the year through weekly themes taken from the interests of the children. A weekly hook sheet is published and computing work can be identified on it. Weekly enhanced provision is planned to ensure the children have the opportunity to explore designing and making skills independently throughout the week.

Greater Depth



Skills Map – Design & Technology								
	,		Year	1				
	Autumn 1	Autumn 2	Spring 1		Spring 2		nmer 1	Summer 2
Cycle 1	DT: Wolf Trap						ke a hinged ure chest	DT: Where food comes from
Cycle 2		DT: Rocket Crawler			DT: Make a boat			
	Autumn 1	Autumn 2	Spring 1		Spring 2	Sun	nmer 1	Summer 2
	Technical Knowledge	9	Design		Make			Evaluate
Objectives Objectives ar ex pr di Co	uild structures, exploring he ney can be made stronger, so not more stable explore and use mechanisms example, levers, sliders, when not axles], in their products ooking & Nutrition: Use the rinciples of a healthy and valet to prepare dishes ooking & Nutrition: Undersydere food comes from.	appealing design crit [for els communic talking, draw mock-ups appropriation communic communic talking talkin	poseful, functional, products based on eria. develop, model and ate their ideas through awing, templates, and, where e, information and ation technology.		Select from and use a rantools and equipment to practical tasks [for example cutting, shaping, joining a finishing] Select from and use a wire of materials and componincluding construction materials, ingredients, according their characteristics	perform ple, and de range nents, aterials,	existing pr • Evaluate the	d evaluate a range of oducts neir ideas and products sign criteria
Skills		what the part will work. Use picture a product design crite Use knowle	at they want to do, product is for and how it es and words to design for myself following eria. edge of existing produce ideas.	•	Independently work safe hygienically. Sort materials, componed ingredients according to characteristics, with supposed select appropriate tools, techniques or equipment support to make structure mechanisms. Measure, mark out, cut shape, with support	ents or their port. t. with res &	and 'isn't existing p • Begin to t	alk about what 'is good' good' about a range of roducts . alk about ideas and against design criteria .
			Greater I	Dep	th			



Autumn 1	Skills Map – Design & Technology										
Cycle 2 DT: Tea Party DT: Rocket Crawler Technical Knowledge Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Cooking & Nutrition: Use the basic principles of a healthy and varied diet to prepare dishes Cooking & Nutrition: Understand where food comes from DT: Make a boat Make Evaluate Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping and inversions and tools and equipment to perform practical tasks [for example, cutting, shaping and inversions and tools		Year 2									
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Technical Knowledge	Cycle 1	DT: Wolf Trap									
Technical Knowledge Design Design Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Cooking & Nutrition: Use the basic principles of a healthy and varied diet to prepare dishes Cooking & Nutrition: Understand where food comes from. Describe design using pictures, words, models & diagrams. Design products based on design criteria. Describe design using pictures, words, models & diagrams. Design products for myself & others following design criteria. Research similar existing products on tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles, ingredients, according to their characteristics Explore and evaluate a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles, ingredients, according to their characteristics Segint out of tasks [for example,							treasi	ire chest	comes from		
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 Describe design using pictures, words, models & diagrams. Design products for myself & others following design criteria. Research similar existing products. Make lists of materials or ingredients they will need to do next. Explain now to work safely or hygienically, with support. Independently sort materials, components or ingredients according to their characteristics. Make suggestions as to what I need to do next. Begin to use finishing techniques 	Objectives Objectives ex ex pr di Co	ey can be made stronger, sold more stable splore and use mechanisms sample, levers, sliders, when a axles], in their products booking & Nutrition: Use the inciples of a healthy and vet to prepare dishes booking & Nutrition: Underspooking	stiffer s [for els e basic aried	 appealing pr design criter Generate, de communicat talking, draw mock-ups an appropriate, 	oducts based on ia. evelop, model and e their ideas through ving, templates, ad ICT and, where information and	tools and equipment to practical tasks [for exam cutting, shaping, joining finishing] • Select from and use a w of materials and composincluding construction materials, according textiles, ingredients, according construction.	perform uple, and ide range nents, naterials,	existing p • Evaluate t	roducts their ideas and products		
to make products look good. to make products look good. & why.				 words, mode Design producters follow Research simproducts. Make lists of 	els & diagrams. ucts for myself & ving design criteria. nilar existing materials or	 hygienically, with support Independently sort mate components or ingredient according to their characters Make suggestions as to valued to do next. Begin to use finishing terms 	ert. erials, erts eteristics. what I chniques	 about des Talk about considering they work might be understood opinion Talk about differently 	ign criteria t existing products ng use, materials, how , audience, where they used; express personal t what I would do		



	Skills Map – Design & Technology									
					Year :	3				
	Autumn 1 Aut		Autumn 2		Spring 1	Spring 2	Summer 1	Summer 2		
Су	cle 1		DT: Rock Cake Extreme Eart	_		DT: Pop-up books - Easter		DT: Norman Castles		
Су	cle 2	DT: Puppets – Light & Sound				DT: Bread making – Romans	DT: Making a kite			
		Technical Knowl	edge		Design	Make	9	Evaluate		
and reinforce more complex structures • Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • Cooking & Nutrition: Understand and apply the principles of a healthy and varied diet. • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. 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 ideas through discussion, annotated sketches,							 Evaluate ideas and products against their own design criteria and consider the views of others 			
Skills	Begin to research others' needs. Show design meets a range of requirements. Describe design using an accurately labelled sketch and words. Make detailed lists of materials or ingredients needed. Begin to materials and combine materials and components with some accuracy. Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Begin to apply their understand and use mechanical systems in their products. Begin to understand and apply the principles of a healthy & varied diet. Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Independently demonstrate how to work safely or hygienically. Begin to measure, mark out, cut and shape materials and components with some accuracy. Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Begin to understand and use mechanical systems in their products. Begin to understand and apply the principles of a healthy & varied diet. Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Use design criteria to evaluate finished product. Identify what you would change to make design better segments existing products, considering: how well they have been made, fit for purpose the products. Begin to understand and use mechanical systems in their products. Eagin to products, considering: how well they have been made, fit for purpose the products. Begin to understand and apply the principles of a healthy & varied diet. Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.									
					Greater D	epth				
Thr	ough	regularly returning to the	processes involved	d in De	sign & Technology, grea	ter depth of knowledge and	d understanding in a ra	nge of contexts will be		



	Skills Map – Design & Technology									
	Year 4									
		Autumn 1	Autun		Spring 1		Spring 2	S	ummer 1	Summer 2
C	ycle 1		DT: Rock Cake Earl				DT: Pop-up books - Easter			DT: Norman Castles
C	ycle 2	DT: Puppets – Light & Sound					DT: Bread making – Romans	DT: M	laking a kite	
		Technical Knowled	dge		Design		Make			Evaluate
Objectives	 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Cooking & Nutrition: Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 				esearch and develop ia to inform the n of innovative, ional, appealing ucts that are fit for ose, aimed at cular individuals or os rate, develop, model communicate ideas		lect from and use a wider range of ols and equipment to perform actical tasks [for example, cutting, aping, joining and finishing], curately lect from and use a wider range of aterials and components, including nstruction materials, textiles and gredients, according to their nctional properties and aesthetic salities.		 Investigate and analyse a range of existing products. Evaluate ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in Design Technology have helped shape the world. 	
Skills	Skills			criteria • Sugges: design. • Make a decisio	t improvements for and explain design ns considering ility of resources.	str co • Ur sys • Ur a h • Be pro	reply their understanding of hengthen, stiffen and reinformplex structures. Inderstand and use mechanicatems in their products. Inderstand and apply the princealthy & varied diet. Igin to prepare and cook a vedominantly savoury dishestinge of cooking techniques.	ce more cal nciples of ariety of	 Begin to export original des Discuss by a products we recycled or Know about inventors/dengineers/des 	whom, when and where ere designed hether products can be reused.
					Great	ter Dep	th			



Cycle 1 DT: Owers, domes & bridges DT: Towers, domes & bridges DT: Greater Boards Technical Knowledge Pesign Technical Knowledge Design Make Evaluate Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at more ample, series criteria systems in their products flor example, early shiping, poining and more amount of the design of computing of computing to program, monitor and control their products. Discovered diagrams, prototypes, pattern pieces and control their products are grown, reared, caught and processed! Use internet & questionnaires in for products and an apply the principles of health on the selection of more complex structures. Use internet & questionnaires for research & design criteria. Produce a logical, relative ball & computer and ous design criteria. Produce a logical, relative ball & considering products. Use internet & questionnaires for research & design criteria. Produce a logical, relative ball & considering products. Program and ous detectives. Use computer-aided design. Use internet & questionnaires for research & design criteria. Produce a logical, relative ball & considering products. Program and out we decirated and pupply their understanding of computing to program, monitor and output the products. Program and output the products of the	Skills Map – Design & Technology							
Technical Knowledge Pappy their understanding of how to strengthen, stiffen and reinforce more complex structures				Year 5				
Technical Knowledge Design		Autumn 1	Autumn 2	Spring 1	Spring 2		Summer 2	
Technical Knowledge Pesign Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products (for example, gears, pulleys, cams, lowers and linkages) Understand and use electrical systems in their products (for example, gears, pulleys, cams, lowers and linkages) Understand and use electrical systems in their products (for example, gears, pulleys, cams, lowers and linkages) Understand and use electrical systems in their products (for example, gears, pulleys, cams, lowers and linkages) Understand and use electrical systems in their products (for example, gears, pulleys, cams, lowers and motors) Apply their understanding of computing to program, monitor and control their products. Cooking a Nutrition: Understand and apply the principles of healthy and vaneed diet Prepare and cook a variety of predominantly savoury dishes using a single of cooking techniques. Use internet & questionnaires for research & design ideas. Create own design criteria. Produce a logical, realistic plas & explain it to others. Make design defails and products are grown, reared, caught and processed Use computer-aided designs. Use computer-aided designs. Produce a logical, realistic plas & explain it to others. Wake design decisions considering time & resources. Use computer-aided designs. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. **Valuate** **Valuate ideas & finished product. **Select from and use a wider range of took and equipment to perform practical tasks of made to particular individuals or groups of materials and components, including construction materials, excerding to materials and components, including construction materials, excerding to products. **Valuate ideas through discussion annotated design of materials and components, including construction materials, excerding to the particular individuals in Design Technology have helped shape the world. **Valuate individuals in Design Te	Cycle 1			DT: Towers, domes & bridges				
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reinforce more complex structures Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages) Appeling products that are fit for purpose, aimed at a particular individuals or groups described by their understanding of computing to program, monitor and control their products Cooking & Nutrition: Understand and apply the principles of a leastly and varied dies. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Use internet & questionnaires for research & design ideas. Create own design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular individuals or groups. Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Use internet & questionnaires for research & design ideas. Create own design criteria and finishingl, accurately Select from and use a wider range of materials, actording to their functional properties and aesthetic qualities. Understand how key events and ingredients are grown, reared, caught and processed. Use internet & questionnaires for research & design ideas. Create own design criteria to inform the design of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Understand how key events and ingredient, according to their functional properties and aesthetic qualities. Understand how key events and ingredient, according to their functional properties and aesthetic qualities. Understand how key events and ingredient, according to their functional properties and aesthetic qualities. Understand how key events and their products are fit for predominantly as the products. Understand how was develored to their functional properties and aesthetic qualities. Understand how the vestion and explosed diag		Technical Kno	owledge	Design			Evaluate	
Use internet & questionnaires for research & design ideas. Create own design criteria. Produce a logical, realistic plan & explain it to others. Make design decisions considering time & resources. Use computer-aided designs. West computer-aided designs. how to strengthen, stiffen and reinforce more complex structures. Confidently understand and use mechanical systems in their products. Begin to understand and use electrical systems in their products. Begin to apply their understanding of computing to program, monitor and control their products. Confidently understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. How to strengthen, stiffen and reinforce more complex structures. Confidently understand and use mechanical systems in their products. Begin to apply their understanding of computing to program, monitor and control their products. Confidently understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Objectives	einforce more complex structures. Understand and use mechanical systemanile, gears, pulleys, cams, lever. Understand and use electrical systemanile, series circuits incorporation motors. Apply their understanding of computational their products. Cooking & Nutrition: Understand and ealthy and varied diet. Prepare and cook a variety of predocange of cooking techniques. Understand seasonality, and know the	tems in their products [for s and linkages] ms in their products [for g switches, bulbs, buzzers and ting to program, monitor and d apply the principles of a minantly savoury dishes using a where and how a variety of	 Use research and develop 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 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. 		orm practical tasks haping, joining and vider range of ents, including textiles and to their functional	 existing products. Evaluate ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in Design Technology 	
	Skills			for research & design ideas. Create own design criteria. Produce a logical, realistic place with the explain it to others. Make design decisions considering time & resource	how to strengthen, stiff more complex structure Confidently understand systems in their product Begin to understand ar systems in their product Begin to apply their un computing to program their products. Confidently understand principles of a healthy Prepare and cook a var savoury dishes using a	fen and reinforce es. d and use mechanical cts. dd use electrical cts. derstanding of d monitor and control d and apply the and varied diet. iety of predominantly	gainst specification, considering ourpose and appearance. Test and evaluate final product. Research how sustainable materials are. Talk about some key oventors/designers/ engineers/ hefs/manufacturers of ground-	
GIERLE (DEDITI				Greater Dept				



	Skills Map – Design & Technology								
				Year 6					
		Autumn 1	Autumn 2	Spring 1		Spring 2	Summer 1		Summer 2
Су	cle 1			DT: Towers, domes & bridges		<mark>vers, do</mark> mes & bridges	DT: Healthy Lune (Jamie Oliver case		
Су	cle 2		DT: WW1 Trench Model		DT: K	ingdom – Bread and cakes			DT: Cams Toy
		Technical Kno	owledge	Design		Ma	ke		Evaluate
The search of their products of their products. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of ingredients are grown, reared, caught and processed. To inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. To inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of ingredients are grown, reared, caught and processed. 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. The prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.						uate ideas and products against rown design criteria and sider the views of others to rove their work. erstand how key events and viduals in Design Technology			
Skills	 Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Confidently understand and use mechanical systems in their products. Understand and use electrical systems in their products. Write a detailed evaluation of own interproducts. 								
				Greater Dep	th				
Thi	rough	regularly returning to the	processes involved in De	sign & Technology, greate	r denth	of knowledge and	d understanding in	a range	of contexts will be



	DESIGN & TECHNOLOGY: VOCABULARY MAP								
	Technical Knowledge	Design	Make	Evaluate					
EYFS	materials creations process	ideas materials plan	safely hygienically join materials	describe					
Year 1	structures mechanisms cooking nutrition	product design design criteria purposeful functional appealing	components characteristics structures mechanisms mark out	products design criteria					
Year 2	healthy & varied diet	diagrams research	finishing techniques	audience opinion					
Year 3	mechanical systems seasonality reared	requirements	accuracy assemble	evaluate ground-breaking					
Year 4		design decisions	mechanical systems	recycled reused					
Year 5	electrical systems program	questionnaires computer-aided designs	electrical systems program	sustainable					
Year 6	monitor control	market research	monitor control	technical language appraise					



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	Year 1	Year 2					
Examples of Deeper Thinking Questions	 What would you change about your design? How could you make your design faster/stronger etc? What do you like about someone else's design? What would happen if you changed? 	 What could you do to make your design better? Find one thing that is better about someone else's design. How would you help someone who wanted to make their own? What is the best/worst thing about your design? 					
Cross-Curricular Links	 Cycle 1: Au1: Wolf Trap – Science (materials), English (Three Little Pigs), Geography (fairy tale map drawing) Sp1: Make a Cape – Science (superhero bodies), English (superhero stories), History (superhero story – Edith Cavell) Su1: Make a Treasure Chest – English (pirate stories), History (shipwreck – Henry Blogg) Su2: Cooking and nutrition – Maths (measurement) Cycle 2: Au1: Tea Party – English (Fairy Tales) Sp2: Rocket Crawler – English (Stargazing), Science (rockets), History (moon landing) Su1: Design and make a boat – Geography (where the boat could sail to) 						
Suggested Writing Opportunities	All DT topics can include writing for planning, designing and evaluating. Cycle 1: Au1: Wolf Trap – instructions for building a wolf trap, Designing & Evenus Sp1: Make a cape – English (description of cape, stories with capes), Su1: Make a Treasure Chest – English (pirate stories), Designing & Evenus Su2: Cooking and nutrition –writing recipes, Designing & Evaluating. Cycle 2: Au1: Tea Party – recipe writing, Designing & Evaluating. Sp2: Rocket Crawler – space stories, Designing & Evaluating. Su1: Design and make a boat – Designing & Evaluating, stories about	raluating. Designing & Evaluating. aluating.					



	Years	3 & 4	Years 5 & 6		
Examples of Deeper Thinking Questions	 Year 3 What could you change to improve your design? What made creating your design difficult? What questions would you ask if? 	 Year 4 Explain what you could change and how it would improve your design? How would you change your design for the 'real world'? How effective at Is your? 	 Year 5 How could you make your design more suited to mass production? What developments would need to be made for your design to? What tests would you need to do to? 	 Year 6 What would you need to change to be able to sell your design? How could you adapt to make? What do you predict would happen if? Judge whether would cause/change/affect 	
Cross-Curricular Links	fossils), English Y4 (Ug: Boy Genius o	g) ory (the Stone Age), Science (Rocks and f the Stone Age). — Geography (earning a living), Maths oks y (Anglo-Saxons)	 Sp1&2: Structures – Geography (Notes of Su1: Creating a healthy, locally sourced Geography (locally sourced food), Motosephine (l	rth and South America) ced meal – Science (the human body), laths (measurement) lish (War Poets & War Horse), History d –English (Historical stories, Angloent changes of state), Maths	
Suggested Writing Opportunities	 where food for recipe came from/de (explaining and justifying menu choice) Sp2: Stone Age tool/jewellery – Histor fossils), English Y4 (Ug: Boy Genius or Su2: Cooking (Great bread Bake Off) ensured their product would make a Cycle 2: Au2: Christmas crafts and pop-up books Sp2: Cereal Bars with raisins – Histor Recipe writing 	 Geography (explanation texts about about food sources), Science ces), Recipe writing cry (the Stone Age), Science (Rocks and f the Stone Age). Geography (discussion of how they profit), Recipe writing, advertising etc 	 All DT topics can include writing for Cycle 1: Sp1&2: Structures – English/Geogra Su1: Creating a healthy, locally source how it's healthy), Geography (debated Cycle 2: Au2: WW1 designing a trench – England life in a trench), History (WW1), Sp2: Cooking different types of breat recipes) Su1: 3D map of UK/mountain range 	phy (description of super-structures) ced meal – Science (recipes, explaining e about locally sourced food) lish/history (descriptions of trenches Art (WW1 artists). d – History (historically accurate	



Design & Technology Long Term Plan Key Stage One Years 1 and 2

Cycle One		Cycle Two			
Term/Theme	Coverage – see skills	Term/Theme	Coverage – see skills		
enrichment	map	enrichment	map		
A1: DT - Wolf Trap	Structures	A1: DT - Tea Party	Cooking and Nutrition		
		A2: DT - Rocket crawler	Mechanisms		
		Sp2: DT - Make a boat	Construction and Textiles		
Su1: DT - Make a hinged treasure chest.	Mechanisms				
Su2: DT - Where food comes from.	Cooking and Nutrition				



Design & Technology Long Term Plan Lower Key Stage Two Years 3 and 4.

Cycle One		Cycle Two		
Term/Theme enrichment	Coverage – see skills map	Term/Theme enrichment	Coverage – see skills map	
		A1: DT – Shadow Puppets	Mechanisms	
A2: DT – Rock Cakes	Cooking & Nutrition			
Sp1: DT – Easter Pop- up Books	Mechanisms	Sp2: DT – Breadmaking, Romans	Cooking & Nutrition	
		Su1: DT – Making a Kite	Structures	
Su1: DT – Norman Castles	Structures			



Design & Technology Long Term Plan Upper Key Stage Two Years 5 and 6

Cycle One		Cycle two	
Term/Theme	Coverage – see skills	Term/Theme	Coverage – see skills
Enrichment	map	Enrichment	map
		A2: DT – WW1 Trench Model	Structures
Sp1: DT – Towers, domes & bridges	Structure		
Sp2: DT – Towers, domes & bridges	Electrical systems Computing	Sp2: DT – Bread & Cakes	Cooking & Nutrition
Su1 – Healthy Lunches (Jamie Oliver case study)	Cooking & Nutrition		
		Su2: Cam Toys	Mechanical Systems

	Cumulative Design & Technology Skills Progression Ladder						
	Technical Knowledge	Design	Make	Evaluate			
R	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.	 Think of their own ideas. Consider which materials to use. Plan how best to approach a task. 	 Select appropriate resources & tools. Work safely and hygienically with support. Join materials, using tape or glue. 	Describe the making process and say if what they made works as they wanted it to and if they like it or not.			
1	Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders,	 Explain what they want to do, what the product is for and how it will work. Use pictures and words to design a product for myself following design criteria. Use knowledge of existing products to produce ideas. 	Independently work safely & hygienically. Sort materials, components or ingredients according to their characteristics, with support. Select appropriate tools, techniques or equipment. with support to make structures & mechanisms. Measure, mark out, cut and shape, with support	Begin to talk about what 'is good' and 'isn't good' about a range of existing products. Begin to talk about ideas and products against design criteria.			
2	wheels and axles], in their products Cooking & Nutrition: Use the basic principles of a healthy & varied diet to prepare dishes Cooking & Nutrition: Understand where food comes from.	 Describe design using pictures, words, models & diagrams. Design products for myself & others following design criteria. Research similar existing products. Make lists of materials or ingredients they will need. 	 Explain how to work safely or hygienically, with support. Independently sort materials, components or ingredients according to their characteristics. Make suggestions as to what I need to do next. Begin to use finishing techniques to make products look good. 	Describe what went well, thinking about design criteria Talk about existing products considering use, materials, how they work, audience, where they might be used; express personal opinion Talk about what I would do differently if I were to do it again & why.			
3	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for	Begin to research others' needs. Show design meets a range of requirements. Describe design using an accurately labelled sketch and words. Make detailed lists of materials or ingredients needed.	 Independently demonstrate how to work safely or hygienically. Begin to measure, mark out, cut and shape materials/components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Begin to understand and use mechanical systems in their products. Begin to understand and apply the principles of a healthy & varied diet. Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. 	Use design criteria to evaluate finished product. Identify what you would change to make design better. Begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose Learn about some inventors/designers/engineers/chefs/ manufacturers of ground-breaking products			
4	example, gears, pulleys, cams, levers and linkages] • Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] (Y5 & 6) • Apply their	 Begin to create own design criteria. Suggest improvements for design. Make and explain design decisions considering availability of resources. 	 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products. Understand and apply the principles of a healthy & varied diet. Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. 	Use criteria to evaluate product. Begin to explain how I could improve original design. Discuss by whom, when and where products were designed Research whether products can be recycled or reused. Know about some inventors/designers/engineers/chefs/manufacturers of ground-breaking products			
5	understanding of computing to program, monitor and control their products. (Y5 & 6) Cooking & Nutrition: Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	 Use internet & questionnaires for research & design ideas. Create own design criteria. Produce a logical, realistic plan & explain it to others. Make design decisions considering time & resources. Use computer-aided designs. 	 Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Confidently understand and use mechanical systems in their products. Begin to understand and use electrical systems in their products. Begin to apply their understanding of computing to program, monitor and control their products. Confidently understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. 	Evaluate ideas & finished product against specification, considering purpose and appearance. Test and evaluate final product. Research how sustainable materials are. Talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products			
6	Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	 Draw on market research to inform design & identify features of design that will appeal to the intended user. Follow & refine a logical plan. Make design decisions, considering, resources & cost. 	 Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Confidently understand and use mechanical systems in their products. Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products. Confidently prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	 Write a detailed evaluation of own ideas and products against design criteria using technical language. Begin to compare and appraise own products against those created by peers. 			