



DT Knowledge & Skills Progression

	Nursery	Reception	Years 1 & 2	Years 3 & 4	Years 5 & 6
Design: understanding contexts, users and purposes	<ul style="list-style-type: none"> ✓ Begin to talk about what they want to make ✓ Begin to talk about who their product is for 	<ul style="list-style-type: none"> ✓ Talk about what they want to make ✓ Talk about who their product is for 	<ul style="list-style-type: none"> ✓ Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment ✓ State what products they are designing and making ✓ Say whether their products are for themselves or other users and why ✓ Describe what their products are for ✓ Say how their products will work ✓ Say how they will make their products suitable for their intended users ✓ Use simple design criteria to help develop their ideas 	<ul style="list-style-type: none"> ✓ Gather information about the needs and wants of particular individuals and groups ✓ Develop their own design criteria and use these to inform their ideas ✓ Work with increasing confidence within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment ✓ Begin to describe the purpose of their products ✓ Indicate some of the design features of their products that will appeal to intended users ✓ Explain how particular parts of their products work 	<ul style="list-style-type: none"> ✓ Carry out research, using surveys, interviews, questionnaires and web-based resources ✓ Identify the needs, wants, preferences and values of particular individuals and groups ✓ Develop a simple design specification to guide their thinking ✓ Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment ✓ Describe the purpose of their products ✓ Indicate the design features of their products that will appeal to intended users ✓ Explain in detail how particular parts of their products work
Design: generating, developing, modelling and communicating ideas	<ul style="list-style-type: none"> ✓ Talk about their ideas to an adult 	<ul style="list-style-type: none"> ✓ Talk about their ideas to adults and their peers ✓ Begin to generate ideas by using what they know ✓ Make simple models to express their ideas 	<ul style="list-style-type: none"> ✓ Generate ideas by drawing on their own experiences ✓ Use knowledge of existing products to help come up with ideas ✓ Develop and communicate ideas by talking and drawing ✓ Model ideas by exploring materials, components and construction kits and by making templates and mockups ✓ Use information and communication technology, where appropriate, to develop and communicate their ideas 	<ul style="list-style-type: none"> ✓ Generate realistic ideas, focusing on the needs of the user ✓ Make design decisions that take account of the availability of resources ✓ Begin to share and clarify ideas through discussion ✓ Model some of their ideas using prototypes and pattern pieces ✓ Use annotated sketches to develop and communicate their ideas 	<ul style="list-style-type: none"> ✓ Generate innovative ideas, drawing on research ✓ Make design decisions, taking account of constraints such as time, resources and cost ✓ Share and clarify ideas through discussion ✓ Model their ideas using prototypes and pattern pieces ✓ Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas ✓ Use computer-aided design to develop and communicate their ideas



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Making: planning	<ul style="list-style-type: none"> ✓ When asked, explain what they are going to do next ✓ Develop manipulation and control ✓ Explore different materials and tools 	<ul style="list-style-type: none"> ✓ Plan by suggesting what to do next ✓ Select from a given range of tools and equipment ✓ With adult input, select from a given range of materials and components according to their characteristics ✓ Improve manipulation and control ✓ Explore different materials and tools (a wider selection than in nursery) 	<ul style="list-style-type: none"> ✓ Select from a given range of tools and equipment, explaining their choices ✓ Select from a given range of materials and components according to their characteristics 	<ul style="list-style-type: none"> ✓ Order the main stages of making ✓ With help, select tools and equipment suitable for the task ✓ With help, explain their choice of tools and equipment in relation to the skills and techniques they will be using ✓ With help, select materials and components suitable for the task 	<ul style="list-style-type: none"> ✓ Produce appropriate lists of tools, equipment and materials that they need ✓ Formulate step-by-step plans as a guide to making ✓ Select tools and equipment suitable for the task ✓ Explain their choice of tools and equipment in relation to the skills and techniques they will be using ✓ Select materials and components suitable for the task ✓ Explain their choice of materials and components according to functional properties and aesthetic qualities
Making: Practical skills and techniques	<ul style="list-style-type: none"> ✓ Cut simple materials independently making the shapes that they wish ✓ With support, begin to cut more difficult materials ✓ Join materials together using glue, masking tape and sellotape 	<ul style="list-style-type: none"> ✓ Begin to understand some procedures for safety and hygiene ✓ Begin to assemble, join and combine materials and components using resources provided for them ✓ Cut materials independently ✓ Begin to mark out materials that they want to cut. 	<ul style="list-style-type: none"> ✓ Follow procedures for safety and hygiene ✓ Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components ✓ Measure, mark out, cut and shape materials and components ✓ Assemble, join and combine materials and components using resources provided for them ✓ Use finishing techniques, including those from art and design 	<ul style="list-style-type: none"> ✓ Measure, mark out, cut and shape materials and components with some accuracy ✓ Assemble, join and combine materials and components with some accuracy ✓ Apply a range of finishing techniques, including those from art and design, with some accuracy ✓ Follow procedures for safety and hygiene with guidance ✓ Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 	<ul style="list-style-type: none"> ✓ Accurately measure, mark out, cut and shape materials and components ✓ Accurately assemble, join and combine materials and components ✓ Accurately apply a range of finishing techniques, including those from art and design ✓ Use techniques that involve a number of steps ✓ Demonstrate resourcefulness when tackling practical problems ✓ Follow procedures for safety and hygiene with increasing independence ✓ Use a wider range of materials and components than LKS2, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components



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Evaluating: Own ideas and products	<ul style="list-style-type: none"> ✓ Talk about what they are making ✓ Begin to talk about what they like about what they have made 	<ul style="list-style-type: none"> ✓ Talk about what they are making and what they like about what they have made 	<ul style="list-style-type: none"> ✓ Talk about their design ideas and what they are making ✓ Make simple judgements about their products and ideas against design criteria ✓ Suggest how their products could be improved 	<ul style="list-style-type: none"> ✓ Refer to their design criteria as they design and make ✓ Use their design criteria to evaluate their completed products ✓ Begin to identify the strengths and areas for development in their ideas and products ✓ Begin to consider the views of others, including intended users, to improve their work 	<ul style="list-style-type: none"> ✓ Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make ✓ Evaluate their ideas and products against their original design specification ✓ Identify the strengths and areas for development in their ideas and products ✓ Consider the views of others, including intended users, to improve their work
Evaluating: Key Events & Individuals				<ul style="list-style-type: none"> ✓ Know and learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products 	
Evaluating: Existing Products	<ul style="list-style-type: none"> ✓ Begin to talk about what they like about products 	<ul style="list-style-type: none"> ✓ Begin to explore what materials products are made from ✓ Talk about what they like about products ✓ Begin to talk about what they dislike about products 	Pupils should explore: <ul style="list-style-type: none"> ✓ What products are ✓ Who products are for ✓ What products are for ✓ How products work ✓ How products are used ✓ Where products might be used ✓ What materials products are made from ✓ What they like and dislike about products 	Pupils should investigate and analyse: <ul style="list-style-type: none"> ✓ Who designed and made the products ✓ Where products were designed and made ✓ When products were designed and made ✓ Whether products can be recycled or reused 	Pupils should investigate and analyse: <ul style="list-style-type: none"> ✓ How much products cost to make ✓ How innovative products are ✓ How sustainable the materials in products are ✓ What impact products have beyond their intended purpose
				Pupils should investigate and analyse: <ul style="list-style-type: none"> ✓ How well products have been designed ✓ How well products have been made ✓ Why materials have been chosen ✓ What methods of construction have been used ✓ How well products work ✓ How well products achieve their purposes ✓ How well products meet user needs and wants 	



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Technical Knowledge: Making products work	<ul style="list-style-type: none"> ✓ Explore how to make their structures stay 'standing up' 	<ul style="list-style-type: none"> ✓ Explore how to make their structures stronger and stable ✓ Explore how to make wheels move 	Pupils should know: <ul style="list-style-type: none"> ✓ About the simple working characteristics of materials and components ✓ About the movement of simple mechanisms such as levers, sliders, wheels and axles ✓ How freestanding structures can be made stronger, stiffer and more stable ✓ That a 3-D textiles product can be assembled from two identical fabric shapes 	Pupils should know: <ul style="list-style-type: none"> ✓ How mechanical systems such as levers and linkages create movement ✓ How simple electrical circuits and components can be used to create functional products ✓ How to make strong, stiff shell structures ✓ That a single fabric shape can be used to make a 3D textiles product ✓ That food ingredients can be fresh, pre-cooked and processed 	Pupils should know: <ul style="list-style-type: none"> ✓ How mechanical systems such as cams create movement ✓ How more complex electrical circuits and components can be used to create functional products ✓ How to program a computer to monitor changes in the environment and control their products ✓ How to reinforce and strengthen a 3D framework ✓ That a 3D textiles product can be made from a combination of fabric shapes ✓ That a recipe can be adapted by adding or substituting one or more ingredients
Cooking & Nutrition: Where food comes from	<ul style="list-style-type: none"> ✓ Name some food items that can be grown in our gardens at home 	<ul style="list-style-type: none"> ✓ Learn what we can grow in our gardens at home ✓ Name a variety of food items that can be grown in our gardens at home 	Pupils should know: <ul style="list-style-type: none"> ✓ That all food comes from plants or animals ✓ That food has to be farmed, grown elsewhere (e.g. home) or caught ✓ That some food is grown easily in the UK and other foods come from other parts of the world 	Pupils should know: <ul style="list-style-type: none"> ✓ That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world 	Pupils should know: <ul style="list-style-type: none"> ✓ That seasons may affect the food available ✓ How food is processed into ingredients that can be eaten or used in cooking
Cooking & Nutrition: Food prep, cooking & nutrition	<ul style="list-style-type: none"> ✓ Make healthy choices about food and drink. ✓ Name and identify a range of different foods. ✓ Express their likes and dislikes in food. 	<ul style="list-style-type: none"> ✓ Name a variety of different foods. ✓ Know some foods are healthy and some foods are unhealthy and be able to talk to adults about this. ✓ Use basic tools to prepare food products. ✓ Begin to work safely and hygienically with adult support 	Pupils should know: <ul style="list-style-type: none"> ✓ How to name and sort foods into the five groups in 'The eatwell plate' ✓ That everyone should eat at least five portions of fruit and vegetables every day ✓ How to prepare simple dishes safely and hygienically, without using a heat source 	Pupils should know: <ul style="list-style-type: none"> ✓ That a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell plate ✓ That to be active and healthy, food and drink are needed to provide energy for the body 	Pupils should know: <ul style="list-style-type: none"> ✓ That recipes can be adapted to change the appearance, taste, texture and aroma ✓ That different food and drink contain different substances – nutrients, water and fibre – that are needed for health ✓ That foods available can vary dependent on culture and seasonality



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		✓ Begin to understand 5-a-day	✓ How to use techniques such as cutting, chopping, kneading ✓ To safely use knives and other cooking utensils	Pupils should know: ✓ How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source ✓ How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
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Key Vocabulary				
	EYFS	Years 1 & 2	Years 3 & 4	Years 5 & 6
Design	idea	product, user, materials, label, part, purpose, design, stages, equipment, plan, designer	efficient, technique, criteria, features, design brief, adapt, labelled drawings, success criteria, annotated sketch, viewpoints, process, engineer, represent, original, sketch	consumer, service, cross section, specification, finish, procedures, annotations, exploded diagram, pattern pieces, costings,
Make	make, made, join, cut,	measure, mark, instructions, decorate, shape, combine, assemble, test, strong, stable	attach, pieces, techniques, construct, repair, systematic, score, centimetre, prototype, components, functional, aesthetic, appearance, millimetre, accuracy, reinforce, stable, secure, structure	assemble, refine, fill, sand,
Evaluate	like, dislike	like, dislike, strengths, changes	improvements, market, designer, technology, function, disassemble, feedback, modify	manufacture, alterations, analysis, adjustment, refinement, sustainability, energy efficient, human impact
Textiles	fabric, texture, smooth, rough, soft, hard, weave, sew, needle, thread	sew, template, needle, thread, knot, running stitch, textiles, decorate, attach	Back stitch, cross stitch, blanket stitch, pin (verb), fastening, seam	embellish, fibres, natural, synthetic, recycled, aesthetic
Technical knowledge	stacking, scissors, hole punch, attach, stick, glue, masking tape, Sellotape, join, fold	tear, curl, bend, split pin, masking tape, treasury tag, straight, curved, slider, lever, pivot, pop-up, structure, glue, strengthen, hinges, stable, strong, stiff, wheel, axle, tube, dowel, art straw, wood, cotton reel, chassis	mechanism, mechanical system, gears, pulleys, lever, linkage, pivot, input, output, loose, fixed, guide, bridge, electronics, parallel circuit, series circuit, bulb, switch, buzzer, motor, control, monitor, software, program	rotary, linear, cam, cranks, follower, convert, motion, guide, off centre, offset, ellipse, eccentric, shaft, LEDs, resistors, transistors, chips, code
Cooking & Nutrition	healthy, unhealthy, knife, fork, spoon, food, water, taste, fruit, vegetable	ingredients, fruit, vegetable, dairy, oil, spread, beans, pulses, eggs, fish, meat, protein, potato, rice, bread, pasta, starchy carbohydrate, safe, clean, variety, diet, farm, grow, catch, cut, chop, peel, knead, stretch, measure, weigh, recipe, spoons, cups, scales	meal, balanced, hygiene, nutrition, energy, appearance, texture, reared, processed, mix, knead, bake, temperature, oven, hob, grams, millilitres, seasonal	menu, global, harvest, microorganisms, storage, seasonal, cultural, food industry, utensils, grill, fry, boil, scale, ratio, substitute, temperature, aroma