

Design and Technology: EYFS & Key Stage 1

	Nursery	Reception	Year 1	Year 2
Designing and Evaluating	D1 Explore different materials freely, in order to develop their ideas about how to use them and what to make. EAD	D1 Return to and build on their previous learning, refining ideas and developing their ability to represent them. EAD	D1 I can explore objects and designs and begin to describe what I like about them.	D1 I can explore objects and designs to identify likes and dislikes of the designs.
	D2 Develop their own ideas and then decide which materials to use to express them. EAD	D2 Explore, use and refine a variety of artistic effects to express their ideas and feelings. EAD	D2 I can say what materials and tools I will use from a limited selection.	D2 I can say what materials and tools I will use from a limited selection and justify my choices.
			D3 I can suggest improvements to existing designs.	D3 I can suggest improvements to existing designs to my own and others work.
			D4 I can design products that have a clear purpose and an intended user.	D4 I can explore how products have been created.
			D5 I can design using drawings or sketches.	D5 I can model simple designs using software.
				D6 I can refine the design as work progresses.

National Curriculum:

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.
- Evaluate
- Explore and evaluate a range of existing products.
 - Evaluate their ideas and products against design criteria.

	Nursery	Reception	Year 1	Year 2
Making	M1 Explore different materials freely, in order to develop their ideas about how to use them and what to make. EAD Develop their own ideas and then decide which materials to use to express them. EAD	M1 Return to and build on their previous learning, refining ideas and developing their ability to represent them. EAD	M1 Construction I can use materials to practise joining, cutting, and shaping to make and strengthen products.	M1 Materials I can cut materials safely using tools provided.
	M2 Join different materials and explore different textures. EAD	M2 Explore, use and refine a variety of artistic effects to express their ideas and feelings. EAD	M2 Construction I can construct using joining, cutting, shaping and finishing techniques to make and strengthen products.	M2 Materials I can demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).
	M3 Use one-handed tools and equipment, for example, making snips in paper with scissors. PD	M3 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	M3 Mechanics. I can create products using sliders and levers.	M3 Materials I can measure and mark out to nearest cm.
	M4 Create closed shapes with continuous lines, and begin to use these shapes to represent objects. EAD			M4 Materials I can demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).
				M5 Textiles I can shape textiles using templates.
				M6 Textiles I can join textiles using running stitch.
				M7 Textiles I can colour and decorate textiles using number of techniques.
				M8 Mechanics I can create products using wheels and axles

National Curriculum:

Pupils should be taught to:

Make

- Select from and use a range of tools and equipment to perform practical tasks (for example: cutting, shaping, joining and stitching).

- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

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 axels) in their products.

	Nursery	Reception	Year 1	Year 2
Cookery and Nutrition	C1 Start to eat independently and learning how to use a knife and fork. PD	C1 Know and talk about the different factors that support their overall health and wellbeing including healthy eating. PD	C1 I can say where food comes from (animal or a plant).	C1 I can say where food comes from within my locality (farms and fields).
	C2 Make healthy choices about food, drink, activity and tooth brushing. PD		C2 I know that food is caught, reared or grown.	C2 I know that different foods are best produced in different seasons within my locality (Food in the UK – linked to seasons)
			C3 I know that there are different types of food and that we need more than one of these to make a meal.	C3 I can name the basic food groups and sort ingredients into them (Carbohydrates, fruit and vegetables, protein, dairy).
			C4 I can slice, chop and peel ingredients safely and hygienically.	C4 I can select ingredients to create a varied meal.
			C5 I can measure or weigh using measuring cups.	C5 I can slice, chop, peel and grate ingredients safely and hygienically.

National Curriculum:
Pupils should be taught to:
 Cookery and Nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

Design and Technology: Key Stage 2

	Year 3	Year 4
Designing and Evaluating	D1 I can design with purpose by identifying opportunities to design.	D1 I can design with purpose by identifying opportunities to design and justify my choices.
	D2 I can make products by working efficiently (such as by carefully selecting from a wide range of materials and tools).	D2 I can make products by working efficiently and with precision (such as by carefully selecting from a wide range of materials and tools.)
	D3 I can refine work as work progresses, evaluating the end product design.	D3 I can refine work and techniques as work progresses, continually evaluating the product design.
	D4 I can identify some of the great designers in all of the areas of study to generate ideas for designs.	D4 I can use software to design and represent product designs including labels.
	D5 I can improve upon existing designs, giving reasons for choices.	D5 I can identify some of the great designers in all of the areas of study (including pioneers in sustainability) to generate ideas for designs.
	D6 I can use software to design and represent product designs.	D6 I can disassemble products to understand how they work.

National Curriculum:
Pupils should be taught to:

Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular individual or group.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.

Evaluate

- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of other to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.

	Year 3	Year 4
Making	M1 Construction I can choose suitable techniques to construct products or to repair items.	M1 Materials I can measure and mark out to the nearest mm
	M2 Construction I can strengthen materials using suitable techniques.	M2 Materials I can cut materials accurately and safely by selecting appropriate tools.
	M3 Mechanics I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	M3 Materials I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).
		M4 Materials I can select appropriate joining techniques.
		M5 Textiles I can select the most appropriate techniques to decorate textiles.
		M6 Textiles I can understand the need for a seam allowance.

	M7 Textiles I can join textiles with appropriate stitching.
	M8 Electricals and electronics I can recognise if a battery operated device works or not.
	M9 Electricals and electronics I can diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).
	M10 Electricals and electronics I can create series circuits.
	M11 Electricals and electronics I can create parallel circuits.
	M12 Computing I can monitor models using software designed for this purpose.
	M13 Computing I can control models using software designed for this purpose.

National Curriculum:

Pupils should be taught to:

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.

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.

	Year 3	Year 4
Cookery and Nutrition	C1 I can say where food comes from, from around Europe.	
	C2 I know that different foods are best produced in different seasons around Europe.	
	C3 I can name all of the food groups and sort ingredients into them (Carbohydrates, fruit and vegetables, protein, dairy, oils and spreads, foods high in fats and sugars).	
	C4 I can follow a recipe, including selecting appropriate ingredients.	
	C5 I can prepare ingredients hygienically selecting and using appropriate utensils.	
	C6 I can measure ingredients to the nearest gram.	

	C7 I can assemble and cook ingredients (controlling the temperature of the oven or hob if cooking).	
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National Curriculum:

Pupils should be taught to:

Cookery and Nutrition

- 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.