

DESIGN AND TECHNOLOGY

Skills Progression



	Daisies (2.Y.O.)	Sunflowers (3Y.O)	Reception
Early Learning Goal	<p>ELG: Creating with Materials Children at the expected level of development will:</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; - Make use of props and materials when role playing characters in narratives and stories. 		
Skills Progression in EYFS	<p>Enjoy and take part in action songs, such as 'Twinkle, Twinkle Little Star'. Start to develop pretend play, pretending that one object represents another.</p> <p>For example, a child holds a wooden block to her ear and pretends it's a phone.</p> <p>Explore different materials, using all their senses to investigate them.</p> <p>Manipulate and play with different materials.</p> <p>Use their imagination as they consider what they can do with different materials.</p> <p>Make simple models which express their ideas.</p>	<p>Make imaginative and 'small worlds' with blocks and construction kits, adding features of locations such as farm. City, park.</p> <p>Talk about their creations.</p> <p>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Join different materials and explore different textures.</p>	<p>Explore, use and refine a variety of artistic effects continuing to use different tools and materials</p> <p>Talk about what they have created and how they made it</p> <p>Explore paint, collage, recycled materials and natural materials to create different effects and understand more about what different materials can do</p> <p>Use props to enhance story telling or imaginative play</p> <p>Make props for their play using recycled and found materials</p> <p>Create collaboratively, share ideas, resources and skills</p>

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum Designing	Pupils should be taught to: <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. 		Pupils should be taught to: <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. 			
Designing Understanding contexts, users and purposes	Begin to think about the purpose of the design and the intended user Begin to explore materials, make templates and mock ups e.g. moving picture / lighthouse	State the purpose of the design and the intended user. Explore materials, make templates and mock ups e.g. moving picture / lighthouse.	Begin to gather information about the needs and wants of particular individuals and groups. Begin to develop their own design criteria and use these to inform their ideas Begin to research designs.	Gather information about the needs and wants of particular individuals and groups. Develop their own design criteria and use these to inform their ideas. Research designs.	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. Recognise when their products have to fulfil conflicting requirements	
Generating, developing,	Begin to generate own ideas for design	Generate own ideas for design by	Share and clarify ideas through discussion.		Generate innovative ideas, drawing on research.	

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modelling and communicating ideas.	by drawing on own experiences or from reading	drawing on own experiences or from reading.	Model their ideas using prototypes and pattern pieces. Use annotated sketches, cross-sectional drawings and diagrams.	Make design decisions, taking account of constraints such as time, resources and cost. Develop prototypes. Use computer-aided design.		
National Curriculum Making	Pupils should be taught to: <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 materials and components, including construction materials, textiles and ingredients, according to their characteristic 		Pupils should be taught to: <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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. follow procedures for safety <ul style="list-style-type: none"> use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 			
Making Practical Skills and Techniques	Follow procedures for safety. Begin to use and make own templates. Begin to measure, mark out, cut out and shape materials and components (supported if needed). Begin to assemble, join and combine materials. Use simple fixing materials e.g. temporary – paper clips tape and	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. Explain reasons for choice of fixing materials. Think carefully about finishing techniques (including those from art and design).	Begin to 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, include those from art and design, with some accuracy.	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, include those from art and design, with some accuracy.	Accurately measure to nearest cm/ mm, mark out, cut and shape materials and components Accurately assemble, join and combine materials/ components. Accurately apply a range of finishing techniques, including those from art and design. Demonstrate resourcefulness, e.g. make refinements.	Accurately measure to nearest mm, mark out, cut and shape materials and components. Use techniques that involve a number of steps. Accurately apply a range of finishing techniques, including those from art and design. Refine design and explain reasons for refinement.

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	permanent – glue, staples Use finishing techniques (including those from art and design).				
Planning and Making	Make a plan of their product. Use a range of tools and equipment safely and correctly. Choose appropriate materials and components for their product.	Plan by suggesting what to do next. Select from a range of tools and equipment (explaining their choices). Select from a range of materials and components according to their characteristics.	Select tools and equipment suitable for the task. Select materials and components suitable for the task. Order the main stages of making. Produce detailed lists of tools, equipment and materials that they need.	Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Explain their choice of materials and components according to functional properties and aesthetic qualities. Produce detailed lists of tools, equipment and materials that they need.	Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Explain their choice of materials and components according to functional properties and aesthetic qualities. Formulate step-by-step plans as a guide to making Produce detailed lists of tools, equipment and materials that they need.
National Curriculum (Evaluating)	Pupils should be taught to:		Pupils should be taught to:		
Evaluating Existing Products	Begin to investigate and understand - what products are, who they are for, how they are made and what materials are used.	Investigate - what products are, who they are for, how they are made and what materials are used.	Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused.	Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are.	
Own Ideas and Products	Talk about their design ideas and	Make simple judgements about	Identify the strengths and weaknesses of their ideas and products. Consider the views of	Critically evaluate the quality of the design, manufacture and fitness for purpose of	

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	what they are making. Suggest how their products could be improved.	their products and ideas against design criteria. Evaluating products and components used.	others, including intended users, to improve their work.	their products as they design and make. Compare their ideas and products to their original design specification.		
National Curriculum Technical Knowledge	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products. 		<p>Pupils should be taught to:</p> <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, gears, pulleys, cams, levers and linkages]. • understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products . <p>Understand how to use learning from science and maths to help design and make products that work:</p> <ul style="list-style-type: none"> • Know that materials have both functional properties and aesthetic qualities. • Know that materials can be combined and mixed to create more useful characteristics. Know that mechanical and electrical systems have an input, process and output. • Use the correct technical vocabulary for the projects they are undertaking. 			
Technical Knowledge	<p>Understand about the simple working characteristics of materials and components.</p> <p>Understand about the movement of simple mechanisms: levers, sliders.</p> <p>Understand how freestanding structures can be made stronger,</p>	<p>Understand about the simple working characteristics of materials and components.</p> <p>Understand about the movement of simple mechanisms: wheels and axles.</p>	<p>Understand how levers and linkages create movement.</p> <p>Know how to make strong, stiff shell structures.</p> <p>Know that a single fabric shape can be used to make a 3D textiles product.</p>	<p>Understand how pneumatic systems create movement.</p> <p>Understand how simple electrical circuits and components can be used to create functional products.</p>	<p>Understand how cams, pulleys and gears create movement.</p> <p>Know how to reinforce/strengthen a 3D framework.</p> <p>Know that a 3D textiles product can be made from a combination of fabric shapes.</p>	<p>Understand how more complex electrical circuits and components can be used to create functional products. Understand how</p>

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	stiffer and more stable.					
National Curriculum (Cooking and Nutrition)	<p>Pupils should be taught to:</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. 		<p>Pupils should be taught to:</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. • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. • 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 			
Cooking and Nutrition (Where food comes from)	Know where food comes from – all food comes from plants or animals.	Know where food comes from -food has to be farmed, grown elsewhere (e.g. home) or caught.	Know 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.	Know that seasons may affect the food available Know that food ingredients can be fresh, pre-cooked and processed.	Understand how food is processed into ingredients that can be eaten or used in cooking.	Know that a recipe can be adapted a by adding or substituting one or more ingredients
Cooking and Nutrition (Food Preparation)	<p>Prepare simple dishes safely and hygienically, without using a heat sources.</p> <p>Use techniques such as cutting.</p> <p>Name and sort foods into the five groups of the 'eat well' plate.</p>	<p>Use appropriate equipment to weigh and measure ingredients.</p> <p>Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Understand that food ingredients should be combined according</p>	<p>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.</p> <p>Measure using grams.</p>	<p>Know that to be active and healthy, food is needed to provide energy for the body.</p> <p>Follow a recipe.</p>	<p>Know that different foods contain different substances - nutrients, water and fibre - that are needed for health.</p> <p>Understand the need for correct storage. Measure accurately.</p>	<p>Know that recipes can be adapted to change the appearance, taste, texture and aroma.</p> <p>Work out ratios in recipes.</p>

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		to their sensory characteristics.				
Cooking and nutrition (Recipe instructions)	Follow instructions given one at a time by an adult. Carry out instructions with support.	Follow a simple recipe with guidance from an adult. Carry out instructions independently.	Follow a recipe independently. Carry out modifications to recipes			