

Progression of skills in Design & Technology

In EYFS, children will investigate and develop areas of DT in a range of different activities. Below are (non-exhaustive) examples of how children may demonstrate the Early Learning Goals that link most closely with DT.

Personal, Social & Emotional Development	Expressive Arts and Design
Managing Self Children at the expected level of development will: - Be confident to try new activities and show independence, resilience and perseverance in the face of challenge - Explain the reasons for rules, [...] and try to behave accordingly - Manage their own basic hygiene and personal needs, including [...] understanding the importance of healthy food choices.	Creating with Materials Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - Share creations, explaining the process they have used. - Make use of props and materials when role playing characters in narratives and stories.
	Communication and Language
Self-Regulation Children at the expected level of development will: - Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate; - Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.	Speaking Children at the expected level of development will: - Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. - Express their ideas and feelings about their experiences using full sentences [...]
Physical Development	Understanding the World
Fine Motor Skills Children at the expected level of development will: - Use a small range of tools, including scissors, paint brushes and cutlery - Begin to show accuracy and care when drawing	Past and Present Children at the expected level of development will: Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design						
Using creativity and imagination, pupils design products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.	Draw on their own experience, likes & dislikes to help generate ideas. Suggest ideas and explain what they are going to do (drawing, writing and/or verbally). Develop their design ideas by linking back to evaluation of existing products. Know who is the target group for what they intend to design and make. Sketch out design ideas, choosing their favourite elements for a final design. Model their ideas in a suitable medium (e.g. salt dough, paper/card etc).	Generate ideas by drawing on their own and other people's experiences, likes and dislikes. Develop their design ideas through discussion, observation, drawing and modelling. Understand the purpose of what they intend to design and make. Check their own designs match simple design criteria (and understand that they need adapting if not). Draw and accurately label simple designs. Model their ideas in a suitable medium, showing a clear link to drawn designs.	Generate ideas for an item, considering its purpose and needs of the user(s). Plan the order of their work before starting. Explore, develop and communicate design proposals by modelling ideas and presenting them to an adult/peer. Make clear, labelled drawings of designs, using rulers where appropriate.	Generate ideas for an item, considering its purpose and needs of the user(s) and taking into account the views of others; give useful feedback about design ideas to others. Make labelled drawings from different views showing specific features. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.	Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. Develop aspects of their design ideas by modelling them in a variety of ways and adapting their designs if necessary. Develop their designs using labelled drawings from a range of perspectives, including cross-sectional drawings, either by hand or using ICT.	Plan the order of their work, choosing appropriate materials, tools and techniques. Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways and adapting their designs if necessary. Communicate their ideas through detailed, labelled drawings from a range of perspectives, including exploded diagrams, either by hand or using ICT.
	Use of ICT & electrical systems: Create simple designs/models using ICT (e.g. purple mash)		Use of ICT & electrical systems: Use ICT to design and/or model ideas (e.g. using Purple Mash, Sketchup) including designs from more than one perspective.		Use of ICT & electrical systems: Use ICT to support design (CAD) including exploded diagrams and different perspectives.	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make/Technical skills						
Food Pupils understand and apply the principles of nutrition and learn how to cook.	All years: Name, taste and prepare a broad range of ingredients and healthy recipes, reflecting cultural diversity.					
	Understand basic food hygiene – hands washed, hair tied back, clean surfaces/ equipment etc Measure ingredients accurately (simple cup/spoon measures), progressing to measuring jugs and weighing scales when appropriate. Prepare simple dishes safely and hygienically without using a heat source. Cut, grate or peel ingredients safely.	Prepare ingredients hygienically, choosing appropriate utensils. Measure accurately using scales and measuring cups/jugs. Follow a recipe with increasing independence. Assemble and cook ingredients (controlling the temperature of the oven or hob when cooking).	Understand the importance of correct storage and handling of ingredients (e.g. refrigeration, freezing, canning etc, knowledge of micro-organisms). Demonstrate a range of baking and cooking techniques. Measure accurately and calculate ratios of ingredients to scale up or down from recipe. Create and refine recipes, e.g. changing ingredients/methods, adjusting cooking times/temperatures, cooking outdoors.			
Textiles	Shape textiles using templates or following drawn lines when cutting. Join textiles using running stitch. Colour and decorate textiles using a range of techniques (example progression: fabric pens -> fabric paints -> simple decorative stitching, knitting or weaving).	Measure, tape or pin, cut and join fabric with some accuracy. Join and combine materials and components accurately in temporary and permanent ways. Sew using a range of different stitches (primarily decorative). Learn simple weaving/braiding and/or knitting.	Create objects (such as a cushion) that require a seam allowance. Join textiles with a combination of stitching techniques (e.g. backstitch for seams and running stitch to attach decoration). Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).			
Construction	Cut materials safely using tools provided. Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling) With support, cut strip wood/dowel using a handsaw. Use appropriate materials to create models with wheels and axles e.g. tubes, dowels and cotton reels. Use materials to practise drilling, screwing, nailing and gluing to strengthen products.	Begin to use mechanical systems in their products (e.g. gears, pulleys and levers) with guidance from adults, progressing to understanding and choosing appropriate mechanical systems to use. Investigate how to make structures more stable e.g. by widening the base. Use a glue gun with close supervision. Cut wood with greater accuracy – straight cuts to within 5mm of marked lines. Begin to use sandpaper on sawn wood to ensure a safely smooth edge.	Join materials using appropriate methods. Use a hand drill to drill tight and loose fit holes. Cut wood accurately to 1mm. Build frameworks using a range of materials e.g. wood, card and corrugated plastic. Use a cam to make an up and down mechanism. Effectively use sandpaper on sawn/drilled wood to ensure safely smooth edges with a neat appearance.			
All Areas		Use of ICT & electrical systems: Use series circuits and/or parallel circuits in a DT product.	Use of ICT & electrical systems: Program and control a model using ICT control models (eg Crumble controller, Raspberry Pi, Lego Spike). Create circuits that employ a number of components (such as LEDs, resistors and transistors).			

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Evaluate						
Pupils critique, evaluate and test their ideas and products and the work of others.	Explore and evaluate a range of existing products, answering questions about likes and dislikes. Understand how these link to given design criteria. Informally evaluate their products as they are developed (with prompting from an adult), identifying strengths and possible changes they might make as they go along. Evaluate their product by discussing how well it works in relation to the purpose (design criteria) with support from an adult, either verbally or writing answers to simple questions.	Explore and evaluate a range of existing products, asking and answering questions about appearance, materials, likes and dislikes. Use evaluations of existing products to explain the design criteria. Informally evaluate their products as they are developed, identifying strengths and possible changes they might make as they go along. Talk/write about their ideas, saying what they like and dislike about them and suggesting at least one way they would change their design/product if they made it again.	Investigate and analyse a range of existing products, identifying likes, dislikes and why materials might have been chosen. Identify a purpose and establish design criteria for a successful product (as a class, with teacher support). Evaluate (with support) how a product may have been made, including what materials and tools would have been used. Evaluate their product against original design criteria e.g. how well it meets its intended purpose, and note any changes from the original design.	Investigate and analyse a range of existing products, identifying likes, dislikes, materials and who might be the intended user. Use evaluations of existing products to identify criteria that can be used for their own designs (setting design criteria for themselves with adult support). Evaluate how a product may have been made, including what materials and tools would have been used. Evaluate their work both during and at the end of the project, identifying what worked well and what they would improve in future.	Investigate and analyse a range of existing products, taking into account the views of others (e.g. classmates, staff, family/friends at home). Choose their own design criteria with reference to the purpose of the product. Evaluate their products against the original criteria, carrying out appropriate tests and identifying strengths and areas for development. Use feedback from others (e.g. classmates, staff) when evaluating their own products.	Investigate and analyse a range of existing products, assessing in what ways and how successfully they meet the needs of the user, suggesting strengths and weaknesses. Develop their own design criteria independently, using their evaluations of existing products. Evaluate their products against the original criteria, carrying out appropriate tests and identifying strengths and areas for development. Present finished products to others, outlining how it meets the success criteria and needs of the user (‘selling it’).
					Use of ICT & electrical systems: Use ICT to support sharing ideas with others, (e.g. evaluations using pictures on the board/powerpoints).	
Linked theory lessons/cross-curricular links						
Through the evaluation of past and present design and technology, pupils develop a critical understanding of its impact on daily life and the wider world. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art.	KS1 DT includes: - Cooking/nutrition theory - Cross-curricular links		KS2 DT includes: - Understanding of key events/individuals in DT (historical and modern) - Cooking/nutrition theory - Cross-curricular links			
	Understand where food comes from (e.g. from plants/animals). Group familiar food products e.g. fruit and vegetables. [RE link: Harvest festivals]	Group foods into the five groups in The Eatwell Plate, with support as needed, and understand how this relates to a healthy diet. [PSHE link: Healthy lifestyles]	Name some foods from each group of the Eatwell plate and how they are of benefit to the body. Understand where different foods come from (areas of the world). [Geography link: where food comes from/climates]	Understand the benefits of different food groups from the Eatwell plate and use this to evaluate their own food tech projects. [PE link: best diets for different activities/sports]	Understand the concepts of seasonality and sustainability, linking these to their own food tech projects. [Maths link: plan a meal using a simple budget.]	Understand the purposes of different ingredients in recipes to allow for suitable substitutions (e.g. for special dietary requirements or adapting to lack of unseasonable ingredients). [Science link: simple physical & chemical reactions in cooking]