

	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. 		
Cooking and nutrition	<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.