DT Progression Document

	Early Years/ Reception	Milestone 1 KS1	Milestone 2 End of lower KS2	Milestone 3 End of upper KS2
Master practical techniques	**Nursery** • Explores how things work • Makes imaginative and complex small worlds with blocks and construction kits • Explores different materials freely to develop ideas about how to use them and what to make • Joins different materials and explores different textures **Reception** • Makes imaginative and complex small worlds with blocks	**Materials** • 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, using hinges, or combining materials to strengthen)	**Materials** • 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 cutouts) • Select appropriate joining techniques	**Materials** • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or using a more precise scissor after roughly cutting) • Show an understanding of the qualities of materials in order to choose appropriate tools to cut and shape (eg the nature of fabric may mean sharper scissors are needed than for paper)
		Structures • Practise drilling, screwing, gluing and nailing materials to make and strengthen products	**Structures** • Choose suitable techniques to construct products or repair them	**Structures** • Develop a range of practical skills to create products (such as cutting, drilling, nailing, screwing, filing and sanding)
		Mechanisms • Create products using levers, wheels and winding mechanisms	**Mechanisms** • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as linked levers or pneumatics)	**Mechanisms** • Use innovative combinations of electronics (or computing) and mechanisms in product design

	and construction kits such as a city and a park • Develops their own ideas and decide which materials to use to express them • Joins different materials and explores different textures	**Food and nutrition** • Cut, peel and grate ingredients safely and hygienically • Measure or weigh using measuring cups or electronic scales • Assemble and cook ingredients	**Food and nutrition** • Prepare ingredients hygienically using appropriate utensils • Measure ingredients accurately to the nearest gram • Follow a recipe • Assemble and cook ingredients	**Food and nutrition** • Understand the importance of correct storage and handling of ingredients Using knowledge of microorganisms) • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe • Demonstrate a range of cooking and baking techniques • Create and refine recipes, including ingredients, methods, cooking times and temperatures
			Electrics and computing • Create products with series and parallel circuits • Control and monitor models using apps designed for this purpose	**Electrics and computing** Create products using electronic kits that employ a number of components (such as LEDs and resistors)
Take inspiration from design		• Explore objects and designs to identify likes and dislikes • Suggest improvements to existing designs • Explore how products have been created	• Identify some of the great designers in all of the areas of study to generate ideas for designs • Improve upon existing designs, giving reasons for choices • Disassemble products to understand how they work	• Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices • Create innovative designs that improve upon existing products • Evaluate the design of products so as to suggest

				improvements to the user experience
Design, make, evaluate and improve		• Design products that have a clear purpose and intended use • Make products, refining the design as work progresses • Use software to design	• 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 apps to design and represent product 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 • Use prototypes, cross-sectional diagrams and computer- aided designs to represent designs