



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 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 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 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



Design and Technology Progression of Skills

<p>Cooking and nutrition in KS1 Key stage 1 Pupils should be taught:</p> <ul style="list-style-type: none"> Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from. 	<ul style="list-style-type: none"> 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] <p>Apply their understanding of computing to program, monitor and control their products.</p> <p>Cooking and nutrition in KS1 Key stage 1 Pupils should be taught:</p> <ul style="list-style-type: none"> 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
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	EYFS	KS1		KS2			
	Reception	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
EXPLORING AND RESEARCHING Exploring context and existing products	Understand what some daily products are and what they used for Understand that there are products all around us that have been designed and made	*Understand what a product is and who it is for *Understand how a product works and how it is used *Identify where you might find this product	*Understand what a product is and who it is for *Understand how a product works and how it is used	*Identify who made the product, when it was made and what its purpose is *Identify what the product has been made from *Evaluate the product on design and use	*Identify who made the product, when it was made and what its purpose is *Identify what the product has been made from *Evaluate the product on design and use	*Identify who made the product, when it was made and what its purpose is *Identify what the product has been made from and how environmentally friendly the materials are *Evaluate the product on design, appearance and use	*Identify who made the product, when it was made and what its purpose is *Identify what the product has been made from and how environmentally



Design and Technology Progression of Skills

			<ul style="list-style-type: none"> *Identify where you might find this product *Identify the materials used to make the product *Express an opinion about the product 	<ul style="list-style-type: none"> *Research facts about famous inventors/ chefs / designers etc linked to products 	<ul style="list-style-type: none"> *Research facts about famous inventors/ chefs / designers etc linked to product 	<ul style="list-style-type: none"> *Identify the cost to make the product *Research facts about famous inventors/ chefs / designers etc linked to product 	<ul style="list-style-type: none"> friendly the materials are *Evaluate the product on design, appearance and use *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
<p>DESIGN CRITERIA</p> <p>Understanding their intended users and their own product</p>	<p>Draw and describe their ideas</p>	<ul style="list-style-type: none"> *Explain what product they will be designing and making *Explain who their product will be used by 	<ul style="list-style-type: none"> *Use own experiences and existing products to develop ideas *Explain what product they will be 	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *Understand and gather information about what a particular group or people want from a product *Describe the purpose of their product 	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *Understand and gather information about what a particular group or people want from a product, using



Design and Technology Progression of Skills

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

							*Generate innovative ideas that meet needs of user
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Planning</p> <p>Communicating ideas and creating prototypes for product</p>	<p>Talk about how they are going to make their ideas</p> <p>Talk about which materials they wish to use and why</p>	<p>*Discuss what their steps for making could be</p> <p>*Represent ideas through talking and drawing</p>	<p>Discuss what their steps for making could be</p> <p>Represent ideas through talking, drawing and computing – (where appropriate)</p> <p>Choose materials to use based on suitability of their properties</p> <p>Create templates/pattern pieces and explore materials whilst developing ideas</p>	<p>Share and discuss ideas with others</p> <p>Order the main stages of making</p> <p>Choose materials to use based on suitability of their properties</p> <p>Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate)</p> <p>Create pattern pieces and prototypes</p>	<p>Share and discuss ideas with others</p> <p>Order the main stages of making</p> <p>Choose materials to use based on suitability of their properties</p> <p>Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate)</p> <p>Create pattern pieces and prototypes</p>	<p>Share and discuss ideas with others</p> <p>Record a step by step plan for making</p> <p>Produce lists for the tools, equipment and materials they will be using</p> <p>Choose materials to use based on suitability of their properties and aesthetic qualities</p> <p>Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate)</p> <p>Create pattern pieces and prototypes</p>	<p>Share and discuss ideas with others</p> <p>Record a step by step plan for making</p> <p>Produce lists for the tools, equipment and materials they will be using</p> <p>Choose materials to use based on suitability of their properties and aesthetic qualities</p> <p>Represent ideas in diagrams, annotated sketches and computer based programmes (where appropriate)</p> <p>Create pattern pieces and prototypes</p>



Design and Technology Progression of Skills

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
MAKING	<p>Follow simple safety and food hygiene produces whilst making</p> <p>Join, assemble and combine materials, exploring different ways</p>	<p>Choose suitable tools for making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components</p> <p>Join, assemble and combine materials and components</p>	<p>Choose suitable tools for making whilst explaining why they should be used</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components</p> <p>Join, assemble and combine materials and components</p> <p>Use finishing techniques, including skills learnt in Art</p>	<p>Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components with some accuracy</p> <p>Join, assemble and combine materials and components with some accuracy</p> <p>Use finishing techniques, including skills learnt in Art with some accuracy</p>	<p>Choose suitable tools for making whilst explaining why they should be used Use design criteria whilst making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components with some accuracy</p> <p>Join, assemble and combine materials and components with some accuracy</p> <p>Use finishing techniques, including skills learnt in Art with some accuracy</p>	<p>Choose suitable tools for making whilst explaining why they should be used</p> <p>Use design criteria whilst making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components accurately</p> <p>Join, assemble and combine materials and components accurately</p> <p>Use finishing techniques, including skills learnt in Art accurately</p> <p>Demonstrate problem solving skills when encountering a mistake or practical problem</p>	<p>Choose suitable tools for making whilst explaining why they should be used</p> <p>Use design criteria whilst making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components accurately</p> <p>Join, assemble and combine materials and components accurately</p> <p>Use finishing techniques, including skills learnt in Art accurately</p> <p>Demonstrate problem solving skills when encountering a mistake or practical problem</p>	<p>Choose suitable tools for making whilst explaining why they should be used</p> <p>Use design criteria whilst making</p> <p>Follow safety and food hygiene procedures</p> <p>Measure, mark, cut and shape materials and components accurately</p> <p>Join, assemble and combine materials and components accurately</p> <p>Use finishing techniques, including skills learnt in Art accurately</p> <p>Demonstrate problem solving skills when encountering a mistake or practical problem</p>



Design and Technology Progression of Skills

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



Design and Technology Progression of Skills

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



Design and Technology Progression of Skills

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