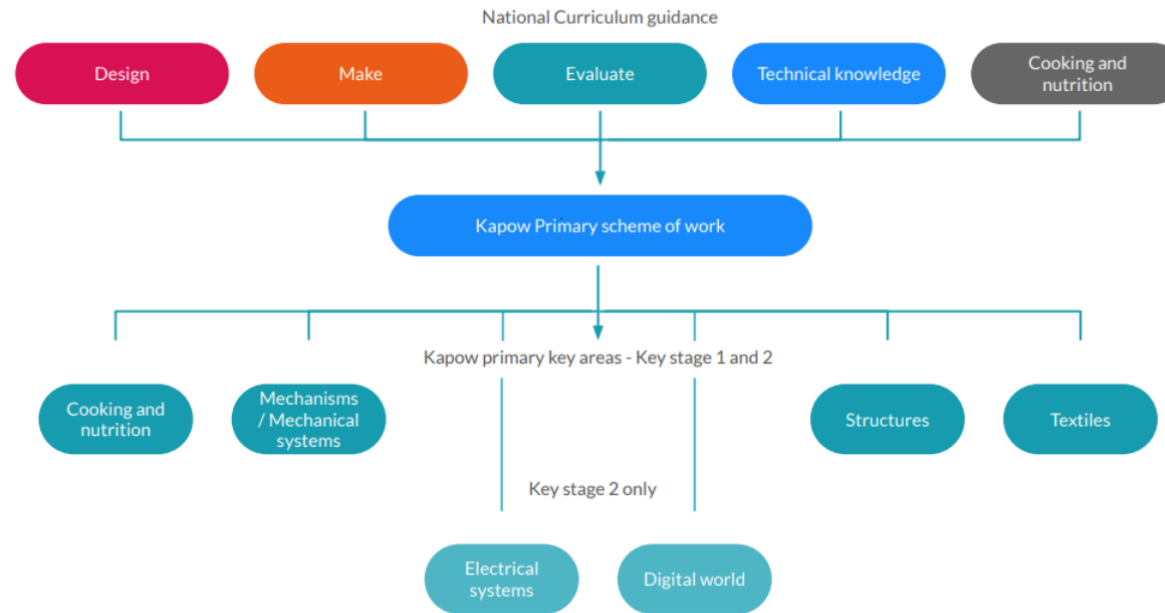




Statutory Requirements	EYFS	Key Stage 1	Key Stage 2
	<p><i>In EYFS, Design and Technology learning is delivered through the statutory areas of Expressive Arts and Design, Physical Development and Understanding the World.</i></p> <p><i>These areas develop children's early ability to explore materials, use tools safely, design and create products, and begin to understand how things work.</i></p> <p><i>These skills provide the foundation for the National Curriculum Design and Technology programme of study in Key Stage 1</i></p>	<p><i>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:</i></p> <p>Design</p> <ul style="list-style-type: none"> • <i>Design purposeful, functional, appealing products for themselves and other users based on design criteria</i> • <i>Generate, develop, model and communicate their ideas through talking, drawing, templates, mockups and, where appropriate, information and communication technology</i> <p>Make</p> <ul style="list-style-type: none"> • <i>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</i> • <i>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i> <p>Evaluate</p> <ul style="list-style-type: none"> • <i>Explore and evaluate a range of existing products</i> • <i>Evaluate their ideas and products against design criteria</i> 	<p><i>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:</i></p> <p>Design</p> <ul style="list-style-type: none"> • <i>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</i> • <i>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> <p>Make</p> <ul style="list-style-type: none"> • <i>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i> • <i>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i> <p>Evaluate</p> <ul style="list-style-type: none"> • <i>Investigate and analyse a range of existing products</i> • <i>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i> • <i>Understand how key events and individuals in design and technology have helped shape the world</i> <p>Technical knowledge</p> <ul style="list-style-type: none"> • <i>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i> • <i>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</i> • <i>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</i> • <i>Apply their understanding of computing to program, monitor and control their products.</i>



How is the Design and technology scheme of work organised?



	Structures	Cooking and Nutrition	Textiles	Mechanisms/ Mechanical systems	Digital World	Electrical Systems
Nursery						
Reception						
Year 1						
Year 2						
Year 3						
Year 4						
Year 5						
Year 6						



Structures	EYFS Boats	
	Design	<ul style="list-style-type: none"> • Designing a junk model boat. • Using knowledge from exploration to inform design.
	Make	<ul style="list-style-type: none"> • Making a boat that floats and is waterproof, considering material choices.
	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.
	Technical Knowledge	<ul style="list-style-type: none"> • To know that 'waterproof' materials are those which do not absorb water.
	Additional Knowledge	<ul style="list-style-type: none"> • To know that some objects float and others sink. • To know the different parts of a boat.
	Year 1 Stable Structures	
	Design	<ul style="list-style-type: none"> • Beginning to recognise how products and designs in the world around us solve certain needs. • Stating what they intend to make and why – identifying the purpose. • Talking about ideas, with purpose and user in mind. • Talking about existing products when generating ideas.
	Make	<ul style="list-style-type: none"> • Choosing between a small number of materials, ingredients or components. • Explaining their choices based on personal experiences. • Requesting equipment appropriate to the purpose. (e.g. scissors for cutting, glue for joining) • Refining their grip to cut competently and confidently.
	Evaluate	<ul style="list-style-type: none"> • Saying what they like about their peers' designs and products. • Accepting feedback and understanding it is meant to improve their work.
	Technical Knowledge	<ul style="list-style-type: none"> • Recognising that different structures are used for different purposes. • Exploring the features of structures. • Describing structures as buildings or freestanding structures. • Creating supporting structures to aid stability.



Additional Knowledge	<ul style="list-style-type: none"> • To know that the purpose is what something is for. • To know that a plan is deciding what to do first and next. • To know that different equipment does different things. • To know the names of common pieces of equipment. • To know that some tools are sharp like scissors and knives. • To know that a structure is something that has been made and put together.
Year 2 Baby Bear's Chair	
Design	<ul style="list-style-type: none"> • Generating and communicating ideas using sketching and modelling.
Make	<ul style="list-style-type: none"> • Making a structure according to design criteria. • Creating joints and structures from paper/card and tape. • Building a strong and stiff structure by folding paper.
Evaluate	<ul style="list-style-type: none"> • Testing the strength of own structure. • Identifying the weakest part of a structure. • Evaluating the strength, stiffness and stability of own structure.
Technical Knowledge	<ul style="list-style-type: none"> • To know that materials can be manipulated to improve strength and stiffness. • To know that a structure is something which has been formed or made from parts. • To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. • To know that a 'strong' structure is one which does not break easily. • To know that a 'stiff' structure or material is one which does not bend easily.
Additional Knowledge	
Year 3 Product Packaging	
Design	<ul style="list-style-type: none"> • Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. • Beginning to use 2D CAD software to communicate their ideas.
Make	<ul style="list-style-type: none"> • Creating accurate shapes from templates. • Cutting out more complex shapes accurately. • Choosing shapes to suit the function of a product.
Evaluate	<ul style="list-style-type: none"> • Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements.



		<ul style="list-style-type: none"> Investigating and analysing a range of existing products by looking at their functionality and appeal. Reflecting on feedback to decide if and how it could be used to improve future iterations.
	Technical Knowledge	<ul style="list-style-type: none"> Beginning to understand how different structures are built. Strengthening structures by ribbing. Constructing a range of 3D shapes.
	Additional Knowledge	<ul style="list-style-type: none"> To know that creating accurate shapes improves how they look and sometimes their function. To know good suggestions help give better feedback. To know that they can choose to use feedback or not. To know that a shell structure is a hollow shape with a thin outer layer. To know that 3D shapes can form structures. To know structures can be strengthened by manipulating materials and shapes.
Structures	Year 6 Playgrounds	
	Design	<ul style="list-style-type: none"> Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs.
	Make	<ul style="list-style-type: none"> Building a range of play apparatus structures drawing upon new and prior knowledge of structures. Measuring, marking and cutting wood to create a range of structures. Using a range of materials to reinforce and add decoration to structures.
	Evaluate	<ul style="list-style-type: none"> Improving a design plan based on peer evaluation. Testing and adapting a design to improve it as it is developed. Identifying what makes a successful structure.
	Technical Knowledge	<ul style="list-style-type: none"> To know that structures can be strengthened by manipulating materials and shapes.
	Additional Knowledge	<ul style="list-style-type: none"> To understand what a 'footprint plan' is. To understand that in the real world, design, can impact users in positive and negative ways. To know that a prototype is a cheap model to test a design idea.
	Mechanisms	Year 2 Fairground Wheel
Design		<ul style="list-style-type: none"> Conducting simple surveys or discussions to gather opinions on what others need or like in a design. Knowing that a survey is used to find out what people like.



		<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. • 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.
	Make	<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. • 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. • Knowing the names of some geometric shapes: triangle, pyramid, square, cube, circle, sphere. • Considering balance in their finishing, like evenly spaced decoration.
	Evaluate	<ul style="list-style-type: none"> • Discussing a range of existing products and saying what they like and dislike about them. • Evaluating existing products against design criteria. • Evaluating their ideas and creations against simple design criteria. • Knowing that design criteria help to decide if their product is a success. • Suggesting improvements to their peers' designs and products. • Knowing that improve means to make something better. • Knowing that their suggestions can improve someone else's work.
	Technical Knowledge	<ul style="list-style-type: none"> • To know everyday objects have mechanisms. • To know many things that move have parts inside to help them work. • To know mechanisms usually limit unwanted movement. • To know everyday objects utilise wheels and axles. • To know wheels must be able to turn to work effectively. • To know axles allow wheels to turn without falling off.



	Additional Knowledge	<ul style="list-style-type: none"> To know the features of a fairground wheel include the wheel, frame, pods, a base an axle and an axle holder.
Year 2		
Making a moving monster		
	Design	<ul style="list-style-type: none"> Creating a class design criteria for a moving monster. Designing a moving monster for a specific audience in accordance with a design criteria.
	Make	<ul style="list-style-type: none"> Making linkages using card for levers and split pins for pivots. Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. Cutting and assembling components neatly.
	Evaluate	<ul style="list-style-type: none"> Evaluating own designs against design criteria. Using peer feedback to modify a final design.
	Technical Knowledge	<ul style="list-style-type: none"> To know that mechanisms are a collection of moving parts that work together as a machine to produce movement. To know that there is always an input and output in a mechanism. To know that an input is the energy that is used to start something working. To know that an output is the movement that happens as a result of the input. To know that a lever is something that turns on a pivot. To know that a linkage mechanism is made up of a series of levers.
	Additional Knowledge	<ul style="list-style-type: none"> To know some real-life objects that contain mechanisms.
Year 4		
Mechanical Cars		
	Design	<ul style="list-style-type: none"> Developing drawing and sketching skills with a focus on clarity and simplicity. Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams) Creating prototypes using materials with similar properties to their final design. Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. Developing designs by adding detail and justifications about materials, tools, methods.
	Make	<ul style="list-style-type: none"> Following detailed safety instructions. Using a ruler as a measuring tool with increasing accuracy by creating spaced marks using millimetres and measuring lengths of objects.



		<ul style="list-style-type: none"> • Handle different sizes and types of scissors with confidence. • With close supervision using a hot glue gun to join wooden materials (e.g. lolly sticks). • Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. • Selecting materials, components or ingredients from a wider choice but within a limited design space (e.g. seasonal ingredients from May and June in the UK).
	Evaluate	<ul style="list-style-type: none"> • Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Reflecting on feedback to decide if and how it could be used to improve future iterations. • Investigating and analysing a range of existing products by looking at their functionality and appeal. • Analysing why specific products, designers or inventors are successful. • Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements. • Evaluating how effective their chosen materials and tools were in fulfilling the design brief.
	Technical Knowledge	<ul style="list-style-type: none"> • To understand that a mechanical system can allow us to move something more easily. • To know that mechanical systems have more than one mechanism that moves to make them work. • To know that mechanical systems are often hidden in products to make them look more appealing.
	Additional Knowledge	<ul style="list-style-type: none"> • To know that extra information on drawings or diagrams can help the user understand a design or idea. • To know that an exploded diagram shows how the parts of a product fit together. • To know that a prototype is a detailed model that helps a user understand how a product will work. • To know that a target audience is a group of people that might like the idea. • To know that different tools and equipment have different dangers. • To know that a ruler can be used to measure length. • To know that a hot glue gun can be used to join materials. • To know that better suggestions of improvements mean better feedback. • To know that they can choose to use feedback or not. • To know that some products are more successful than other because of their function. • To know that choices of materials and equipment can affect the final product. • To know that feedback is ideas and suggestions from other people that can help improve their work.



Year 5 Gears and Pulleys	
Design	<ul style="list-style-type: none"> Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. Using a series of prototypes to refine and improve their designs.
Make	<ul style="list-style-type: none"> Consistently apply safety instructions. Select appropriate scissors to handle delicate cutting tasks and challenging materials. Cutting patterns and drawings accurately. 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. Choosing PVA glue over hot glue for its safety when joining materials in less intensive projects.
Evaluate	<ul style="list-style-type: none"> Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. Considering alternative materials, tools or techniques that could enhance the product. Providing feedback that is helpful, specific, and encouraging. Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had.
Technical Knowledge	<ul style="list-style-type: none"> That mechanical systems that use gears in everyday objects (eg bicycle, clock). That gears and pulleys allow us to transfer movement and force from one part of a mechanical system to another. That gears allow us to increase the output of a mechanism.
Additional Knowledge	<ul style="list-style-type: none"> That original and innovative ideas are different from what has been made before. That annotations are detailed labels and comments on diagrams. That risks are things that might happen. That hot glue creates a strong bond quickly. That is often better to choose safer equipment. That sustainability means thinking about the materials that were used to make a product and how the product was made. That their final product can still be improved by different materials or techniques. That evaluating their designs in detail will help them understand its successful and less successful parts.



		<ul style="list-style-type: none"> • That feedback should be positive, helpful and specific. • That explaining how they used feedback to improve their design can help them create better products in the future.
Electrical Systems	Year 4 Torches	
	Design	<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.
	Make	<ul style="list-style-type: none"> • Making a torch with a working electrical circuit and switch. • Using appropriate equipment to cut and attach materials. • Assembling a torch according to the design and success criteria.
	Evaluate	<ul style="list-style-type: none"> • Evaluating electrical products. • Testing and evaluating the success of a final product.
	Technical Knowledge	<ul style="list-style-type: none"> • To know that an electrical circuit must be complete for electricity to flow. • To know that a switch can be used to complete and break an electrical circuit.
	Additional Knowledge	<ul style="list-style-type: none"> • To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens. • To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.
	Year 5 Wobble Bots	
	Design	<ul style="list-style-type: none"> • Using a series of prototypes to refine and improve their designs.
	Make	<ul style="list-style-type: none"> • Selecting materials, components or ingredients based on research or user needs. • Explaining their choices, referring to their research. • Understanding and explaining the importance of each safety rule. • Consistently apply safety instructions.
	Evaluate	<ul style="list-style-type: none"> • Considering alternative materials, tools or techniques that could enhance the product. • Providing feedback that is helpful, specific, and encouraging. • Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had.
Technical Knowledge	<ul style="list-style-type: none"> • Beginning to understand that electricity flows around a circuit. • Using different components to produce different results from electrical systems. • Creating working electrical circuits with a wider variety of electrical components. • Deconstructing electrical systems to understand how they work. 	



	Additional Knowledge	<ul style="list-style-type: none"> • Environmental impact is how the product and making the product might affect the environment. • Original and innovative ideas are different from what has been made before. • Improving on prototypes can help to improve the final design. • Research can help decide which materials are best for both aesthetics and functional properties. • Some equipment can work well with other equipment. • Risks are things that might go wrong. • The shape of an object can affect both its aesthetics and function. • Sustainability means thinking about the materials that were used to make a product and how the product was made. • Evaluating their designs in detail will help them understand its successful and less successful parts. • Feedback should be positive, helpful and specific • Explaining how they used feedback to improve their design can help them create better products in the future. • An electric motor converts electricity into rotational movement. • A motorised product is one which uses a motor to function. • The names of components that can form an electrical system
Cooking and Nutrition	EYFS Soup	
	Design	<ul style="list-style-type: none"> • Designing a soup recipe as a class • Designing soup packaging
	Make	<ul style="list-style-type: none"> • Chopping plasticine safely • Chopping vegetables with support
	Evaluate	<ul style="list-style-type: none"> • Tasting the soup and giving opinions • Describe some of the following when tasting food: look, feel, smell and taste • Choosing their favourite packaging design and explain why
	Knowledge	<ul style="list-style-type: none"> • To know that soup is ingredients (usually vegetables and liquid) blended together • To know that vegetables are grown • To recognised and name some common vegetables • To know that different vegetables taste different • To know that eating vegetables is good for us • To discuss why different packages might be used for different foods



Year 1 Smoothies		
Design	<ul style="list-style-type: none"> • Designing smoothie carton packaging by-hand. • Learning where and how fruits and vegetables grow. 	
Make	<ul style="list-style-type: none"> • Chopping fruit and vegetables safely to make a smoothie. • Juicing fruits safely to make a smoothie. • Identifying if a food is a fruit. 	
Evaluate	<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. 	
Knowledge	<ul style="list-style-type: none"> • To know that a blender is a machine which mixes ingredients together into a smooth liquid. • To know that a fruit has seeds and a vegetable does not. • To know that fruits grow on trees or vines. • To know that vegetables can grow either above or below ground. • To know that vegetables is any edible part of a plant. 	
Year 3 Eating Seasonally		
Design	<ul style="list-style-type: none"> • Describing how climate affects where foods grow. 	
Make	<ul style="list-style-type: none"> • Identifying seasonal ingredients from the UK. • 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. 	
Evaluate	<ul style="list-style-type: none"> • Describing the texture and flavour of ingredients. • Describing the benefits of seasonal fruits and vegetables and the impact on the environment. 	
Knowledge	<ul style="list-style-type: none"> • To know that seasonal means foods that grow in a given season in a given country. • To know some seasonal foods that grow in the UK and what season they grow in. • To know that eating seasonal foods can have a positive impact on the environment. • To know how to describe the flavour and texture of foods. • To know how to cut a peel safely. • To know that the appearance of food is as important as taste. 	



		<ul style="list-style-type: none"> To know that similar coloured fruits and vegetables often have similar nutritional benefits.
	Year 5 Developing a Recipe	
	Design	<ul style="list-style-type: none"> Researching existing recipes. Suggesting alternative ingredients. Designing a jar label.
	Make	<ul style="list-style-type: none"> Writing an alternative recipe. Understanding cross-contamination. Using preparation skills. Making a developed recipe.
	Evaluate	<ul style="list-style-type: none"> Explaining the farm to fork process. Analysing nutritional content.
	Technical Knowledge	<ul style="list-style-type: none"> To know that beef comes from cows reared on farms. To know that recipes can be adapted to suit nutritional needs and dietary requirements. To know that nutritional information is found on food packaging. To know that coloured chopping boards can prevent cross-contamination. To know that food packaging serves many purposes.
Textiles	EYFS Bookmarks	
	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.
	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.
	Evaluate	<ul style="list-style-type: none"> Reflecting on a finished product and comparing to their design.
	Knowledge	<ul style="list-style-type: none"> To know that a design is a way of planning our idea before we start. To know that threading is putting one material through an object.
	Year 1 Simple Stitches	
	Design	<ul style="list-style-type: none"> Talking about ideas, with purpose and user in mind. Using basic drawing skills to communicate ideas.



Make	<ul style="list-style-type: none"> • Explaining in simple terms why certain tools must be handled carefully. • Following and recalling simple safety instructions. • Using a straightedge to draw a straight line. • Beginning to use objects with a fixed width or length to create even spacing of markings or cuts. (e.g. a lolly stick). • Using a large plastic needle and large-weave embroidery fabric to begin to create a running stitch. • Applying masking tape to fix something in place or join to edges.
Evaluate	<ul style="list-style-type: none"> •
Technical Knowledge	<ul style="list-style-type: none"> • Discussing fabric properties. • Threading large needles. • Rehearsing sewing techniques with large needles and thick thread, like wool. • Sewing a running stitch in large-weave embroidery fabric or hessian. • Spacing stitches evenly.
Additional Knowledge	<ul style="list-style-type: none"> • To know: • To know drawings are a way to explain ideas. • To know the names of common pieces of equipment. • To know that following instructions helps with safety. • To know that spacing cuts or marks evenly can be useful. • To know that texture is how something feels. • To know that evenly spaced stitches help when following a pattern.
<p>Year 4 Fastenings</p>	
Design	<ul style="list-style-type: none"> • Writing design criteria for a product, articulating decisions made. • Designing a personalised book sleeve.
Make	<ul style="list-style-type: none"> • Making and testing a paper template with accuracy and in keeping with the design criteria. • Measuring, marking and cutting fabric using a paper template. • Selecting a stitch style to join fabric, working neatly by sewing small, straight stitches. • Incorporating fastening to a design.
Evaluate	<ul style="list-style-type: none"> • Testing and evaluating an end product against the original design criteria. • Deciding how many of the criteria should be met for the product to be considered successful. • Suggesting modifications for improvement. • Articulating the advantages and disadvantages of different fastening types.
Technical Knowledge	<ul style="list-style-type: none"> • To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro. • To know that different fastening types are useful for different purposes.



		<ul style="list-style-type: none"> To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions.
Year 6 Bags		
Design		<ul style="list-style-type: none"> Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. Designing a waistcoat in accordance with a specification linked to set of design criteria. Annotating designs, to explain their decisions
Make		<ul style="list-style-type: none"> Using a ruler to accurately measure and draw lines and marks. Using nets to create 3D objects. Using a combination of joining techniques to ensure strong joins (for example, using safety pins to hold fabric in place while a running stitch is sewn). Using a template when cutting fabric to ensure they achieve the correct shape. Using pins effectively to secure a template to fabric without creases or bulges. Marking and cutting fabric accurately, in accordance with their design. Sewing a strong running stitch, making small, neat stitches and following the edge. Tying strong knots. Decorating a waistcoat, attaching features (such as appliqué) using thread. Finishing the waistcoat with a secure fastening (such as buttons). Learning different decorative stitches. Sewing accurately with evenly spaced, neat stitches.
Evaluate		<ul style="list-style-type: none"> Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. Reflecting on their work continually throughout the design, make and evaluate process.
Technical Knowledge		<ul style="list-style-type: none"> Using pins effectively to secure a template to fabric without creases or bulges. Tying knots at the end of thread to secure it. Attaching objects like buttons using thread.
Additional Knowledge		<ul style="list-style-type: none"> To know how designers use pattern pieces when creating textile products. To know how nets can be folded to create 3D shapes. To know safety pins can hold fabric in place before sewing. To know consistently sized stitches improve the aesthetic of a product. To know the shape of a product can affect both its aesthetics and function. To know aesthetics is how something looks. To know complete products are sometimes made in parts that are sewn together. To understand that it is important to design clothing with the client/ target customer in mind. To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric.



		<ul style="list-style-type: none"> To understand the importance of consistently sized stitches
Digital World	Year 3 Wearable Technology	
	Design	<ul style="list-style-type: none"> Problem solving by suggesting which features on a micro:bit might be useful and justifying my ideas. Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge. Developing design ideas through annotated sketches to create a product concept. Developing design criteria to respond to a design brief.
	Make	<ul style="list-style-type: none"> Following a list of design requirements. Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.
	Evaluate	<ul style="list-style-type: none">
	Technical Knowledge	<ul style="list-style-type: none"> To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. To know that a micro:bit is a pocket-sized, codeable computer. To know that a simulator is able to replicate the functions of an existing piece of technology.
	Additional Knowledge	<ul style="list-style-type: none"> To understand what is meant by 'point of sale display.' To know that CAD stands for 'Computer-aided design'.
	Year 6 Navigating the World	
	Design	<ul style="list-style-type: none"> 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. Developing a product idea through annotated sketches. Placing and manoeuvring 3D objects, using CAD. Changing the properties of, or combining one or more 3D objects, using CAD.
	Make	<ul style="list-style-type: none"> 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"> 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. Identifying key industries that utilise 3D CAD modelling and explaining why. Describing how the product concept fits the client's request and how it will benefit the customers. Explaining the key functions in my program, including any additions. Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch.

St Ann's R.C. Primary School Progression of Knowledge and Skills – Design Technology



		<ul style="list-style-type: none">• Demonstrating a functional program as part of a product concept pitch.
	Technical Knowledge	<ul style="list-style-type: none">• To know that accelerometers can detect movement.• To understand that sensors can be useful in products as they mean the product can function without human input.
	Additional Knowledge	<ul style="list-style-type: none">• To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request.• To know that 'multifunctional' means an object or product has more than one function.• To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.