

		•	nderstanding the World • Expressive A		
			design technology within the nation		
Age	Physical development	nt	Understanding the world	Expressive arts and desig	ŋ
	Moving and handling	Health and self- care	Technology	Exploring and using media and materials	Being imaginative
30 – 50 months	• To use one- handed tools and equipment, e.g. makes snips in paper with child scissors.	• To understand that equipment and tools have to be used safely.	 To show an interest in technological toys with knobs or pulleys, or real objects. To show skill in making toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images. 	 To enjoy joining in with dancing and ring games. To begin to move rhythmically. To imitate movement in response to music. To tap out simple repeated rhythms. 	 To develop preferences for forms of expression. To use movement to express feelings. To create movement in response to music. To capture experiences and responses with a range of media, such as music, dance and paint and other materials or words.
40 – 60 months	 To use simple tools to effect changes to materials. To handle tools, objects, construction and malleable materials safely and with increasing control. 	 To show understanding of the need for safety when tackling new challenges and consider and manage some risks. To show understanding of how to transport and store equipment safely. 		 To explore what happens when they mix colours. To experiment to create different textures. To understand that different media can be combined to create new effects. 	 To create simple representations of events, people and objects. To choose particular colours to use for a purpose

		• To practise some appropriate safety measures without direct supervision.	 To manipulate materials to achieve a planned effect. To construct with a purpose in mind, using a variety of resources. To use simple tools and techniques competently and appropriately. To select appropriate resources and adapt work where necessary. To select tools and techniques needed to shape, assemble and join materials they are using. 	
ELG	• To handle equipment and tools effectively, including pencils for writing.		• To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	• To use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

	Knowledge, Skills and Unders	standing breakdown for Desigi	n and Technology			
		Year 1				
Through a varie	ty of creative and practical activities, pup	ils should be taught the kno	wledge, understanding and ski	ills needed to engage in an		
iterative process	s (one that includes a repeated cycle of o	perations) of designing and I	making. They should work in a	range of relevant contexts		
[for ex	ample, the home and school, gardens ar	nd playgrounds, the local con	nmunity, industry and the wid	er environment].		
	🔸 design purposeful, functional, appe	ealing products for themselve	es and other users based on de	esign criteria		
	🖊 g	enerate and communicate th	neir ideas			
	🖊 use a range c	of tools and equipment to pe	rform practical tasks			
	use a wide range of materials and com	ponents, including construct	tion materials, textiles and ing	redients		
	🖊 exp	lore a range of existing produ	ucts			
	🖊 build structures, exploring l	how they can be made stron	ger, stiffer and more stable			
	🖊 how to cook and ap	ply the principles of nutritior	n and healthy eating			
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition		
Design appealing products	Use a range of tools and equipment to	Explore a range of existing	Practise techniques to join	Select from and use		
that have a definite function,	perform practical tasks eg a sewing	products to help with own	and/or strengthen materials	ingredients according to		
for a particular person eg	machine to use running stitch to join	design.	eg, glueing and reinforcing	their characteristics eg		
Christmas card.	fabric.		card.	make a healthy sandwich.		
	enerate, model and Use a wide range of materials and					
_	ommunicate their design components, including construction					
ideas through talking,	materials, textiles and ingredients.					
drawing and using templates, where	Make use of template to produce shapes.					
appropriate, using						
information and						

communication technology.

	Knowledge, Skills and Unders	standing breakdown for Design Year 2	and Technology	
iterative process [for ex	 select from and use a d use a wide range of materials and comp explore an build structures, exploring l how to cook and ap 	vils should be taught the know perations) of designing and r ad playgrounds, the local com ealing products for themselve develop, model and commun range of tools and equipment conents, including construction characteristics d evaluate a range of existing	naking. They should work in a munity, industry and the wide as and other users based on de nicate their ideas nt to perform practical tasks on materials, textiles and ingre g products ger, stiffer and more stable and healthy eating	range of relevant contexts er environment]. esign criteria
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition
Design and make purposeful, functional products based on design criteria eg bird house model. Generate, model and communicate their design ideas through talking, drawing and using templates, where appropriate, using information and communication technology.	Select and demonstrate safe use of tools eg saw. Select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics. Perform a range of cutting and shaping techniques eg tearing, cutting, folding and curling eg bird boxes. Use a range of joining techniques eg glueing, hinges or combining materials to strengthen.	Explore and evaluate an existing design and propose improvements. Explore the processes used to create products. Modify and develop own design as they progress.	Explore how structures can be made stronger, stiffer and more stable. Explore and use mechanisms in their products eg wheels and axles.	Safely cut, peel or grate ingredients in a hygienic manner eg fruit salad. Use measuring cups or electronic scales to measure the required amount of ingredients. Combine ingredients. Understand where our food comes from.

engage in an it of relev use d select from and use a Design Make		repeated cycle of operations ne, school, leisure, culture, er of innovative, functional, appe cate their ideas through discu range of tools and equipmen	s) of designing and making. The Interprise, industry and the wig ealing products that are fit for Inssion and annotated sketches It to perform practical tasks	ney should work in a range der environment]. r purpose s
engage in an it of relev use d select from and use a Design Make	terative process (one that includes a evant contexts [for example, the hon design criteria to inform the design of generate, model and communic select from and use a wider wider range of materials and comp	repeated cycle of operations ne, school, leisure, culture, er of innovative, functional, appe cate their ideas through discu range of tools and equipment onents, including constructio functional properties	s) of designing and making. The Interprise, industry and the wig ealing products that are fit for Inssion and annotated sketches It to perform practical tasks	ney should work in a range der environment]. r purpose s
of releve use d select from and use a Design Make	evant contexts [for example, the hondesign criteria to inform the design of design criteria to inform the design of generate, model and communion select from and use a wider wider range of materials and comp	ne, school, leisure, culture, er of innovative, functional, appe cate their ideas through discu range of tools and equipmen onents, including constructio functional properties	nterprise, industry and the wie ealing products that are fit for ission and annotated sketches t to perform practical tasks	der environment]. r purpose s
 use d select from and use a Design Make 	design criteria to inform the design of generate, model and communio select from and use a wider wider range of materials and comp invest	of innovative, functional, appe cate their ideas through discu range of tools and equipment onents, including construction functional properties	ealing products that are fit for ssion and annotated sketches t to perform practical tasks	r purpose s
Select from and use a Design Make	 generate, model and communic select from and use a wider wider range of materials and comp invest 	cate their ideas through discu range of tools and equipmen onents, including constructio functional properties	ssion and annotated sketches t to perform practical tasks	S
Select from and use a begin	 select from and use a wider wider range of materials and comp invest 	range of tools and equipment onents, including constructio functional properties	t to perform practical tasks	
Design Make	wider range of materials and comp	onents, including constructio functional properties		edients according to their
Design Make	🕌 invest	functional properties	n materials, textiles and ingre	dients according to their
		• •		
		igate a range of existing prod		
		igute a range of chisting prou	ucts	
			riteria to improve their work	
	•	ing of how to strengthen mor	•	
		d use mechanical systems in t	-	
0		pply the principles of a health	•	
		Evaluate	Technical knowledge	Cooking and nutrition
Produce designs with a clear Selec	ct appropriate techniques to	Investigate a range of	Apply their understanding of	Select and use correct
	struct products.	existing products to find out	how to strengthen more	utensils to hygienically
	ct from and demonstrate safe use of	how they were constructed.	complex structures.	prepare food.
	s eg saw for cutting, glue for joining.	Evaluate their ideas and	Understand how mechanical	Understand and apply the
-	ct from and use a wide range of	products against their own	systems work and use some	principles of a healthy and
-	erials and components, including	design criteria to improve	in their products.	varied diet.
5	struction materials and textiles	their work.		
-	ording to their functional properties.	Study the work of some		
-	correct stitch to join materials.	recognised designers eg		
	decorative finish using a suitable	including pioneers in		
	nique.	horticultural techniques to stimulate ideas for designs.		
communication technology.		sumulate lueas for designs.		

	Knowledge, Skills and Understanding breakdown for Design and Technology					
	Year 4					
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to						
engage in an iterative process (one that includes a repeated cycle of operations) of designing and making. They should work in a range						
of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].						
	4 develop design criteria to inform the	design of functional, appeal	ing products that are fit for pu	irpose		
🔺 generate, deve	lop, model and communicate their ideas	through discussion, annotate	ed sketches and prototypes an	d computer-aided design		
	select from and use a wider					
select from and	use a wider range of materials and comp		• •	edients. according to their		
		functional properties				
	📕 investigate a	and analyse a range of existir	ng products			
	apply their understanding of how			res		
4	nderstand and use mechanical systems in					
	and use electrical systems in their produc			_		
	derstand seasonality, and know where an	-				
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition		
Develop own design criteria	Select from, and use safely, a wider range	Investigate and analyse a	Understand and use	Understand seasonality,		
to inform the design of	of tools and equipment.	range of existing products.	electrical systems in their	and know where and how a		
functional, appealing	Select from and use a wider range of	Disassemble designs to	products [for example, series	variety of ingredients are		
products.	materials and components according to	discover how they work.	circuits incorporating	grown, reared, caught and		
Generate, model and	their functional properties.	Make improvements to	switches, bulbs, buzzers and	processed.		
communicate their design	Use suitable cutting and shaping	established designs and be	motors].	Understand how to store		
ideas through discussion,	techniques.	able to explain why.	Apply understanding of	and handle food		
annotated sketches and	Choose suitable joining techniques.		forces to select a suitable	ingredients properly.		
prototypes and, where			mechanism eg levers,			
applicable, computer-aided			winding mechanism, pulleys			
design.			and gears.			

	Knowledge, Skills and Unders	tanding breakdown for Design	and Technology	
		Year 5		
iterative prod use resea generate, develop, r select from and use evalue value	arch and develop design criteria to inform model and communicate their ideas throu se a wider range of tools and equipment t a wider range of materials and compone	f operations) of designing and r leisure, culture, enterprise, ind the design of innovative, funct ugh discussion, annotated sketch computer-aided design to perform practical tasks [for ex- ints, including construction mater roperties and aesthetic qualities r own design criteria and considicts [for example, series circuits	naking. They should work in a ra ustry and the wider environmen ional, appealing products that an hes, cross-sectional and explode xample, cutting, shaping, joining erials, textiles and ingredients, a seler the views of others to improvincorporating switches, bulbs, b	nge of relevant contexts [for t]. re fit for purpose d diagrams, prototypes and and finishing], accurately ccording to their functional re their work
	prepare and cook a variety of pre	dominantly savoury dishes usin		
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition
Generate, model and communicate their design ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and, where applicable, computer-aided design. Use research and develop own design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Produce several prototypes each building upon the previous to optimise design.	Select from and use a wider range of tools and equipment to perform practical tasks accurately. Use a variety of stitching techniques to join fabrics. Select from and use a wider range of materials and components, including construction materials and textiles, according to their functional properties and aesthetic qualities.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Create circuits using electronics kits that combine a number of parts (e.g. LEDs, resistors, chips etc.) Use different techniques to strengthen, stiffen and reinforce more complex structures.	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

Knowledge, Skills and Understanding breakdown for Design and Technology						
		Year 6				
Through a	variety of creative and practical activities	s, pupils should be taught the kn	owledge, understanding and ski	lls needed to engage in an		
iterative pro	cess (one that includes a repeated cycle o			-		
	• • • • • • • • • • • • • • • • • • • •	•	ustry and the wider environmen	-		
use research and d	evelop design criteria to inform the desig	n of innovative, functional, appe individuals or groups	ealing products that are fit for p	urpose, aimed at particular		
generate, develop	🖕 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes,					
	patter	n pieces and computer-aided de	esign			
🖊 select from and u	se a wider range of tools and equipment t	to perform practical tasks [for ex	cample, cutting, shaping, joining	and finishing], accurately		
🔸 select from and use	e a wider range of materials and compone	ents, including construction mate	erials, textiles and ingredients, a	ccording to their functional		
	рі	roperties and aesthetic qualities				
📥 eval	uate their ideas and products against thei	r own design criteria and consid	er the views of others to improv	ve their work		
	understand how key events and in	dividuals in design and technolo	ogy have helped shape the world	b		
	understand and use mechanical systems i		· · · · · · · · · · · · · · · · · · ·			
📥 understand	and use electrical systems in their produ		• •	uzzers and motors]		
	apply their understanding of computing to program, monitor and control their products					
		apply the principles of a healthy				
	prepare and cook a variety of pre					
Design	Make	Evaluate	Technical knowledge	Cooking and nutrition		
Use research and develop	Cut with precision and produce a good	Evaluate the design of	Combine electronics and	Invent and modify own		
design criteria to inform the	quality finish.	products and identify	mechanics to produce	recipes including		
design of innovative, functional,	Select appropriate tools to cut and	possible changes to improve	original designs.	ingredients, methods,		
appealing products that are fit	shape a particular type of material.	their performance.	Use cams to change a	cooking times and		
for purpose, aimed at particular	Understand the purpose of and	Understand how key events	rotation into a push/pull	temperatures.		
individuals or groups.	include a seam allowance.	and individuals in design and	movement.	Plan a menu, based on		
Use design ideas from several		technology have helped	Apply their understanding of	savoury dishes, suitable for		
significant designers giving		shape the world.	computing to program,	a healthy and balanced		
reasons for their selections.			monitor and control their	diet.		
Include design processes such			products.			
as prototypes, cross-sectional						
diagrams and CAD.						