

## SUBJECT: Design Technology



Statement of INTENT: To encourage innovation, creativity and practicality in design, technical skill in making and realistic evaluation of completed items. To facilitate an understanding of the subject and enable the growth of knowledge in an increasingly technological world. To understand and apply the principles of nutrition and to learn how to cook.

Age related Breadth of Study							
	EYFS	KS1	KS2				
	Through adult modelling and guidance,	National Curriculum statements:	National Curriculum statements:				
	they will learn how to look after their	When designing and making, pupils should be	When designing and making, pupils should be taught to:				
	bodies, including healthy eating, and	taught to:	Design				
	manage personal needs independently.	Design	-Use research and develop design criteria to inform the design of				
		-Design purposeful, functional, appealing	innovative, functional, appealing products that are fit for purpose, aimed				
	Early Learning Goals:	products for themselves and other users	at particular individuals or groups				
		based on design criteria	-Generate, develop, model and communicate their ideas through				
	PSED	-Generate, develop, model and communicate	discussion, annotated sketches, cross-sectional and exploded diagrams,				
	-Manage their own basic hygiene and	their ideas through talking, drawing, templates,	prototypes, pattern pieces and computer-aided design				
	personal needs, including dressing,	mock-ups and, where appropriate, information	Make				
	going to the toilet and understanding	and communication technology.	-Select from and use a wider range of tools and equipment to perform				
	the importance of healthy food choices.	Make	practical tasks [for example, cutting, shaping, joining and finishing],				
		-Select from and use a range of tools and	accurately				
	PD	equipment to perform practical tasks [for	-Select from and use a wider range of materials and components, including				
	-Use a range of small tools, including	example, cutting, shaping, joining and finishing].	construction materials, textiles and ingredients, according to their				
	scissors, paint brushes and cutlery;	-Select from and use a wide range of materials	functional properties and aesthetic qualities.				
		and components, including construction	Evaluate				
	EAD	materials, textiles and ingredients, according to	-Investigate and analyse a range of existing products				
	-Safely use and explore a variety of	their characteristics.	-Evaluate their ideas and products against their own design criteria and				
	materials, tools and techniques,	Evaluate	consider the views of others to improve their work				
	experimenting with colour, design,	-Explore and evaluate a range of existing	- Understand how key events and individuals in design and technology				
	texture, form and function;	products.	have helped shape the world				
	-Share their creations, explaining the	-Evaluate their ideas and products against design	Technical knowledge				
	process they have used;	criteria.	-Apply their understanding of how to strengthen, stiffen and reinforce				
		Technical knowledge	more complex structures				
		-Build structures, exploring how they can be	- understand and use mechanical systems in their products [for example,				
		made stronger, stiffer and more stable.	gears, pulleys, cams, levers and linkages]				
		-Explore and use mechanisms [for example,	- understand and use electrical systems in their products [for example,				
		levers, sliders, wheels and axles], in their	series circuits incorporating switches, bulbs, buzzers and motors]				
		products.	- apply their understanding of computing to program, monitor and control				
			their products.				

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	3-4 (Pre-Key Stage)	Talk about what	Understand the need	Talk about the	Understand what makes	Understand the main	Confidently plan a series
	Make healthy	he/she eats at home	for a variety of food	different food	a healthy and balanced	food groups and the	of healthy meals based
	choices about food,	and begin to discuss	in a diet.	groups and name	diet, and that different	different nutrients	on the principles of a
	drink, activity and	what healthy foods		food from each	foods and drinks	that are important	healthy and varied diet.
	toothbrushing	are.		group.	provide different	for health.	
	(PSED)		Understand that all		substances the body		
		Say where some food	food has to be	Understand that	needs to be healthy and	Understand how a	Use information on food
	Reception	comes from and give	farmed, grown or	food has to be	active.	variety of ingredients	labels to inform choices.
	Develop their small	examples of food that	caught.	grown, farmed or		are grown, reared,	
⊂	motor skills so that	is grown.		caught in Europe	Understand seasonality	caught and	
Nutrition	they can use a			and the wider	and the advantages of	processed to make	Research, plan and
i t	range of tools	Use simple tools with	Use a wider range of	world.	eating seasonal and	them safe and	prepare and cook a
<u> </u>	competently, safely	help to prepare food	cookery techniques	llaa aidan	locally produced food.	palatable / tasty to	savoury dish, applying
2	and confidently.	safely.	to prepare food	Use a wider	Dood and fallow vasings	eat.	his/her knowledge of
and	Suggested tools: pencils for drawing		safely.	variety of ingredients and	Read and follow recipes which involve several		ingredients and his/her technical skills.
9	and writing,			techniques to	processes, skills and	Select appropriate	tecinical skills.
ü	paintbrushes,			prepare and	techniques.	ingredients and use a	
Cooking	scissors, knives,			combine	teciniques.	wide range of	
Ŏ	forks and spoons			ingredients safely.		techniques to	
	(PD)			ingredients safety.		combine them.	
	(1.5)						
	Know and talk						
	about the different						
	factors that support						
	their overall health						
	and wellbeing –						
	healthy eating						
	(PSED)						

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	3-4 (Pre-Key Stage)	Use a range of	Design purposeful,	Use knowledge of	Use knowledge of	Use his/her	Use research he/she has
	Select and use activities and	simple tools to	functional,	existing products to	existing products to	research into	done into famous
	resources, with help when	cut, join and	appealing products	design his/her own	design a functional	existing products	designers and inventors
	needed. This helps them to	combine	for himself/herself	functional product.	and appealing	and his/her market	to inform the design of
	achieve a goal they have	materials and	and other users		product for a	research to inform	his/her own innovative
	chosen, or one which is	components	based on design	Create designs using	particular purpose	the design of	products.
	suggested to them (PSED)	safely.	criteria.	annotated sketches,	and audience.	his/her own	
				cross-sectional		innovative product.	Generate, develop,
	Explore different materials	Select from and	Generate, develop,	diagrams and	Create designs using		model and communicate
	freely, to develop their ideas	use a range of	model and	simple computer	exploded diagrams.	Create prototypes	his/her ideas through
	about how to use them and	tools and	communicate	programmes.		to show his/her	discussion, annotated
	what to make (EAD).	equipment to	his/her ideas		Use techniques	ideas.	sketches, cross-sectional
		perform	through talking,	Safely measure,	which require more		and exploded diagrams,
	Develop their own ideas	practical tasks	drawing,	mark out, cut,	accuracy to cut,	Make careful and	prototypes, pattern
	and then decide which	e.g. cutting,	templates, mock-	assemble and join	shape, join and finish	precise	pieces and computer-
	materials to use to express	shaping, joining	ups and, where	with some accuracy.	his/her work e.g.	measurements so	aided design.
	them (EAD).	and finishing.	appropriate,		Cutting internal	that joins, holes	
			information and	Make suitable	shapes, slots in	and openings are in	Apply his/her knowledge
es	Join different materials and	Ask simple	communication	choices from a	frameworks.	exactly the right	of materials and
til	explore different textures	questions about	technology.	wider range of tools		place.	techniques to refine and
Textiles	(EAD).	existing		and unfamiliar	Use his/her		rework his/her product
-		products and	Choose	materials and plan	knowledge of	Produce step by	to improve its functional
	Reception:	those that	appropriate tools,	out the main stages	techniques and the	step plans to guide	properties and aesthetic
	Articulate their ideas and	he/she has	equipment,	of using them.	functional and	his/her making,	qualities.
	thoughts in well-formed	made.	techniques and		aesthetic qualities of	demonstrating that	
	sentences (CL)		materials from a	Investigate and	a wide range of	he/she can apply	Use technical knowledge
			wide range.	analyse existing	materials to plan	his/her knowledge	accurate skills to
	Show resilience and			products and those	how to use them.	of different	problem solve during the
	perseverance in the face		Safely measure,	he/she has made,		materials, tools and	making process.
	of challenge (PSED).		mark out, cut and	considering a wide	Consider how	techniques.	
			shape materials	range of factors.	existing products and		Use his/her knowledge
	Return to and build on their		and components		his/her own finished	Make detailed	of famous designs to
	previous learning, refining		using a range of		products might be	evaluations about	further explain the
	ideas and developing their		tools.		improved and how	existing products	effectiveness of existing
	ability to represent them				well they meet the	and his/her own	products and products
	(EAD)		Evaluate and		needs of the	considering the	he/she have made.
			assess existing		intended user.	views of others to	
	Create collaboratively,		products and those			improve his/her	
	sharing ideas, resources		that he/she has			work.	
	and skills (EAD)		made using a				
			design criteria.				

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	3-4 (Pre-Key Stage)	Create simple	Design purposeful,	Use knowledge of	Use knowledge of	Use his/her research	Use a wide range of
	Select and use activities	designs for a	functional, appealing	existing products	existing products to	into existing products	methods to
	and resources, with help	product.	products for	to design his/her	design a functional and	and his/her market	strengthen, stiffen and
	when needed. This helps		himself/herself and	own functional	appealing product for a	research to inform the	reinforce complex
	them to achieve a goal	Use pictures	other users based on	product.	particular purpose and	design of his/her own	structures and can use
	they have chosen, or one	and words to	design criteria.		audience.	innovative product.	them accurately and
	which is suggested	describe what		Create designs			appropriately.
	to them (PSED).	he/she wants to	Generate, develop,	using annotated	Create designs using	Create prototypes to	
		do.	model and communicate	sketches, cross-	exploded diagrams.	show his/her ideas.	
	Explore different		his/her ideas through	sectional			
	materials freely, to	Select from and	talking, drawing,	diagrams and	Use techniques which	Make careful and	
	develop their ideas	use a range of	templates, mock-ups	simple computer	require more accuracy	precise measurements	
	about how to use them	tools and	and, where appropriate,	programmes.	to cut, shape, join and	so that joins, holes and	
	and what to make (EAD).	equipment to	information and		finish his/her work e.g.	openings are in exactly	
		perform	communication	Safely measure,	Cutting internal	the right place.	
	Develop their own ideas	practical tasks	technology.	mark out, cut,	shapes, slots in		
	and then decide which	e.g. cutting,		assemble and join	frameworks.	Produce step by step	
S	materials to use to	shaping, joining	Choose appropriate	with some		plans to guide his/her	
ıre	express them (EAD).	and finishing.	tools, equipment,	accuracy.	Use his/her knowledge	making, demonstrating	
ctı			techniques and materials		of techniques and the	that he/she can apply	
Structures	Join different materials	Ask simple	from a wide range.	Make suitable	functional and	his/her knowledge of	
Stı	and explore	questions about		choices from a	aesthetic qualities of a	different materials,	
	different textures (EAD).	existing	Safely measure, mark	wider range of	wide range of	tools and techniques.	
		products and	out, cut and shape	tools and	materials to plan how		
	Choose the right	those that	materials and	unfamiliar	to use them.	Make detailed	
	resources to carry out	he/she has	components using a	materials and	C	evaluations about	
	their own plan. For	made.	range of tools.	plan out the main	Consider how existing	existing products and	
	example, choosing a	Duild structures	Evaluate and assess	stages of using	products and his/her	his/her own	
	spade to enlarge a small	Build structures,	Evaluate and assess existing products and	them.	own finished products might be improved and	considering the views	
	hole they dug with a trowel (PD).	exploring how they can be	those that he/she has	Investigate and	how well they meet	of others to improve his/her work.	
	trower (FD).	made stronger,	made using a design	analyse existing	the needs of the	ms/ner work.	
	Collaborate with others	stiffer and more	criteria.	products and	intended user.	Build more complex 3D	
	to manage large items,	stable.	criteria.	those he/she has	intended discr.	structures and apply	
	such as moving a long	Stable.	Investigate different	made,	Apply techniques	his/her knowledge of	
	plank safely, carrying		techniques for stiffening	considering a	he/she has learnt to	strengthening	
	large hollow blocks (PD).		a variety of materials	wide range of	strengthen structures	techniques to make	
	60 11011011 010010 (1 0).		and explore different	factors.	and explore his/her	them stronger or more	
	Use one-handed tools		methods of enabling	Strengthen	own ideas.	stable.	
	and equipment, for		structures to remain	frames using		<del>-</del> -	
	- 4 - 1		stable.	diagonal struts.			
		ı		1 0	<u>I</u>		

example, making snips in			
paper with scissors (PD).			
paper with seissors (1 b).			
Reception:			
Show resilience and			
perseverance in the face			
of challenge (PSED).			
<u> </u>			
Use talk to help work out			
problems and organise			
thinking and activities,			
and to explain how			
things work and why			
they might happen			
(PSED).			
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Return to and build on			
their previous learning,			
refining ideas and			
developing their ability			
to represent them (EAD).			
Create collaboratively,			
sharing ideas, resources			
and skills (EAD).			
, ,			
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			
(PD).			

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Create simple designs	Design purposeful,	Use knowledge of			Generate, develop, model
		for a product.	functional, appealing	existing products to			and communicate his/her
			products for	design his/her own			ideas through discussion,
		Use pictures and	himself/herself and	functional product.			annotated sketches, cross-
		words to describe	other users based on				sectional and exploded
		what he/she wants to	design criteria.	Create designs			diagrams, prototypes,
		do.		using annotated			pattern pieces and
			Generate, develop,	sketches, cross-			computer-aided design.
		Select from and use a	model and	sectional diagrams			
		range of tools and	communicate his/her	and simple			Apply his/her knowledge of
		equipment to perform	ideas through talking,	computer			materials and techniques to
		practical tasks e.g.	drawing, templates,	programmes.			refine and rework his/her
		cutting, shaping,	mock-ups and, where				product to improve its
		joining and finishing.	appropriate,	Safely measure,			functional properties and
			information and	mark out, cut,			aesthetic qualities.
		Ask simple questions	communication	assemble and join			
		about existing	technology.	with some			Use technical knowledge
Mechanisms		products and those		accuracy.			accurate skills to problem
is:		that he/she has made.	Choose appropriate				solve during the making
an			tools, equipment,	Make suitable			process.
S		Use wheels and axles	techniques and	choices from a			
Je		in a product.	materials from a wide	wider range of			Apply his/her understanding
2			range.	tools and			of computing to program,
				unfamiliar			monitor and control his/her
			Safely measure, mark	materials and plan			product
			out, cut and shape	out the main stages			
			materials and	of using them.			Understand how to use
			components using a				more complex mechanical
			range of tools.	Investigate and			and electrical systems.
				analyse existing			
			Evaluate and assess	products and those			Understand and use
			existing products and	he/she has made,			electrical systems in
			those that he/she has	considering a wide			products.
			made using a design	range of factors.			
			criteria.				
				Understand how			
			Explore and use	mechanical systems			
			mechanisms e.g.	such as levers and			
			levers, sliders, wheels	linkages or			
			and axles, in his/her	pneumatic systems			
			products.	create movement.			