

Design and Technology Design Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structure	<ul style="list-style-type: none"> Learning the importance of a clear design criteria. Including individual preferences and requirements in a design. 	<ul style="list-style-type: none"> Generating and communicating ideas using sketching and modelling. Learning about different types of structures, found in the natural world and in everyday objects. 		<ul style="list-style-type: none"> Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weigh 		<ul style="list-style-type: none"> Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs.
Mechanisms/ Mechanical systems	<ul style="list-style-type: none"> Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. Creating clearly labelled drawings that illustrate movement. 	<ul style="list-style-type: none"> Selecting a suitable linkage system to produce the desired motion. Designing a wheel. 	<ul style="list-style-type: none"> Designing a Christmas card which uses a mixture of structures and mechanisms. Naming each mechanism, input and output accurately. Design a moving Christmas card for a specific audience in accordance with a design criteria. 			<ul style="list-style-type: none"> Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement. Understanding how linkages change the direction of a force. Making things move at the same time. Understanding and drawing cross-sectional diagrams to show the inner-workings of my design.
Textiles	<ul style="list-style-type: none"> Using a template to create a design for a puppet. 		<ul style="list-style-type: none"> Designing and making a template Writing design criteria for a product, articulating decisions made. 			<ul style="list-style-type: none"> Designing a waistcoat in accordance to a specification linked to set of design criteria. Annotating designs, to explain their decisions.
Cooking and nutrition		Designing three wrap ideas based on a food combination which work well together.		<ul style="list-style-type: none"> Designing a biscuit within a given budget, drawing upon previous taste testing judgements. Designing packaging for a biscuit that targets a specific group. 	<ul style="list-style-type: none"> Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. Writing an amended method for a recipe to incorporate the relevant changes to ingredients. 	

					<ul style="list-style-type: none"> • Designing appealing packaging to reflect a recipe. • Researching existing recipes to inform ingredient choices. 	
Digital World			<ul style="list-style-type: none"> • Problem solving by suggesting which features on a Micro:bit might be useful and justifying my ideas. • Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge. • Developing design ideas through annotated sketches to create a product concept. • Developing design criteria to respond to a design brief. 		<ul style="list-style-type: none"> • Researching (books, internet) for a particular (user's) animal's needs. • Developing design criteria based on research. • Generating multiple housing ideas using building bricks. • Understanding what a virtual model is and the pros and cons of traditional and CAD modelling. • Placing and manoeuvring 3D objects, using CAD. • Changing the properties of, or combining one or more 3D objects, using CAD. 	
Electrical systems				Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas.	<ul style="list-style-type: none"> • Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product. • Developing design criteria based on findings from investigating existing products. • Developing design criteria that clarifies the target user. 	