

Progress in Knowledge and Skills: DT

Updated January 2023



	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Design	<p>To use knowledge of existing products and own and other people's experiences to help generate ideas.</p> <p>To design products that have a purpose and are aimed at an intended use.</p> <p>To explain how a product looks and works through talking and annotated drawings.</p> <p>To design models using simple computing software.</p> <p>To plan and test ideas using templates and models.</p> <p>To understand and follow design criteria.</p> <p>To work in a range of relevant contexts, for example imaginary, story based, home, school and the wider environment.</p>	<p>To identify the design features of their products.</p> <p>To use knowledge of existing products to help to generate ideas.</p> <p>To design products that have a purpose and are aimed at a specific user.</p> <p>To explain how parts of their products work.</p> <p>To use annotated sketches to develop and communicate their ideas.</p> <p>To explore different initial ideas before coming up with a final design.</p> <p>To start to explain their choice of materials and components including function when planning.</p> <p>To test ideas out through using prototypes.</p> <p>To use computer-aided design to develop their ideas.</p> <p>To develop and follow simple design criteria.</p>	<p>To identify the design features of their products that will appeal to intended customers.</p> <p>To use knowledge of a broad range of existing products to help to generate ideas.</p> <p>To design innovative and appealing products that have a clear purpose and are aimed at a specific user.</p> <p>To explain how particular parts of their products work and their function on the product.</p> <p>To use annotated sketches and cross-sectional drawings to develop and communicate their ideas.</p> <p>To explore different initial ideas before coming up with a final design.</p> <p>To explain their choice of materials and components including function and aesthetics when planning.</p>	<p>To begin to use research to inform design criteria to inform the design of functional and appealing products that are fit for purpose.</p> <p>To use knowledge of existing products to help generate their ideas.</p> <p>To begin to design products that have a purpose and indicate the design features of their products that will appeal to the intended user.</p> <p>To explain how particular parts of their products work.</p> <p>To use annotated sketches and cross-sectional drawings to develop and communicate ideas.</p> <p>To generate design ideas and communicate final designs.</p> <p>To work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, industry and the wider environment.</p>	<p>To use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market.</p> <p>To use knowledge of a broad range of existing products to help generate their ideas.</p> <p>To design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user.</p> <p>To explain how particular parts of their products work and how they are useful for the intended user.</p> <p>To use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate ideas.</p>	<p>To draw on own experiences to generate ideas.</p> <p>To design products that have a purpose.</p> <p>To explain how a product looks and works through talking and drawings.</p> <p>To plan and test ideas using simple templates and models.</p> <p>To understand and follow simple design criteria.</p> <p>To work in a range of relevant contexts, for example imaginary, story based, home and school.</p>

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Design Continued		To work in a broader range of relevant contexts, for example entertainment, the home, school, leisure and the wider environment.	To test ideas out through using prototypes, suggesting alternative methods if the first attempt fails. To use computer-aided design to develop and communicate their ideas. To develop and follow simple design criteria. To work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.		To generate a range of design ideas and clearly communicate final designs. To consider the availability and costings of resources when planning out designs. To work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.	
Make	<p>Planning:</p> <p>To follow a simple plan or recipe with support.</p> <p>To begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer.</p> <p>To select from a choice of materials, textiles and components.</p> <p>Practical skills and techniques:</p> <p>To begin to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures.</p>	<p>Planning:</p> <p>To follow a simple plan or recipe.</p> <p>To select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer.</p> <p>To select from a range of materials, textiles and components according to their characteristics.</p> <p>Practical skills and techniques:</p> <p>To learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures.</p>	<p>Planning:</p> <p>To begin to select from a range of tools and equipment, explaining their choices.</p> <p>To select from a choice of materials and components according to their properties and qualities.</p> <p>To place the main stages of making in a systematic order.</p> <p>Practical skills and techniques:</p> <p>To begin to use tools and equipment safely, appropriately and accurately and learn to follow hygiene procedure.</p>	<p>Planning:</p> <p>To carefully select from a range of tools and equipment, explaining their choices.</p> <p>To select from a range of materials and components according to their functional properties and aesthetic qualities.</p> <p>To place the main stages of making in a systematic order.</p> <p>Practical skills and techniques:</p> <p>To learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedure.</p>	<p>Planning:</p> <p>To plan by suggesting what to do next with some support.</p> <p>To select from a range of tools and equipment.</p> <p>To select from a range of materials and components according to their functional properties and aesthetic qualities.</p> <p>To create plans as a guide to making.</p> <p>Practical skills and techniques:</p> <p>To learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures.</p>	<p>Planning:</p> <p>To independently plan by suggesting what to do next.</p> <p>To select from a wide range of tools and equipment, explaining their choices.</p> <p>To select from a range of materials and components according to their functional properties and aesthetic qualities.</p> <p>To create step-by-step plans as a guide to making.</p> <p>Practical skills and techniques:</p> <p>To learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures.</p>

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Make Continued	<p>To use a range of materials and components, including textiles and food ingredients with support.</p> <p>To begin to measure and mark out with support.</p> <p>To begin to cut, shape and score materials.</p> <p>To assemble, join and combine materials, components or ingredients with support.</p> <p>To begin to demonstrate how to cut, shape and join fabric to make a simple product.</p> <p>To use a basic running stitch with support.</p> <p>To begin to cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups.</p>	<p>To use a range of materials and components, including textiles and food ingredients.</p> <p>To measure and mark out with support.</p> <p>To cut, shape and score materials with some accuracy.</p> <p>To assemble, join and combine materials, components or ingredients.</p> <p>To demonstrate how to cut, shape and join fabric to make a simple product.</p> <p>To manipulate fabrics in simple ways to create the desired effect.</p> <p>To use a basic running stitch.</p> <p>To cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups.</p> <p>To begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.</p>	<p>To use a range of materials and components, including construction materials and kits, textiles and mechanical and electrical components.</p> <p>To measure and mark out to the nearest cm and millimetre with support.</p> <p>To cut, shape and score materials with some degree of accuracy.</p> <p>To assemble, join and combine material and components with some degree of accuracy.</p> <p>To demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product.</p> <p>To join textiles with a sewing technique.</p> <p>To begin to use different finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.</p>	<p>To use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components.</p> <p>To measure and mark out to the nearest cm and millimetre with growing independence.</p> <p>To cut, shape and score materials accurately.</p> <p>To assemble, join and combine material and components accurately.</p> <p>To demonstrate how to measure, cut, shape and join fabric accurately to make a simple product.</p> <p>To join textiles with an appropriate sewing technique.</p> <p>To select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.</p>	<p>To take roughly exact measurements and mark out, to within 1 millimetre.</p> <p>To use materials and components, including construction materials and kits, textiles, and mechanical components.</p> <p>To begin to cut a range of materials with precision and some accuracy.</p> <p>To begin to shape and score materials with precision and some accuracy.</p> <p>To begin to assemble, join and combine materials and components with some accuracy.</p> <p>To demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with some degree of precision to make a product.</p> <p>To join textiles using stitches.</p> <p>To improve the appearance of their product.</p>	<p>To independently take exact measurements and mark out, to within 1 millimetre.</p> <p>To use a full range of materials and components, including construction materials and kits, textiles, and mechanical components.</p> <p>To cut a range of materials with precision and accuracy.</p> <p>To shape and score materials with precision and accuracy.</p> <p>To assemble, join and combine materials and components with accuracy.</p> <p>To demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product.</p> <p>To join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch.</p> <p>To refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.</p>

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Evaluate	<p>To begin to explore and evaluate existing products mainly through simple discussions and comparisons.</p> <p>To start explaining positives and things to improve for existing products.</p> <p>To begin to explore what materials products are made from.</p> <p>To talk about what they are making.</p> <p>To begin to evaluate their products and ideas against their simple design criteria.</p>	<p>To explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations.</p> <p>To explain positives and things to improve for existing products.</p> <p>To explore what materials products are made from.</p> <p>To talk about their design ideas and what they are making.</p> <p>To start to identify strengths and possible changes they might make to refine their existing design.</p> <p>To evaluate their products and ideas against their design criteria.</p> <p>To start to understand that the iterative process sometimes involves repeating different stages of the process.</p>	<p>To explore and evaluate existing products, explaining the purpose of the product.</p> <p>To explore what materials/ingredients products are made from and begin to suggest reasons for this.</p> <p>To begin to consider the design criteria as they make progress and are willing to alter their plans.</p> <p>To evaluate their product against their original design criteria.</p> <p>To begin to evaluate the key events that have helped shape the world.</p>	<p>To explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose.</p> <p>To explore what materials/ingredients products are made from and suggest reasons for this.</p> <p>To consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product.</p> <p>To evaluate their product against their original design criteria.</p> <p>To evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.</p>	<p>To begin complete competitor analysis of other products on the market.</p> <p>To begin to evaluate the quality of design, manufacture and fitness for purpose of products as they design and make.</p> <p>To evaluate their ideas and products against the original design criteria.</p>	<p>To complete detailed competitor analysis of other products on the market.</p> <p>To critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make.</p> <p>To evaluate their ideas and products against the original design criteria, making changes as needed.</p>

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Technical Knowledge	<p>To begin to build simple structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>To talk about the simple working characteristics of materials and components.</p> <p>To start to explore mechanisms, such as levers, sliders and wheels.</p>	<p>To build simple structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>To talk about and start to understand the simple working characteristics of materials and components.</p> <p>To explore and create products using mechanisms, such as levers, sliders and wheels.</p>	<p>To begin to understand that materials have both functional properties and aesthetic qualities.</p> <p>To understand how to strengthen, stiffen and reinforce more complex structures.</p> <p>To begin to understand and demonstrate how mechanical and electrical systems have an input and output process.</p> <p>To attempt to make and represent simple electrical circuits.</p> <p>To explore how mechanical systems such as levers and linkages create movement.</p> <p>To begin to use mechanical systems in their products.</p>	<p>To understand that materials have both functional properties and aesthetic qualities.</p> <p>To apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create products.</p> <p>To understand and demonstrate how mechanical and electrical systems have an input and output process.</p> <p>To make and represent simple electrical circuits, such as a series and parallel, and components to create functional products.</p> <p>To explain how mechanical systems such as levers and linkages create movement.</p> <p>To use mechanical systems in their products.</p>	<p>To understand how to strengthen, stiffen and reinforce more complex structures in order to create products with some useful characteristics.</p> <p>To understand and demonstrate that mechanical and electrical systems have an input, process and output.</p> <p>To explore how mechanical systems, such as cams, create movement and use mechanical systems in their products.</p> <p>To understand computing to program, monitor and control a product.</p>	<p>To apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products.</p> <p>To apply understanding and demonstrate that mechanical and electrical systems have an input, process and output</p> <p>To explain how mechanical systems, such as cams, create movement and use mechanical systems in their products.</p> <p>To apply their understanding of computing to program, monitor and control a product.</p>

See next page for EYFS

Early Years Foundation Stage

	Design	Make	Evaluate	Technical Knowledge
Design and Technology Curriculum	<p>To design Diwa lamps</p> <p>To design our own form of technology (laptop/tablet)</p> <p>To design a superhero character and scene</p> <p>To design an Easter Card featuring key symbols for the faith</p> <p>To construct our own environments for a range of purposes (large bricks for Superhero HQs)</p> <p>To design our own transport using 3D shapes and to design make a vehicle that floats.</p> <p>To make a moving Superhero using split pins.</p>	<p>Clay models</p> <p>Recyclable material models throughout the junk (art/dt area – junk modelling).</p> <p>Vehicles using construction kits, recyclable materials and 3D shapes.</p> <p>Hello Colour Pencil on the iPads.</p>	<p>CLL encouraged throughout and use of evaluative speech, e.g. I could improve . . ., I found . . ., I saw . . ., I liked . . .</p>	<p>Joining skills – use of scissors, glue sticks, pva, Sellotape, split pins and masking tape.</p>
Early Learning Goals	<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. 			
Linked Texts	<p>Supertato, Jennifer Juniper, Easter Story, Demon King (Diwali), Transport (information books)</p>			