Design and Technology Progression of Skills

	EYFS	KS1	KS2

Design and Technology Progression of Skills

National Curriculum / Early Learning Goals	**Expressive Arts and Design** **Creating with Materials** • 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 • make use of props and materials when role playing characters in narratives and stories **Physical Development** **Fine Motor Skills** • hold a pencil effectively in preparation for fluent writing – using the tripod grip for almost all cases • use a range of small tools, including scissors, paintbrushes and	**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 **Make** • 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 **Evaluate** • 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.	**Design** • 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 **Make** • 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 **Evaluate** • 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 circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products. **Cooking and nutrition** • understand and apply the principles of a healthy and varied diet

	cutlery • begin to show accuracy and care when drawing	**Cooking and nutrition** • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from.	• 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.

Design	National Curriculum	EYFS	KS1	KS2	
		Expressive Arts and Design: **Pupils should be taught to:** • share their creations, explaining the process they have used	**Design** Pupils should be taught to: • 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.	**Design** Pupils should be taught to: • 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.	
	S ,	EYFS	KS1	**LKS2**	UKS2

		• Participate in small group, class and one-to-one discussions to share their ideas and ask relevant questions • Explore a range of products with opportunities to express their ideas, feelings and experiences. • Attempt to use introduced vocabulary. • Set and work towards simple goals.	• Children engage in the process of designing through a range of creative and practical activities. • Work within a range of contexts that are meaningful. • Design purposeful, functional and products for use by an intender user. • Generate, develop, model and share their ideas through talking and drawings. Explain how their product will look and work through talking and simple annotated designs. • Use knowledge of existing ideas to help generate their ideas. • Follow simple design criteria.	• Children participate in the process of designing through a range of creative and practical activities. • Work within an expanding range of contexts that are meaningful. • Research existing products and apply their findings to design functional and appealing products for use by a specific user. • Generate, develop, model and share their ideas through discussion, annotated sketches, cross-sectional/exploded diagrams, prototypes, pattern pieces and computer-aided design where appropriate. • Use existing knowledge and product research to explain how specific parts of their product work. • Explain their design choices, including materials, aesthetics and functionality. • Test ideas through the use of prototypes.	• Children participate in and lead (where appropriate) the process of designing through a range of creative and practical activities. • Work within and expanding range of contexts that are meaningful. • Use research and knowledge of existing materials to develop detailed design criteria for a product fit for purpose aimed at a target market. • Use these design criteria to design functional and appealing product for use by their intended user. • Generate, develop, model and share their ideas through discussion, annotated sketches, cross-sectional/exploded diagrams, prototypes, pattern pieces and computer-aided design where appropriate. • Explain their design choices, including materials, aesthetics, functionality and cost to produce.

		EYFS	KS1	KS2

Design and Technology Progression of Skills

		• safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • hold a pencil effectively in preparation for fluent writing – using the tripod grip for almost all cases • use a range of small tools, including scissors, paintbrushes and cutlery • begin to show accuracy and care when drawing • make use of props and materials when role playing characters in narratives and stories	Pupils should be taught to: • 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.	Pupils should be taught to: • 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.
	Skills Progression	EYFS	KS1	LKS2	UKS2
		• Develop fine motor skills to work competently and accurately when using a range of simple hand tools (scissors, glue, cutlery). • Create collaboratively, sharing ideas, resources and skills. • Safely use and explore a range of materials and techniques,	• Children engage in the process of making through a range of creative and practical activities. • Select from and use a range of tools and equipment for practical tasks (cutting, shaping, and joining). • Select from and use a range of materials considering their characteristics (e.g. construction materials, textiles and ingredients). • With support, follow a simple plan or recipe. • Practise using hand tools safely and appropriately (e.g. scissors, safe knives, graters) Cut, shape, score,	• Children participate in the process of making through a range of creative and practical activities. • Select from and use an expanding range of tools and equipment for practical tasks (cutting, shaping, joining, and components). Explain their choices considering aesthetic qualities. • Use a wider range of materials and components (e.g. construction materials and kits, textiles, electrical components). • With developing independence, follow a simple plan or recipe. • With developing independence, choose and use a range of hand tools safely and explain their choices considering effectiveness of	• Children participate in and lead (where appropriate) the process of designing through a range of creative and practical activities. • Select from and use an expanding range of tools and equipment for practical tasks. Explain their choices considering cost of materials, aesthetic qualities and functionality. • Select from and use a wider range of materials and components (e.g. construction materials, ingredients, textiles) considering their functionality and aesthetic qualities. • Independently follow a plan and make suggestions of what to do next.

		experimenting with colour, design, texture and functions.	assemble, join materials or ingredients with support. • Begin to use simple finishing techniques to improve the appearance of products.	tool. Explain some aspects of safety considerations. • Begin to demonstrate how to measure, mark, cut and join different materials with some degree of accuracy. • Begin to select and use different and appropriate finishing techniques to improve the appearance of products.	• With developing confidence, choose from and use a range of tools safely and appropriately, considering safety equipment/measures where necessary. • Confidently demonstrate how to measure, mark, cut, shape, join, assemble and combine accurately. • Refine use of finishing techniques to improve the appearance of the product.

Evaluate					
	National Curriculum	EYFS	KS1	KS2	
		Evaluate • share their creations, explaining the process they have used	**Evaluate** Pupils should be taught to: • explore and evaluate a range of existing products; • evaluate their ideas and products against design criteria.	**Evaluate** Pupils should be taught to: • 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.	
	Skills	EYFS	KS1	LKS2	UKS2

		• Share their creations, explaining the processes they have used. • Begin to explain materials they have used. • Say what they like and do not like, attempt to explain why.	• Explore and evaluate existing products through discussions, comparing products and sharing likes/dislikes. • Explore and discuss the materials products are made from. • As they design/make, discuss their design strengths and any potential changes they may need to make. • Evaluate their final product against the simple design criteria. • Begin to understand that the design and make processes sometimes involve changing and/or repeating part of the process.	• Explore, analyse and evaluate existing products through discussions, comparing products and sharing likes, dislikes and ideas around functionality of the product. • Begin to understand how key events and individuals have helped to shape the world. • As they design/make, consider their design criteria and consider the view of others (e.g. peer review). • Evaluate their final product against the original design criteria.	• Explore, analyse and evaluate a range of existing product through discussions, comparing products and sharing likes, dislikes and ideas around functionality and cost of the product. • Analyse existing competitors to their own products (where appropriate) and consider improvements to their own design criteria. • Develop understanding of how key events and individuals have helped to shape the world. • As they design/make, consider their own design criteria, view of others and intended consumer. Make changes where necessary. • Evaluate their final product against their own original design criteria, considering purpose, functionality, cost of materials and competitor products where appropriate.

		EYFS	KS1	KS2

		Technical Knowledge • 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, paintbrushes and cutlery • begin to show accuracy and care when drawing	**Technical Knowledge** Pupils should be taught to: • 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.	**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 circuits incorporating switches, bulbs, buzzers and motors]; • apply their understanding of computing to program, monitor and control their products.	
	Skills Progression	EYFS	KS1	LKS2	UKS2
		• Begin to understand a range of technical vocabulary and explore their meaning (texture, colour, form, function, design). • Confidently name a range of small tools	• Build simple structures and explore how they can be made stronger and more stable using a range of materials. • Discuss and begin to understand characteristics of materials and components within a range of contexts using	• Develop independence when building increasingly complex structures and explore how they can be made stronger and more stable using a range of materials. • Understand, discuss and begin to demonstrate the characteristics of	• Independently and confidently, build increasingly complex structures considering the strength and stability in the design process. • Understand, discuss and begin to demonstrate the characteristics of materials and components in relation to useful products. • Understand how mechanical

		• Develop accuracy when drawing designs.	an increasing range of vocabulary. • Explore and create products using mechanisms (e.g. levels, sliders, wheels).	materials and components in relation to useful products using an increasing range of vocabulary. • Understand, discuss and demonstrate the use of simple electrical circuits to create functional products.	systems (e.g. cams) create movements in products. • Apply their understanding of computing to program and monitor a product. • Apply their knowledge of technical vocabulary to a range of contexts and products.

Cooking & Nutrition					
	National Curriculum	EYFS	KS1	KS2	
		Cooking and Nutrition • 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 • use a range of small tools, including scissors, paintbrushes and cutlery	**Cooking and Nutrition** Pupils should be taught to: • use the basic principles of a healthy and varied diet to prepare dishes; • understand where food comes from.	**Cooking and Nutrition** Pupils should be taught to: • 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.	
	Skills	EYFS	KS1	LKS2	UKS2

		• With support, manage own basic hygiene and begin to consider the importance of healthy food. • Begin to develop a food vocabulary using their sense to taste, smell, touch, feel and see. • Explore familiar food products and their uses. • Begin to measure and weigh food items (spoons, cups)	• Explain where different foods originate from around the world. • Understand that all food comes from plants or animals and that this must be farmed or caught. • Understand that everyone should east at least five portions of fruit and vegetables every day. • Reference the Eatwell Guide when choosing ingredients for dishes.	• Develop knowledge of when, where and how food is grown both in the UK and the world. • Explore preparing and cooking a variety of predominantly savoury dishes considering safety and hygiene. • With support, use a heat course to cook ingredients showing awareness of safety aspects and control of heat. • With support, prepare ingredients using appropriate cooking utensils and considering safety and hygiene. • With support, measure, weigh (to the nearest gram and millilitre) and mix ingredients considering safety and hygiene. • Begin to follow a recipe with increasing independence and accuracy. • Consider current healthy diet advice and reference the Eatwell Guide when researching and choosing ingredients for dishes. Understand that a healthy diet is made up of lots of different foods and drinks. Understand that to be healthy we must be active and provide our bodies with energy.	• Know, explain and give examples of good that is grown (fruit, potatoes), food that is reared (cattle, poultry) and food that is caught (fish) in the UK and the world. • Understand seasonality and how this can affect food availability. • Independently prepare ingredients using appropriate cooking utensils. Explain choices of utensil and safety considerations. • Independently measure, weigh and mix ingredients. Explain choices of ingredient/method and safety considerations. • Independently follow a recipe with accuracy. • Begin to adapt and refine recipes considering the consumer, appearance, taste, texture and aroma of the final product. • Explain that different foods contain different nutrition substances (e.g. protein) and consider the Eatwell Guide when planning dishes.