

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

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.

	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 1 2019-2020

KS1 DT Curriculum NC End Points:	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2 (Week 7)	Spring 2 Week 3	Summer 2 Week 4
<p><u>Designing:</u> Is able to design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Can generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p><u>Making:</u> Is able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p><u>Evaluating:</u> Can explore and evaluate a range of existing products evaluate their ideas and products against design criteria.</p> <p><u>Technical Knowledge</u> Can build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Is able to explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p><u>Food Technology:</u> Uses the basic principles of a healthy and varied diet to prepare dishes, understanding where food comes from.</p>	Topic	Toys: Moving Pictures	Freestanding Structures (Rockets)	Summer: Food (Selecting and Preparing Raw Ingredients: Fruit Snack)
	Key Knowledge	<ul style="list-style-type: none"> Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. Understand the steps to make a moving picture or toy Understand that products are designed for users based on criteria, and what simple criteria for a moving toy could be: the mechanism should work smoothly, it should make the right type of movement 	<ul style="list-style-type: none"> Apollo 11 was the spaceflight that first landed humans on the Moon and they will Design and create a rocket replica ensuring that it is freestanding. To know how to join components together effectively. Know that a range of tools can be used for different purposes: cutting, sticking, curling, bending, joining etc. To understand how structures can be made stronger and stiffer. 	<p>Compromised content:</p> <ul style="list-style-type: none"> It is important to wash hands before preparing food and also to wash fruit before we eat it. Simple utensils can be used to process food and make it easier to eat. Fruit is an essential part of a balanced diet and 5 portions of fruit and vegetables are recommended per day. Fruit and vegetables can be farmed or grown at home. A Fruit usually contains a plant or tree's edible seed. A Vegetable is a plant used for food. Nutrients are the things in food that the body needs to remain healthy. Pith is the soft white lining inside fruit such as oranges. A fruit Salad is a cold dish of fresh and/or cooked fruit. Sensory evaluation is when senses are used to evaluate qualities such as appearance, smell, taste, texture (mouth feel). A Kebab has cooked and/or fresh ingredients on a skewer.
	Cross Curricular Links	<ul style="list-style-type: none"> History Topic: Toys from the Past 	<ul style="list-style-type: none"> Maths: 2D and 3D shapes Science: Materials History – link with space topic 	<ul style="list-style-type: none"> Science: Healthy Diet Literacy: Writing instructions
	Key Skills	<ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences Develop, model and communicate their ideas through drawings and mock-ups with card and paper. Plan and suggest steps in the creation phase. Select and use tools, explaining their choices, to cut, shape and join paper and card. 	<ul style="list-style-type: none"> Explore initial ideas using drawings and mock-ups. Use tools for different purposes: cutting, sticking, curling, bending, joining etc. Select and use a range of materials and components, such as paper, card, plastic and wood according to their characteristics. Build structures by selecting appropriate materials and investigating ways to strengthen them. Evaluate their ideas throughout the process and review their products against original criteria. 	<p>Compromised content:</p> <ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose.
	School Context			
<ul style="list-style-type: none"> Make a moving picture book as a class to show EYFS classes examples of toys from the past. 	<ul style="list-style-type: none"> Relate to school workshop about rockets in space. Identify structures in the school environment that are free standing. 	<ul style="list-style-type: none"> Children use fruit from planters on the roof garden and edible playground. Consider why organic ingredients might be used and where these can be sources in the local area or grown from seed. 		

Year 2 2020-21

KS1 DT Curriculum NC End Points:	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2 (Week 8)	Spring 1 Week 6	Summer 1 Week 4
	Topic	Autumn: Textiles (Winter Puppets)	Spring: Mechanisms (Vehicles with Wheels)	Summer: Food (Selecting and Preparing Raw Ingredients: Savoury)
<p><u>Designing:</u> Is able to design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Can generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p><u>Making:</u> Is able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p><u>Evaluating:</u> Can explore and evaluate a range of existing products evaluate their ideas and products against design criteria.</p> <p><u>Technical Knowledge</u> Can build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Is able to explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p><u>Food Technology:</u> Uses the basic principles of a healthy and varied diet to prepare dishes, understanding where food comes from.</p>	<p>Key Knowledge</p> <ul style="list-style-type: none"> To know what Design criteria is and how it can be used to create a product. To know which equipment is needed to sew material together. To know and use key vocabulary, as relevant to the project: seam, thread, stitch. To know how to evaluate their product against the design criteria and suggest improvements. 	<p>Science: Features of Seasons</p>	<p>Compromised content:</p> <ul style="list-style-type: none"> A mechanism is a device used to create movement in a product and wheels and axles are examples of this. To know the difference and distinguish between fixed and freely moving axles, using technical vocabulary relevant to the project. To know the purpose of their product (that the finished model can be moved on wheels with ease) To know what components are needed to construct a moving vehicle and use this to select materials according to which are most suitable. 	<ul style="list-style-type: none"> To know the purpose of different tools and which to select for use in preparing food (eg culinary, sieve, spatula, peeler). To know how to wash, peel, slice and grate vegetables, selecting and use appropriate kitchen equipment safely and purposefully. To know how to grow vegetables from seed prepare for eating (including peeling, chopping, steaming and boiling) To know that some ingredients are easier to acquire according to the season. To know the food groups that different healthy foods belong and demonstrate by selecting appropriate combinations for a singular meal. To know the source of their food.
<p>Cross Curricular Links</p>	<p>Key Skills</p> <ul style="list-style-type: none"> Design and create a puppet, sewing the material together effectively at the seams. Thread and use a needle safely. Evaluate own and each other's product(s) against the design criteria. 	<p>Compromised content:</p> <ul style="list-style-type: none"> Generate initial ideas and simple design criteria. Develop and communicate ideas through drawings and mock-ups. Use a range of tools and equipment to perform practical tasks, such as cutting and joining to allow movement and finishing. Select from and using a range of materials and components, such as paper, card, plastic and wood, according to their characteristics. Use wheels and axles as mechanisms in their product. Evaluate the success of their product against the design criteria. 	<ul style="list-style-type: none"> Science: Healthy Eating School event; Tastes of the World 	<ul style="list-style-type: none"> Plan and prepare a dish of nutritional value. Prepare a meal safely, using a range of equipment appropriately. Make and present food in an aesthetically pleasing way and evaluate the success of their own and others' dishes, involving critique of how dishes could be improved. to be able to use a range of methods of food preparation peeling, chopping, steaming and boiling.
School Context				
		<ul style="list-style-type: none"> Discuss moving vehicles in our local area, following observation. Relate learning to class text involving moving vehicles 	<ul style="list-style-type: none"> Children refer learning to what they are growing on the rooftop terrace and in the edible playground Children consolidate learning during the outdoor picnic with school grown food in the summer term 	

Year 3 2021-22				
KS2 DT Curriculum NC End Points: Designing <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. 	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2 Week 5	Spring 2 Week 3	Summer 1 Week 5
	Topic	Autumn: Bread Based Product	Spring: Shell Structures (Anderson Shelters)	Summer: Mechanical Systems (Pneumatics)
Key Knowledge	<p>Recovery content:</p> <ul style="list-style-type: none"> Recap the importance of handwashing before eating and preparing food. Recap the fact that 5 portions of fruit and vegetables are recommended as part of a healthy lifestyle. Remind children of the food groups, and the fact that bread is a carbohydrate, but that the topping/filling will enhance the nutritional value of their product. Explain what a sensory evaluation is before children carry this out. <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 	<p>Recovery content:</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=-iL3-eTwWBw 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	<ul style="list-style-type: none"> Science: Healthy diet/hygiene 	History - WW2 links to local shelters.		
Key Skills	<p>Recovery content:</p> <p>Recap the purpose of each utensil, providing further demonstration and opportunities for children to practise using as necessary.</p> <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. 	<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). 	<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. 	

		<ul style="list-style-type: none"> • 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. 		
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.		