



C. E. PRIMARY ACADEMY  
(HANDSWORTH)

## **Design and Technology**

## **Progression Document**

## *A spiral curriculum*

The scheme of work has been designed as a spiral curriculum with the following key principles in mind:

- ✓ **Cyclical:** Pupils return to the key areas again and again during their time in primary school.
- ✓ **Increasing depth:** Each time a key area is revisited it is covered with greater complexity.
- ✓ **Prior knowledge:** Upon returning to each key area, prior knowledge is utilised so pupils can build upon previous foundations, rather than starting again.



# How does Kapow Primary's scheme of work align with the National Curriculum?

Our scheme of work fulfils the statutory requirements outlined in the **National Curriculum (2014)**. The National Curriculum Programme of Study for Design and technology aims to ensure that all pupils:

★ develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.

★ build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.

★ critique, evaluate and test their ideas and products and the work of others.

★ understand and apply the principles of nutrition and learn how to cook.

We have identified five key strands which run throughout our scheme of work:

Design

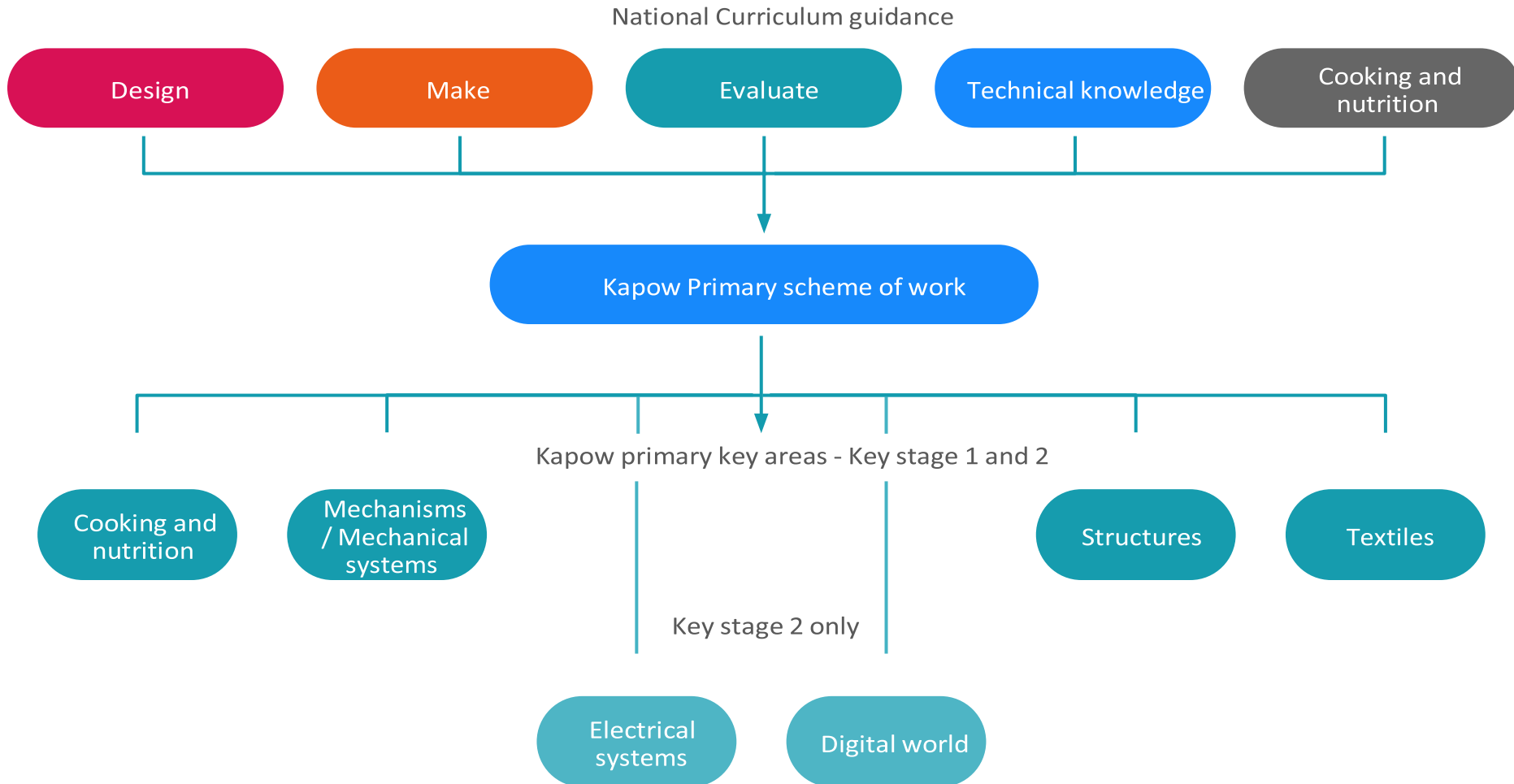
Make

Evaluate

Technical knowledge

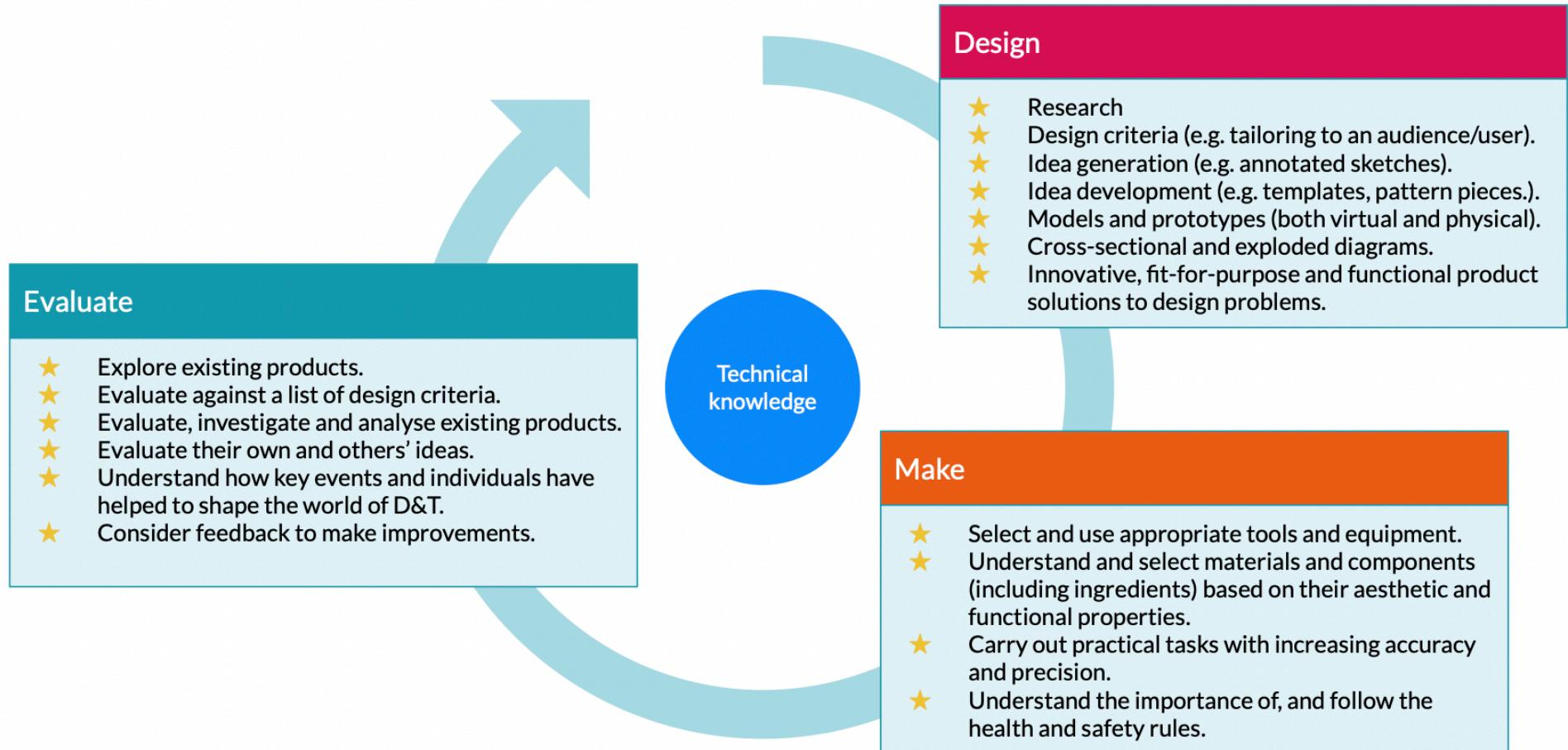
Cooking and nutrition

# How is the Design and technology scheme of work organised?



# The design process

The Design and technology National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each Kapow Primary unit follows these stages, to form a full project. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical and technical understanding, required for each strand.



**Cooking and nutrition\*** has a separate section in the D&T National Curriculum, with additional focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality. Food units still follow the design process summarised above, for example by tasking the pupils to develop recipes for a specific set of requirements (design criteria) and to suggest methods of packaging the food product including the nutritional information.

# How does Kapow Primary help our school to meet statutory guidance for D&T?

Each of our key areas links to the technical knowledge section of the Design and technology National Curriculum *or* reinforces principles learnt through exploring various methods and techniques. From KS1 to KS2, the technical knowledge descriptors build upon prior learning and/or introduce new learning.

	Structures	Mechanisms	Textiles	Electrical systems	Digital world	Cooking and nutrition
KS1	Build structures such as windmills and chairs, exploring how they can be made stronger, stiffer and more stable. Recognise areas of weakness through trial and error.	Introduce and explore simple mechanisms, such as sliders, wheels and axles in their designs. Recognise where mechanisms such as these exist in toys and other familiar products.	Explore different methods of joining fabrics and experiment to determine the pros and cons of each technique.	<p><b>KS2 only*</b> Create functional electrical products that use series circuits, incorporating different components such as bulbs, LEDs, switches, buzzers and motors.</p> <p>Consider how the materials used in these products can:</p>	<p><b>KS2 only*</b> Learn how to develop an electronic product with processing capabilities.</p> <p>Apply Computing principles to program functions within a product including to control and monitor it.</p>	<p>Learn about the basic rules of a healthy and varied diet to create dishes.</p> <p>Understand where food comes from, for example plants and animals.</p>
KS2	Continue to develop KS1 exploration skills, through more complex builds such as pavilion and bridge designs. Understand material selection and learn methods to reinforce structures.	<p><b>Mechanical systems</b></p> <p>Extend pupils understanding of individual mechanisms, to form part of a functional system, for example: Automatas, that use a combination of cams, followers, axles/shaft, cranks and toppers.</p>	<p>Understand that fabric can be layered for effect, recognising the appearance and technique for different stitch and fastening types, including their:</p> <ul style="list-style-type: none"> <li>• Strength.</li> <li>• Appropriate use.</li> <li>• Design.</li> </ul>	<ul style="list-style-type: none"> <li>• Protect the circuitry.</li> <li>• Reflect light.</li> <li>• Conduct electricity.</li> <li>• Insulate.</li> </ul>	<p>Understand how the history and evolution of product design lead to the on-going Digital revolution and the impact it is having in the world today.</p>	<p>Understand and apply the principles of a healthy and varied diet to prepare and cook a variety of dishes using a range of cooking techniques and methods.</p> <p>Understand what is meant by seasonal foods.</p> <p>Know where and how ingredients are sourced.</p>

## Long Term Plan

<b>Year 1</b>	<p><u>Food: Fruit and Vegetables</u></p> <p>Handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish chosen ingredients for a smoothie they will make, with accompanying packaging.</p>	<p><u>Mechanisms: Wheels and Axels</u></p> <p>Learn about the main components of a wheeled vehicle. Develop understanding of how wheels, axles and axle holders work; problem-solve why wheels won't rotate; to design and build their own vehicle designs.</p>	<p><u>Structures: Constructing a Windmill</u></p> <p>Design, decorate and build a windmill for a mouse (client) to live in, develop an understanding of different types of windmill, how they work and their key features. Look at real existing examples and the functions that they carry out.</p>
<b>Year 2</b>	<p><u>Food: A Balanced Diet</u></p> <p>Explore and learn what forms a balanced diet, pupils will taste test ingredient combinations from different food groups that will inform a wrap design of their choice which will include a healthy mix of protein, vegetables and dairy.</p>	<p><u>Mechanisms: Fairground Wheel</u></p> <p>Design and create a functional Ferris wheels, consider how the different components fit together so that the wheels rotate and the structure stands freely. Select appropriate materials and develop their cutting and joining skills.</p>	<p><u>Structures: Baby Bear's Chair</u></p> <p>Using the tale of Goldilocks and the Three Bears as inspiration, pupils help Baby Bear by making him a brand new chair, exploring different shapes and materials. When designing the chair, they consider his needs and what he likes.</p>
<b>Year 3</b>	<p><u>Food: Eating Seasonally</u></p> <p>Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They look at the relationship between the colour of fruits and vegetables and their health benefits by making three dishes.</p>	<p><u>Mechanisms: Pneumatic Toys</u></p> <p>Design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts. Pupil are introduced to thumbnail sketches and exploded diagrams.</p>	<p><u>Structures: Constructing a Castle</u></p> <p>Learning about the features of a castle, pupils design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base.</p>

<p><b>Year 4</b></p>	<p><u>Food: Adapting a Recipe</u></p> <p>Work in groups to adapt a simple biscuit recipe, to create the tastiest biscuit ensuring that their creation comes within the given budget of overheads and costs of ingredients.</p>	<p><u>Electrical Systems: Torches</u></p> <p>Pupils apply their scientific understanding of electrical circuits to create a torch made from recycled and reclaimed materials and objects. They design and evaluate their product against set design criteria.</p>	<p><u>Structures: Pavilions</u></p> <p>Exploring pavilion structures, learning about what they are used for and investigate how to create strong and stable structures before designing and creating their own pavilions, complete with cladding.</p>
<p><b>Year 5</b></p>	<p><u>Mechanical Systems: Making a Pop-up Book</u></p> <p>Create a four-page pop-up story book design, incorporating a range of functional mechanisms that use levers, sliders, layers and spacers to give the illusion of movement through interaction.</p>	<p><u>Textiles: Stuffed Toys</u></p> <p>Create a stuffed toy by applying skills learnt in previous units. Introduce blanket stitch.</p>	<p><u>Structures: Bridges</u></p> <p>After learning about various types of bridges and exploring how the strength of structures can be affected by the shapes used, create their own bridge and test its durability - using woodworking tools and techniques.</p>
<p><b>Year 6</b></p>	<p><u>Mechanical Systems: Automata Toys</u></p> <p>Use woodworking skills, pupils construct an automata; measuring and cutting their materials, assembling the frame, choosing cams and designing the characters that sit on the followers to form an interactive shop display.</p>	<p><u>Electrical Systems: Steady Hand Game</u></p> <p>Design and create a steady hand game, use nets to create the bases and apply knowledge of electrical circuits to build an operational circuit with a buzzer that completes the circuit when the handle makes contact with the wire.</p>	<p><u>Structures: Playgrounds</u></p> <p>Design and create a model for a new playground featuring five apparatus, made from three different structures. Using a footprint as the base, practise visualising objects in plan view and get creative including natural features.</p>



# Progression of Knowledge and Skills: Structures

		Year 1 Constructing a Windmill	Year 1 Baby Bear's Chair
Skills	Design	<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> </ul>	<ul style="list-style-type: none"> <li>• Generating and communicating ideas using sketching and modelling</li> </ul>
	Make	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Making a structure according to design criteria</li> <li>• Creating joints and structures from paper/card and tape</li> <li>• Building a strong and stiff structure by folding paper</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <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>• Testing the strength of own structures</li> <li>• Identifying the weakest part of a structure</li> <li>• Evaluating the strength, stiffness and stability of own structure</li> </ul>
Knowledge	Technical	<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> </ul>	<ul style="list-style-type: none"> <li>• To know that materials can be manipulated to improve strength and stiffness</li> <li>• To know that a structure is something which has been formed or made from parts</li> <li>• To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move</li> <li>• To know that a 'strong' structure is one which does not break easily</li> <li>• To know that a 'stiff' structure or material is one which does not bend easily</li> </ul>
	Additional	<ul style="list-style-type: none"> <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>	N/A

		Year 3 Constructing a Castle	Year 4 Pavilions
Skills	Design	<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> </ul>	<ul style="list-style-type: none"> <li>• Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect</li> <li>• Building frame structures designed to support weight</li> </ul>
	Make	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Creating a range of different shaped frame structures</li> <li>• Making a variety of free standing frame structures of different shapes and sizes</li> <li>• Selecting appropriate materials to build a strong structure and for the cladding</li> <li>• Reinforcing corners to strengthen a structure</li> <li>• Creating a design in accordance with a plan</li> <li>• Learning to create different textural effects with materials</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• Evaluating structures made by the class</li> <li>• Describing what characteristics of a design and construction made it the most effective</li> <li>• Considering effective and ineffective designs</li> </ul>
Knowledge	Technical	<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> </ul>	<ul style="list-style-type: none"> <li>• To understand what a frame structure is</li> <li>• To know that a 'free-standing' structure is one which can stand on its own</li> </ul>
	Additional	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• To know that a pavilions ia a decorative building or structure for leisure activities</li> <li>• To know that cladding can be applied to structures for different effects.</li> <li>• To know that aesthetics are how a product looks</li> <li>• To know that a product's function means its purpose</li> <li>• To understand that the target audience means the person or group of people a product is designed for</li> <li>• To know that architects consider light, shadow and patterns when designing</li> </ul>

		Year 5 Bridges	Year 6 Playgrounds
Skills	Design	<ul style="list-style-type: none"> <li>• Designing a stable structure that is able to support weight</li> <li>• Creating frame structure with focus on triangulation</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs</li> </ul>
	Make	<ul style="list-style-type: none"> <li>• Making a range of different shaped beam bridges</li> <li>• Using triangles to create truss bridges that span a given distance and supports 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> </ul>	<ul style="list-style-type: none"> <li>• Building a range of play apparatus structures drawing upon new and prior knowledge of structures</li> <li>• Measuring, marking and cutting wood to create a range of structures</li> <li>• Using a range of materials to reinforce and add decoration to structures</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• Improving a design plan based on peer evaluation</li> <li>• Testing and adapting a design to improve it as it is developed</li> <li>• Identifying what makes a successful structure</li> </ul>
Knowledge	Technical	<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 their properties</li> <li>• To understand the material (functional and aesthetic) properties of wood</li> </ul>	<ul style="list-style-type: none"> <li>• To know that structures can be strengthened by manipulating materials and shapes</li> </ul>

Additional	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• To understand what a 'footprint plan' is</li> <li>• To understand that in the real world, design, can impact users in positive and negative ways</li> <li>• To know that a prototype is a cheap model to test a design idea</li> </ul>
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## Progression of Knowledge and Skills: Mechanisms/Mechanical Systems

		Year 1 Wheels and Axels	Year 2 Fairground Wheel
Skills	Design	<ul style="list-style-type: none"> <li>• Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move</li> <li>• Creating clearly labelled drawings which illustrate movement</li> </ul>	<ul style="list-style-type: none"> <li>• Selecting a suitable linkage system to produce the desired motions</li> <li>• Designing a wheel Selecting appropriate materials based on their properties</li> </ul>
	Make	<ul style="list-style-type: none"> <li>• Adapting mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Selecting materials according to their characteristics</li> <li>• Following a design brief</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <li>• Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluating different designs</li> <li>• Testing and adapting a design</li> </ul>

Knowledge	Technical	<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> </ul>	<ul style="list-style-type: none"> <li>• To know that different materials have different properties and are therefore suitable for different uses</li> </ul>
	Additional	<ul style="list-style-type: none"> <li>• To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• To know the features of a ferris wheel include the wheel, frame, pods, a base an axle and an axle holder</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>
		Year 3 Pneumatic Toys	Year 5 Pop Up Book
	Design	<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> </ul>	<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> </ul>
	Make	<ul style="list-style-type: none"> <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, weaving</li> </ul>	<ul style="list-style-type: none"> <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> </ul>
	Evaluate	<ul style="list-style-type: none"> <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>	N/A

	Technical	<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> </ul>	<ul style="list-style-type: none"> <li>• To know that mechanisms control movement</li> <li>• To understand that mechanisms that 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> </ul>
	Additional	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <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>

		Year 6 Automata Toys
Skills	Design	<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-working</li> </ul>
	Make	<ul style="list-style-type: none"> <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</li> <li>• 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> </ul>
	Evaluate	<ul style="list-style-type: none"> <li>• Evaluating the work of others and receiving feedback on own work</li> <li>• Applying points of improvements</li> <li>• Describing changes they would make/do if they were to do the project again</li> </ul>

Knowledge	Technical	<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> </ul>
	Additional	<ul style="list-style-type: none"> <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>

## Progression of Knowledge and Skills: Electrical Systems (KS2 Only)

		Year 4 Torches	Year 6 Steady Hand Game
Skills	Design	<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> </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> </ul>
	Make	<ul style="list-style-type: none"> <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> </ul>	<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 Incorporating a circuit into a base</li> </ul>

	Evaluate	<ul style="list-style-type: none"> <li>• Testing and evaluating the success of a final product and taking inspiration from the w</li> </ul>	<ul style="list-style-type: none"> <li>• Testing own and others finished games, identifying what went well and making suggestions for improvement</li> </ul>
Knowledge	Technical	<ul style="list-style-type: none"> <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> </ul>	<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> </ul>
	Additional	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• To understand the diagram perspectives 'top view', 'side view' and 'back'</li> </ul>

## Progression of Knowledge and Skills: Cooking and Nutrition

		Year 1 Fruit and vegetables	Year 2 A Balanced Diet
Skills	Design	<ul style="list-style-type: none"> <li>• Designing smoothie carton packaging by-hand or on ICT software</li> </ul>	<ul style="list-style-type: none"> <li>• Designing a healthy wrap based on a food combination which work well together</li> </ul>



	Make	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Slicing food safely using the bridge or claw grip</li> <li>• Constructing a wrap that meets a design brief</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <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>• 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>
Knowledge	Cooking and Nutrition	<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>

		Year 3 Eating Seasonally	Year 4 Adapting a Recipe
Skills	Design	<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> </ul>	<ul style="list-style-type: none"> <li>• Designing a biscuit within a given budget, drawing upon previous taste testing</li> </ul>

	Make	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Following a baking recipe</li> <li>• Cooking safely, following basic hygiene rules</li> <li>• Adapting a recipe</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <li>• Establishing and using design criteria to help test and review dishes</li> <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> </ul>	<ul style="list-style-type: none"> <li>• Evaluating a recipe, considering: taste, smell, texture and appearance</li> <li>• Describing the impact of the budget on the selection of ingredients</li> <li>• Evaluating and comparing a range of products</li> <li>• Suggesting modifications</li> </ul>
Knowledge	Cooking and Nutrition	<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>	<ul style="list-style-type: none"> <li>• To know that the amount of an ingredient in a recipe is known as the 'quantity'</li> <li>• To know that it is important to use oven gloves when removing hot food from an oven</li> <li>• To know the following cooking techniques: sieving, creaming, rubbing method, cooling</li> <li>• To understand the importance of budgeting while planning ingredients for biscuits</li> </ul>

## Progression of Knowledge and Skills: Textiles

	Year 6 Fastenings: Stuffed Toys
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Skills	Design	<ul style="list-style-type: none"> <li>• Writing design criteria for a product, articulating decisions made</li> <li>• Designing a personalised book sleeve</li> </ul>
	Make	<ul style="list-style-type: none"> <li>• Making and testing a paper template with accuracy and in keeping with the design criteria</li> <li>• Measuring, marking and cutting fabric using a paper template</li> <li>• Selecting a stitch style to join fabric, working neatly sewing small neat stitches</li> <li>• Incorporating fastening to a design</li> </ul>
	Evaluate	<ul style="list-style-type: none"> <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> <li>• Suggesting modifications for improvement</li> <li>• Articulating the advantages and disadvantages of different fastening types</li> </ul>
Knowledge	Technical	<ul style="list-style-type: none"> <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 types are useful for different purposes</li> <li>• To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions</li> </ul>