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.

Physical Development (Fine Motor Skills)	**Personal, social and emotional development (Managing Self)**
• 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	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
Understanding the world (The Natural World)	**Expressive Arts and Design (Creating with Materials)**
• Explore the natural world around them, making observations and drawing pictures of animals and plants.	• 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**
Pupils should be taught: **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	Pupils should be taught: **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 • 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:** • 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:** • 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:** • Evaluate their own designs and products against their design criteria. • Explore and evaluate existing products expressing their own opinions.
Technical knowledge	**Children can:** • 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:** • 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	All About Me Continuous Provision	**Development Matters** Show resilience and perseverance in the face of challenge. Explore different materials freely, to develop their ideas about how to use them and what to make. Revisit and build on prior learning and developing ability to represent them. **Early Learning Goals (ELG)** 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. **Other skills:** *Manipulate mark making tools for effect (e.g pencils, scissors)* *Using pincer grip/tweezers to change positions of objects.* *Join different materials and explore different textures such as: using tape and glue in junk modelling.*	Traditional Tales 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.	Let's go Wild!	

		.		To use the correct technical vocabulary for the projects they are undertaking.		
Autumn 2	When I Grow Up Autumn Christmas Continuous Provision	**Development Matters** Show resilience and perseverance in the face of challenge. Explore different materials freely, to develop their ideas about how to use them and what to make. Revisit and build on prior learning and developing ability to represent them. **Early Learning Goals (ELG)** 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. **Other skills:** *Cut along a straight line with scissors / Start to cut along a curved line, like a circle.* *Using different tools such as playdough and paintbrushes.* *Manipulate malleable materials to make a ball/sausage shape.*	It's a Wonderful World		Poles Apart	

Spring 1	Winter In the Past Continuous Provision	**Design** Children to design and create their own pizzas. Generate ideas by drawing on their experiences of pizzas they have seen. Develop their ideas by talking. **Cooking and Nutrition** How to name and sort foods into groups-meat/vegetables, How to prepare simple dishes safely and hygienically, without using a heat source. How to use techniques such as cutting, peeling and grating. **Evaluate** Talk about how they would rate their pizza. Linked to Dinosaurs focus, would the toppings be suitable for a Herbivore, Carnivore or Omnivore? **Other skills:** *Handle tools, objects, construction and malleable materials with increasing control.*	Space Textiles	**Design** Work confidently in a range of contexts Discuss and design the type of alien they are going to sew. Develop their ideas by talking and drawing. Use knowledge of existing products to help come up with ideas. **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 and components. **Evaluate** Talk about their design ideas and what they are making. Make simple judgements about their products and ideas, did it meet its purpose? What they like and dislike about their own and existing products. **Technical knowledge** Know about the simple working characteristics of materials and components. That a 3D textile product can be assembled from two identical fabric shapes.	The Great Fire	**Design** Work confidently within a range of contexts Describe the features of their fire truck vehicle. Use knowledge of existing vehicles to help come up with ideas Model ideas by exploring materials and by making templates. Develop and communicate ideas by talking and drawing. **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, allowing movement. Use finishing techniques **Evaluate** Talk about their design ideas and what they are making Explore how vehicles work. Make simple judgements about their products and ideas against design criteria. **Technical Knowledge** Know about the simple working characteristics of materials and components and how to join and attach parts that need to move. To use the correct technical vocabulary for the projects they are undertaking.

						To know about the movement of simple mechanisms, such as wheels and different axles.
Spring 2	Paddington Easter Continuous Provision	**Design** Children to design their own city of choice. **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. **Evaluate** Make simple judgements about their products and ideas. **Technical knowledge** How to join, fold, and attach a variety of materials to make a city. How to build a strong structure.	Castles		Twisted Tales	
Summer 1	Spectacular Stories Continuous Provision	**Other skills:** *Provide children with a range of materials for children to construct with. Use a wide range of joining techniques to join materials in 3D modelling. Make and use props when role playing familiar stories.*	Farms Sliders and hinges	**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. **Make** Select from a range of tools and	Come Outside	**Design** 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

				equipment. Select from a range of materials and components. Assemble, join and combine materials and components. **Evaluate** Talk about their design ideas and what they are making. Suggest how their products can be improved. Talk about their likes and dislikes of their product and existing products that contain levers and/or sliders. **Technical knowledge** To know about the movement of simple mechanisms such as levers and sliders. To know and use some technical vocabulary for the products they are undertaking		Model ideas by exploring 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, ensuring they can reinfornce for stability. **Evaluate** Talk about their design ideas and what they are making Explore how their playground equipment works What materials products are made from. **Technical knowledge** Know about the simple working characteristics of materials and components. To use the correct technical vocabulary for the projects they are undertaking. How to make free standing structures more stable
Summer 2	Under the Sea Continuous Provision	**Design** Children to design their own sea creatures. **Make** Use clay to carry out design effectively. Demonstrate range of shaping techniques when using clay to form sea creature shape.	Wonderland and our local area	**Design** Discuss what foods the children will need for a healthy lunch. **Make** Select appropriate toppings and follow instructions to make their lunch. To remember and apply food preparation and hygiene rules.	Summer Fun	**Design** Children to design and create their own fruit kebab. Generate ideas on different types of fruits. Develop their ideas by talking. **Cooking and Nutrition** How to name different fruits, How to prepare simple dishes

		Evaluate Make simple judgements about their clay sea creature. **Technical knowledge** Ensuring the clay is strong in stability and strength.		**Evaluate** Talk about how they would rate their food. What did they like? What could be improved next time?		safely and hygienically, without using a heat source. How to use techniques such as cutting. **Evaluate** Talk about how they would rate their fruit kebab.