

## Design and Technology Progression Document

Food and Nutrition							
FS1	FS2	Y1	Y2	Y3	Y4	Y5	Y6
<ul style="list-style-type: none"> <li>• Begin to understand and follow a range of instructions.</li> <li>• Begin to use a range of cooking utensils to prepare food.</li> <li>• Begin to try an increasing range of food, discussing textures, tastes, likes and dislikes.</li> <li>• Begin to discuss foods from around the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and follow a range of instructions.</li> <li>• To use a range of cooking utensils to prepare food.</li> <li>• To try an increasing range of food, discussing textures, tastes, likes and dislikes.</li> <li>• Discuss foods from around the world.</li> <li>• Understand the importance</li> </ul>	<ul style="list-style-type: none"> <li>• Designing smoothie carton packaging by-hand.</li> <li>• Chopping fruit and vegetables safely to make a smoothie.</li> <li>• Juicing fruits safely to make a smoothie.</li> <li>• Tasting and evaluating different food combinations.</li> <li>• Describing appearance, smell and taste.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing three wrap ideas based on a food combination which work well together.</li> <li>• Chopping foods safely to make a wrap.</li> <li>• Constructing a wrap that meets a design brief.</li> <li>• Grating foods to make a wrap.</li> <li>• Snipping smaller foods instead of cutting.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a recipe for a savoury tart.</li> <li>• Following the instructions within a recipe.</li> <li>• Tasting seasonal ingredients.</li> <li>• Selecting seasonal ingredients.</li> <li>• Peeling ingredients safely.</li> <li>• Cutting safely with a vegetable knife.</li> <li>• Establishing and using</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a biscuit, drawing upon previous taste testing judgements.</li> <li>• Following a baking recipe, including the preparation of ingredients.</li> <li>• Cooking safely, following basic hygiene rules.</li> <li>• Adapting a recipe to meet the requirements of a target audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.</li> <li>• Writing an amended method for a recipe to incorporate the relevant changes to ingredients.</li> <li>• Designing appealing</li> </ul>	<ul style="list-style-type: none"> <li>• Writing a recipe, explaining the key steps, method and ingredients.</li> <li>• Including facts and drawings from research undertaken.</li> <li>• Following a recipe, including using the correct quantities of each ingredient.</li> <li>• Adapting a recipe based on research.</li> </ul>

## Design and Technology Progression Document

<ul style="list-style-type: none"> <li>• Begin to understand the importance of a healthy diet.</li> <li>• Begin to know the importance of clean hands when preparing food.</li> </ul>	<p>of a healthy diet.</p> <ul style="list-style-type: none"> <li>• To know the importance of clean hands when preparing food.</li> </ul>	<ul style="list-style-type: none"> <li>• Suggesting information to be included on packaging.</li> <li>• Comparing their own smoothie with someone else's.</li> <li>• To know that a blender is a machine which mixes ingredients together into a smooth liquid.</li> <li>• To know that a fruit has seeds.</li> <li>• To know that fruits grow on trees or vines.</li> <li>• To know that vegetables can grow either above</li> </ul>	<ul style="list-style-type: none"> <li>• Describing the taste, texture and smell of fruit and vegetables.</li> <li>• Taste testing food combinations and final products.</li> <li>• Describing the information that should be included on a label.</li> <li>•Evaluating food by giving a score.</li> <li>• To know that 'diet' means the food and drink that a person or animal usually eats.</li> </ul>	<p>design criteria to help test and review dishes.</p> <ul style="list-style-type: none"> <li>• Describing the benefits of seasonal fruits and vegetables and the impact on the environment.</li> <li>• Suggesting points for improvement when making a seasonal tart.</li> <li>• To know that not all fruits and vegetables can be grown in the UK.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluating a recipe, considering: taste, smell, texture and appearance.</li> <li>• Evaluating and comparing a range of food products.</li> <li>• Suggesting modifications to a recipe (e.g. This biscuit has too many raisins, and it is falling apart, so next time I will use less raisins).</li> <li>• To know that the amount of an ingredient in a recipe is known as the 'quantity.'</li> </ul>	<p>packaging to reflect a recipe.</p> <ul style="list-style-type: none"> <li>• Researching existing recipes to inform ingredient choices.</li> <li>• Cutting and preparing vegetables safely.</li> <li>• Using equipment safely, including knives, hot pans and hobs.</li> <li>• Knowing how to avoid cross-contamination.</li> <li>• Following a step by step method</li> </ul>	<ul style="list-style-type: none"> <li>• Working to a given timescale.</li> <li>• Working safely and hygienically with independence.</li> <li>• Evaluating a recipe, considering: taste, smell, texture and origin of the food group.</li> <li>• Taste testing and scoring final products.</li> <li>• Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own</li> </ul>
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## Design and Technology Progression Document

		<p>or below ground.</p> <ul style="list-style-type: none"> <li>• To know that vegetables is any edible part of a plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).</li> </ul>	<ul style="list-style-type: none"> <li>• To understand what makes a balanced diet.</li> <li>• To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.</li> <li>• To understand that I should eat a range of different foods from each food group, and roughly how much of each food group.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that climate affects food growth.</li> <li>• To know that vegetables and fruit grow in certain seasons.</li> <li>• To know that cooking instructions are known as a 'recipe'.</li> <li>• To know that imported food is food which has been brought into the country.</li> <li>• To know that exported food is food which has been sent to another country..</li> <li>• To know that eating</li> </ul>	<ul style="list-style-type: none"> <li>• To know that safety and hygiene are important when cooking.</li> <li>• To know the following cooking techniques: sieving, measuring, stirring, cutting out and shaping.</li> <li>• To know that products often have a target audience.</li> </ul>	<p>carefully to make a recipe.</p> <ul style="list-style-type: none"> <li>• Identifying the nutritional differences between different products and recipes.</li> <li>• Identifying and describing healthy benefits of food groups.</li> <li>• To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed.</li> <li>• To know that recipes can be adapted to suit</li> </ul>	<p>throughout the planning, preparation and cooking process.</p> <ul style="list-style-type: none"> <li>• Evaluating health and safety in production to minimise cross contamination.</li> <li>• To know that 'flavour' is how a food or drink tastes.</li> <li>• To know that many countries have 'national dishes' which are recipes associated with that country.</li> <li>• To know that 'processed food' means</li> </ul>
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## Design and Technology Progression Document

			<ul style="list-style-type: none"> <li>• To know that 'ingredients' means the items in a mixture or recipe.</li> </ul>	<p>seasonal foods can have a positive impact on the environment.</p> <ul style="list-style-type: none"> <li>• To know that similar coloured fruits and vegetables often have similar nutritional benefits.</li> <li>• To know that the appearance of food is as important as taste.</li> </ul>		<p>nutritional needs and dietary requirements.</p> <ul style="list-style-type: none"> <li>• To know that I can use a nutritional calculator to see how healthy a food option is.</li> <li>• To understand that 'cross-contamination' means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.</li> </ul>	<p>food that has been put through multiple changes in a factory.</p> <ul style="list-style-type: none"> <li>• To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides.</li> <li>• To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).</li> </ul>
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## Design and Technology Progression Document

						<ul style="list-style-type: none"><li>• To know that coloured chopping boards can prevent cross-contamination.</li><li>• To know that nutritional information is found on food packaging.</li><li>• To know that food packaging serves many purposes.</li></ul>	
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## Design and Technology Progression Document

Textiles							
FS1	FS2	Y1	Y2	Y3	Y4	Y5	Y6
<ul style="list-style-type: none"> <li>• Begin to explore different materials.</li> <li>• Begin to understand how to join things together.</li> <li>• begin to use a needle and thread and can confidently follow 'pinch, push, pull' method to sew.</li> <li>• Begin to know how to safely use a range of</li> </ul>	<ul style="list-style-type: none"> <li>• Explore different materials.</li> <li>• Understand how to join things together.</li> <li>• Use a needle and thread and can confidently follow 'pinch, push, pull' method to sew.</li> <li>• To know how to safely use a range of equipment e.g. needles for sewing.</li> </ul>	<ul style="list-style-type: none"> <li>• Discussing what a good design needs.</li> <li>• Designing a simple pattern with paper.</li> <li>• Designing a bookmark.</li> <li>• Choosing from available materials.</li> <li>• Developing fine motor/cutting skills with scissors.</li> <li>• Exploring fine motor/threading and weaving (under, over technique)</li> </ul>	<ul style="list-style-type: none"> <li>• Using a template to create a design for a puppet.</li> <li>• Cutting fabric neatly with scissors.</li> <li>• Using joining methods to decorate a puppet.</li> <li>• Sequencing steps for construction.</li> <li>• Reflecting on a finished product, explaining likes and dislikes.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a pouch.</li> <li>• Selecting and cutting fabrics for sewing.</li> <li>• Decorating a pouch using fabric glue or running stitch.</li> <li>• Threading a needle.</li> <li>• Sewing running stitch, with evenly spaced, neat, even stitches to join fabric.</li> <li>• Neatly pinning and cutting fabric using a</li> </ul>	<ul style="list-style-type: none"> <li>• Designing and making a template from an existing cushion and applying individual design criteria.</li> <li>• Following design criteria to create a cushion.</li> <li>• Selecting and cutting fabrics with ease using fabric scissors.</li> <li>• Threading needles with greater</li> </ul>	<ul style="list-style-type: none"> <li>• Writing design criteria for a product, articulating decisions made.</li> <li>• Designing a personalised book sleeve.</li> <li>• Making and testing a paper template with accuracy and in keeping with the design criteria.</li> <li>• Measuring, marking and cutting fabric</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a stuffed toy, considering the main component shapes required and creating an appropriate template.</li> <li>• Considering the proportions of individual components.</li> <li>• Creating a 3D stuffed toy from a 2D design.</li> <li>• Measuring, marking and cutting fabric</li> </ul>

## Design and Technology Progression Document

<p>equipment e.g. needles for sewing.</p>		<p>with a variety of materials.</p> <ul style="list-style-type: none"> <li>• Using a prepared needle and wool to practise threading.</li> <li>• Reflecting on a finished product and comparing to their design.</li> <li>• To know that a design is a way of planning our idea before we start.</li> <li>• To know that threading is putting one material through an object.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that 'joining technique' means connecting two pieces of material together.</li> <li>• To know that there are various temporary methods of joining fabric by using staples. glue or pins.</li> <li>• To understand that different techniques for joining materials can be used for different purposes.</li> </ul>	<p>template.</p> <ul style="list-style-type: none"> <li>• Evaluating the quality of the stitching on others' work.</li> <li>• Discussing as a class, the success of their stitching against the success criteria.</li> <li>• Identifying aspects of their peers' work that they particularly like and why.</li> <li>• To know that sewing is a method of joining fabric.</li> <li>• To know that different stitches can</li> </ul>	<p>independence</p> <ul style="list-style-type: none"> <li>• Tying knots with greater independence</li> <li>• Sewing cross stitch to join fabric.</li> <li>• Decorating fabric using appliqué.</li> <li>• Completing design ideas with stuffing and sewing the edges.</li> <li>• Evaluating an end product and thinking of other ways in which to create similar items.</li> <li>• To know that applique is a</li> </ul>	<p>using a paper template.</p> <ul style="list-style-type: none"> <li>• Selecting a stitch style to join fabric.</li> <li>• Working neatly by sewing small, straight stitches.</li> <li>• Incorporating a fastening to a design.</li> <li>• Testing and evaluating an end product against the original design criteria.</li> <li>• Deciding how many of the criteria should be met for the product to be considered successful.</li> </ul>	<p>accurately and independently</p> <ul style="list-style-type: none"> <li>• Creating strong and secure blanket stitches when joining fabric.</li> <li>• Threading needles independently</li> <li>• Using appliqué to attach pieces of fabric decoration.</li> <li>• Sewing blanket stitch to join fabric.</li> <li>• Applying blanket stitch so the spaces between the stitches are</li> </ul>
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## Design and Technology Progression Document

			<ul style="list-style-type: none"> <li>• To understand that a template (or fabric pattern) is used to cut out the same shape multiple times.</li> <li>• To know that drawing a design idea is useful to see how an idea will look.</li> </ul>	<p>be used when sewing.</p> <ul style="list-style-type: none"> <li>• To understand the importance of tying a knot after sewing the final stitch.</li> </ul>	<p>way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces.</p> <ul style="list-style-type: none"> <li>• To know that when two edges of fabric have been joined together it is called a seam.</li> <li>• To know that it is important to leave space on the fabric for the seam.</li> <li>• To understand that some products are turned inside</li> </ul>	<ul style="list-style-type: none"> <li>• Suggesting modifications for improvement.</li> <li>• Articulating the advantages and disadvantages of different fastening types.</li> <li>• To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro.</li> <li>• To know that different fastening</li> </ul>	<p>even and regular.</p> <ul style="list-style-type: none"> <li>• Testing and evaluating an end product and giving point for further improvements .</li> <li>• To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric.</li> <li>• To understand that it is easier to finish simpler designs to a high standard.</li> </ul>
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## Design and Technology Progression Document

					<p>out after sewing so the stitching is hidden.</p>	<p>types are useful for different purposes.</p> <ul style="list-style-type: none"> <li>• To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that soft toys are often made by creating appendages separately and then attaching them to the main body.</li> <li>• To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely.</li> </ul>
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## Design and Technology Progression Document

### Structures, Mechanisms and Electrical Systems.

FS1	FS2	Y1	Y2	Y3	Y4	Y5	Y6
<ul style="list-style-type: none"> <li>• Begin to explore simple differences between materials, in order to create models.</li> <li>• Begin to build using a range of construction materials.</li> <li>• Begin to build with a purpose.</li> <li>• Begin to build independently or as part of a team.</li> <li>• Begin to evaluate designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore simple differences between materials, in order to create models.</li> <li>• Build using a range of construction materials.</li> <li>• Build with a purpose.</li> <li>• Build independently or as part of a team.</li> <li>• Evaluate designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Learning the importance of a clear design criteria.</li> <li>• Including individual preferences and requirements in a design.</li> <li>• Making stable structures from card, tape and glue.</li> <li>• Learning how to turn 2D nets into 3D structures.</li> <li>• Following instructions to cut and</li> </ul>	<ul style="list-style-type: none"> <li>• Creating a class design criterion for a moving monster.</li> <li>• Designing a moving monster for a specific audience in accordance with a design criteria.</li> <li>• Making linkages using card for levers and split pins for pivots.</li> <li>• Experimenting</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a shape that reduces air resistance.</li> <li>• Drawing a net to create a structure from.</li> <li>• Choosing shapes that increase or decrease speed as a result of air resistance.</li> <li>• Personalising a design.</li> <li>• Measuring, marking, cutting and assembling</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product.</li> <li>• Developing design criteria based on findings from investigating existing products.</li> <li>• Developing design criteria that clarifies</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a stable structure that is able to support weight.</li> <li>• Creating a frame structure with a focus on triangulation.</li> <li>• Making a range of different shaped beam bridges.</li> <li>• Using triangles to create truss bridges that span a given</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a steady hand game - identifying and naming the components required.</li> <li>• Drawing a design from three different perspectives.</li> <li>• Generating ideas through sketching and discussion.</li> <li>• Modelling ideas through prototypes.</li> <li>• Understanding the purpose of products</li> </ul>

## Design and Technology Progression Document

		<p>assemble the supporting structure of a windmill.</p> <ul style="list-style-type: none"> <li>• Making functioning turbines and axles which are assembled into a main supporting structure.</li> <li>• Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't.</li> <li>• Suggest points for improvements.</li> </ul>	<p>with linkages adjusting the widths, lengths and thicknesses of card used.</p> <ul style="list-style-type: none"> <li>• Cutting and assembling components neatly.</li> <li>• Evaluating own designs against design criteria.</li> <li>• Using peer feedback to modify a final design.</li> <li>• To know that mechanisms are a collection of moving parts that work together as a machine to</li> </ul>	<p>with increasing accuracy.</p> <ul style="list-style-type: none"> <li>• Making a model based on a chosen design.</li> <li>• Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.</li> <li>• To understand that all moving things have kinetic energy.</li> <li>• To understand that kinetic energy is the energy that</li> </ul>	<p>the target user.</p> <ul style="list-style-type: none"> <li>• Altering a product's form and function by tinkering with its configuration.</li> <li>• Making a functional series circuit, incorporating a motor.</li> <li>• Constructing a product with consideration for the design criteria.</li> <li>• Breaking down the construction process into steps so that others can make the product.</li> </ul>	<p>distance and support a load.</p> <ul style="list-style-type: none"> <li>• Building a wooden bridge structure.</li> <li>• Independently measuring and marking wood accurately.</li> <li>• Selecting appropriate tools and equipment for particular tasks.</li> <li>• Using the correct techniques to saws safely.</li> <li>• Identifying where a structure needs reinforcement and using card corners</li> </ul>	<p>(toys), including what is meant by 'fit for purpose' and 'form over function'.</p> <ul style="list-style-type: none"> <li>• Constructing a stable base for a game.</li> <li>• Accurately cutting, folding and assembling a net.</li> <li>• Decorating the base of the game to a high quality finish.</li> <li>• Making and testing a circuit.</li> <li>• Incorporating a circuit into a base.</li> <li>• Testing own and others</li> </ul>
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## Design and Technology Progression Document

		<ul style="list-style-type: none"> <li>• To understand that the shape of materials can be changed to improve the strength and stiffness of structures.</li> <li>• To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses).</li> <li>• To understand that axles are used in structures and mechanisms to make</li> </ul>	<p>produce movement.</p> <ul style="list-style-type: none"> <li>• To know that there is always an input and output in a mechanism.</li> <li>• To know that an input is the energy that is used to start something working.</li> <li>• To know that an output is the movement that happens as a result of the input.</li> <li>• To know that a lever is something that turns on a pivot.</li> <li>• To know that a linkage mechanism is</li> </ul>	<p>something (object/person ) has by being in motion.</p> <ul style="list-style-type: none"> <li>• To know that air resistance is the level of drag on an object as it is forced through the air.</li> <li>• To understand that the shape of a moving object will affect how it moves due to air resistance.</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses.</li> <li>• Determining which parts of a product affect its function and which parts affect its form.</li> <li>• Analysing whether changes in configuration positively or negatively affect an existing product.</li> <li>• Peer evaluating a</li> </ul>	<p>for support.</p> <ul style="list-style-type: none"> <li>• Explaining why selecting appropriate materials is an important part of the design process.</li> <li>• Understanding basic wood functional properties.</li> <li>• Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary.</li> <li>• Suggesting points for improvements</li> </ul>	<p>finished games, identifying what went well and making suggestions for improvement.</p> <ul style="list-style-type: none"> <li>• Gathering images and information about existing children's toys.</li> <li>• Analysing a selection of existing children's toys.</li> <li>• To know that batteries contain acid, which can be dangerous if they leak.</li> <li>• To know the names of the components in a basic series</li> </ul>
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## Design and Technology Progression Document

		<p>parts turn in a circle.</p> <ul style="list-style-type: none"> <li>• To begin to understand that different structures are used for different purposes.</li> <li>• To know that a structure is something that has been made and put together.</li> </ul>	<p>made up of a series of levers.</p>		<p>set of instructions to build a product.</p> <ul style="list-style-type: none"> <li>• To know that series circuits only have one direction for the electricity to flow.</li> <li>• To know when there is a break in a series circuit, all components turn off.</li> <li>• To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin.</li> </ul>	<p>for own bridges and those designed by others.</p> <ul style="list-style-type: none"> <li>• To understand some different ways to reinforce structures.</li> <li>• To understand how triangles can be used to reinforce bridges.</li> <li>• To know that properties are words that describe the form and function of materials.</li> <li>• To understand why material</li> </ul>	<p>circuit, including a buzzer.</p>
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## Design and Technology Progression Document

					<ul style="list-style-type: none"> <li>• To know a motorised product is one which uses a motor to function.</li> </ul>	<p>selection is important based on properties.</p> <ul style="list-style-type: none"> <li>• To understand the material (functional and aesthetic) properties of wood.</li> </ul>	
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