

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Beyond Primary Expectations
Design	<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Use pictures and words to convey what they want to make. Begin to use software to represent 2D designs? 		<ul style="list-style-type: none"> Investigate existing products, including drawing them to analyse and understand how they are made. Plan a sequence of actions to make a product Generate designs with annotated sketches and computer-aided design (CAD) where appropriate. Develop more than one design 		<ul style="list-style-type: none"> Undertake research to inform design process. This may include surveys and interviews. Use prototypes, cross-sectional diagrams, exploded diagrams and CAD software to represent designs. 		<ul style="list-style-type: none"> Communicate ideas and designs skilfully and accurately in 2D and 3D, using a variety of techniques, including computing.
Make	<ul style="list-style-type: none"> Explain what they are making and which materials they are using. Make products, using a range of tools to cut, shape, join and finish 		<ul style="list-style-type: none"> Develop prototypes. Refine work and techniques as work progresses, continually evaluating the product design. 		<ul style="list-style-type: none"> Ensure products have a high-quality finish, using art skills where appropriate. Develop thoughtful prototypes that can be used to inform and refine a product and make it more successful through careful evaluation. 		
Evaluate	<ul style="list-style-type: none"> Talk about how closely their finished product meets their design criteria. Say what they like and don't like about their product and explain why 		<ul style="list-style-type: none"> Identify strengths and weaknesses of their design ideas Talk about how closely their finished product meets their design criteria and meets the need of the user. 		<ul style="list-style-type: none"> Consider the views of others when evaluating their own work Justify their decisions about materials and methods of construction. 		

					<ul style="list-style-type: none"> • Make suggestions on how their design/product could be improved. 		
<p>Cooking and nutrition</p>	<ul style="list-style-type: none"> • Understand where food comes from. • Group familiar food products e.g. fruit and vegetables. • Cut ingredients safely. • Prepare simple dishes-safely and hygienically-without using a heat source. 	<ul style="list-style-type: none"> • Group foods into the five groups in The Eatwell Plate. • Cut, grate or peel ingredients safely. • Prepare simple dishes-safely and hygienically-without using a heat source. • Measure or weigh using cups or electronic scales. 	<ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • Know that a healthy diet is made up from a variety of different food and drink, as depicted in The Eatwell Plate. • Measure and weigh ingredients appropriately. • Follow a recipe. 	<ul style="list-style-type: none"> • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Know that a healthy diet can be adapted depending on a person's lifestyle. • Measure ingredients using scales. • Prepare ingredients hygienically and using the appropriate utensils by following a recipe. 	<ul style="list-style-type: none"> • Assemble or cook ingredients, controlling the temperature of the oven or hob if cooking. • Measure accurately using different equipment. • Create recipes, including ingredients, methods, cooking times and temperatures. • Understand the importance of correct storage and handling of ingredients. 	<ul style="list-style-type: none"> • Combine ingredients appropriately e.g. beating or rubbing. • Measure ingredients to the nearest gram and millilitre and calculate ratios of ingredients to scale up or down from a recipe. • Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. • Create and refine recipes, including ingredients, methods, cooking times 	<ul style="list-style-type: none"> • Understand the importance of nutrition, a balanced diet and about the characteristics of a broad range of ingredients in choosing and preparing food.

						and temperatures.	
Construction, mechanics and electronics	<ul style="list-style-type: none"> • Mark out materials to be cut using a template. • Attach wheels to chassis using an axle. • With support cut strip wood/dowel using a hacksaw. • Make vehicles with construction kits which contain free running wheels. 	<ul style="list-style-type: none"> • Use a range of materials to create models with wheels and axles e.g. tubes, dowel and cotton reels. • Use materials to practise drilling, screwing, nailing and gluing to strengthen products. 	<ul style="list-style-type: none"> • Create series circuits. • Strengthen frames using diagonal struts. • Begin to use mechanical systems in their products e.g. gears, pulleys and levers. 	<ul style="list-style-type: none"> • Create series and parallel circuits. • Investigate how to make structures more stable e.g by widening the base. • Understand and use mechanical structures in their products e.g. gears, pulleys, levers and gears. 	<ul style="list-style-type: none"> • Control a model using an ICT control model. • Use a glue gun with close supervision. • Join materials using appropriate methods. • Use a hand drill to drill tight and loose fit holes. 	<ul style="list-style-type: none"> • Create circuits that employ a number of components (such as LEDs, resistors and transistors). • Cut wood accurately to 1mm. Build frameworks using a range of materials e.g. wood, card and corrugated plastic. • Use a cam to make an up and down mechanism 	<ul style="list-style-type: none"> • Develop sophisticated practical skills and carry out diagnostic, repair and maintenance tasks in a range of contexts. • Develop well-conceived and well-executed practical solutions. • Increase skills, knowledge and competence in using materials, machinery, technique and processes.
Materials	<ul style="list-style-type: none"> • Fold, tear and cut paper or card. • Investigate strengthening sheet materials. • Roll paper to create tubes. • Demonstrate a range of 	<ul style="list-style-type: none"> • Demonstrate a range of joining techniques such as gluing, taping or creating hinges. • Cut materials safely using 	<ul style="list-style-type: none"> • Measure and mark out accurately. • Cut materials accurately and safely by selecting appropriate tools. • Cut slots. 	<ul style="list-style-type: none"> • Measure and mark out to the nearest mm. Use and explore complex popups. • Cut slots and internal shapes. • Create nets. 	<ul style="list-style-type: none"> • Cut materials with precision. • Cut accurately and safely to a marked line. • Join/combine materials with temporary, fixed or moving joints. 	<ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood). • Show an understanding of the qualities of materials to 	

	<p>joining techniques such as gluing or taping.</p> <ul style="list-style-type: none"> • Measure and mark out lines. 	<p>tools provided.</p> <ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling. • Use simple pop-ups. 		<ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. 		<p>choose appropriate tools to cut and shape.</p>	
<p>Take inspiration from design throughout history</p>	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes. • Explore how products have been created. 	<ul style="list-style-type: none"> • Disassemble products to understand how they work. • Improve on existing designs, giving reasons for choices. • Identify some of the great designers in different areas of study to generate ideas from their designs. 	<ul style="list-style-type: none"> • Use knowledge of inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products to create their own innovative designs. 	<ul style="list-style-type: none"> • Analyse the work of others, including iconic designs to informal work. • Understand developments in D and T and the responsibilities of designers, including environmental responsibilities. 			