



Design Technology Long Term Plan

Curricular Goal

Provide opportunities to design, make, evaluate and use technical knowledge when learning about cooking and nutrition, textiles, mechanisms, structures and electrical systems. Ensure and develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.

Autumn Term 2						
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><u>Cooking and nutrition.</u></p> <p>N.C</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. <p>Teddy Bears Picnic - Sandwiches and fruit skewers.</p> <ol style="list-style-type: none"> 1. To learn about different types of picnic food and where they have come from. 2. To explore and taste different picnic food. 3. How to design a food skewer to take on a picnic. 4. To make picnic food using their design sheet. 5. Evaluating our picnic food. 	<p><u>Textiles - Sewing.</u></p> <p>N.C Design</p> <ul style="list-style-type: none"> • design purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria 	<p><u>Cooking and nutrition.</u></p> <p>N.C</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet. • 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>Pizzas</p> <p>Pupils explore what makes a balanced diet and taste test combinations of different food groups before designing and making a pizza.</p> <ol style="list-style-type: none"> 1. Explore different parts of a pizza. Where did pizza originate? Are there different ways to make pizza? What are the class's favourites? 	<p><u>Cooking and nutrition.</u></p> <p>N.C</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet. • 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>Bread/Focaccia - Adapting a recipe</p> <p>Pupils adapt a recipe by adding or altering the ingredients and then work in groups to create a final design that falls within a set budget and design brief.</p> <p>Look at Paul Hollywood – bread chef.</p> <ol style="list-style-type: none"> 1. To investigate and evaluate bread products according to their characteristics. 	<p><u>Cooking and nutrition.</u></p> <p>N.C</p> <ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet. • 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>Savoury Pasties</p> <p>Pupils explore what makes a balanced diet and taste test combinations of different food groups before designing and making a pasty.</p> <ol style="list-style-type: none"> 1. Explore different pasties- savoury/sweet. Where did they originate? Ingredients in the pastry. 2. To examine, describe and categorise a variety of pastry based products. 	<p><u>Textiles - Sewing.</u></p> <p>N.C Design</p> <ul style="list-style-type: none"> • 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. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. • 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. <p>Evaluate</p> <ul style="list-style-type: none"> • investigate and analyse a range of existing products. • evaluate their ideas and



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		<p>Christmas Stocking Decoration</p> <ol style="list-style-type: none"> 1. Running stitch In their introduction to sewing, children explore different examples of textiles and learn a simple running stitch. 2. Explore and discuss templates. Children create a simple template and cut out their fabric 3. Sew their fabric together using a simple running stitch 4. Design/research what the front of the stocking will look like. 5. Using their design ideas from the previous lesson, children add decorations to their stockings. 6. Evaluate finished product. 	<ol style="list-style-type: none"> 2. To examine, describe and categorise a variety of bread based products. 3. To examine, describe and categorise a variety of pizza toppings. 4. To design a balanced healthy pizza. 5. To be able to make a food product (pizza) based on a design. 6. To be able to evaluate their food product. 	<ol style="list-style-type: none"> 2. To learn how bread products are an important part of a balanced diet and can be eaten in different ways. 3. To find out which different ingredients are needed to make bread and focaccia and how ingredients can be altered and mixed to create different effects. 4. To be able to design a bread (focaccia) product for a particular person or event. 5. To be able to make bread based on a plan and design. 6. To be able to evaluate a finished product. 	<ol style="list-style-type: none"> 3. To explore where ingredients for pasties come from - explore healthy foods. 4. To design a savoury pasty. 5. To be able to make a food product (savoury pasty) based on a design. 6. To be able to evaluate their food product. 	<p>products against their own design criteria and consider the views of others to improve their work.</p> <ul style="list-style-type: none"> • understand how key events and individuals in design and technology have helped shape the world. <p>Drawstring bags</p> <ol style="list-style-type: none"> 1. To investigate and analyse items made using textiles: the materials used and how they are made. 2. To explore some ways in which textiles are joined and separated. 3. To design an item made using textiles, and draw pattern pieces. 4. To use pattern pieces to measure, mark and cut fabric: to sew design elements according to a design. 5. To join fabric pieces by hand sewing. 6. To sew hems on an item made using textiles: to add design details.
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Summer Term 2						
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><u>Mechanisms</u></p> <p>N.C Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics explore and evaluate a range of existing products <p>Evaluate</p> <ul style="list-style-type: none"> evaluate their ideas and products against design criteria <p>TECHNICAL KNOWLEDGE</p> <ul style="list-style-type: none"> explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <p>Cars with axles</p> <ol style="list-style-type: none"> Research -exploring existing products. Explore 	<p><u>Structures</u></p> <p>N.C Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products <p>TECHNICAL KNOWLEDGE</p> <ul style="list-style-type: none"> build structures, exploring how they can be made stronger, stiffer and more stable. <p>Bridges</p>	<p><u>Textiles - Sewing</u></p> <p>N.C Design</p> <ul style="list-style-type: none"> 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. generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. 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. <p>Evaluate</p> <ul style="list-style-type: none"> 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. understand how key events and individuals in design and 	<p><u>Electrical Systems</u></p> <p>TECHNICAL KNOWLEDGE - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p> <p><u>Structures</u></p> <p>TECHNICAL KNOWLEDGE -apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Lighthouses (with a light).</p> <ol style="list-style-type: none"> Research -exploring existing lighthouses. What are they used for/why are they important. . To explore different structures - how to create a stable base and structure for the lighthouse. Design their lighthouse. Make the lighthouse structure. 	<p><u>Computing - to program, monitor and control</u></p> <p>TECHNICAL KNOWLEDGE - apply their understanding of computing to program, monitor and control their products.</p> <p>Micro:bits</p> <p>BBC Micro:bits - https://microbit.org/getting-started/introduction/</p> <p>Projects - https://microbit.org/projects/make-it-code-it/</p>	<p><u>Mechanical Systems</u></p> <p>TECHNICAL KNOWLEDGE - -understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>Cams/levers - moving toy in a box - Automata animals?</p> <ol style="list-style-type: none"> Research -exploring existing products. Explore how they move and the impact of the mechanism. To explore different ways cams move, using different cam shapes. Practising skills- prototypes? Design a mechanical cam toy. Make their cam toy. Decorate their cam toy. Evaluate their cam toy and look for ways to improve.



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	<p>how they move and the impact of the mechanism.</p> <ol style="list-style-type: none">2. To explore different ways to make wheels move. <p>Practising skills- prototypes?</p> <ol style="list-style-type: none">3. Design a toy vehicle.4. Make their toy vehicle.5. Decorate their toy vehicle.6. Evaluate their toy vehicle and look for ways to improve.		<p>technology have helped shape the world.</p> <p>Pencil cases</p> <ol style="list-style-type: none">1. To investigate a range of pencil cases.2. To practise and compare sewing stitches.3. To be able to sew embellishments to a piece of fabric.4. To investigate ways of opening and closing pencil cases. <p>To be able to design a pencil case.</p> <ol style="list-style-type: none">5. To be able to make a pencil case based on a design.6. To be able to evaluate a design and look for ways to improve.	<ol style="list-style-type: none">5. Create the light part of the lighthouse with an electrical circuit.6. Evaluate their lighthouse and look for ways to improve.		
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