



Design and Technology N/C and Progression Map

Key Stage One	
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	
Cooking and Nutrition	
use the basic principles of a healthy and varied diet to prepare dishes	
understand where food comes from.	

Key Stage Two	
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	
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.	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas (Design)	1.Begin to draw on their own experience to help generate ideas and research conducted on criteria.	1.Start to generate ideas by drawing on their own and other people's experiences.	1.With growing confidence generate ideas for an item, considering its purpose and the user/s.	1.Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science.	1.Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.	1.Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.
	2. Begin to understand the development of existing products: What they are for, how they work, materials used.	2.Begin to develop their design ideas through discussion, observation, drawing and modelling.	2.Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product.			
	3. Start to suggest ideas and explain what they are going to do.	3.Identify a purpose for what they intend to design and make.				
	4. Understand how to identify a target group for what they intend to design and make based on a design criteria.	4.Understand how to identify a target group for what they intend to design and make based on a design criteria.		2.When planning consider the views of others, including intended users, to improve their work.		
	5. Begin to develop their ideas through talk and drawings.	5.Develop their ideas through talk and drawings and label parts.				
	6. Make templates and mock ups of their ideas in card and paper or using ICT.	6.Make templates and mock ups of their ideas in card and paper or using ICT.			2.Use results of investigations, information sources, including ICT when developing design ideas.	
			3.Understand how well products have been designed, made, what materials have been used and the construction technique.	3.Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.	3.With growing confidence select appropriate materials, tools and techniques.	2.Plan the order of their work, choosing appropriate materials, tools and techniques. 3.Suggest alternative methods of making if the first attempts fail.
			4.Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.	4.Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.		
			5.Start to understand whether products can be recycled or reused.			
			6.Know to make drawings with labels when designing.	5.Confidently make labelled drawings from different views showing specific features.	4.Draw up a specification for their design- link with Mathematics and Science.	4. Draw up a specification for their design- link with Mathematics and Science.

			7.When planning explain their choice of materials and components including function and aesthetics.	6.When planning explain their choice of materials and components according to function and aesthetic.		
					5. Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.	5. Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
					6. With growing confidence apply a range of finishing techniques, including those from art and design.	6. Accurately apply a range of finishing techniques, including those from art and design.
				7. Identify the strengths and areas for development in their ideas and products.		7. Identify the strengths and areas for development in their ideas and products.
					7. Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.	8. Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.
Working with tools, equipment, materials and components to make quality products	7. Begin to make their design using appropriate techniques	7. Begin to select tools and materials; use correct vocabulary to name and describe them.	8. Start to work safely and accurately with a range of simple tools. 9. Explain their choice of tools and equipment in relation to the skills and techniques they will be using.	8. Select a wider range of tools and techniques for making their product safely.	8. Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately	9. Confidently select appropriate tools, materials, components and techniques and use them.
	8. Begin to build structures, exploring how they can be made stronger, stiffer and more stable.	8. Build structures, exploring how they can be made stronger, stiffer and more stable.				
	9. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.		10. Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.		9. 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	10. Assemble components to make working models.
	10. With help measure, mark out, cut and shape a range of materials.	9. With help measure, cut and score with some accuracy.	11. Measure, mark out, cut, score and assemble components with more accuracy.	9. Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.		
	11. Explore using tools e.g. scissors and a hole punch safely.	10. Learn to use hand tools safely and appropriately.				11. Use tools safely and accurately.
	12. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.	11. Start to assemble, join and combine materials in order to make a product.		10. Start to join and combine materials and components accurately in temporary and permanent ways.		12. Construct products using permanent joining techniques.
	13. Begin to use simple finishing techniques to improve the appearance of their product.	12. Start to choose and use appropriate finishing techniques based on own ideas.		11. Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.	10. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.	13. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

					11. Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product.	
	13. Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques.	12. Start to measure, tape or pin, cut and join fabric with some accuracy.	12. Now sew using a range of different stitches, to weave and knit. 13. Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.	12. Begin to measure and mark out more accurately.	14. With confidence pin, sew and stitch materials together to create a product.	
		13. Start to understand that mechanical and electrical systems have an input, process and output.	14. Understand how more complex electrical circuits and components can be used to create functional products.	13. Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. 14. Understand that mechanical and electrical systems have an input, process and output	15. Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. 16. Understand that mechanical and electrical systems have an input, process and output	
		14. Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.	15. Know how mechanical systems such as cams or pulleys or gears create movement.	15. Understand how mechanical systems such as cams or pulleys or gears create movement.	17. Understand how mechanical systems such as cams or pulleys or gears create movement.	
		15. Know how simple electrical circuits and components can be used to create functional products.				
			16. Continue to learn how to program a computer to monitor changes in the environment and control their products.			
			17. Understand how to reinforce and strengthen a 3D framework.		18. Know how to reinforce and strengthen a 3D framework.	
				16. Weigh and measure accurately (time, dry ingredients, liquids)		
					19. Demonstrate when make modifications as they go along.	
					20. Aim to make and to achieve a quality product.	
Evaluating processes and products	14. Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria).	14. Evaluate your work against their design criteria.	16. Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose	18. Evaluate their products carrying out appropriate tests.	17. Start to evaluate a product against the original design specification and by carrying out tests.	21. Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.
	15. When looking at existing products explain what they like and dislike about products and	15. Look at a range of existing products explain what they like and dislike about products and why.	17. Begin to disassemble and evaluate familiar products and consider the views of others to	19. Start to evaluate their work both during and at the end of the assignment.	18. Begin to evaluate it personally and seek evaluation from others	

	why.		improve them.			
	16. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make	16.Start to evaluate their products as they are developed, identifying strengths and possible changes they might make.		20. Be able to disassemble and evaluate familiar products and consider the views of others to improve them.	19. Evaluate their work both during and at the end of the assignment.	22. Evaluate their work both during and at the end of the assignment. 23. Evaluate against their original criteria and suggest ways that their product could be improved.
		17.With confidence talk about their ideas, saying what they like and dislike about them.				
			18.Evaluate the key designs of individuals in design and technology has helped shape the world.	21. Evaluate the key designs of individuals in design and technology has helped shape the world.	20. Evaluate the key designs of individuals in design and technology has helped shape the world.	24. Evaluate the key designs of individuals in design and technology has helped shape the world
						25. Record their evaluations using drawings with labels.
Cooking and Nutrition	Begin to understand that all food comes from plants or animals.	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.	Know that food has to be farmed, grown elsewhere (e.g. home) or caught.	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 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 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.	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.
	Start to understand how to name and sort foods into the five groups in 'The Eat well plate'	Understand how to name and sort foods into the five groups in 'The Eat well plate'	Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'	Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'		
	Begin to understand that everyone should eat at least five portions of fruit and vegetables every day.	Know that everyone should eat at least five portions of fruit and vegetables every day.	Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.	Know that to be active and healthy, food and drink are needed to provide energy for the body.	Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.	Know different food and drink contain different substances – nutrients, water and fibre – that are needed for health.
	Know how to prepare simple dishes safely and hygienically, without using a heat source.	Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source	Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.	Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.	Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.	Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
	Know how to use techniques such as cutting, peeling and grating.	Demonstrate how to use techniques such as cutting, peeling and grating.	Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Start to understand how to use a of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
					Begin to understand that seasons may affect the food available.	Understand that seasons may affect the food available.
					Understand how food is processed into ingredients that can be eaten or used in cooking.	Understand how food is processed into ingredients that can be eaten or used in cooking.