

EYFS Framework	
Personal, Social and Emotional Development	
ELG: Self-Regulation Set and work towards simple goals, being able to wait for what they want and control their impulses when appropriate; Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.	
ELG: Fine Motor Skills Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy when drawing.	
Expressive Arts and Design ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the processes they have used.	

National Curriculum					
	Designing	Making	Evaluating	Technical Knowledge	Food Technology
KS1	<p>Design - purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Explore and evaluate a range of existing products evaluate their ideas and products against design criteria.</p>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p>
KS2	<p>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.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p>	<p>Investigate and analyse a range of existing products, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p>	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p>

Year 3 2019-20

KS2 DT Curriculum NC End Points:	Term	Autumn	Spring	Summer	
	Half Term Coverage	Autumn 2 Week 6	Spring 2 Week 3	Summer 2 Week 7	
	Topic	Autumn: Bread Based Product	Spring: Shell Structures (Anderson Shelters)	Summer: Mechanical Systems (Pneumatics)	
Designing	Key Knowledge	<ul style="list-style-type: none"> Can 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. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Making: <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Evaluating: <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understands how key events and individuals in design and technology have helped shape the world. Technical Knowledge: <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. Food technology: <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	<ul style="list-style-type: none"> A range of utensils can be used for a range of techniques to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking. The food's appearance is how it looks to the eye. The food's texture is how the product feels in the mouth. Sensory evaluation means evaluating food products in terms of the taste, smell, texture and appearance. A preference test means trying different things (foods) and deciding which is preferred. A strawberry huller is tool to remove the stalk and leaves from a strawberry. Processed food includes ingredients that have been changed in some way to enable them to be eaten or used in food preparation and cooking. 	<ul style="list-style-type: none"> The Anderson Shelter was designed (in 1938) by William Peterson and Oscar Carl Kerrison, in response to a request from the Home Office. It was named after Sir John Anderson, who was responsible for preparing air-raid precautions immediately before the start of WWII Anderson shelters were very effective at saving lives and preventing injuries during the war The Morrison Shelter was an indoor shelter, in the form of a table with a cage-like construction beneath it. It was designed by John Baker and named after Herbert Morrison, the Minister of Home Security at the time. To use understanding of how the shape of a structure can influence its strength (Anderson shelter – arch, Morrison shelter – four 'legs' as support and lid) and how their own structure can be strengthened by internal support and exterior reinforcement. Know how to use and manipulate materials in order to create a structure 	Compromised content: <ul style="list-style-type: none"> A Pneumatic system is one that works using gases (air). A Hydraulic system is one that works using liquids (water). Energy produced by pneumatic systems can be more flexible, less costly, more reliable and less dangerous than some actuators and electric motors. There are lots of familiar examples - examples-of-pneumatics.html Something that is squashed, such as air in a tube, is compressed. The 'input' is what goes into a system and 'output' is what comes out. A point about which a lever turns is called a pivot. Pressure is the force used on an object or surface. Inflating something is filling it with air or a gas to make it swell up and Deflating is removing the pressurised air to allow an object like a balloon to shrink. A Syringe is a tube with a nozzle and plunger for sucking and blowing air or liquids. A System is a set of related parts or components used to create an outcome. In a pneumatic system, the 'input movement' is where the user pushes or pulls a syringe or pump. The 'output movement' is where the object at the end of the tube moves.
Cross Curricular Links	Key Skills	<ul style="list-style-type: none"> Science: Healthy Diet/hygiene 	History - WW2 links to local shelters.		
		<ul style="list-style-type: none"> Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Plan the main stages of a recipe, listing ingredients, utensils and equipment. Select and use appropriate utensils and equipment to prepare and combine ingredients. Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Know and use relevant technical and sensory vocabulary appropriately. 	<ul style="list-style-type: none"> Use research to inform the design criteria for a shelter suitable to the context of an era. To investigate the construction of existing structures and evaluate their own design against the design criteria Use existing designs to inform own and communicate ideas through discussion, annotated sketches, cross-sectional diagrams and computer aided design (word.doc with shape manipulation) Compare designs and understand the necessary features of a suitable structure (considering locational aspects; indoors/outdoor, speed of accessibility, strength and space). 	Compromised content: <ul style="list-style-type: none"> Investigate, analyse and evaluate familiar objects that use air to make them work e.g. bicycle pump, balloon, inflatable swimming aids, foot pump for inflating an air bed. What does the air do? How has it been used in the design of these products? How can air be used to move heavy objects? Construct a simple pneumatic system by joining a balloon to 5mm tubing and then to a washing-up liquid bottle. What happens to the air when you squeeze the bottle? What happens when you let go? Can you lift a soft toy or a note pad using a balloon? Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. Use annotated sketches and prototypes to develop, model and communicate ideas. Order the main stages of making. Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. Select from and use finishing techniques suitable for the product they are creating. Investigate and analyse books, videos and products with pneumatic mechanisms. Evaluate their own products and ideas against criteria and user needs, as they design and make. Understand and use pneumatic mechanisms. Know and use technical vocabulary relevant to the project. 	
		School Context			
		<ul style="list-style-type: none"> Use herbs from the edible playground and rooftop planters to flavour dishes. 	WW2 links to local shelters in Stoke Newington Look at different building structures in the local area – how the design is shaped for different purposes.		

Year 4 2020-21				
KS2 DT Curriculum NC End Points:	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 1 Week 7	Spring 2 Week 6	Summer 2 Week 7
	Topic	Textiles (Fastening Wallet or Purse)	Pop up Café (Food Technology)	Levers and Linkages
<p>Designing</p> <ul style="list-style-type: none"> Can 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. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Making:</p> <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. <p>Evaluating:</p> <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. <p>Food technology:</p> <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 				
<p>Key Knowledge</p> <ul style="list-style-type: none"> To know how to specify a design to make it more appealing to a specific target group. To know different types of stitches for the purpose of functionality and aesthetics. Know and use technical vocabulary relevant to the project. Know how to evaluate their product against the product criteria they have generated individually, as a means to improve their work. <p>Cross Curricular Links</p> <ul style="list-style-type: none"> ICT : Document and annotate process using SeeSaw Science : Observing changes of state, understanding allergies and bacteria, questioning and exploring these concepts Maths : through market research recording feedback and establishing results. Through pricing and budgeting products. Geography: Climates <p>Key Skills</p> <ul style="list-style-type: none"> Design and make a functional purse or wallet with a fastening, communicating initial ideas through annotated sketches Use research into the features of an appealing functional purse/wallet to inform design criteria Select and use a range of tools to perform practical tasks; stitching and sewing (joining), cutting and systematically work through phases of a design. Investigate the effect of different stitches in joining seams and how they contribute to the overall effectiveness and durability of the product. Evaluate the outcome with reference to the design criteria Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. consider the availability and costings of resources when planning out designs; Make, decorate and present the food product appropriately for the intended user and purpose. Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. Understand how key chefs have influenced eating habits to promote varied and healthy diets. Select and use a range of utensils, including knives, chopping boards, weighing scales, measuring jugs, baking trays. Select and use a range of healthy ingredients such as bread, fruits, vegetables and spreads (considering and giving reasons for choices). Review which dishes were most popular and use this as a means to evaluate own dish and suggest improvements, relating this process to real life scenarios (such as developing a menu/informing stock/purchase) Review work against own design criteria, including aspects such as presentation, food combinations, popularity and healthiness. 				
<p>School Context</p>				
		Cross-curricular year group project culminating in a special event, where parents and carers are invited to dine at the Pop-Up Café.	Children learn to be aware that levers occur in nature and that the arm and jaw are both examples of levers.	

Year 5 2021-22					
KS2 DT Curriculum NC End Points:	Term	Autumn	Spring 1 Week 1	Summer 2 Week 1 & 2	
	Half Term Coverage	-	Spring: Food technology (Baking)	Summer: Structures (Bridge Making)	
	Topic	-	Spring: Food Technology (Baking)	Summer: Structures (Bridge Making)	
	Key Knowledge		<ul style="list-style-type: none"> To know about the benefits of whole grain flour, opposed to a plain flour and the reasons why some types of bread, such as wholemeal, are more healthy than others and can be a source of carbohydrate in a healthy balanced diet. To know that a wheat grain is a seed and how it is harvested and ground at a mill to make flour. https://m.youtube.com/watch?v=v8vLiPctrU To know about the influence of specific manufacturers and consider the importance and usefulness of market research in this context. To know the importance of clear and accurate food labelling and knowledge of ingredients, with particular reference to food allergies. To know the different tools and ingredients typically involved in breadmaking and the steps involved in the breadmaking process Kneading is pulling and squeezing dough to make it smooth. Bran is the hard protective shell of a grain of wheat. Dough is a mixture of flour, yeast and water before it is cooked. Endosperm is the store of food inside a seed. Germ – part of the seed where the root and shoots grow from. Yeast is a tiny plant which makes bubbles of carbon dioxide when mixed with flour and warm water. Unleavened bread – flat bread where yeast has not been added. 	<ul style="list-style-type: none"> To know that there are many different types of bridge: beam, arch, cable-stayed, suspension, cantilever there are many famous bridge engineers: eg severn bridge, Tower Bridge; John Wolfe Barry and Sir Horrace Jones different materials can be used: steel, brick, wood, iron, rivets how to work safely using tools and equipment how to strengthen a material or structure design using materials understand how to assess the quantity of materials needed for a structure The design of particular bridges makes them particularly successful considering their purpose and location (eg Severn Bridge, Tower Bridge) Cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design can support the design process overall. 	
	Cross Curricular Links		<ul style="list-style-type: none"> calculate the cost of the ingredients used in our bread rolls (cross-curricular: maths) create a recipe for making bread by taking notes while watching a recipe video, using features of instructional writing (cross-curricular: literacy) 	<ul style="list-style-type: none"> recognising/describing/building 3D shapes (maths) asking relevant questions, formulate/express opinions, give well-structured descriptions/explanations (literacy skills) comparing materials (science) 	
	Key Skills		<ul style="list-style-type: none"> Evaluate a range of bread, through taste, to inform own design criteria which children subsequently review their own product against, considering appearance, flavour, texture and ingredients. Record evaluative data in a table to support comparison Carrying out and articulating the findings of research carried out in groups. Reviewing, considering and suggesting ways in which a recipe could be adapted to be made healthier (eg recipes involving white flour/salt/sugar) Preparing and baking a savoury dish, using specific techniques for purpose. 	<ul style="list-style-type: none"> evaluate an existing bridge to inform plans and structures compare the strengths of different shaped frameworks within 2D structures sketch and annotate a plan of their planned bridge Use computer aided design and exploded diagrams to support the design process write a step by step set of instructions to follow for building their bridge, including the tools and materials evaluate different materials and their suitability for use in a bridge accurately join frameworks using appropriate and robust joins work in a team to plan and build a bridge structure build a bridge following a plan accurately evaluate their completed project considering how successful their bridge is according to the original brief 	
School Context					
					<ul style="list-style-type: none"> visit KS1 playground to observe the bridge and how it is supported. discuss different bridges crossing the Thames and what type they are

Year 6 2022-23

KS2 Curriculum End Points:	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2 (Weeks 6 and 7)	Spring 2 Week 6	-
	Topic	Motion Figures (Freestanding Structures with an Internal Skeleton Frame)	Mechanical Systems (Moving Vehicles Incorporating Electronics and Pulleys)	
<p>Designing</p> <ul style="list-style-type: none"> Can 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. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Making:</p> <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. <p>Evaluating:</p> <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understands how key events and individuals in design and technology have helped shape the world. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. <p>Food technology:</p> <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	<p>Key Knowledge</p> <ul style="list-style-type: none"> To know how to use a wider range of tools and equipment to perform practical tasks (eg hammer, pliers). Knows the value of and is able to make a prototype for design (eg a smaller version in a different medium) to inform subsequent improvement and to support the communication of ideas. Knows how to hold and strike a hammer in smooth and rythmical motion Knows how to hold and operate pliers correctly by using the correct grip to shape and form a material Knows how to form different shapes using wire to create the human body whilst in motion To know how a more complex structure can be supported by an internal frame 	<p>Recovery content (from summer Y3):</p> <ul style="list-style-type: none"> Explain to children that a mechanism is a device used to create movement in a product. Relate new learning to a context that covers previous knowledge on axles and wheels, as an example of a mechanism: https://www.youtube.com/watch?v=-l3-eTwWBw Children to be able to identify and explain some of the advantages and disadvantages of powering a vehicle (like the one they are naming, as well as in real life), by a motor or engine, as well as by pneumatics. Mechanical systems and pulleys have an input, process and output and that gears and pulleys can be used to speed up, slow down or change the direction of movement. Develop their use of technical vocabulary, for example, knowing how to check that a motor shaft rotates when powered. To know that a frame structure can be reinforced and strengthened with triangular shapes at the corners. Build on existing knowledge of axles and wheels, with a focus on ensuring that fixed axles allow the wheels to rotate freely and continuously when a pulley is attached. Know how to measure and cut different materials, including dowel, accurately and safely. Know the importance of a process of review of each construction phase to ensure that each part works and is secure to achieve a fully effective end product. 		
	<p>Cross Curricular Links</p> <ul style="list-style-type: none"> Computing - taking pictures of themselves PE - athletic poses and postures History: During this term, children will use 'sketch' to produce a computer-aided design of an Ancient Greek vase 		<ul style="list-style-type: none"> Computing – use search technologies for research purposes and be discerning when evaluating digital content. Art and design – use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape. Science – apply knowledge and understanding of circuits, switches, conductors and insulators in the design of the final product. Mathematics – understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm. 	
	<p>Key Skills</p> <ul style="list-style-type: none"> Select and use a wider range of tools and equipment to perform practical tasks (including a hammer to join wire to wood, pliers to manipulate a structure into the shape of a figure) and using equipment safely. Draw and photograph the body in motion and use images to inform designs. Evaluate their own and others' products, against design criteria and identifying and communicating how refinement of building processes, as well as the outcome itself, could be improved. 		<p>Recovery content (from summer Y3):</p> <ul style="list-style-type: none"> Children use a balloon to incorporate pneumatics into their moving vehicle as an alternative means to power it, should the motor ever fail. Children to evaluate both – does their vehicle go further/faster when it is powered by pneumatics or the motor? Accurately measure the lengths of square-section wood, sawing and smoothing ends with sandpaper. Build and reinforce a rectangular frame with triangles. Reinforce axles with bearings securing axle holders and checking that wheels move freely. Building a wooden pulley system with a secure fit. Create a chassis in order to hold a motor which will enable the vehicle to be powered. Assess to identify and address potential weaknesses and apply knowledge of strengthening, reinforcing and stiffening. Attach a battery with wires to a motor. Critically evaluate the quality of the design, manufacture, functionality, innovation and fitness for purpose, throughout the process and when the final product is in use, referring back to the design criteria. Follow step-by step plans with referral to lists of tools, equipment and materials needed. 	
School Context				
			Children test products in the school hall as part of the evaluation process.	

