



National Curriculum Purpose of Study:

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

National Curriculum Subject content KS1

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].

Key stage 1 Pupils should be taught:

- Design products based on design criteria
- Generate and develop ideas and where appropriate, use information and communication technology
- Select from and use a range of tools and equipment to perform practical tasks
- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria
- 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.

National Curriculum Aims:

The national curriculum for design and technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas and products and the work of others.
- Understand and apply the principles of nutrition and learn how to cook.

National Curriculum Attainment targets:

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

National Curriculum Subject content KS2

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].

Key stage 2 pupils should be taught:

- 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 their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- Select from and use a wider range of tools and equipment
- 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





Cooking and nutrition in KS1 Key stage 1 Pupils should be taught:

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

- 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 in KS1

Key stage 1 Pupils should be taught:

- 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

	EYFS	KS1		KS2			
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
	Understand what	*Understand what a	*Understand what a	*Identify who made	*Identify who made	*Identify who made	*Identify who made
EXPLORING AND	some daily products are and	product is and who it	product is and who it	the product, when it was made and what	the product, when it was made and what	the product, when it was made and what	the product, when it
RESEARCHING	what they used	is for	is for	its purpose is	its purpose is	its purpose is	was made and what
Exploring context	for	*Understand how a		*Identify what the	*Identify what the	*Identify what the	its purpose is
and existing	Understand that	product works and	*Understand how a	product has been	product has been	product has been	
products	there are products all	how it is used	product works and	made from	made from	made from and how environmentally	*Identify what the
	around us that	*Identify where you	how it is used	*Evaluate the product	*Evaluate the product	friendly the materials	product has been
	have been designed and	might find this		on design and use	on design and use	are	made from and how
	made	product				*Evaluate the product	environmentally
						on design,	
						appearance and use	





			*Identify where you might find this product *Identify the materials used to make the product *Express an opinion about the product	*Research facts about famous inventors/ chefs / designers etc linked to products	*Research facts about famous inventors/ chefs / designers etc linked to produc	*Identify the cost to make the product *Research facts about famous inventors/ chefs / designers etc linked to product	*Identify the cost to make the product and whether it has any other purposes eg. Leading innovation of the time, trend setting *Research facts about famous inventors/ chefs / designers etc linked to product
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
DESIGN CRITERIA Understanding their intended users and their own product	Draw and describe their ideas	*Explain what product they will be designing and making *Explain who their product will be used by	*Use own experiences and existing products to develop ideas *Explain what product they will be	*Understand and gather information about what a particular group or people want from a product *Describe the purpose of their product and how it will work	*Understand and gather information about what a particular group or people want from a product *Describe the purpose of their product	*Understand and gather information about what a particular group or people want from a product, using questionnaires, surveys etc *Describe the purpose of their product	*Understand and gather information about what a particular group or people want from a product, using



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	*Describe what their	designing and	*Identify design	*Identify design	*Identify design	questionnaires,
	product will be used for	making	features that will appeal tointended	features that will appeal to intended	features that will appeal to intended	surveys etc
			users	users	users Explain how	
		*Explain who their	*Explain how parts of their product works	*Explain how parts of their product works	parts of their product will work	*Describe the
		product will be used		·		purpose of their
		by	*Generate realistic ideas that meet needs	*Develop their own design criteria and	*Develop their own	' '
		*Describe what their	of user	use for planning	design criteria and use for planning ideas	product
		product will be used		ideas		*Identify design
		for and how it will		*Generate realistic	*Generate innovative ideas that meet needs	features that will
		work		ideas that meet needs	of user and take into	appeal to intended
				of user and take into account availability	account availability of resources	users
		*Explain why their		of resource	resources	*Explain how parts
		product is suitable				of their product will
		for the intended use				work
						Work
						10
						*Create a design
						description for their
						product
						*Highlight the
						impact of time,
						resources and cost
						within their design
						ideas
						lueus





				sign regression of s			*Generate
							innovative ideas that
							meet needs of user
	D	V 4	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	V =	-
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Planning Communicating ideas and creating prototypes for product	Talk about how they are going to make their ideas Talk about which materials they wish to use and why	*Discuss what their steps for making could be *Represent ideas through talking and drawing	Discuss what their steps for making could be Represent ideas through talking, drawing and computing — (where appropriate) Choose materials to use based on suitability of their properties Create templates/pattern pieces and explore materials whilst developing ideas	Share and discuss ideas with others Order the main stages of making Choose materials to use based on suitability of their properties Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate) Create pattern pieces and prototypes	Share and discuss ideas with others Order the main stages of making Choose materials to use based on suitability of their properties Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate) Create pattern pieces and prototypes	Share and discuss ideas with others Record a step by step plan for making Produce lists for the tools, equipment and materials they will be using Choose materials to use based on suitability of their properties and aesthetic qualities Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate) Create pattern pieces and prototypes	Share and discuss ideas with others Record a step by step plan for making Produce lists for the tools, equipment and materials they will be using Choose materials to use based on suitability of their properties and aesthetic qualities Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate) Create pattern pieces and prototypes





safe		tion Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Join and mat expl	ollow simple Ifety and food Iggiene produces In, assemble Ind combine Ind combine Interials, Isploring Ifferent ways	imple nd food produces aking Follow safety and food hygiene s, procedures	Choose suitable tools for making whilst explaining why they should be used Follow safety and food hygiene procedures Measure, mark, cut and shape materials and components Join, assemble and combine materials and components Use finishing techniques, including skills learnt in Art	Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making Follow safety and food hygiene procedures Measure, mark, cut and shape materials and components with some accuracy Join, assemble and combine materials and components with some accuracy Use finishing techniques, including skills learnt in Art with some accuracy	Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making Follow safety and food hygiene procedures Measure, mark, cut and shape materials and components with some accuracy Join, assemble and combine materials and components with some accuracy Use finishing techniques, including skills learnt in Art with some accuracy	Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making Follow safety and food hygiene procedures Measure, mark, cut and shape materials and components accurately Join, assemble and combine materials and components accurately Demonstrate problem solving skills when encountering a mistake or practical	Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making Follow safety and food hygiene procedures Measure, mark, cut and shape materials and components accurately Join, assemble and combine materials and components accurately Demonstrate problem solving skills when encountering a mistake or practical problem Use finishing techniques that involve a number of steps, including skills learnt in Art accurately





						Use finishing	
						techniques, including	
						skills learnt in Art	
						accurately	
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
	Talk about what	Talk about their	Talk about their	Use design criteria to	Use design criteria to	Use design criteria to	Use design criteria to
EVALUATION	they have made and what it could	design ideas and	design ideas and	evaluate product –	evaluate product – identifying both	evaluate product – identifying both	evaluate product – looking at quality of
	be used for	what they have	what they have	identifying both	strengths and areas	strengths and areas	end product and
		made	made	strengths and areas	for development	for development	design and whether it is fit for its intended
				for development	Consider the views of	Consider the views of	purpose
		Make simple	Make simple		others, including intended user, whilst	others, including intended user, whilst	Consider the views of
		judgements of how	judgements of how	Consider the views of	evaluating product	evaluating product	others, including
		the product met their	the product met their	others, including		Redesign / make	intended user, whilst evaluating product
		design ideas	design ideas	intended user, whilst		product based	3.
				evaluating product		evaluations	Redesign / make product based
			Suggest how their				evaluations
			product could be				
			improved				
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Teaching	Talk about where	Understand that	Understand that	Understand which	Understand which	Understand which	Understand which
cooking and	food comes from	food comes from	food comes from	foods are reared,	foods are reared,	foods are reared, caught, or grown and	foods are reared, caught, or grown and
nutrition	Talk about	plants or animals	plants or animals	caught, or grown and	caught, or grown and	that this happens in	that this happens in
Understanding	harvest			that this happens in	that this happens in	the UK and across the globe	the UK and across the globe
food and food		Understand that	Understand that	the UK and across	the UK and across		
preparation		food has to be	food has to be	the globe	the globe		





			Design and recrition	- <u> </u>			
		farmed, caught, or	farmed, caught, or			Understand that the	Understand that the
		grown	grown	Understand that	Understand that	seasons can affect food produce	seasons can affect food produce
				recipes can be	recipes can be		
		Understand what	Understand what	changed by adding	changed by adding	Understand that sometimes raw	Understand that sometimes raw
		harvest is	harvest is	or taking away	or taking away	ingredients need to be	ingredients need to be
				ingredients	ingredients	processed before they can be used in	processed before they can be used in cooking
						cooking (eg. De-	(eg. De-feathering a
				Understand that the	Understand that the	feathering a chicken)	chicken)
				seasons can affect	seasons can affect food produce	Understand that	Understand that
				food produce	Jood produce	recipes can be adapted to change	recipes can be adapted to change the
						the appearance, taste	appearance, taste and
						and aroma of a dish	aroma of a dish
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Prepare simple	Prepare simple dishes	Sort foods into the 5	Sort foods into the 5	Sort foods into the 5	Sort foods into the 5	Sort foods into the 5
Teaching	dishes	hygienically and	groups using The	groups using The	groups using The	groups using The Eatwell Plate and	groups using The Eatwell Plate and
cooking and nutrition	hygienically and	safely without a heat	Eatwell Plate	Eatwell Plate and	Eatwell Plate and	identify that this	identify that this
Hatrition	safely without a	source		identify that this	identify that this	makes up a healthy diet	makes up a healthy diet
Food preparation,	heat source		Identify that people	makes up a healthy	makes up a healthy		
cooking and nutrition		Use cooking	should eat at least 5	diet	diet	Identify that food and drink provide certain	Identify that food and drink provide certain
	Understand	techniques such as:	portions of fruit and			nutritional and health	nutritional and health
	hygiene whilst cooking	cutting, peeling and	vegetables a day	Identify seasonality	Identify seasonality	benefits which support a healthy	benefits which support a healthy lifestyle
		grating		within foods	within foods	lifestyle	3 3 3
			Prepare simple dishes			Identify that people	Identify that people should eat at least 5
		Understand hygiene	hygienically and	Identify that food	Identify that food	should eat at least 5	portions of fruit and
		whilst cooking	safely without a heat	and drink are needed	and drink are needed	portions of fruit and vegetables a day	vegetables a day
			source	to provide energy for	to provide energy for		
					a healthy and active	Design and prepare simple dishes	





Design and Technology Progression of Skills									
			Understand hygiene	a healthy and active	lifestyle Identify that	hygienically and	Design and prepare		
			whilst cooking	lifestyle	people should eat at	safely, where needed with a heat source	more complex dishes, indulging savoury and		
					least 5 portions of		sweet dishes,		
			Use cooking	Identify that people	fruit and vegetables a	Use a wider range of equipment and	hygienically and safely, where needed		
			techniques such as:	should eat at least 5	day	cooking techniques	with a heat source		
			cutting, peeling and	portions of fruit and		such as: chopping, peeling, grating	Use a wider range of		
			grating	vegetables a day	Prepare simple dishes	slicing, mixing,	equipment and		
					hygienically and	spreading, kneading and baking	cooking techniques such as: chopping,		
				Prepare simple dishes	safely, where needed		peeling, grating		
				hygienically and	with a heat source		slicing, mixing, spreading, kneading		
				safely, where needed			and baking		
				with a heat source	Use cooking				
					techniques such as:				
				Use cooking	chopping, peeling,				
				techniques such as:	grating slicing,				
				chopping, peeling,	mixing, spreading,				
				grating slicing,	kneading and baking				
				mixing, spreading,					
				kneading and baking					