



	Autumn	Spring	Summer
EY	<p><u>Mechanism: Sliding Santa chimneys</u> Explore a simple paper slider mechanism as part of a practical example and then apply it to create their own sliding Santa chimney picture.</p> <p><u>Cooking and Nutrition: Soup</u> Refresh knowledge of fruits and vegetables and explore what it means to have a healthy balanced diet. Design and prepare the ingredients to create their rainbow salad. Taste and evaluate their rainbow salad.</p>	<p><u>Structures: Boats</u> Explore what is meant by 'waterproof', 'floating' and 'sinking', then experiment and make predictions with various materials to carry out a series of tests. Different features of boats and ships before investigating their shape and structures to build their own.</p>	<p><u>Textiles: ladybird/flower bookmark</u> Threading and weaving techniques using various materials and objects. They look at the history of the bookmark from Victorian times versus modern-day styles. The pupils apply their knowledge and skills to design and sew their own bookmarks.</p> <p><u>Cooking and Nutrition: Summer rainbow salad</u> Refresh knowledge of fruits and vegetables and explore what it means to have a healthy balanced diet. Design and prepare the ingredients to create their rainbow salad. Taste and evaluate their rainbow salad.</p>



	Autumn	Spring	Summer
KS1 Year A	<p><u>Mechanisms: Wheels and axles</u></p> <ul style="list-style-type: none"> •Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move. •Creating clearly labelled drawings that illustrate movement. •Adapting mechanisms. •Testing mechanisms, <p>Linked with history transport unit</p>	<p><u>Textiles: Puppets</u></p> <ul style="list-style-type: none"> •Using a template to create a design for a puppet. •Cutting fabric neatly with scissors. •Using joining methods to decorate a puppet. •Sequencing steps for construction. •Reflecting on a finished product, explaining likes and dislikes. <p>Linked with Easter</p>	<p><u>Structures: Constructing a windmill</u></p> <ul style="list-style-type: none"> •Finding the middle of an object. •Puncturing holes. •Adding weight to a structure. •Creating supporting structures. •Cutting evenly and carefully. •Evaluating and improving a product. <p><u>Cooking and Nutrition: Smoothies</u></p> <ul style="list-style-type: none"> •Designing smoothie carton packaging by hand. •Chopping fruit and vegetables safely to make a smoothie. •Juicing fruits to make a smoothie. •Identifying if a food is a fruit. •Learning where and how fruits and vegetables grow. •Tasting and evaluating different foods. •Describing appearance, smell and taste. •Suggesting information to be included on packaging. <p>Linked with Seasonal Change</p>
KS1 Year B	<p><u>Textiles: Pouches</u></p> <ul style="list-style-type: none"> • Designing a pouch. •Selecting and cutting fabrics for sewing. •Decorating a pouch using fabric glue or running stitch. •Threading a needle. •Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. •Neatly pinning and cutting fabric using a template. •Troubleshooting scenarios posed by teacher. •Evaluating the quality of the stitching on others' work. <p>Linked with Christmas</p>	<p><u>Mechanisms: London Eye</u></p> <ul style="list-style-type: none"> •Using a simple design brief that outlines the intended use, target user, and key features of the product, to create simple design criteria. •Knowing that a design brief helps to decide what to make. •Knowing that design criteria are the steps for making a product successful. •Creating ideas with design criteria in mind. •Referring to specific parts of existing products when generating ideas. •Knowing that the design criteria help when thinking of ideas. <p>Linked with Wonders of the World</p>	<p><u>Structures: Exploring Stability</u></p> <ul style="list-style-type: none"> •Generating and communicating ideas using sketching and modelling. •Learning about different types of structures, found in the natural world and in everyday objects. •Making a structure according to design criteria. •Creating joints and structures from paper/card and tape. •Building a strong and stiff structure by folding paper. •Exploring the features of structures. •Comparing the stability of different shapes. •Testing the strength of their own structures. <p><u>Cooking and Nutrition: Tasty Wraps</u></p> <ul style="list-style-type: none"> •Chopping foods safely to make a wrap. •Grating foods to make a wrap. •Snipping smaller foods instead of cutting. •Spreading soft foods to make a wrap. •Identifying the five food groups. •Learning about a balanced diet. •Tasting and evaluating different food combinations. •Describing appearance, smell and taste.



<p>LKS2 Year A</p>	<p><u>Electrical Systems: Electric - Christmas Card or decoration</u> (electric poster)</p> <ul style="list-style-type: none"> • Carry out research on Electric card or decoration. • Generate a final design for electric card or decoration. • Plan the positioning of the bulb (circuit component) and its purpose. • Mounting the electrical components to improve strength and withstand the weight of the circuit on the rear. • Measuring and marking out using a template or ruler. • Fitting an electrical component (Bulb) • Test that the simple circuit works by adding a battery. • Learning ways to give the final product a high quality finish. • Testing the success of initial ideas against the design criteria and justifying opinions. <p>Linked with Christmas</p>	<p><u>Structures: Earthquake Proof Structure</u> (pavilions)</p> <ul style="list-style-type: none"> • Design a stable structure aesthetically pleasing. • Building frame structures designed to support weight and earth movements • Selecting appropriate materials to build a strong structure • Reinforcing corners to strengthen a structure • To know that a 'free standing' structure is one that can stand on its own. <p>Linked with How can people live in dangerous places?</p>	<p><u>Textiles: Egyptian Collar</u></p> <ul style="list-style-type: none"> • Designing and making a template for an Egyptian collar and applying individual design criteria. • Following their design criteria to create an Egyptian collar.. • Sewing cross stitch to decorate or join fabric. • Decorating fabric using appliqué, beads (or other embellishments), ribbon and pinking scissors. • Evaluating an end product. <p>Linked with 'What do pyramids tell us about Ancient Egypt?'</p> <p><u>Cooking and Nutrition: Eating Seasonally</u></p> <ul style="list-style-type: none"> • Describing how climate affects where foods grow. • Identifying seasonal ingredients from the UK. • Tasting seasonal ingredients. • Describing the texture and flavour of ingredients. • Peeling foods by hand or with a peeler. • Cutting ingredients safely. • Choosing ingredients based on a design brief. • Following the instructions within a recipe. <p>Linked with science – Animals including humans – healthy diet</p>
<p>LKS2 Year B</p>	<p><u>Mechanical Systems: Sling shot car</u></p> <ul style="list-style-type: none"> • Designing a shape that reduces air resistance. • Drawing a net to create a structure from. • Measuring, marking, cutting and assembling with increasing accuracy. • Making a model based on a chosen design. • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. <p>Linked with Science – forces</p>	<p><u>Electrical systems: Torches</u></p> <ul style="list-style-type: none"> • Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. • Making a torch with a working electrical circuit and switch. • Using appropriate equipment to cut and attach materials. • Assembling a torch according to the design and success criteria. • Evaluating electrical products. • Testing and evaluating the success of a final product. <p>Linked with Science – Electricity</p>	<p><u>Digital World: Mindful Minutes Timer</u></p> <ul style="list-style-type: none"> • Writing design criteria for a programmed timer (Micro:bit). • Exploring different mindfulness strategies and using this research to inform my design criteria. • Developing a prototype case for my mindful moment timer. • Using and manipulating shapes and clipart and using computer-aided design (CAD) to produce a logo. • Following a list of design requirements. • Developing a prototype case for my mindful moment timer. • Creating a 3D structure using a net. • Programming a Micro:bit to time a set number of seconds/minutes upon button press. • Show all <p>Linked with Science – Computing</p> <p><u>Cooking and Nutrition: Adapting a recipe</u></p> <ul style="list-style-type: none"> • Evaluating and comparing a range of products. • Following a baking recipe. • Understanding safety and hygiene rules. • Designing a biscuit within a given budget. • Suggesting modifications and adapting a recipe. • Conducting market research. <p>Linked with cultural capital</p>



<p>UKS2 Year A</p>	<p><u>Textiles: Stuffed Toys</u></p> <ul style="list-style-type: none"> • Designing a stuffed toy considering the main component shapes required and creating an appropriate template. • Considering the proportions of individual components. • Creating a 3D stuffed toy from a 2D design. • Measuring, marking and cutting fabric accurately and independently. • Creating strong and secure blanket stitches when joining fabric. • Threading needles independently. • Using appliqué to attach pieces of fabric decoration. • Sewing blanket stitch to join fabric. <p>Linked with Christmas</p>	<p><u>Digital World: Navigating World</u></p> <ul style="list-style-type: none"> • Developing design criteria to fulfil the client's request. • Developing a product idea through annotated sketches. • Placing and manoeuvring 3D objects, using CAD. • Changing the properties of, or combine one or more 3D objects, using CAD. • Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo). • Explaining material choices and why they were chosen as part of a product concept. <p>Linked with Computing</p>	<p><u>Electrical Systems: Steady Hand Game</u></p> <ul style="list-style-type: none"> • Designing a steady hand game, identifying and naming the components required. • Drawing a design from three different perspectives. • Modelling ideas through prototypes. • Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'. • Constructing a stable base for a game. • Accurately cutting, folding and assembling a net. • Decorating the base of the game to a high-quality finish. <p>Linked with maths (NETS), science previous topic on Electricity,</p> <p><u>Cooking and Nutrition: Developing recipe</u></p> <ul style="list-style-type: none"> • Explaining the farm-to-fork process. • Researching existing recipes. • Suggesting alternative ingredients writing an new recipe. • Analysing nutritional content. • Understanding cross-contamination and preparation skills. • Designing a jar label.
<p>UKS2 Year B</p>	<p><u>Mechanical Systems: Automata Moving Toy</u></p> <ul style="list-style-type: none"> • Noticing wider-reaching problems or needs in the community. • Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality. • Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. <p>Linked with Christmas or WWII topic</p>	<p><u>Digital World: Monitoring Devices</u></p> <ul style="list-style-type: none"> • Developing design criteria based on research. • Generating multiple housing ideas using building bricks. • Understanding what a virtual model is and the pros and cons of traditional and CAD modelling. • Placing and manoeuvring 3D objects, using CAD. • Changing the properties of, or combining one or more, 3D objects using CAD. • Understanding the functional and aesthetic properties of plastics. • Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature moves out of a specified range. <p>Linked with Is world trade fair? Science living things and their habitats, computing.</p>	<p><u>Structures: Bridges</u></p> <ul style="list-style-type: none"> • Designing a stable structure that is able to support weight. • Creating a frame structure with focus on triangulation. • Making a range of different shaped beam bridges. • Using triangles to create truss bridges that span a given distance and support a load. • Independently measuring and marking wood accurately. • Selecting appropriate tools and equipment for particular tasks. • Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. <p><u>Cooking and Nutrition: Come Dine with Me</u></p> <ul style="list-style-type: none"> • Writing a menu, planning the key steps, method and ingredients. • Following a recipe, including using the correct quantities of each ingredient. • Adapting a recipe based on research. • Working to a given timescale. • Working safely and hygienically with independence. • Evaluating a recipe, considering: taste, smell, texture and origin of the food group. • Taste testing and scoring final products. <p>Linked with cultural capital</p>



		EYFS	KS1	LKS2	UKS2
Structures	Design	<ul style="list-style-type: none"> • Designing a junk model boat. • Using knowledge from exploration to inform design. 	<ul style="list-style-type: none"> • Learning the importance of a clear design criteria. • Including individual preferences and requirements in a design. • Generating and communicating ideas using sketching and modelling. • Learning about different types of structures, found in the natural world and in everyday objects. 	<ul style="list-style-type: none"> • Designing a structure that is earthquake proof, aesthetically pleasing and selecting materials to create a desired effect. • Building frame structures designed to support weight withstand some movement. 	<ul style="list-style-type: none"> • Designing a stable structure that is able to support weight. • Creating a frame structure with a focus on triangulation
	Make	<ul style="list-style-type: none"> • Making a boat that floats and is waterproof, considering material choices. 	<ul style="list-style-type: none"> • Making stable structures from card. • Following instructions to cut and assemble the supporting structure of a windmill. • Making functioning turbines and axles which are assembled into a main supporting structure. • Finding the middle of an object. • Puncturing holes. • Adding weight to structures. • Creating supporting structures. • Cutting evenly and carefully. • Making a structure according to design criteria. • Creating joints and structures from paper/card and tape. • Building a strong and stiff structure by folding paper 	<ul style="list-style-type: none"> • Creating a range of different shaped frame structures. • Making a variety of free standing frame structures of different shapes and sizes. • Selecting appropriate materials to build a strong structure and cladding. • Reinforcing corners to strengthen a structure. • Creating a design in accordance with a plan. • Learning to create different textural effects with materials. 	<ul style="list-style-type: none"> • Making a range of different shaped beam bridges. • Using triangles to create truss bridges that span a given distance and support a load. • Building a wooden bridge structure. • Independently measuring and marking wood accurately. • Selecting appropriate tools and equipment for particular tasks. • Using the correct techniques to saws safely. • Identifying where a structure needs reinforcement and using card corners for support. • Explaining why selecting appropriating materials is an important part of the design process. • Understanding basic wood functional properties.
	Evaluate	<ul style="list-style-type: none"> • Making predictions about and evaluating different materials to see if they are waterproof. • Making predictions about and evaluating existing boats to see which floats best. • Testing their design and reflecting on what could have been done differently. • Investigating the how the shapes and structure of a boat affect the way it moves. 	<ul style="list-style-type: none"> • Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. • Suggest points for improvements • Exploring the features of structures. • Comparing the stability of different shapes. • Testing the strength of own structures and identifying the weakest part of it. • Evaluating the strength, stiffness and stability of own structure 	<ul style="list-style-type: none"> • Evaluating structures made by the class. • Describing what characteristics of a design and construction made it the most effective. • Considering effective and ineffective designs. 	<ul style="list-style-type: none"> • Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. • Suggesting points for improvements for own bridges and those designed by others.



		EYFS	KS1	LKS2	UKS2
Mechanisms	Design	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. 	<ul style="list-style-type: none"> Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. Using a simple design brief that outlines the intended use, target user, and key features of the product, to create simple design criteria. Using labels to explain parts of a design, label materials, etc. Knowing that drawings can help explain how something works. Knowing that a label explains part of a drawing. 	<ul style="list-style-type: none"> Designing a shape that reduces air resistance. Drawing a net to create a structure from. Choosing shapes that increase or decrease speed as a result of air resistance. Personalising a design. 	<ul style="list-style-type: none"> Noticing wider-reaching problems or needs in the community. Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality. Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design.
	Make	<ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. 	<ul style="list-style-type: none"> Choosing materials, ingredients or components from a wider range of materials, ingredients or components. Explaining their choices based on the properties of materials and components adapting mechanisms, when: <ul style="list-style-type: none"> they do not work as they should. to fit their vehicle design. to improve how they work after testing their vehicle. Knowing some properties of materials like hard, soft, flexible, waterproof, strong etc Following and recalling simple safety instructions. Knowing that some tools are sharp like scissors and knives. Choosing known geometric shapes when making. Beginning to shape objects to improve how they work. 	<ul style="list-style-type: none"> Measuring, marking, cutting and assembling with increasing accuracy. Making a model based on a chosen design. Explaining their choices based on the properties of materials and components adapting mechanisms, when: <ul style="list-style-type: none"> they do not work as they should. to fit their vehicle design. to improve how they work after testing their vehicle. Following and recalling safety instructions. Knowing that some tools are sharp like scissors and knives and begin to use more independently 	<ul style="list-style-type: none"> Producing lists of equipment, materials and tools that they need for a task. Selecting materials, components or ingredients based on research or user needs. Explaining their choices, referring to their research. Considering which equipment will work well together. Choosing from the known range of equipment available to them with little guidance. Assessing risks associated with different tools and equipment. Understanding and explaining the importance of each safety rule. Consistently apply safety instructions. Cutting jelutong or other harder wood with a coping saw or a tenon saw in small groups. Cutting in a back-and-forth sawing motion where appropriate. In supervised groups, using hot glue guns safely. Recognising that hot glue is useful for joining materials that need a strong bond that sets quickly.
	Evaluate	<ul style="list-style-type: none"> Share their creations, explaining the process they have used. 	<ul style="list-style-type: none"> Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move. Discussing a range of existing products and saying what they like and dislike about them. Evaluating their ideas and creations against simple design criteria. Knowing that design criteria help to decide if their product is a success. Knowing that improve means to make something better. 	<ul style="list-style-type: none"> Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. Evaluating how effective their chosen materials and tools were in fulfilling the design brief. 	<ul style="list-style-type: none"> Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. Providing feedback that is helpful, specific and encouraging. Incorporating feedback from peers or users to improve their product further, explaining the changes they made and the impact they had.



		EYFS	KS1	LKS2	UKS2
Textiles	Design	<ul style="list-style-type: none"> • Discussing what a good design needs. • Designing a simple pattern with paper. • Designing a bookmark. • Choosing from available materials. 	<ul style="list-style-type: none"> • Using a template to create a design for a puppet. • Designing a pouch creating own template. • Choosing from available materials. 	<ul style="list-style-type: none"> • Designing and making a template from research and applying individual design criteria. 	<ul style="list-style-type: none"> • Designing a stuffed toy, considering the main component shapes required and creating an appropriate template. • Considering the proportions of individual components.
	Make	<ul style="list-style-type: none"> • Developing fine motor/cutting skills with scissors. • Exploring fine motor/threading and weaving (under, over technique) with a variety of materials. • Using a prepared needle and wool to practise threading. 	<ul style="list-style-type: none"> • Selecting and cutting fabrics for sewing. • Sequencing steps for construction. • Cutting fabric neatly with scissors. • Decorating a pouch or puppet using fabric glue or running stitch. • Threading a needle. • Neatly pinning and cutting fabric using a template. • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. 	<ul style="list-style-type: none"> • Following design criteria to create an Egyptian collar. • Selecting and cutting fabrics with ease using fabric scissors. • Threading needles with greater independence. • Tying knots with greater independence. • Sewing cross stitch to join fabric. • Decorating fabric using appliqué. • Completing design ideas with embellishing the collars based on design ideas 	<ul style="list-style-type: none"> • Creating a 3D stuffed toy from a 2D design. • Measuring, marking and cutting fabric accurately and independently. • Creating strong and secure blanket stitches when joining fabric. • Threading needles independently. • Using appliqué to attach pieces of fabric decoration. • Sewing blanket stitch to join fabric. • Applying blanket stitch so the spaces between the stitches are even and regular.
	Evaluate	<ul style="list-style-type: none"> • Reflecting on a finished product and comparing to their design. 	<ul style="list-style-type: none"> • Reflecting on a finished product, explaining likes and dislikes. • Troubleshooting scenarios posed by teacher. • Discussing as a class, the success of their stitching against the success criteria. 	<ul style="list-style-type: none"> • Evaluating an end product and thinking of other ways in which to create similar items. • Evaluating the quality of the stitching on own work. • Identifying aspects of their peers' work that they particularly like and why. 	<ul style="list-style-type: none"> • Testing and evaluating an end product and giving point for further improvements. • Evaluating the quality of the stitching on own and others' work. • Identifying aspects of their own and peers' work that they particularly like and why.



		EYFS	KS1	LKS2	UKS2
Food, Cooking and Nutrition	Design	<ul style="list-style-type: none"> • Designing a soup or rainbow summer salad recipe as a class. • Designing soup or salad packaging. 	<ul style="list-style-type: none"> • Designing smoothie carton packaging by-hand. • Learning where and how fruits and vegetables grow. • Designing three wrap ideas 	<ul style="list-style-type: none"> • Describing how climate affects where foods grow. • Designing a biscuit within a given budget. • Conducting market research. 	<ul style="list-style-type: none"> • Researching existing recipes. • Suggesting alternative ingredients. • Designing a jar label. • Writing a recipe, explaining the key steps, method and ingredients. • Including facts and drawings from research undertaken.
	Make	<ul style="list-style-type: none"> • Chopping plasticine safely. • Chopping vegetables with support. 	<ul style="list-style-type: none"> • Chopping fruit and vegetables safely to make a smoothie or wrap • Juicing fruits safely to make a smoothie. • Identifying if a food is a fruit. • Constructing a wrap that meets a design brief. • Grating foods to make a wrap. • Snipping smaller foods instead of cutting. • Spreading soft foods to make a wrap. 	<ul style="list-style-type: none"> • Following the instructions within a recipe. • Tasting seasonal ingredients. • Peeling foods by hand or with a peeler. • Cutting ingredients safely. • Choosing ingredients based on a design brief. • Following a baking recipe. • Understanding safety and hygiene rules. • Adapting a recipe. 	<ul style="list-style-type: none"> • Writing an alternative recipe. • Understanding cross-contamination. • Using preparation skills. • Following a developed recipe, including using the correct quantities of each ingredient. • Adapting a recipe based on research. • Working to a given timescale. • Working safely and hygienically with independence.
	Evaluate	<ul style="list-style-type: none"> • Tasting the soup or salad and giving opinions. • Describing some of the following when tasting food: look, feel, smell and taste. • Choosing their favourite packaging design and explaining why. 	<ul style="list-style-type: none"> • Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. • Comparing their own smoothie with someone else's. • To know that 'diet' means the food and drink that a person or animal usually eats. • To know what makes a balanced diet. • To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. • To know that I should eat a range of different foods from each food group, and roughly how much of each food group. • To know that 'ingredients' means the items in a mixture or recipe. • To know how to cut, grate, snip and spread to prepare foods. • To know how to review and give a score to evaluate. 	<ul style="list-style-type: none"> • Describing the texture and flavour of ingredients. • Evaluating an adapted recipe. • Evaluating and comparing a range of products. • Suggesting modifications 	<ul style="list-style-type: none"> • Analysing nutritional content. • Evaluating a recipe, considering: taste, smell, texture and origin of the food group. • Taste testing and scoring final products. • Suggesting and writing up points of improvements in productions. • Evaluating health and safety in production to minimise cross contamination.



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Digital World (KS2 only)	Design			<ul style="list-style-type: none"> Carry out research based on Christmas cards or decorations to develop a range of initial ideas. Design an electric card or decoration that fits the requirements of a given brief. Plan the positioning of the bulb (circuit component) and its purpose. Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. 	<ul style="list-style-type: none"> Designing a steady hand game - identifying and naming the components required. Drawing a design from three different perspectives. Generating ideas through sketching and discussion. Modelling ideas through prototypes. Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'.
	Make			<ul style="list-style-type: none"> Create the electric card or decoration. Mount it onto corrugated card to improve its strength and allow it to withstand the weight of the circuit on the rear Measure and mark materials out using a template or ruler. Fit an electrical component (bulb). Learn ways to give the final product a higher quality finish (e.g. framing to conceal a roughly cut edge). Making a torch with a working electrical circuit and switch. Using appropriate equipment to cut and attach materials. Assembling a torch according to the design and success criteria. 	<ul style="list-style-type: none"> Constructing a stable base for a game. Accurately cutting, folding and assembling a net. Decorating the base of the game to a high quality finish. Making and testing a circuit. Incorporating a circuit into a base.
	Evaluate			<ul style="list-style-type: none"> Learning to give and accept constructive criticism on own work and the work of others. Testing the success of initial ideas against the design criteria and justifying opinions. Revisiting the requirements and review developing design ideas and check that they fulfil their needs. Evaluating electrical products. Testing and evaluating the success of a final product 	<ul style="list-style-type: none"> Testing own and others finished games, identifying what went well and making suggestions for improvement. Gathering images and information about existing children's toys. Analysing a selection of existing children's toys.



		EYFS	KS1	LKS2	UKS2
Electrical Systems (KS2 only)	Design			<ul style="list-style-type: none"> • Writing design criteria for a programmed timer (Micro:bit). • Exploring different mindfulness strategies. • Applying the results of my research to further inform my design criteria. • Using and manipulating shapes and clipart by using computer-aided design (CAD), to produce a logo. • Following a list of design requirements. 	<ul style="list-style-type: none"> • Researching (books, internet) for a particular (user's) animal's needs. • Developing design criteria based on research. • Generating multiple housing ideas using building bricks. • Understanding what a virtual model is and the pros and cons of traditional and CAD modelling. • Placing and manoeuvring 3D objects, using CAD. • Changing the properties of, or combining one or more 3D objects, using CAD. • Writing a design brief from information submitted by a client. • Developing design criteria to fulfil the client's request. • Considering and suggesting additional functions for my navigation tool.
	Make			<ul style="list-style-type: none"> • Developing a prototype case for my mindful moment timer. • Creating 3D structures using modelling materials. • Programming a micro:bit in the Microsoft micro:bit editor, to time a set number of seconds/minutes upon button press. 	<ul style="list-style-type: none"> • Understanding the functional and aesthetic properties of plastics. • Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range. • Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo). • Explaining material choices and why they were chosen as part of a product concept. • Programming an N,E, S, W cardinal compass.
	Evaluate			<ul style="list-style-type: none"> • Investigating and analysing a range of timers by identifying and comparing their advantages and disadvantages. • Evaluating my Micro:bit program against points on my design criteria and amending them to include any changes I made. • Documenting and evaluating my project. • Understanding what a logo is and why they are important in the world of design and business. • Testing my program for bugs (errors in the code). • Finding and fixing the bugs (debug) in my code. • Using an exhibition to gather feedback. • Gathering feedback from the user to make suggested improvements to a product. 	<ul style="list-style-type: none"> • Explaining key functions in my program (audible alert, visuals). • Explaining how my product would be useful for an animal carer including programmed features. • Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. • Developing an awareness of sustainable design. • Explaining the key functions in my program, including any additions. • Explaining how my program fits the design criteria. • Explaining the key functions and features. • Demonstrating a functional program as part of a product concept pitch.