



Battling Brook Primary School

Design Technology Skills Progression 2023/2024

To master practical skills						
Area	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Food	Year 1 Crumbles	Year 2 Portable Snack	Year 3 Dips	Year 4 Soup	Year 5 Bread	Year 6 Spaghetti Bolognese
	<ul style="list-style-type: none"> • Cut ingredients safely and hygienically. • Measure or weigh using measuring cups. • Assemble ingredients. 	<ul style="list-style-type: none"> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using cups and measuring scales. • Assemble and cook ingredients. 	<ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils including a juicer. • Measure ingredients to the nearest gram. • Follow a recipe with support. • Assemble ingredients and cook (with support, controlling the temperature of the oven or hob, if cooking) 	<ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils including a blender. • Accurately measure ingredients to the nearest gram. • Follow a recipe independently. • Assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking) 	<ul style="list-style-type: none"> • Understand the importance of correct handling of ingredients • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe with support. • Demonstrate a range of baking techniques such as kneading. • Refine recipes, including ingredients, methods, cooking times and temperatures 	<ul style="list-style-type: none"> • Understand the importance of correct storage of ingredients • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe independently. • Demonstrate a range of cooking techniques such as simmering. • Create and refine recipes, including ingredients, methods, cooking times and temperatures
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Materials	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

	<ul style="list-style-type: none"> • With support, cut materials safely using tools provided. • Measure and mark out to the nearest non-standard measure. • Demonstrate the techniques of cutting and shaping (such as tearing, cutting, folding). • Demonstrate a range of joining techniques (by gluing, taping and combining materials to strengthen) 	<ul style="list-style-type: none"> • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, taping and hinges and combining materials to strengthen) 	<ul style="list-style-type: none"> • Cut materials and safely by selecting appropriate tools. • With support, measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques (such as gluing, taping and paper fasteners). 	<ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • Independently measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts with a saw. • Select appropriate joining techniques (such as gluing, taping, rubber bands and twisting pipe cleaners to join) 	<ul style="list-style-type: none"> • Cut materials with precision and refine the finish using a scissor cut after roughly cutting out a shape. • With support, choose appropriate tools to cut and shape materials based on an understanding of the quality of the material. (e.g.. sharper scissors would be needed for fabric but not paper) 	<p>Cut materials with precision using finishing tools such as sandpaper.</p> <ul style="list-style-type: none"> • Independently, choose appropriate tools to cut and shape materials based on an understanding of the quality of the material. (e.g.. sharper scissors would be needed for fabric but not paper)
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Structures	Year 1 Framed Structures (Chair)	Year 2 Solid Structures (Simple bridge)	Year 3	Year 4 Framed Structures (Truss Bridge)	Year 5 Arched Structures (Building/Shelter)	Year 6 Framed Structures (Tetrahedral Kite)
	Framed Structures To combine materials to make a framed structure . To use materials to strengthen products.	Solid Structures To combine materials to make a solid structure . To use an arch shape to strengthen products.		<ul style="list-style-type: none"> • To use shaped frames (triangular and square) to construct products. • Strengthen materials by adding joining plates and a strut. 	<ul style="list-style-type: none"> • Develop a range of practical skills to create products (such as folding, cutting irregular shapes and gluing together arches using square section wood) 	<ul style="list-style-type: none"> • Develop a range of practical skills to create and strengthen products (such as gluing and combining tetrahedrons)
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Mechanisms	Year 1 Wheel and Axle (Moon Buggy)	Year 2 Sliders (Picture cards)	Year 3 Linked Levers (Folding safety barrier)	Year 4 Pneumatics (Lifting Device)	Year 5	Year 6 Pulleys and Gears (Cable Cars)

	<ul style="list-style-type: none"> • Create products using a wheel mechanism. 	<ul style="list-style-type: none"> • Create products using slider mechanisms. 	<ul style="list-style-type: none"> • To choose appropriate mechanisms for a product (such as moving or fixed pivots in a lever mechanism) 	<ul style="list-style-type: none"> • Use scientific knowledge of a lever mechanism to make a pneumatic or hydraulic system. 		<ul style="list-style-type: none"> • Use knowledge of a pulley system to make a product. • Use combinations of electronics (electric motor) and mechanics in product designs
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Electrics and Computing	Year 1	Year 2	Year 3 Paper Circuits (Light up card)	Year 4	Year 5 Motors (Motorised Car)	Year 6
		<ul style="list-style-type: none"> • Model designs using software. 	<ul style="list-style-type: none"> • Create series and parallel circuits Dips • To use computer programme (e.g. purple mash) to design a net. 		<ul style="list-style-type: none"> • Create circuits using electronics kits that employ a number of components (such as a motor LEDs, a switch). 	
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Design, Make, Evaluate and Improve	<ul style="list-style-type: none"> • Design products that have a clear purpose. • Make products, modifying the design to improve it. 	<ul style="list-style-type: none"> • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses • Use software to design. 	<ul style="list-style-type: none"> • With support, design with purpose by identifying opportunities to design. • Make products with a clear purpose and intended user. • Refine work and techniques as work progresses. • Use software to design and represent product designs. 	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. 	<ul style="list-style-type: none"> • Design and make with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Ensure products have a high-quality finish, using art skills where appropriate. 	<ul style="list-style-type: none"> • Design and make products through stages of prototypes, making continual refinements. • Use prototypes and cross-sectional diagrams to represent designs.
	Milestone 1 KS1		Milestone 2 LKS2		Milestone 3 UKS2	
Take Inspiration from design	Year 1 <ul style="list-style-type: none"> • Explore objects to identify likes and dislikes. • Explore how products have been created. 	Year 2 <ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes. • Suggest improvements to existing designs. • Explore how products have been created and for which audience. 	Year 3 <ul style="list-style-type: none"> • Identify some of the great designers to generate ideas for designs (such as Caroline Haslett, Patrick Hanratty) • Improve upon existing designs, giving ideas for choices. • Explore products to understand how they work 	Year 4 <ul style="list-style-type: none"> • Identify some of the great designers to generate ideas for designs (such as Isambard Kingdom Brunel) • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work 	Year 5 <ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices (such as Norman Foster and Karl Benz) • Create ideas for designs that improve upon existing products. • Discuss existing designs of products and suggest improvements to the user experience. 	Year 6 <ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices (such as Andrew Smith Hallidie and Graham Bell) • Create innovative designs that improve upon existing products. • Evaluate existing designs of products suggest improvements to the user experience.