

Design Technology Progression Map

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Children design purpose appealing products for f users based on design c They generate, develop communicate their idea drawing, templates, mod appropriate, information communication technol Children can: use their knowledge of and their own experien generate their ideas; design products that he are aimed at an intend explain how their produ work through talking an annotated drawings; design models using sin software; plan and test ideas usin and mock-ups; understand and follow criteria; work in a range of relev example imaginary, stor and the wider environme	rhemselves and other riteria. , model and s through talking, ck-ups and, where and ogy. existing products ce to help ave a purpose and led user; ucts will look and ad simple nple computing ng templates simple design vant contexts, for y-based, home, school	Children use research criteria to inform the functional, appealing p purpose, aimed at pa- groups. They generate, develop, communicate their idea: annotated sketches, cro exploded diagrams, prot pieces and computer- a Children can: identify the design featu products that will appea- customers; use their knowledge of existing products to help design innovative and a products that have a cl are aimed at a specific explain how particular p work; use annotated sketches drawings to develop ar ideas; when designing, explore ideas before coming up design; when planning, start to of materials and compo- function and aesthetics test ideas out through u use computer-aided de communicate their develop and follow sim work in a broader range example entertainment, leisure, food industry and	design of innovative, roducts that are fit for articular individuals or model and s through discussion, ss-sectional and otypes, pattern ded design. ures of their al to intended a broad range of b generate their ideas; appealing ear purpose and user; barts of their products and cross-sectional d communicate their e different initial b with a final explain their choice onents including ; sing prototypes; sign to develop and ideas ble design criteria; e of relevant contexts, for the home, school,	Children use research and dev the design of innovative, fur that are fit for purpose, aime groups. They generate, develop, mod ideas through discussion, and sectional and exploded diagra- pieces and computer- aided of Children can: use research to inform and de criteria to inform the design of appealing products that are a target market; use their knowledge of a broad to help generate their ideas; design products that have a the design features of their pr intended user; explain how particular parts of use annotated sketches, cro- exploded diagrams (possibly design) to develop and com- generate a range of design is communicate final designs; work in a broad range of rele conservation, the home, school industry and the wider environ	actional, appealing products ad at particular individuals or el and communicate their bated sketches, cross- ams, prototypes, pattern design. evelop detailed design of innovative, functional and fit for purpose and aimed at ad range of existing products clear purpose and indicate roducts that will appeal to the of their products work; oss-sectional drawings and including computer-aided municate their ideas; deas and clearly costings of resources when evant contexts, for example ol, leisure, culture, enterprise,
	Begin to draw on their own	Start to generate ideas by drawing on	With growing confidence,	Start to generate ideas, considering	Start to generate, develop, model and communicate	Generate, develop, model and communicate their

the development of existing products: explain what they are for, how they work, what materials have been used.for what to design make.Understand how to identify a target group for what they intend to design and make based on a design criteria.Understand identify a design Develop through t drawings.Begin to develop their ideas through talk and simple drawings.Develop puils beg explain w	item considering its purpose and the user. develop gn ideas When planning, discussion, explain their choice ion, of materials and and components g. including function and aesthetics.	triance to helptheir own and othererate ideas and archpeople's experiences.ducted on ria.Begin to develop their design ideas through discussion, observation, drawing and modelling.to understandIdentify a purpose	the purposes for which they are designing. When planning, explain their choice of materials and components including function and aesthetics considering the views of others to improve	their ideas through discussion, annotated sketches and diagrams. With growing confidence select appropriate materials, tools and techniques. Start to understand how much products cost to make, how sustainable and	ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, and pattern. Confidently use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
Children select from and use a rang	design e based on criteria. their ideas alk and and label gin to /hy they certain	lify a target p for what they d to design make based on sign criteria.and make based on a design criteria.make based on sign criteria.Develop their ideas through talk and drawings and label parts.n to develop ideas through and simple rings.Develop their ideas through talk and drawings and label parts.Pupils begin to explain why they chose a certain material.Pupils begin to explain why they chose a certain material.	features. Develop a clear plan on the process and how to use materials, equipment and suggesting alternative methods if the first attempt fails.	develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Draw up a specification for their design-link with Mathematics and Science. Produce a detailed step-by step plan. Suggest some alternative plans and say what the good points and drawbacks are about each. With growing confidence, apply a range of finishing techniques, including those from art and design Explain how their product will appeal to the audience	 their intended purpose. Use market research to inform plans. Suggest ideas about how their product could be sold and work within a given budget. Confidently draw up a specification for their design-link with Mathematics and Science. Suggest alternative methods of making if the first attempts fail. Plan the order of their work, choosing appropriate materials, Accurately apply a range of finishing techniques, including those from art and design. Identify the strengths and areas for development in their ideas and products.

and equipment to perform practical tasks If or example, cutting, shaping, joining and finishing].

They select from and use a wide range of materials and components, including construction materials, textiles and inaredients, according to their characteristics.

Children can:

Make

Planning

with support, follow a simple plan or recipe; begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;

select from a range of materials, textiles and components according to their characteristics:

Practical skills and techniques

learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;

use a range of materials and components. including textiles and food ingredients;

with help, measure and mark out;

cut, shape and score materials with some accuracy;

assemble, join and combine materials, components or ingredients;

demonstrate how to cut, shape and join fabric to make a simple product:

manipulate fabrics in simple ways to create the desired effect:

use a basic running stich;

cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;

begin to use simple finishing techniques to improve the appearance of their product, tools and equipment to perform practical tasks [for example, cutting, shaping, joining] and finishing] accurately.

They select from and use a wider range of materials and components, including construction materials, textiles and inaredients, according to their functional properties and aesthetic qualities.

Children can:

Planning

with growing confidence, carefully select from a range of tools and equipment, explaining their choices;

select from a range of materials and components according to their functional properties and aesthetic qualities;

place the main stages of making in a systematic order;

Practical skills and techniques

learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;

use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;

with growing independence, measure and mark out to the nearest cm and millimetre:

cut, shape and score materials with some dearee of accuracy:

assemble, join and combine material and components with some degree of accuracy;

demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;

join textiles with an appropriate sewing technique;

begin to select and use different and appropriate finishing techniques to improve equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.

They 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.

Children can:

Plannina

independently plan by suggesting what to do next;

with growing confidence, select from a wide range of tools and equipment, explaining their choices;

select from a range of materials and components according to their functional properties and aesthetic qualities;

create step-by-step plans as a guide to making;

Practical skills and techniques

learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures:

independently take exact measurements and mark out, to within 1 millimetre:

use a full range of materials and components, including construction materials and kits, textiles, and mechanical components:

cut a range of materials with precision and accuracy;

shape and score materials with precision and accuracy;

assemble, join and combine materials and components with accuracy:

demonstrate how to measure, make a seam allowance. tape, pin, cut, shape and join fabric with precision to make a more complex product;

join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;

refine the finish using techniques to improve the appearance of their product, such as sanding or a more

such as adding simple decorations.		the appearance of a p hemming, tie-dye, fabri graphics.	roduct such as		
Begin to make their design using appropriate techniques.	Begin to select tools and materials; use correct vocabulary to name and	Select a wider range of tools and techniques for making their product.	Select and use a wider range of tools and techniques for making their product safely.	Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately.	Confidently select appropriate tools, materials, components and techniques and use them with accuracy.
Begin to build structures,	describe them.		Know how to	Select from and use a	Aim to make and to

Evaluate	 products against design criteria. Children can: explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; explain positives and things to improve for existing products; explore what materials products are made from; talk about their design ideas and what they are making; as they work, start to identify strengths and possible changes they might make to refine their existing design; evaluate their products and ideas against their simple design criteria; start to understand that the iterative process sometimes involves repeating different stages of the process. 		 consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world. Children can: explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; explore what materials/ingredients products are made from and suggest reasons for this; consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product; evaluate their product against their original design criteria; evaluate the key events, including technological developments, and designs of individuals in design and technology that have 		 improve their work. They understand how key events and individuals in design and technology have helped shape the world. Children can: complete detailed competitor analysis of other products on the market; critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make; evaluate their ideas and products against the original design criteria, making changes as needed. 	
	Start to evaluate their product by discussing how well it works in relation to the purpose. When looking at existing products, explain what they like and dislike about the products and why. Begin to evaluate their products as they are developed, identifying	Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about products and why. Evaluate their products as they are developed, identifying what went well and possible changes they	helped shape the world. Start to evaluate their product against their original design criteria. Begin to evaluate familiar products and consider the views of others to improve them. Suggest improvements to their final design.	Evaluate their product throughout the process making some simple changes where necessary. Evaluate their products, thinking of both appearance and function. Evaluate their products carrying out simple tests. Identify improvements to their final design explaining why these would improve the final design.	Start to evaluate a product against the original design specification and by carrying out appropriate tests. Evaluate their work both during and at the end of the assignment and seek evaluation from others. Evaluate appearance and function against original criteria, suggesting improvements and refinements.	Evaluate their work continuously both during and at the end of the assignment and frequently seek evaluation from others. Evaluate their products, identifying strengths and areas for development, and carry out appropriate tests. Record their evaluations using drawings with labels – clearly identifying improvements and refinements.

	strengths and possible	might make next time.				
	changes they might	might make hext lime.				
	Ŭ , Ŭ					
	 make next time. Children build structures, exploring how they can be made stronger, stiffer and more stable. They explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. Dhildren can: build simple structures, exploring how they can be made stronger, stiffer and more stable; talk about and start to understand the simple working characteristics of materials and components; explore and create products using mechanisms, such as levers, sliders and wheels. 		Children apply their under strengthen, stiffen and re structures. They understand and use their products [for examp cams, levers and linkage They understand and use their products [for examp incorporating switches, b motors]. They apply their understand program, monitor and co Children can: understand that materia functional properties and apply their understandir stiffen and reinforce mo order to create more of products; understand and demon mechanical and electria an input and output pro- make and represent sim such as a series and par components to create f explain how mechanical use mechanical systems	inforce more complex mechanical systems in ble, gears, pulleys, s]. electrical systems in ble, series circuits ulbs, buzzers and nding of computing to ontrol their products. als have both d aesthetic qualities; ag of how to strengthen, re complex structures in useful characteristics of strate how cal systems have cess; ple electrical circuits, allel, and unctional products; al systems such as the movement;	Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures. They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. They apply their understanding of computing to program, monitor and control their products. Children can: apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; understand and demonstrate that mechanical and electrical systems have an input, process and output; explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; apply their understanding of computing to program, monitor and control a product.	
	Children use the basic pr and varied diet to prepa		Children understand and of a healthy and varied of		Children understand and ap and varied diet.	ply the principles of a healthy
	They understand where f		They prepare and cook o		They prepare and cook a vo	ariety of predominantly
	Children can:		predominantly savoury d	ishes using a	savoury dishes using a range	of cooking techniques.
Cooking and	explain where in the world different foods originate from;		range of cooking techniques. They understand seasonality, and know where and how a variety of ingredients are grown,		They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	
Nutrition			reared, caught and proc		Children can:	
	understand that all fooc animals;	a comes from plants or	Children can: start to know when, whe	ere and how food is	know, explain and give exa (such as pears, wheat and	

understand that food has to be farme grown elsewhere (e.g. home) or caug			poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;		
name and sort foods into the five groups in the Eatwell Guide;	variety of predominant safely and hygienically	understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;		understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;	
understand that everyone should eat five portions of fruit and vegetables ev day and start to explain why; use what they know about the Eatwel design and prepare dishes.	with support, use a hec ingredients showing aw	with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;		understand that food is processed into ingredients that can be eaten or used in cooking; demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically	
	use a range of techniq mashing, whisking, crus cutting, kneading and	shing, grating,	including, where appropric source;	ite, the use of a heat	
		-	demonstrate how to use a techniques, such as griddlir	range of cooking ng, grilling, frying and boiling;	
	variety and balance of drink, as represented in and be able to apply t	explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;		explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;	
	nutritious food and drin	understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;		adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;	
	utensils;			alter methods, cooking times and/or temperatures; measure accurately and calculate ratios of ingredients to scale up or down from a recipe;	
		measure and weigh ingredients to the nearest gram and millilitre;		independently follow a recipe.	
		start to independently follow a recipe; start to understand seasonality.			
Begin to understand that all food comes from plants or animals. Develop	om food is grown,	Know that food is grown, reared and caught in the UK, Europe and the wider world.	Begin to explain how ingredients are grown, reared and caught in the UK, Europe and the wider world.	Explain how ingredients are grown, reared and caught. Understand that seasons may affect the food	
Start to understand understandin how to name and where differe	of world. In foods	Understand why a	Begin to understand	available.	
sort foods into the five groups. come from a different cou	ive to diet is made up from a variety and	healthy diet is important.	that seasons may affect the food available.	Know different food and drink contain different substances that are needed	
Know that everyoneshould eat at leastUnderstand hfive portions of fruitname and so		Know that to be active and healthy, food and drink are	Evaluate a meal and consider if they	for health. Plan a healthy and	

and vegetables	into the five groups in	Begin to know that	needed to provide	contribute towards a	affordable diet.
every day.		to be active and	energy.	balanced diet	
	Recognise the need	healthy, food and			Explain how food is
Know how to	for a variety of food	drink are needed to	Understand how to	Begin to understand	processed into ingredients
prepare simple	in a diet.	provide energy.	prepare and cook a	that different food and	that can be eaten or used
dishes safely and		p	variety of	drink contain different	in cooking.
hygienically, without	Demonstrate how to	Understand how to	predominantly	substances that are	in cooking.
using a heat source.	prepare simple	prepare and cook	savoury dishes	needed for health.	Know how to prepare and
Using a near source.	dishes safely and	a variety of dishes	including having	needed for neultr.	cook a variety of
Begin to use	hygienically, without	including having	experience of using	Explain what times of	predominantly savoury
techniques such as	using a heat source.	experience of using	a heat source.	year particular foods	dishes safely and
the second se	Using a near source.	a heat source.	a near source.	are eaten in.	
cutting, peeling and	Demonstrate how to	a near source.	Understand what to	die edien in.	hygienically including the use of a heat source.
grating.					use of a near source.
	use techniques such	Begin to understand	do to be safe and	Understand how food is	
Measure and weigh	as cutting, peeling	how to use a range	hygienic.	processed into	Confidently use a range of
food items using non-	and grating	of techniques such		ingredients that can be	techniques such as peeling,
standard measures		as peeling,	Understand how to	eaten or used in	chopping, slicing, grating,
(e.g. spoons and		chopping, slicing,	use a range of	cooking.	mixing, spreading, kneading
cups).		grating, mixing,	techniques such as		and baking.
		spreading,	peeling, chopping,	Know how to prepare	
		kneading and	slicing, grating,	and cook a variety of	Use appropriate tools and
		baking.	mixing, spreading,	predominantly savoury	equipment, weighing and
			kneading and	dishes including the use	measuring with scales.
			baking.	of a heat source.	
			Measure and weigh	Demonstrate	
			ingredients	increasing confidence	
			accurately.	in how to use a range	
				of techniques such as	
				peeling, chopping,	
				slicing, grating, mixing,	
				spreading, kneading	
				and baking.	
				and baking.	
				Begin to use	
				appropriate tools and	
				equipment, weighing	
				and measuring with	
				scales.	