



Design and Technology Curriculum Progression Map

Mechanisms	Structures	Textiles	Electronics	Cooking and Nutrition
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Design	Make	Evaluate
Planning and Preparation Evaluating Existing Products Selecting Tools	Making Products Work Technical Knowledge Practical Skills	Contexts, Uses and Purposes Evaluating Own Ideas and Products

Early Years

	Children in Reception will learn to:	Children at the expected level of development will:
Reception	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. 	<ul style="list-style-type: none"> 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.

KS1

	Unit:	National Curriculum Objectives	Children will:
Year 1	Delightful Decorations	<p>Pupils should be taught to:</p> <p>Design:</p> <ul style="list-style-type: none"> 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 <p>Make:</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) select from and use a wide range of material and components, including construction materials, textiles and ingredients, according to their characteristics 	<ul style="list-style-type: none"> Design products with a clear purpose and an intended user (to meet design criteria). Explore different materials. Which material is best for the purpose? Discuss ideas and create annotated sketches (drawing on own experiences).
	Making Fire Engines		<ul style="list-style-type: none"> select from a range of tools and equipment explaining their choices select from a range of materials and components according to their characteristics cut out and shape materials join and combine materials use simple fixing materials e.g. temporary (tape) and permanent (glue)
Year 2	Stable Structures	<p>Evaluate:</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria <p>Technical knowledge:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Talk about design ideas and what they have made. Make simple judgements about their products based on the agreed design criteria. Suggest how their products can be improved.
	Moving Mini-beasts		<ul style="list-style-type: none"> Design products with a clear purpose and an intended user (to meet design criteria). To refine the design as work progresses. Discuss ideas and create annotated sketches. Make templates and mock ups (drawing on own experiences or from reading).
			<ul style="list-style-type: none"> Follow procedures for safety. Use and make own templates. Measure, mark out, cut out and shape materials and components. Assemble, join and combine materials and components. Use simple fixing materials e.g. temporary (paper clips, tape) and permanent (glue, staples). Use finishing techniques from Art and Design.
			<ul style="list-style-type: none"> Make judgements about their products/ ideas based on the agreed design criteria Suggest how their products can be improved. Evaluate the effectiveness of products and components used.

KS2

	Unit:	National Curriculum Objectives	Children will:
		Pupils should be taught to:	
Year 3	Light Up Signs	Design: <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Gather information about the needs and wants of particular individuals and groups. Develop their own design criteria and explain their reasoning for their design. Share and clarify ideas through discussion. Create annotated sketches and cross-sectional diagrams. To use computer aided-design to express their ideas.
	Pencil Cases	<ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 	<ul style="list-style-type: none"> Follows procedures for safety. Use a wider range of materials and components, including construction materials/ kits, textiles, food ingredients, mechanical components and electrical components. Measure, mark out, cut and shape materials and components with some accuracy. Assemble, join and combine materials/ components with some accuracy. Apply a range of finishing techniques, including those from Art and Design.
Year 4	Alarms	Make: <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<ul style="list-style-type: none"> Identify the strengths and weaknesses of their ideas and products. Refer back to their design criteria and use this to evaluate the overall effectiveness. Consider the views of others when evaluating their product.
			<ul style="list-style-type: none"> Gather information about the needs and wants of particular individuals and groups. To research designs. Develop their own design criteria and use this to inform/ adapt their design. Create annotated sketches and cross-sectional diagrams. Model ideas using prototypes and pattern pieces.
			<ul style="list-style-type: none"> Follows procedures for safety. Use a wider range of materials and components, including construction materials/ kits, textiles, food ingredients, mechanical components and electrical components. Measure, mark out, cut and shape materials and components with some accuracy. Assemble, join and combine materials/ components with some accuracy. Apply a range of finishing techniques, including those from Art and Design.

	Storybooks	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Identify the strengths and weaknesses of their ideas and products. Refer back to their design criteria and use this to evaluate the overall effectiveness. Consider the views of others, including intended users, to improve their work.
Year 5	Moving Toys	<p>Evaluate:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Carry out research, using surveys and questionnaires. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple design specification. To use pattern pieces and develop prototypes.
	Programming Pioneers	<ul style="list-style-type: none"> understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge:</p>	<ul style="list-style-type: none"> Follows procedures for safety. Use a wider range of materials and components, including construction materials/ kits, textiles, food ingredients, mechanical components and electrical components. Accurately measure to the nearest mm, mark out, cut and shape materials/ components. Accurately assemble, join and combine materials/ components. Apply a range of finishing techniques effectively and accurately, including those from Art and Design. Use techniques that involve a number of steps. Demonstrate resourcefulness e.g. make refinements.
Year 6	Building Bridges	<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, 	<ul style="list-style-type: none"> Identify the strengths and weaknesses of their ideas and products. Compare their ideas and products to their original design specification, considering the views of others. Evaluate the design and fitness for purpose of their products.
		<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, 	<ul style="list-style-type: none"> Carry out research, using interviews, questionnaires and web-based resources. Generate innovative ideas, drawing on research. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple design specification and make decisions taking into account constraints, such as: time, resources and cost. Create annotated sketches and cross-sectional diagrams. To use computer aided-design.

		<p>gears, pulleys, cams, levers and linkages]</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Follows procedures for safety. Use a wider range of materials and components, including construction materials/ kits, textiles, food ingredients, mechanical components and electrical components. Accurately measure to the nearest mm, mark out, cut and shape materials/ components. Accurately assemble, join and combine materials/ components. Apply a range of finishing techniques effectively and accurately, including those from Art and Design. Use techniques that involve a number of steps. Demonstrate resourcefulness e.g. make refinements.
	Slippers		<ul style="list-style-type: none"> Identify the strengths and weaknesses of their ideas and products. Compare their ideas and products to their original design specification, considering the views of others. Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.

Cooking and Nutrition

	Unit:	National Curriculum Objectives:	Children will:
Year 1	Eat More Fruit and Vegetables	<p>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"> Know where food comes from. Prepare simple dishes safely and hygienically, without using a heat source. Know that everyone should eat at least five portions of fruit and vegetables every day. Use techniques such as cutting, slicing and mixing.
Year 2	Perfect Pizzas		<ul style="list-style-type: none"> Know where food comes from. Prepare simple dishes safely and hygienically, without using a heat source. Prepare simple dishes safely and hygienically, without using a heat source. Use appropriate equipment to weigh and measure ingredients. Name and sort foods into the five groups of the 'eat well' plate. Use techniques such as mixing, kneading and baking.
Year 3	Sandwich Snacks	<p>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 	<ul style="list-style-type: none"> Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate. Know that to be active and healthy, food is needed to provide energy for the body. Measure using grams. Follow a recipe.
Year 4	Seasonal Food	<ul style="list-style-type: none"> understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	<ul style="list-style-type: none"> Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate. Know that to be active and healthy, food is needed to provide energy for the body. Measure using grams. Follow a recipe. Use techniques such as peeling, chopping, slicing and mixing.
Year 5	Bread	<p>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 	<ul style="list-style-type: none"> Know that recipes can be adapted to change the appearance, taste, texture and aroma. Know that different foods contain different substances (nutrients, water and fibre) that are need for health. Understand the need for the correct storage of ingredients, Measure ingredients accurately. Work out ratios in recipes. Use techniques such as baking and mixing.

Year 6	Great British Dishes	using a range of cooking techniques <ul style="list-style-type: none">• understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	<ul style="list-style-type: none">• Know that recipes can be adapted to change the appearance, taste, texture and aroma.• Know that different foods contain different substances (nutrients, water and fibre) that are need for health.• Understand the need for the correct storage of ingredients,• Measure ingredients accurately.• Work out ratios in recipes.• Use techniques such as peeling, grating, slicing, chopping and mixing.
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