Design and Technology Progression

Our curriculum for **Design and Technology** aims to ensure that all pupils have the opportunity to develop the creative, technical and practical expertise needed to perform everyday tasks confidently, and to encourage the children to design and make products that solve real and relevant problems using the skills, knowledge and understanding that they have acquired. This is in order to participate successfully in the future in an increasingly technological world.

Also included are Camp Primary and Nursery School drivers: Global and Local Community, Spiritual and Moral Development and Environment. We will focus on using recycled materials and investigating sustainable technology, we will grow and prepare food from our allotments and include cooking practices and dishes from a variety of cultures. These areas will be driving our Design and Technology curriculum. They are embedded throughout our curriculum and are clearly linked in all subjects.

	Drivers	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To design, make, evaluate and improve	Local and Global Include women and black designers in history and today	• Design products that have a clear purpose and an intended user. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs.	•Make products, refining the design as work progresses. •Suggest improvements to existing designs. • Explore how products have been created.	•Design with purpose by identifying opport unities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, evaluating the end product design. • Improve upon existing designs, giving reasons for choices.	•Design with purpose by identifying opport unities to design. • Make products by working efficiently. • Refine work and techniques as work progresses, continually evaluating the product design. •Identify some of the great designers to generate ideas for designs.	• Design with the user in mind, motivated by the service a product will offer. • Make products through stages of prototypes, making continual refinements. • Ensure products have a high quality finish, using art skills where appropriate. • Create innovative	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Use prototypes, cross-sectional diagrams. • Combine/Explore elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Evaluate the design of products to suggest improvements to the user experience

Design and Technology Progression

						designs that improve upon existing products.	
To master practical skills **Food Technology**	Global and Local Environment	• Cut ingredients safely and hygienically. • Assemble or cook ingredients.	• Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales.	• Prepare ingredients hygienically using appropriate utensils. • Measure accurately. • Follow a recipe. • Assemble or cook ingredients	• Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram. • Assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking).	• Understand the importance of correct storage and handling of ingredients. • Demonstrate a range of baking and cooking techniques.	• Measure accurately and calculate ratios of ingredients to scale up or down from recipe. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.

Design and Technology Progression

To master practical skills **Textiles**	Environment Using reusable materials where possible.		• Shape textiles using templates. • Colour and decorate textiles • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques	• Join textiles with appropriate stitching. • Understand the need for a seam allowance. • Select the most appropriate techniques to decorate textiles • Measure and mark out to nearest cm.		• Create objects that employ a seam allowance. • Join textiles with a combination of stitching techniques . • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles. • Measure and mark out to the nearest mm. • Apply appropriate cutting and shaping techniques.	

Design and Technology Progression

To master practical skills **Electrical Systems** (link to Science)					•Create series circuits. •Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).		•Create circuits using electronics kits that employ a number of components with increasing confidence •Create parallel circuits
To master practical skills **Structures**	Environment use sustainable and reusable resources.	• Use materials to make and strengthen products. Cut materials safely using tools provided. •Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).		• Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. • Measure and mark out to nearest cm. • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). • Select appropriate		• Measure and mark out to the nearest mm. • Apply appropriate cutting and shaping techniques. • Develop a range of practical skills to create products (e.g cutting, drilling and screwing, nailing, glueing, filling and sanding).	

Design and Technology Progression

				joining techniques.			
To master practical skills **Mechanisms**	Environment Using reusable materials where possible.	• Create products using sliders and levers. • Cut materials safely using tools provided. •Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).	• Create products using wheels and axles.	• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	• Use scientific knowledge to choose appropriate mechanisms for a product, leverages and linkages	• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	• Convert rotary motion to linear using cams.