

Design & Technology (D.T.)

Curriculum progression Map

Level expected at the end of EYFS - We have selected the Early Learning Goals that link most closely to the D.T. National Curriculum.

<p>Physical Development (Fine Motor Skills)</p> <ul style="list-style-type: none"> • Hold a pencil effectively in preparation for fluent writing - using the tripod grip in almost all cases. • Use a range of small tools, including scissors, paintbrushes and cutlery. • Begin to show accuracy and care when drawing 	<p>Personal, social and emotional development (Managing Self)</p> <ul style="list-style-type: none"> • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
<p>Understanding the world (The Natural World)</p> <ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants. 	<p>Expressive Arts and Design (Creating with Materials)</p> <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.

Key Stage 1 National Curriculum Expectations	Key Stage 2 National Curriculum Expectations
<p>Pupils should be taught:</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 [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 	<p>Pupils should be taught:</p> <p>Design</p> <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 • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <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 • 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

- 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 & Nutrition

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

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.

Knowledge / Skills to be covered

Design	Children can: <ul style="list-style-type: none">• Design products that have a clear purpose and function with an intended user.• Communicate their ideas through discussion, drawings or using ICT.• Refine the design as work progresses.
Make	Children can: <ul style="list-style-type: none">• Select appropriate materials, components, construction materials or textiles.• Select from a variety of tools to carry out their design effectively.• Demonstrate a range of joining techniques.• Demonstrate a range of shaping techniques.
Evaluate	Children can: <ul style="list-style-type: none">• Evaluate their own designs and products against their design criteria.• Explore and evaluate existing products expressing their own opinions.
Technical knowledge	Children can: <ul style="list-style-type: none">• Build structures, being able to improve them in stability, rigidity or strength.• Explore and include mechanisms (sliders, axles, wheels and levers) in their designs.
Cooking & Nutrition	Children can: <ul style="list-style-type: none">• Know how to hygienically and safely prepare and assemble a healthy dish.• Research where food originates from.• Understand the link between nutrition and a healthy lifestyle.

	Year R		Year 1		Year 2	
	Topic	NC link & Skills	Topic	NC link & Skills	Topic	NC link & Skills
Autumn1	Getting to know you Autumn	Continuous Provision- all year Development Matters Show resilience and perseverance in the face of challenge. Develop their small motor skills so that they can use a range of tool competently, safely and confidently. Suggested tools; pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons. Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.	Pirates Waterproof hats	Design Work confidently within a range of contexts State what product they are designing and making. Describe what their products are for. Use knowledge of existing products to help come up with ideas Model ideas by exploring waterproof materials and by making templates. Make Plan by suggesting what to do next. Select from a range of tools and equipment. Use a range of materials and components. Assemble join and combine materials keeping the hat waterproof. Evaluate Talk about their design ideas and what they are making Explore whether the product is waterproof. What they like and dislike about products. Technical knowledge Know about the simple working characteristics of materials and components.	It's good to be me	

				To use the correct technical vocabulary for the projects they are undertaking.		
Autumn 2	Toys Christmas		Around the World		Where in the world (China) Playground	<p>Design</p> <p>Work confidently within a range of contexts State what piece of playground equipment they are designing and making. Describe what their products are for. Use knowledge of existing products to help come up with ideas Model ideas by exploring materials and by making templates..</p> <p>Make</p> <p>Plan by suggesting what to do next. Select from a range of tools and equipment. Use a range of materials and components. Assemble join and combine materials, ensuring they can reinforce for stability.</p> <p>Evaluate</p> <p>Talk about their design ideas and what they are making Explore how their playground equipment works What materials products are made from.</p> <p>Technical knowledge</p> <p>Know about the simple working characteristics of materials and components. To use the correct technical</p>

						vocabulary for the projects they are undertaking. How to make free standing structures more stable
Spring 1	Winter People Who Help Us		Space Moon rocks Alien toy	<p>Design</p> <p>Work confidently in a range of contexts State what toy they are designing and making. Generate ideas by drawing on their experiences of different types of toys Develop their ideas by talking and drawing. Use knowledge of existing products to help come up with ideas.</p> <p>Make</p> <p>Plan by suggesting what to do next. Select from a range of tools and equipment. Use a range of materials and components. Assemble, join and combine materials and components.</p> <p>Evaluate</p> <p>Talk about their design ideas and what they are making. Make simple judgements about their products and ideas, did their toy meet its purpose? What they like and dislike about their own and existing products.</p> <p>Technical knowledge</p> <p>Know about the simple working</p>	Great Fire of London Cooking bread	

				characteristics of materials and components. That a 3D textile product can be assembled from two identical fabric shapes.		
Spring 2	Traditional Tales	<p>Design Generate ideas by drawing on their experiences of the story and of their homes Develop their ideas by talking.</p> <p>Make Select from a range of tools and equipment, including construction equipment Use a range of materials and components. Assemble, join and combine materials and components.</p> <p>Evaluate Make simple judgements about their products and ideas.</p> <p>Technical knowledge How to join, fold, and attach a variety of materials to make furniture. How to build a strong structure.</p>	Castles	.	Amazing animals	
Summer 1	Spring Easter The Lost World	<p>Design Generate ideas by drawing on their experiences of pizzas they have seen. Develop their ideas by talking.</p> <p>Cooking and Nutrition How to name and sort foods into groups-meat/vegetables, How to prepare simple dishes</p>	Farms Sliders and hinges	<p>Design Work confidently within a range of contexts. State what products they are designing and making. Say how they will make their slider or lever. Develop and communicate ideas by talking and drawing.</p>	Forces Vehicles	<p>Design Work confidently within a range of contexts State what vehicle they are designing and making. Describe what their vehicle is for. Use knowledge of existing vehicles to help come up with</p>

		<p>safely and hygienically, without using a heat source.</p> <p>How to use techniques such as cutting, peeling and grating.</p>		<p>Make</p> <p>Select from a range of tools and equipment.</p> <p>Select from a range of materials and components. Assemble, join and combine materials and components.</p> <p>Evaluate</p> <p>Talk about their design ideas and what they are making.</p> <p>Suggest how their products can be improved.</p> <p>Talk about their likes and dislikes of their product and existing products, that contain levers and/or sliders.</p> <p>Technical knowledge</p> <p>To know about the movement of simple mechanisms such as levers and sliders.</p> <p>To know and use some technical vocabulary for the products they are undertaking</p>		<p>ideas</p> <p>Model ideas by exploring materials and by making templates.</p> <p>Develop and communicate ideas by talking and drawing.</p> <p>Make</p> <p>Plan by suggesting what to do next.</p> <p>Select from a range of tools and equipment.</p> <p>Use a range of materials and components.</p> <p>Assemble join and combine materials, allowing movement.</p> <p>Use finishing techniques</p> <p>Evaluate</p> <p>Talk about their design ideas and what they are making</p> <p>Explore how vehicles work.</p> <p>Make simple judgements about their products and ideas against design criteria.</p> <p>Technical Knowledge</p> <p>Know about the simple working characteristics of materials and components and how to join and attach parts that need to move.</p> <p>To use the correct technical vocabulary for the projects they are undertaking.</p> <p>To know about the movement of simple mechanisms, such as wheels and different axles.</p>
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Summer 2	Mighty Minibeasts Summer	Design Generate ideas by drawing on their experiences of how their vegetables have grown Develop their ideas by talking. Cooking and Nutrition How to name and sort foods into groups. How to prepare simple dishes safely and hygienically, without using a heat source. How to use techniques such as cutting, peeling and grating. Understand where food comes from.	Wonderland and our local area		Summer Fun	
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