



DT CURRICULUM MAP

At SDA Primary School, the curriculum is centred around a two-year rolling programme. Each curriculum topic contains specific knowledge webs for each subject area. Within each web, knowledge categories provide curriculum coverage.

Reception	Joining materials to make story props Using appropriate tools safely to cut, sculpt and mould Food: Salt dough bread					
END POINT Reception	Creating with Materials Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories.					
Key Stage 1	YEAR A			YEAR B		
	Autumn	Spring	Summer	Autumn	Spring	Summer
	Mechanisms Moving sliders Christmas cards	Food & Nutrition Portable snacks	Mechanisms wheels and axles	Frame structures (Sydney Bridge)	Textiles Puppets	Structures stability and strength
Lower Key Stage 2	Structures: Shell Inspiration from the Iron Bridge	Food & Nutrition Soup Inspiration from cultural variations	Mechanisms: Linked levers & Pneumatics Inspiration from ancient mechanisms and moving devices	Electrics: Paper circuits: switches (Christmas cards) Inspiration from moving books	Food & Nutrition Dips, celebrating seasonality Inspiration from NHS Guidance	Computing: APP Control A Frame architecture inspiration for modern and contemporary buildings.
Upper Key Stage 2	Food & Nutrition Baking	Structures: Frame structures CQ-arch & frame	Mechanisms: Cam – linked to Industrialisation	Textiles: stuffed toy-evacuation	Electrics Electronic motors –	Food & Nutrition pulleys & gears

	Milestone 1 - (Years 1&2)	Milestone 2 - (Years 3&4)	Milestone 3 - (Years 5&6)
Master practical skills - This concept involves developing the skills needed to make high quality products (we have highlighted a range of skills but they may be added to or changed).			
Food	<ul style="list-style-type: none">• Cut, peel or grate ingredients safely and hygienically.• Measure or weigh using measuring cups or electronic scales.• Assemble or cook ingredients.	<ul style="list-style-type: none">• Prepare ingredients hygienically using appropriate utensils.• Measure ingredients to the nearest gram accurately.• Follow a recipe.• Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	<ul style="list-style-type: none">• Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).• Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.• Demonstrate a range of baking and cooking techniques.• Create and refine recipes, including ingredients, methods, cooking times and temperatures.



Materials	<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, hinges or combining materials to strengthen). 	<ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • 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. 	<ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).
Textiles	<ul style="list-style-type: none"> • Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing). 	<ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles. 	<ul style="list-style-type: none"> • Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the

			decoration of textiles (such as a soft decoration for comfort on a cushion).
Electricals and Electronics	<input type="checkbox"/> Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	<input type="checkbox"/> Create series and parallel circuits	<input type="checkbox"/> Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
Computing	<input type="checkbox"/> Model designs using software.	<input type="checkbox"/> Control and monitor models using software designed for this purpose.	<input type="checkbox"/> Write code to control and monitor models or products.
Construction	<input type="checkbox"/> Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	<ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. 	<input type="checkbox"/> Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).
Mechanics	<input type="checkbox"/> Create products using levers, wheels and winding mechanisms.	<input type="checkbox"/> Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	<ul style="list-style-type: none"> • Convert rotary motion to linear using cams. • Use innovative combinations of electronics (or computing) and mechanics in product designs.
Design, make, evaluate and improve - This concept involves developing the process of design thinking and seeing design as a process			



	<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"> • 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. • Use software to design and represent product designs. 	<ul style="list-style-type: none"> • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.
Take inspiration from design throughout history - This concept involves appreciating the design process that has influenced the products we use in everyday life.			
	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. 	<ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. 	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products.

Future Learning in KS3:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion]. When designing and making, pupils should be taught to:

Design: use research and exploration, such as the study of different cultures, to identify and understand user needs; identify and solve their own design problems and understand how to reformulate problems given to them; develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations; use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses; develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools

Make: select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture; select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties

Evaluate: analyse the work of past and present professionals and others to develop and broaden their understanding; investigate new and emerging technologies; test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups; understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists

Technical knowledge: understand and use the properties of materials and the performance of structural elements to achieve functioning solutions; understand how more advanced mechanical systems used in their products enable changes in movement and force; understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs]; apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].

Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 3: understand and apply the principles of nutrition and health; cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet; become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]; understand the source, seasonality and characteristics of a broad range of ingredients