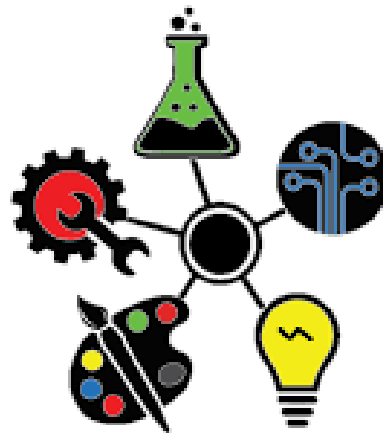


# *Gretton Primary School*

## *DT Curriculum: KAPOW*



## Knowledge and Skills Progression EYFS

	Structures	Food	Textiles
	Junk modelling	Soup	Bookmarks
Skills	<ul style="list-style-type: none"> <li>• Making verbal plans and material choices.</li> <li>• Developing a junk model.</li> <li>• Improving fine motor/scissor skills with a variety of materials.</li> <li>• Joining materials in a variety of ways (temporary and permanent).</li> <li>• Joining different materials together.</li> <li>• Describing their junk model, and how they intend to put it together.</li> <li>• Giving a verbal evaluation of their own and others' junk models with adult support.</li> <li>• Checking to see if their model matches their plan.</li> <li>• Considering what they would do differently if they were to do it again.</li> <li>• Describing their favourite and least favourite part of their model.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a soup recipe as a class.</li> <li>• Designing soup packaging.</li> <li>• Chopping plasticine safely.</li> <li>• Chopping vegetables with support.</li> <li>• Tasting the soup and giving opinions.</li> <li>• Describing some of the following when tasting food: look, feel, smell and taste.</li> <li>• Choosing their favourite packaging design and explaining why.</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) with a variety of materials.</li> <li>• Using a prepared needle and wool to practise threading.</li> <li>• Reflecting on a finished product and comparing to their design.</li> </ul>
Knowledge	<ul style="list-style-type: none"> <li>• To know there are a range to different materials that can be used to make a model and that they are all slightly different.</li> <li>• Making simple suggestions to fix their junk model</li> </ul>	<ul style="list-style-type: none"> <li>• To know that soup is ingredients (usually vegetables and liquid) blended together.</li> <li>• To know that vegetables are grown.</li> <li>• To recognise and name some common vegetables.</li> <li>• To know that different vegetables taste different.</li> <li>• To know that eating vegetables is good for us.</li> <li>• To discuss why different packages might be used for different foods.</li> </ul>	<ul style="list-style-type: none"> <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>

## Knowledge and Skills Progression Year 1/2

		Cycle A	Cycle B
<b>Structures</b>	<b>Skills</b>	<b>Not taught in this cycle</b>	<b>Constructing a windmill</b>
	<b>Knowledge</b>		<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 assemble the supporting structure of a windmill.</li> <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> <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 parts turn in a circle.</li> <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> <li>• To know that a client is the person I am designing for.</li> <li>• To know that design criteria is a list of points to ensure the product meets the clients needs and wants.</li> <li>• To know that a windmill harnesses the power of wind for a purpose like grinding grain, pumping water or generating electricity.</li> <li>• To know that windmill turbines use wind to turn and make the machines inside work.</li> <li>• To know that a windmill is a structure with sails that are moved by the wind.</li> <li>• To know the three main parts of a windmill are the turbine, axle and structure.</li> </ul>

		<b>Cycle A</b>	<b>Cycle B</b>
<b>Mechanisms/Mechanical Systems</b>	<b>Skills</b>	<p style="text-align: center;"><b>Making a moving monster</b></p> <ul style="list-style-type: none"> <li>• Selecting a suitable linkage system to produce the desired motion.</li> <li>• Designing a wheel.</li> <li>• Creating a class design criteria for a moving monster.</li> <li>• Designing a moving monster for a specific audience in accordance with a design criteria.</li> <li>• Selecting materials according to their characteristics.</li> <li>• Following a design brief.</li> <li>• Evaluating different designs.</li> <li>• Testing and adapting a design.</li> </ul>	<p style="text-align: center;"><b>Wheels and Axels</b></p> <ul style="list-style-type: none"> <li>• Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move.</li> <li>• Creating clearly labelled drawings that illustrate movement.</li> <li>• Adapting mechanisms, when:               <ul style="list-style-type: none"> <li>● they do not work as they should.</li> <li>● to fit their vehicle design.</li> <li>● to improve how they work after testing their vehicle.</li> </ul> </li> <li>• Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move.</li> </ul>
	<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• To know that different materials have different properties and are therefore suitable for different uses.</li> <li>• To know that it is important to test my design as I go along so that I can solve any problems that may occur</li> </ul>	<ul style="list-style-type: none"> <li>• To know that wheels need to be round to rotate and move.</li> <li>• To understand that for a wheel to move it must be attached to a rotating axle.</li> <li>• To know that an axle moves within an axle holder which is fixed to the vehicle or toy.</li> <li>• To know that the frame of a vehicle (chassis) needs to be balanced.</li> <li>• To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles.</li> </ul>

		<b>Cycle A</b>	<b>Cycle B</b>
		<b>Fruit and Vegetables</b>	<b>A balanced diet</b>
<b>Cooking and Nutrition</b>	<b>Skills</b>	<ul style="list-style-type: none"> <li>• Designing smoothie carton packaging by-hand or on ICT software</li> <li>• Chopping fruit and vegetables safely to make a smoothie.</li> <li>• Identifying if a food is a fruit or a vegetable.</li> <li>• Learning where and how fruits and vegetables grow.</li> <li>• Tasting and evaluating different food combinations.</li> <li>• Describing appearance, smell and taste.</li> <li>• Suggesting information to be included on packaging.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a healthy wrap based on a food combination which works well together.</li> <li>• Slicing food safely using the bridge or claw grip.</li> <li>• Constructing a wrap that meets a design brief.</li> <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 which grip was most effective.</li> </ul>
	<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Understanding the difference between fruits and vegetables.</li> <li>• To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber).</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 and a vegetable does not.</li> <li>• To know that fruits grow on trees or vines.</li> <li>• To know that vegetables can grow either above or below ground.</li> <li>• To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).</li> </ul>	<ul style="list-style-type: none"> <li>• To know that 'diet' means the food and drink that a person or animal usually eats.</li> <li>• To understand what makes a balanced diet.</li> <li>• To know where to find the nutritional information on packaging.</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> <li>• To know that nutrients are substances in food that all living things need to make energy, grow and develop.</li> <li>• To know that 'ingredients' means the items in a mixture or recipe.</li> <li>• To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy.</li> <li>• To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.</li> </ul>

		Cycle A	Cycle B
		<b>Puppets</b>	<b>Not taught in this cycle</b>
<b>Textiles</b>	<b>Skills</b>	<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 the steps taken during construction.</li> <li>• Reflecting on a finished product, explaining likes and dislikes.</li> </ul>	
	<b>Knowledge</b>	<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> <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>	

## Knowledge and Skills Progression Year 3/4

		Cycle A	Cycle B
<b>Structures</b>	<b>Skills</b>	<p style="text-align: center;"><b>Constructing a castle</b></p> <ul style="list-style-type: none"> <li>• Designing a castle with key features to appeal to a specific person/purpose.</li> <li>• Drawing and labelling a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials needed and colours.</li> <li>• Designing and/or decorating a castle tower on CAD software.</li> <li>• Constructing a range of 3D geometric shapes using nets .</li> <li>• Creating special features for individual designs.</li> <li>• Making facades from a range of recycled materials.</li> <li>• Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design.</li> <li>• Suggesting points for modification of the individual designs.</li> </ul>	<b>Not taught in this cycle</b>
	<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• To understand that wide and flat based objects are more stable.</li> <li>• To understand the importance of strength and stiffness in structures.</li> <li>• To know the following features of a castle: flags, towers, battlements, turrets, curtain walls, moat, drawbridge and gatehouse - and their purpose.</li> <li>• To know that a façade is the front of a structure.</li> <li>• To understand that a castle needed to be strong and stable to withstand enemy attack.</li> <li>• To know that a paper net is a flat 2D shape that can become a 3D shape once assembled.</li> <li>• To know that a design specification is a list of success criteria for a product.</li> </ul>	

		<b>Cycle A</b>	<b>Cycle B</b>
<b>Mechanisms/Mechanical Systems</b>	<b>Skills</b>	<p style="text-align: center;"><b>Making a Slingshot Car</b></p> <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 with increasing accuracy.</li> <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> </ul>	<p style="text-align: center;"><b>Pneumatic Toys</b></p> <ul style="list-style-type: none"> <li>• Designing a toy which uses a pneumatic system.</li> <li>• Developing design criteria from a design brief.</li> <li>• Generating ideas using thumbnail sketches and exploded diagrams.</li> <li>• Learning that different types of drawings are used in design to explain ideas clearly.</li> <li>• Creating a pneumatic system to create a desired motion.</li> <li>• Building secure housing for a pneumatic system.</li> <li>• Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy.</li> <li>• Selecting materials due to their functional and aesthetic characteristics.</li> <li>• Manipulating materials to create different effects by cutting, creasing, folding and weaving.</li> <li>• Using the views of others to improve designs.</li> <li>• Testing and modifying the outcome, suggesting improvements.</li> <li>• Understanding the purpose of exploded-diagrams through the eyes of a designer and their client.</li> </ul>
	<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• To understand that all moving things have kinetic energy.</li> <li>• To understand that kinetic energy is the energy that something (object/person) has by being in motion.</li> <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> <li>• To understand that products change and evolve over time.</li> <li>• To know that aesthetics means how an object or product looks in design and technology.</li> <li>• To know that a template is a stencil you can use to help you draw the same shape accurately.</li> <li>• To know that a birds-eye view means a view from a high angle (as if a bird in flight).</li> <li>• To know that graphics are images which are designed to explain or advertise something.</li> <li>• To know that it is important to assess and evaluate design ideas and models against a list of design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• To understand how pneumatic systems work.</li> <li>• To understand that pneumatic systems can be used as part of a mechanism.</li> <li>• To know that pneumatic systems operate by drawing in, releasing and compressing air.</li> <li>• To understand how sketches, drawings and diagrams can be used to communicate design ideas.</li> <li>• To know that exploded-diagrams are used to show how different parts of a product fit together.</li> <li>• To know that thumbnail sketches are small drawings to get ideas down on paper quickly.</li> </ul>



		Cycle A	Cycle B
Cooking and Nutrition	Skills	<p style="text-align: center;"><b>Not taught in this cycle</b></p>	<p style="text-align: center;"><b>Eating Seasonally</b></p> <ul style="list-style-type: none"> <li>• Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish.</li> <li>• Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination.</li> <li>• Following the instructions within a recipe.</li> <li>• Establishing and using design criteria to help test and review dishes. • 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> </ul>
	Knowledge		<ul style="list-style-type: none"> <li>• To know that not all fruits and vegetables can be grown in the UK.</li> <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 understand that imported foods travel from far away and this can negatively impact the environment.</li> <li>• To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre.</li> <li>• To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health.</li> <li>• To know safety rules for using, storing and cleaning a knife safely.</li> <li>• To know that similar coloured fruits and vegetables often have similar nutritional benefits.</li> </ul>

		Cycle A	Cycle B
		Cross Stitch and Applique Cushions	
Textiles	Skills	<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 or Egyptian collar.</li> <li>• Selecting and cutting fabrics with ease using fabric scissors.</li> <li>• Threading needles with greater independence.</li> <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 (Cushions)</li> <li>• Evaluating an end product and thinking of other ways in which to create similar items.</li> </ul>	<b>Not taught in this cycle</b>
	Knowledge	<ul style="list-style-type: none"> <li>•To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces.</li> <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 out after sewing so the stitching is hidden.</li> </ul>	

		Cycle A	Cycle B
Electrical Systems	Skills	Not taught in this cycle	<b>Torches</b> <ul style="list-style-type: none"> <li>• Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas.</li> <li>• Making a torch with a working electrical circuit and switch.</li> <li>• Using appropriate equipment to cut and attach materials.</li> <li>• Assembling a torch according to the design and success criteria.</li> <li>• Evaluating electrical products.</li> <li>• Testing and evaluating the success of a final product.</li> </ul>
	Knowledge		<ul style="list-style-type: none"> <li>• To understand that electrical conductors are materials which electricity can pass through.</li> <li>• To understand that electrical insulators are materials which electricity cannot pass through.</li> <li>• To know that a battery contains stored electricity that can be used to power products.</li> <li>• To know that an electrical circuit must be complete for electricity to flow.</li> <li>• To know that a switch can be used to complete and break an electrical circuit.</li> <li>• To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens.</li> <li>• To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.</li> </ul>

## Knowledge and Skills Progression Year 5/6

		Cycle A	Cycle B
		<b>Bridges</b>	
<b>Structures</b>	<b>Skills</b>	<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 distance and support a load.</li> <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 for support.</li> <li>• Explaining why selecting appropriating 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 for own bridges and those designed by others.</li> </ul>	<b>Not taught in this cycle</b>
	<b>Knowledge</b>	<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 selection is important based on properties.</li> <li>• To understand the material (functional and aesthetic) properties of wood.</li> <li>• To understand the difference between arch, beam, truss and suspension bridges.</li> <li>• To understand how to carry and use a saw safely.</li> </ul>	

		<b>Cycle A</b>	<b>Cycle B</b>
<b>Mechanisms/Mechanical Systems</b>	<b>Skills</b>	<p style="text-align: center;"><b>Automata Toys</b></p> <ul style="list-style-type: none"> <li>• Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement.</li> <li>• Understanding how linkages change the direction of a force.</li> <li>• Making things move at the same time.</li> <li>• Understanding and drawing cross-sectional diagrams to show the inner-workings of my design.</li> <li>• Measuring, marking and checking the accuracy of the jelutong and dowel pieces required.</li> <li>• Measuring, marking and cutting components accurately using a ruler and scissors. • Assembling components accurately to make a stable frame.</li> <li>• Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles.</li> <li>• Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set.</li> <li>• Evaluating the work of others and receiving feedback on own work.</li> <li>• Applying points of improvement to their toys.</li> <li>• Describing changes they would make/do if they were to do the project again.</li> </ul>	<p style="text-align: center;"><b>Making a pop up book</b></p> <ul style="list-style-type: none"> <li>• Designing a pop-up book which uses a mixture of structures and mechanisms.</li> <li>• Naming each mechanism, input and output accurately.</li> <li>• Storyboarding ideas for a book.</li> <li>• Following a design brief to make a pop up book, neatly and with focus on accuracy.</li> <li>• Making mechanisms and/or structures using sliders, pivots and folds to produce movement.</li> <li>• Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result.</li> <li>• Evaluating the work of others and receiving feedback on own work.</li> <li>• Suggesting points for improvement.</li> </ul>
	<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• To understand that the mechanism in an automata uses a system of cams, axles and followers.</li> <li>• To understand that different shaped cams produce different outputs.</li> <li>• To know that an automata is a hand powered mechanical toy.</li> <li>• To know that a cross-sectional diagram shows the inner workings of a product.</li> <li>• To understand how to use a bench hook and saw safely.</li> <li>• To know that a set square can be used to help mark 90° angles.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that mechanisms control movement.</li> <li>• To understand that mechanisms can be used to change one kind of motion into another.</li> <li>• To understand how to use sliders, pivots and folds to create paper-based mechanisms.</li> <li>• To know that a design brief is a description of what I am going to design and make.</li> <li>• To know that designers often want to hide mechanisms to make a product more aesthetically pleasing.</li> </ul>

		Cycle A	Cycle B
Cooking and Nutrition	Skills	Not taught in this cycle	<p><b>Come dine with me</b></p> <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> <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 throughout the planning, preparation and cooking process.</li> <li>• Evaluating health and safety in production to minimise cross contamination.</li> </ul>
	Knowledge		<ul style="list-style-type: none"> <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 food that has been put through multiple changes in a factory.</li> <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>

		Cycle A	Cycle B
		Stuffed Toys	
Textiles	Skills	<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 accurately and independently .• 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 even and regular.</li> <li>• Testing and evaluating an end product and giving point for further improvements.</li> </ul>	<p style="text-align: center;"><b>Not taught in this cycle</b></p>
	Knowledge	<ul style="list-style-type: none"> <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> <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>	

		Cycle A	Cycle B
Electrical Systems	Skills	Not taught in this cycle	<p><b>Steady hand game</b></p> <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 (toys), including what is meant by 'fit for purpose' and 'form over function'.</li> <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 finished games, identifying what went well and making suggestions for improvement.</li> <li>• Gathering images and information about existing children's toys.</li> <li>• Analysing a selection of existing children's toys</li> </ul>
	Knowledge		<ul style="list-style-type: none"> <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 circuit, including a buzzer.</li> <li>• To know that 'form' means the shape and appearance of an object.</li> <li>• To know the difference between 'form' and 'function'.</li> <li>• To understand that 'fit for purpose' means that a product works how it should and is easy to use.</li> <li>• To know that form over purpose means that a product looks good but does not work very well.</li> <li>• To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind.</li> <li>• To understand the diagram perspectives 'top view', 'side view' and 'back'.</li> </ul>