

<u>Progression Document</u> - Design Technology



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and	Share creations,	<mark>Begin to draw on</mark>	<mark>Start to generate</mark>	With growing	Start to generate	Start to generate,	Generate,
communicating ideas	explaining the	<mark>their own</mark>	ideas by drawing	confidence	ideas, considering	<mark>develop, model</mark>	develop, model
	process they have	<mark>experience to</mark>	on their own and	generate ideas for	the purposes for	and communicate	and communicate
	<mark>used.</mark>	help generate	other people's	an item,	which they are	<mark>their ideas</mark>	their ideas
		ideas and	<mark>experiences.</mark>	considering its	<mark>designing- link</mark>	<mark>through</mark>	through
		research		purpose and the	with Mathematics	<mark>discussion,</mark>	discussion,
		conducted on	Begin to develop	user/s.	<mark>and Science.</mark>	annotated	annotated
		criteria.	their design ideas			<mark>sketches, cross-</mark>	sketches, cross-
			through	Start to order the	Confidently make	sectional and	sectional and
		<mark>Begin to</mark>	discussion,	main stages of	labelled drawings	<mark>exploded</mark>	exploded
		understand the	observation,	making a product.	from different	diagrams,	diagrams,
		development of	drawing and	Identify a purpose	views showing	prototypes,	prototypes,
		existing products:	modelling.	and establish	specific features.	pattern pieces.	pattern pieces.
		What they are		criteria for a			
		for, how they	<mark>Identify a purpose</mark>	successful	Develop a clear	<mark>Begin to use</mark>	Use research and
		work, materials	for what they	product.	idea of what has	research and	develop design
		used. Start to	intend to design		to be done,	develop design	criteria to inform
		suggest ideas and	and make.	Understand how	planning how to	<mark>criteria to inform</mark>	the design of
		explain what they		well products	use materials,	<mark>the design of</mark>	innovative,
		are going to do.	Understand how	have been	equipment and	innovative,	functional,
			to identify a target	designed, made,	processes, and	functional,	appealing
		Understand how	group for what	what materials	suggesting	appealing	products
		to identify a target	they intend to	have been used	alternative	products	that are fit for
		group for what	design and make	and the	methods of	that are fit for	purpose.
		they intend to	based on a design	construction	making, if the first	<mark>purpose.</mark>	
		design and make	<mark>criteria.</mark>	technique.	attempts fail.		Accurately apply a
		based on a design				With growing	range of finishing
		criteria.	Develop their	Learn about	Identify the	confidence apply	techniques,
			ideas through talk	inventors,	strengths and	a range of	including those
		Begin to develop	and drawings and	designers,	areas for	finishing	from art and
		their ideas	label parts. Make	engineers, chefs	development in	techniques,	design.
		through talk and	templates and	and		including those	

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drawings. Make	mock ups of their	manufacturers	their ideas and	from art and	Draw up a
templates and	ideas in card and	who have	products.	<mark>design.</mark>	specification for
mock ups of their	paper or using ICT.	developed			their design- link
ideas in card and		ground-breaking	When planning	<mark>Draw up a</mark>	with Mathematics
paper or using ICT.		products.	consider the	specification for	and Science.
			views of others,	<mark>their design- link</mark>	
		Start to	including	with Mathematics	Plan the order of
		understand	intended users, to	and Science.	their work,
		whether products	improve their		choosing
		can be recycled or	work.		appropriate
		reused.		Use results of	materials, tools
				investigations,	and techniques.
		Know to make	Learn about	information	
		drawings with	inventors,	sources, including	
		labels when	designers,	ICT when	Suggest
		designing.	engineers, chefs	developing design	alternative
			and	ideas.	methods of
		When planning	manufacturers		making
		explain their	who have	With growing	if the first
		choice	developed	confidence select	attempts fail.
		of materials and	ground-breaking	appropriate	1
		components	products.	materials, tools	Identify the
		including function		and techniques.	strengths and
		and aesthetics.	When planning		areas for
			explain their	Start to	development in
			choice of	understand how	their ideas and
			materials and	much products	products.
			components	cost to make, how	products.
			according to	sustainable and	Know how much
			function and	innovative they	products cost to
			aesthetic.	are and the	make, how
				impact products	sustainable and
				have beyond their	
					innovative they
				intended purpose.	are and the
					impact products
					have beyond their
					intended purpose.

Working with	Safely use and	Begin to make	Begin to select	Select a wider	Select a wider	Select appropriate	Confidently select
tools, equipment,	explore a variety	their design using	tools and	range	range	materials, tools	appropriate tools,
materials and	of materials, tools	appropriate	materials; use	of tools and	of tools and	and techniques	materials,
components to	and techniques.	techniques.	correct	techniques for	techniques for	e.g. cutting,	components and
•			vocabulary to	making their	making their	shaping, joining	techniques and
make quality	Use different	Begin to build	name and	product i.e.	product safely.	and finishing,	use them.
products	techniques for	structures,	describe them.	construction		accurately.	
	joining materials,	exploring how		materials and	Know how to		Use tools safely
	such as how to	<mark>they can be made</mark>	Build structures,	<mark>kits, textiles</mark> , food	measure, mark	Select from and	and accurately.
	use adhesive tape	stronger, stiffer	exploring how	ingredients,	out, cut and	use a wider range	
	and different sorts	and more stable.	<mark>they</mark>		shape a range of	of materials and	Assemble
	of glue.		can be made	Explain their	materials, using	components,	components to
		Explore and use	stronger, stiffer	choice of tools	appropriate tools,	including	make working
	Use a range of	mechanisms [for	and more stable.	and	equipment and	construction	models.
	small tools e.g.	example, levers,		equipment in	techniques.	<mark>materials, textiles</mark>	
	scissors.	<mark>sliders, wheels</mark>	With help	relation to the		and ingredients,	Aim to make and
		and axles], in their	measure, cut and	skills and		according to their	to achieve a
		<mark>products.</mark>	score with some	techniques they	Start to join and	functional	quality product.
			accuracy. Learn to	will be using.	combine materials	properties and	
		With help	use hand tools		and components	aesthetic qualities.	With confidence
		measure, mark	safely and		accurately in		pin, sew and stitch
		out, cut and shape	appropriately.	<mark>Start to</mark>	temporary and	Understand how	materials together
		<mark>a range of</mark>		understand that	permanent ways.	<mark>mechanical</mark>	to create a
		materials.	Start to assemble,	mechanical		systems such as	product.
			join and combine	systems such as	<mark>Know how</mark>	cams or pulleys or	
		Explore using	materials in order	levers and	mechanical	gears create	Demonstrate
		tools e.g. scissors	to make <mark>a</mark>	linkages or	systems such as	<mark>movement.</mark>	when make
		and a hole punch	product.	pneumatic	cams or pulleys or		modifications as
		<mark>safely.</mark>		systems create	gears create	Know how more	they go along.
			Demonstrate how	<mark>movement.</mark>	<mark>movement.</mark>	complex electrical	
		Begin to assemble,	to cut, shape and			circuits and	Construct
		join and combine	join fabric to make		Understand how	components can	products using
		materials and	a simple product.		more complex	be used to create	permanent joining
		<mark>components</mark>	Use basic sewing	Measure, mark	electrical circuits	functional	techniques.
		<mark>together using a</mark>	techniques.	out, cut, score and	and components	products and how	
		variety of	Start to choose	assemble assemble	can be used to	to program a	Understand how
		temporary	and use		create functional	computer to	mechanical

methods e.g.	appropriate	components with	products.	monitor changes	systems such as
glues or masking	finishing	more accuracy.	(Science)	in the	cams or pulleys or
tape.	techniques based			environment and	gears create
	on own ideas	Start to work	Continue to learn	control their	movement.
Begin to use		safely and	how to program a	products.	
simple finishing		accurately with a	computer to		
techniques to		range of simple	monitor changes		Know how more
improve the		tools.	in the	Understand that	complex electrical
appearance of			environment and	mechanical and	circuits and
their product.		Start to think	control their	electrical systems	components can
		about their ideas	products.	have an input,	be used to create
		as they make		process and	functional
		progress and be	Understand how	output.	products and how
		willing to change	to reinforce and		to program a
		things if this helps	strengthen a 3D	Begin to measure	computer to
		them to improve	<mark>framework.</mark> Now	<mark>and mark out</mark>	monitor changes
		their work.	sew using a range	more accurately.	in the
			of different		environment and
		Start to measure,	stitches, to weave	Demonstrate how	control their
		tape or pin, cut	and knit.	to use skills in	products.
		and join fa <mark>bric</mark>		<mark>using different</mark>	
		with some		tools and	
		<mark>accuracy.</mark>	Demonstrate how	<mark>equipment safely</mark>	
			to measure, tape	and accurately	
			or pin, cut and	with growing	Know how to
			join fabric with	confidence cut	reinforce and
			some accuracy.	and join with	strengthen a 3D
				accuracy to	framework.
			Begin to use	ensure a good-	
			finishing	quality finish to	Understand that
			techniques to	the product.	mechanical and
			strengthen and		electrical systems
			improve the	Weigh and	have an input,
			appearance of	measure	process and
			their product	accurately (time,	output.
			using a range of	dry ingredients,	
				<mark>liquids).</mark>	

					equipment including ICT.	Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.	Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.
Evaluating	Share their	Start to evaluate	Evaluate their	Start to evaluate	Evaluate their	Start to evaluate a	Evaluate their
processes and	creations,	their product by	work against their	their product	products carrying	product against	products,
products	explaining the process they have	<mark>discussing how</mark> well	design criteria.	against original design criteria <i>e.g.</i>	out appropriate tests.	the original design specification and	identifying strengths and
	used;	it works in relation	Look at a range of	how well it meets	lesis.	by carrying out	areas for
		to the purpose	existing products	its intended	Start to evaluate	tests.	development, and
		(design criteria).	explain what they	purpose	their work both		carrying out
			like and dislike		during and at the	<mark>Evaluate their</mark>	appropriate tests.
		When looking at	about products	Begin to	end of the	work both during	
		existing products	and why.	disassemble and	assignment.	and at the end of	Evaluate their
		<mark>explain what they</mark>		evaluate familiar		the assignment.	work both during
		like and dislike	Start to evaluate	products and	Be able to		and at the end of
		about products	their products as	consider the views	disassemble and	Begin to evaluate	the assignment.
		and why.	they are	of others to	evaluate familiar	it personally and	
		Begin to evaluate	developed,	improve them.	<mark>products and</mark> consider the	seek evaluation	Record their evaluations using
		their products as	identifying strengths and		views of others to	from others.	drawings with
		they are	possible changes		improve them.		labels.
		developed,	they might make.		improve them.		
		identifying					
		strengths and			Evaluate the key		
		possible changes	With confidence	Evaluate the key	designs of	Evaluate the key	
		they might make.	<mark>talk about their</mark>	designs of	individuals in	<mark>designs of</mark>	Evaluate against
			ideas, saying what	individuals in	design and	<mark>individuals in</mark>	their original
			they like and	design and	technology has	design and	criteria and
			dislike about	technology has	helped shape the	<mark>technology has</mark>	suggest ways that
			<mark>them.</mark>		world.		their product

			helped shape the world.		helped shape the world.	could be improved. Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and Nutrition	 Begin to understand that all food comes from plants or animals. Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. Start to understand how to name and sort foods into the five groups in 'The Eat well plate' Begin to understand that 	Understand that all food comes from plants or animals. Know that food has to be farmed, grown elsewhere (e.g. home) or caught. Understand how to name and sort foods into the five groups in 'The Eat well plate' Know that everyone should eat at least five portions of fruit and vegetables every day.	Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Begin to understand that seasons may affect the food available, Understand how food is processed into ingredients that can be eaten or used in	Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking.
	everyone should eat at least five portions of fruit		source.	<mark>source.</mark>	<mark>cooking.</mark>	

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	egetables Demonstrate how	Begin to			
every		understand how			
	dishes safely and	to use a range of			
	hygienically,	techniques such			
	without using a	as peeling,			Know how to
Know	how to heat source.	chopping, slicing,	<mark>Know how to use</mark>	Know how to	prepare and cook
prepa	are simple	grating, mixing,	a range of	prepare and cook	а
dishes	s safely and Demonstrate how	spreading,	techniques such	a	variety of
hygier	nically, to use techniques	kneading and	as peeling,	variety of	predominantly
	out using a such as cutting,	baking.	chopping, slicing,	predominantly	savoury dishes
	source. peeling and	0	grating, mixing,	savoury dishes	safely and
	how to use grating.	Start to	spreading,	safely and	hygienically
	niques such	understand that a	kneading and	hygienically	including, where
as cut		healthy diet is	baking.	including, where	appropriate, the
	ng and	made up from a		appropriate, the	use of a heat
gratin		variety and	Know that a	use of a heat	source.
Broom	·o·	balance of	healthy diet is	source.	
		different food and	made up from a		Understand how
		drink, as depicted	variety and	Start to	to use a range of
		in 'The Eat well	balance of	understand how	techniques such
		plate' Begin to	different food and	to use a range	as
		know that to be	drink, as	of techniques	peeling, chopping,
		active and	depicted in 'The	such	slicing, grating,
		healthy, food and	Eat	as peeling,	mixing,
		drink are needed	well plate' Know	chopping, slicing,	spreading,
		to provide energy	that to be	grating, mixing,	kneading
		for the body.	active and	spreading,	and baking.
		for the body.	healthy,	kneading	Know different
			food and drink are	and baking.	food
			needed to provide	Begin to	and drink contain
			energy for the	understand	different
				that different food	substances –
			<mark>body.</mark>	and drink contain	
				different	nutrients, water
					and fibre — that
				substances –	
				nutrients, water	are needed for
				and fibre	health.

			<mark>– that</mark>	
			are needed for	
			<mark>health.</mark>	

Subject content - NC 2014

<u>Key stage 1</u>

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication
- technology

<u>Make</u>

- 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 materials and components, including construction materials, textiles and ingredients, according to their characteristics

<u>Evaluate</u>

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

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.

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process 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].

When designing and making, pupils should be taught to:

<u>Design</u>

- 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
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and
- computer-aided design

<u>Make</u>

- 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

<u>Evaluate</u>

- investigate and analyse a range of existing products
- evaluate their 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 and technology have helped shape the world

Technical knowledge

- 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]
- understand and use electrical systems in their products [for example, series circuit incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

Key stage 1

use the basic principles of a healthy and varied diet to prepare dishes

understand where food comes from.

Key stage 2

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.