

Design and Technology Making Skills Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structure	<ul style="list-style-type: none"> • Making stable structures from card. • Following instructions to cut and assemble the supporting structure of a windmill. • Making functioning turbines and axles which are assembled into a main supporting structure. • Finding the middle of an object. • Puncturing holes. • Adding weight to structures. • Creating supporting structures. • Cutting evenly and carefully 	<ul style="list-style-type: none"> • Making a structure according to design criteria. • Creating joints and structures from paper/card and tape. • Building a strong and stiff structure by folding paper. 		<ul style="list-style-type: none"> • Creating a range of different shaped frame structures. • Making a variety of free standing frame structures of different shapes and sizes. • Selecting appropriate materials to build a strong structure and cladding. • Reinforcing corners to strengthen a structure. • Creating a design in accordance with a plan. • Learning to create different textural effects with materials 		<ul style="list-style-type: none"> • Building a range of play apparatus structures drawing upon new and prior knowledge of structures. • Measuring, marking and cutting wood to create a range of structures. • Using a range of materials to reinforce and add decoration to structures.
Mechanisms/ Mechanical systems	<p>Adapting mechanisms, when:</p> <ul style="list-style-type: none"> • they do not work as they should. • to fit their vehicle design. • to improve how they work after testing their vehicle. 	<ul style="list-style-type: none"> • Selecting materials according to their characteristics. • Following a design brief. 	<ul style="list-style-type: none"> • Following a design brief to make a pop up Christmas Card, neatly and with focus on accuracy. • Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. • Making mechanisms and/or structures using sliders, pivots and folds to produce movement. • Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. 			<ul style="list-style-type: none"> • Measuring, marking and checking the accuracy of the jelutong and dowel pieces required. • Measuring, marking and cutting components accurately using a ruler and scissors. • Assembling components accurately to make a stable frame. • Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. • Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set.

<h2>Textiles</h2>	<ul style="list-style-type: none"> • Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing steps for construction. 		<ul style="list-style-type: none"> • Making and testing a paper template with accuracy and in keeping with the design criteria. • Measuring, marking and cutting fabric using a paper template. • Selecting a stitch style to join fabric. • Working neatly by sewing small, straight stitches. Incorporating a fastening to a design. 			<ul style="list-style-type: none"> • Using a template when cutting fabric to ensure they achieve the correct shape. • Using pins effectively to secure a template to fabric without creases or bulges. • Marking and cutting fabric accurately, in accordance with their design. • Sewing a strong running stitch, making small, neat stitches and following the edge. • Tying strong knots. • Decorating a waistcoat, attaching features (such as appliqué) using thread. • Finishing the waistcoat with a secure fastening (such as buttons). • Learning different decorative stitches. • Sewing accurately with evenly spaced, neat stitches.
<h2>Cooking and nutrition</h2>		<ul style="list-style-type: none"> • Chopping foods safely to make a wrap. • Constructing a wrap that meets a design brief. • Grating foods to make a wrap. • Snipping smaller foods instead of cutting. 		<ul style="list-style-type: none"> • Following a baking recipe, including the preparation of ingredients. • Cooking safely, following basic hygiene rules. • Adapting a recipe to meet the requirements of a target audience. • Using a cuboid net to create packaging. 	<ul style="list-style-type: none"> • Cutting and preparing vegetables safely. • Using equipment safely, including knives, hot pans and hobs. • Knowing how to avoid cross-contamination. • Following a step by step method carefully to make a recipe. 	
<h2>Digital World</h2>			<ul style="list-style-type: none"> • Following a design brief to make a pop up Christmas Card, neatly and with focus on accuracy. • Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. • Making mechanisms and/or structures using 		<ul style="list-style-type: none"> • Understanding the functional and aesthetic properties of plastics. • Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range. 	

			<p>sliders, pivots and folds to produce movement.</p> <ul style="list-style-type: none"> Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. 			
<p>Electrical systems</p>				<ul style="list-style-type: none"> Making a torch with a working electrical circuit and switch. Using appropriate equipment to cut and attach materials. Assembling a torch according to the design and success criteria. 	<ul style="list-style-type: none"> Altering a product's form and function by tinkering with its configuration. Making a functional series circuit, incorporating a motor. Constructing a product with consideration for the design criteria. Breaking down the construction process into steps so that others can make the product. 	