

KPS – DT Progression of Skills

	Yr 1/2	Yr 1/2	Yr 3/4	Yr 3/4	Yr 5/6	Yr 5/6
Design	<p>Children are beginning to explore how products have been created.</p> <p>Children can design products that have a clear purpose and an intended user (with support).</p> <p>Children can make simple diagrams to show their design.</p> <p>Children can develop design criteria as part of a group.</p>	<p>Children can explore how products have been created.</p> <p>Children can design products that have a clear purpose and an intended user.</p> <p>Children can use software to design.</p> <p>Children can make diagrams to show their design.</p> <p>Children can develop their own design criteria.</p>	<p>Children can show that their design meets a range of requirements.</p> <p>Children can put together a plan which shows the equipment and tools they need.</p> <p>Children can describe a design using an accurately labelled diagram.</p>	<p>Children can design with purpose by identifying opportunities to design.</p> <p>Children begin to use cross-sectional diagrams to demonstrate their design.</p>	<p>Children can collect information and subsequently come up with a range of ideas.</p> <p>Children can take a user's view into account when designing.</p> <p>Children can produce a detailed step-by-step plan.</p> <p>Children can use cross sectional planning to show their design.</p> <p>Children can produce prototypes to show their ideas.</p>	<p>Children can design with the user in mind, motivated by the service a product will offer (rather than simply for profit).</p> <p>Children can use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p> <p>Children can create innovative designs that improve upon existing products.</p>

<p>Children can cut safely using tools provided.</p> <p>Children are beginning to demonstrate a range of cutting and shaping techniques such as tearing, cutting and folding.</p> <p>Children are beginning to demonstrate a range of joining techniques such as gluing and combining materials to strengthen.</p> <p>Children can colour and decorate textiles using techniques such as dyeing or adding sequins</p> <p>Children are beginning to create products using levers, wheels and winding mechanisms.</p>	<p>Children can cut materials safely using tools provided.</p> <p>Children can measure and mark out to the nearest centimetre.</p> <p>Children can demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling.</p> <p>Children can demonstrate a range of joining techniques such as gluing, hinges, or combining materials to strengthen.</p> <p>Children are beginning to join textiles using running stitch.</p> <p>Children can colour and decorate textiles using a number of techniques such as dyeing, adding sequins or printing.</p> <p>Children can make products, refining the design as their work progresses.</p>	<p>Children can use a range of tools and equipment accurately.</p> <p>Children can measure, mark out, assemble and join materials and components with some accuracy.</p> <p>Children can create products using levers, wheels and winding mechanisms.</p> <p>Children can use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.</p> <p>Children can choose the right materials for making a product according to the properties needed.</p>	<p>Children can cut materials accurately and safely by selecting appropriate tools.</p> <p>Children can measure and mark out to the nearest millimetre.</p> <p>Children can understand the need for a seam allowance.</p> <p>Children can join textiles with appropriate stitching.</p> <p>Children can make products by working efficiently (e.g. by carefully selecting materials).</p>	<p>Children can cut materials more accurately.</p> <p>Children can measure and mark out accurately to the nearest millimetre.</p> <p>Children can ensure their product has a seam allowance.</p> <p>Children can join textiles efficiently using a simple stitch.</p> <p>Children can use a range of tools and equipment expertly.</p>	<p>Children can cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p> <p>Children can create objects that need a seam allowance.</p> <p>Children can join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decorations).</p>
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<p>Evaluate</p>	<p>Children are beginning to explore objects to identify likes and dislikes of the designs.</p> <p>Children are beginning to suggest improvements to existing designs.</p> <p>Children can evaluate their design or product against given design criteria.</p> <p>Children are beginning to show an understanding of how historical events or people have helped shape the technological world today.</p>	<p>Children can explore objects to identify likes and dislikes of the designs.</p> <p>Children can suggest improvements to existing designs.</p> <p>Children can evaluate their design or product against their own design criteria.</p> <p>Children can talk about how historical events or people have helped shape the technological world today.</p>	<p>Children are able to look at products and talk about how they work.</p> <p>Children can practise their evaluation skills by evaluating existing products.</p> <p>Children can evaluate their own products.</p> <p>Children can suggest a change that could be made to improve a product.</p>	<p>Children can disassemble products to understand how they work.</p> <p>Children can refine work and techniques as their work progresses, continually evaluating the product design.</p> <p>Children can improve upon existing designs, giving reasons for choices.</p> <p>Children can identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.</p>	<p>Children can test and evaluate their final product.</p> <p>Children can evaluate the design to suggest improvements, considering the materials and methods that have been used.</p> <p>Children can evaluate the appearance and function against the original criteria.</p> <p>Children can practise their evaluation skills by evaluating existing products against criteria which I have set.</p> <p>Children can explain why their finished product is going to be of good quality.</p> <p>Children can explain how their product will appeal to the audience.</p> <p>Children can think about the functionality of their work.</p>	<p>Children can make products through stages of prototypes, making continual refinements.</p> <p>Children can ensure products have a high-quality finish, using art skills where appropriate.</p> <p>Children can evaluate the design of products to suggest improvements to the user experience.</p> <p>Children can combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p> <p>Children can think about the aesthetic qualities of their work.</p>
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<p>Technical Knowledge</p>	<p>Children are beginning to use their understanding of materials and their properties to strengthen, stiffen or reinforce products.</p> <p>Children are developing an understanding of how to use mechanical systems like gears, pulleys, levers and linkages in their designs and products.</p> <p>Children are developing an understanding of how use simple electrical circuits that include switches and bulbs.</p>	<p>Children use their understanding of materials and their properties to strengthen, stiffen or reinforce products.</p> <p>Children understand and use simple electrical circuits that include switches, bulbs, buzzers, or motors in their products (with support).</p>	<p>Children can choose suitable techniques to construct products.</p> <p>Children can explain how to join things in a different way.</p> <p>Children can think about how to make their product strong.</p> <p>Children can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut-outs).</p> <p>Children understand and use mechanical systems like gears, pulleys, levers and linkages in their designs and products.</p> <p>Children can strengthen materials using suitable techniques.</p> <p>Children can use scientific knowledge of the transferences of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys, and gears).</p>	<p>Children can choose textiles for a purpose.</p> <p>Children can select appropriate joining techniques.</p> <p>Children can devise a template.</p> <p>Children can join textiles of different types in a different way.</p> <p>Children can select the most appropriate techniques to decorate textiles.</p> <p>Children can create series and parallel circuits.</p>	<p>Children can choose appropriate tools to cut and shape and justify choices with their knowledge (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p>Children are beginning to use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles.</p> <p>Children are beginning to create circuits using electronics kits that employ several components (such as LEDs, resistors, transistors, and chips).</p> <p>Children are beginning to develop a range of practical skills to create products (such as cutting, drilling, and screwing, nailing, gluing, filing, and sanding).</p>	<p>Children can show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p>Children can use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles.</p> <p>Children can create circuits using electronics kits that employ several components (such as LEDs, resistors, transistors, and chips).</p> <p>Children are developing a range of practical skills to create products (such as cutting, drilling, and screwing, nailing, gluing, filing, and sanding).</p> <p>Children can convert rotary motion to linear using cams.</p>
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Computing

Children are beginning to develop their knowledge of computing to program, monitor or control their product.

Children use their knowledge of computing to program, monitor or control their product.

Children can model designs using software

Children can control and monitor models using software designed for this purpose.

Children can use software to design and represent product designs.

Children are beginning to use innovative combinations of electronics (or computing) and mechanics in product designs.

Children can write code to control and monitor models or products.

Children can use innovative combinations of electronics (or computing) and mechanics in product designs.

Children can write code to control and monitor models or products.

Cooking and Nutrition	Children are beginning to talk about how to be healthy.	Children can talk about how to be healthy.	Children can choose the right ingredients for a product.	Children can prepare ingredients hygienically using appropriate utensils.	Children understand the importance of correct storage and handling of ingredients.	Children understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).
	Children are beginning to show understanding of a varied diet.	Children can show understanding of a varied diet.	Children can say what to do to be hygienic and safe.	Children can measure ingredients to the nearest gram accurately.	Children are beginning to measure accurately and calculate ratios of ingredients to scale up or down from a recipe.	Children can measure accurately and calculate ratios of ingredients to scale up or down from a recipe.
	Children can show some understanding about where different foods come from.	Children can talk about where different foods come from.	Children can use equipment safely.	Children can follow a recipe.	Children are beginning to demonstrate a range of baking and cooking techniques.	Children can demonstrate a range of baking and cooking techniques.
	Children can cut, peel or grate ingredients safely and hygienically with some support.	Children can cut, peel or grate ingredients safely and hygienically.	Children can ensure that their product looks aesthetically appealing.	Children can assemble or cook ingredients (controlling the temperature of the oven or hob if cooking).	Children are beginning to create and refine recipes, including ingredients, methods, cooking times and temperatures.	Children can create and refine recipes, including ingredients, methods, cooking times and temperatures.
	Children are beginning to measure or weigh using measuring cups or electronic scales.	Children can measure or weigh using measuring cups or electronic scales.	Children can describe how their combined ingredients come together.			
	Children are beginning to assemble or cook ingredients.	Children can assemble or cook ingredients.				
	Children can show some understanding of safety when cooking ingredients.	Children can show understanding of safety when cooking ingredients.				