

## Subject overview and Knowledge and Skills Progression- DT

DT Pre Requisites:

**Designing:** use own ideas to design something and describe how their own idea works; design a product which moves; explain to someone else how they want to make their product and make a simple plan before making; thinking of an idea and plan what to do next; explain why they have chosen specific textiles.

**Making:** use own ideas to make something; make a product which moves; choose appropriate resources and tools; choose tools and materials and explain why they have chosen them; join materials and components in different ways; measure materials to use in a model or structure.

**Evaluating:** describe how something works; explain what works well and not so well in the model they have made; explain what went well with their work.

**Technical Knowledge:** make their own model stronger; make a model stronger and more stable; use wheels and axles, when appropriate to do so.

**Food Technology:** cut food safely; weigh ingredients to use in a recipe; describe the ingredients used when making a dish or cake.

		AUTUMN		Dragon's Den	SPRING		SUMMER	
Year 3	Designing	<u>2D to 3D textiles</u> *I can choose a textile for both its stability and appearance.		<u>Food</u> *I can design a product and make sure that it looks attractive.				<u>Structures/Mechanisms</u> *I can prove that my design meets some set criteria. *I can make a product, which uses both electrical and mechanical components.
	Making	*I can select the most appropriate tools and techniques for a given task. *I can work accurately to measure, make cuts and make holes.		*I can follow a step-by-step plan, choosing the right equipment and materials.				*I can build structures, exploring how they can be made stronger, stiffer and more stable. (Y2 20/21)  *I can explore and use mechanisms, in their products. (Y2 20/21)
	Evaluating	*I can explain how to improve a finished model.						* I know why a model has, or has not, been successful.
	Technical Knowledge			* I can use a simple IT program within the design.				* I know how to strengthen a product by stiffening a given part of the structure.
	Food Technology			*I can describe how food ingredients come together. *I can weigh out ingredients and follow a given recipe to create a dish. *I know when food is ready for harvesting.				

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Year 4	Designing			<p style="text-align: center;"><u>Bath bombs</u></p> <ul style="list-style-type: none"> <li>*I can present a product in an interesting and appealing way.</li> <li>*I can communicate ideas in a range of ways, including by sketches and drawings which are annotated.</li> </ul> <p style="text-align: center;"><u>2D to 3D textiles</u></p> <ul style="list-style-type: none"> <li>*I can choose a textile for both its stability and appearance. (Y3 20/21)</li> </ul>	<p style="text-align: center;"><u>Simple circuits</u></p> <ul style="list-style-type: none"> <li>*I can use ideas from other people when I am designing.</li> <li>*I can produce a plan and explain it.</li> </ul>	<p style="text-align: center;"><u>Healthy and varied diet</u></p> <ul style="list-style-type: none"> <li>*I can preserve and adapt my work when my original ideas do not work.</li> </ul>		
	Making			<ul style="list-style-type: none"> <li>*I can measure accurately.</li> <li>*I can select the most appropriate tools and techniques for a given task. (Y3 20/21)</li> <li>*I can work accurately to measure, make cuts and make holes. (Y3 20/21)</li> </ul>	<ul style="list-style-type: none"> <li>*I know which material is likely to give the best outcome.</li> </ul>	<ul style="list-style-type: none"> <li>*I know which tools to use for a particular task and show knowledge of handling the tool.</li> </ul>		
	Evaluating			<ul style="list-style-type: none"> <li>*I can evaluate products for both their purpose and appearance.</li> <li>*I can explain how I have improved my original design.</li> </ul>	<ul style="list-style-type: none"> <li>*I can evaluate and suggest improvements for my designs.</li> </ul>	<ul style="list-style-type: none"> <li>*I can present a product in an interesting way.</li> </ul>		
	Technical Knowledge			<ul style="list-style-type: none"> <li>*I can use IT, where appropriate, to add to the quality of the product.</li> </ul>	<ul style="list-style-type: none"> <li>*I can link scientific knowledge by using lights, switches or buzzers.</li> <li>*I can use electrical systems to enhance the quality of the product.</li> </ul>			
	Food Technology					<ul style="list-style-type: none"> <li>*I know how to be both hygienic and safe when using food.</li> <li>*I can bring a creative element to the food product being designed.</li> </ul>		

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Year 5	Designing		<u>Mars Rover</u> *I can design a product that requires pulleys or gears.	<u>Food</u> *I can explain how to product will appeal to a specific audience. *I can use market research to inform my plans and ideas.	<u>Long Ships</u> *I can produce a detailed, step by step plan.	<u>Food</u> *I can come up with a range of ideas after collecting information from different sources.		
	Making		*I can make a prototype before making a final version. *I can make a product that relies on pulleys or gears.	*I can use a range of tools and equipment competently.	*I know which tool to use for a specific practical task.			
	Evaluating			*I can evaluate appearance and function against original criteria.	*I can suggest alternative plans; outlining the positive features and drawbacks.	*I know how to test and evaluate designed products.		
	Technical Knowledge		* I can link scientific knowledge to design by using pulleys or gears.	*I can use more complex IT programs to enhance the quality of the product produced.	*I can use knowledge to improve a made product by strengthening, stiffening or reinforcing.			
	Food Technology			*I show that I can be both hygienic and safe in the kitchen.		* I know how to prepare a meal by collecting the ingredients in the first place. * I know which season various foods are available for harvesting.		



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Year 6	Designing		<u>Electrical Systems</u> •I can follow and refine my plans. •I show that I can test and evaluate my products.	<u>Food</u> •I can justify my plans in a convincing way. •I can show that I consider culture and society in my plans and designs.				
	Making		•I know how to use any tool correctly and safely. •I know what each tool is used for.	•I can explain why a specific tool is best for a specific action.				
	Evaluating		•I can evaluate my product against clear criteria.	•I can explain how products should be stored and give reasons.				
	Technical Knowledge		•I can use electrical systems correctly and accurately to enhance a given product.	•I know which IT product would further enhance a specific product.				
	Food Technology			•I can explain how food ingredients should be stored and give reasons. •I can work within a budget to create a meal. •I understand the difference between a sweet and savoury dish.				