

Design Technology Long Term Coverage Map

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| <p>EYFS Development Matters Subject Content</p> <ul style="list-style-type: none"> • They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology. | <p>Purpose of study Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. Aims The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook. |
| <p>Ks1 National Curriculum Subject Content</p> <p>Pupils should be taught: 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:</p> <p>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 • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <p>Technical knowledge</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products | <p>KS2 National Curriculum Subject Content</p> <p>Pupils should be taught: 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:</p> <p>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 technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products. |
| <p>Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> | |
| <p>Key stage 1</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>Key stage 2</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. |

Design Technology Key Concepts

These key concepts are the 'big ideas' which run as threads through the curriculum. The same key concepts are explored and revisited in each unit of work in every year group. This enables pupils to build on prior knowledge, deepen their contextual knowledge and always working towards the bigger picture of achievement at the end of each year group or phase.

Master process of design and be Innovative

This concept involves developing the process of design thinking and seeing design as a process of making (something) new or doing something in a new way to make it better. Design, Make, Evaluate and Improve.

Take inspiration from design throughout history and draw upon core disciplines

This concept involves appreciating the design process that has influenced the products we use in everyday life. To evaluate past and present design and technology, and develop a critical understanding of its impact on daily life and the wider world.

Health & Well-being

This concept involves instilling a love of cooking in pupils to open a door to one of the great expressions of human creativity. To develop knowledge of where food comes from and how to cook and apply the principles of nutrition and healthy eating now and in later life.

Aspirations for the future

Pupils develop an understanding of how subjects and specific skills are linked to future jobs.

Here are some of the jobs you could aspire to do in the future:

Fashion designer

Tailor

Product designer

Architect

Software engineer

Civil engineer

Carpenter

Chef

| Year Group | Autumn | Spring | Summer |
|--------------|---|--|--|
| Year 1 | <p align="center">Mechanisms</p> <p align="center">Design a moving picture</p> | <p align="center">Cooking and nutrition</p> <p align="center">Making fruit Kababs using Seasonal Fruits</p> | <p align="center">Textiles</p> <p align="center">Our fabric faces</p> |
| | <p>NC: design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>NC: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>NC: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>NC: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p>NC: explore and evaluate a range of existing products</p> <p>NC: evaluate their ideas and products against design criteria</p> <p>NC: explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> | <p>NC: design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>NC: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>NC: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>NC: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p>NC: explore and evaluate a range of existing products</p> <p>NC: evaluate their ideas and products against design criteria</p> <p>NC: use the basic principles of a healthy and varied diet to prepare dishes</p> <p>NC: understand where food comes from.</p> | <p>NC: design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>NC: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>NC: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>NC: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p>NC: explore and evaluate a range of existing products</p> <p>NC: evaluate their ideas and products against design criteria</p> |
| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Generate ideas based on simple design criteria and their own experiences, Develop, model and communicate ideas through drawings and mock-ups</p> <p>Making - Select and use tools, explaining their choices</p> <p>Evaluating – Discuss how well it works in relation to the purpose and the user and whether it meets design criteria.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Explore a range of existing books and everyday products that use simple sliders and levers.</p> <p>Understand that different mechanisms produce different types of movement.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Design based on past experiences and images pupils may have looked at</p> <p>Making - Producing a fruit kabab that is aesthetically pleasing using seasonal fruits</p> <p>Evaluating – Describe the taste, texture and explain combination of fruits chosen</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Look through cookbook and recipes of different fruits kababs</p> <p>Explore and understand which fruits are seasonal</p> <p>Book inspiration - Handa's Surprise</p> <p>HEALTH & WELL-BEING</p> <p>Use appropriate tools to cut the fruit</p> <p>Hygiene- why clean hands before food prep.</p> <p>Discussion of food allergies and intolerances.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Design- Think of ideas based upon investigations of products and experience of working with Materials. Describe the design by using pictures, diagrams, models and words</p> <p>Make - Join materials together in different ways to make the product. Use a range of materials and techniques to create a face shape</p> <p>Evaluate - - What went well?</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <ul style="list-style-type: none"> • Explore and learn about the running stitch – Why is it named the running g stitch? Where does it originate from? |
| Year 2 | <p align="center">Structures</p> <p align="center">Tudor houses and the Great Fire of London</p> | <p align="center">Cooking and Nutrition</p> <p align="center">Making a fruit salad</p> | <p align="center">Mechanisms</p> <p align="center">Wind turbines</p> |
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| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing – Research and explore Tudor houses</p> <p>Develop a simple design with some annotations</p> <p>Making – Create a 3D product</p> <p>Evaluating - Evaluate their products against their design specification,</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Learn about the history and design of Tudor houses</p> <p>Understand how to strengthen, stiffen and reinforce 3-D frameworks</p> <p>Know and use technical vocabulary relevant to the project.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Research where fruit grows in the UK and more locally in our school vegetable plot</p> <p>To know that some fruit is grown outside of the UK in warmer climates.</p> <p>Making – Create a tasty fruit salad that contains at least 3 fruit that could be selected by our school cook and then served during school dinners in the salad trolley.</p> <p>Peel, cut and combine ingredients to make a fruit salad</p> <p>Evaluating - Describe appearance, taste and texture before and after preparation</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Recipe books from the library</p> <p>As part of their research and evaluation, children describe fruit considering texture, appearance and taste.</p> <p>HEALTH & WELL-BEING</p> <p>Know how to eat a healthy and varied diet.</p> <p>Discussion of food allergies and intolerances.</p> <p>Prepare food knowing the importance of following hygiene rules such as washing their hands, wearing an apron and tying long hair back</p> <p>Use a chopping board and make sure the fruit is flat on the board.</p> <p>Use the techniques such as the claw and the bridge to cut safely.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Closely explore and examine different design features of various wind turbines</p> <p>Using research, produce a design that they think will adequately meet the wind turbine challenge (see resources folder)</p> <p>Making - To follow the design, but make changes if necessary to benefit the product</p> <p>Evaluating – Evaluate their products against their design specification,</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Making links to the huge wind turbine we have close to school, near the Beckton roundabout.</p> <p>What does it look like? Make links to the design.</p> <p>Children use the poster and various other sources to get inspirations for different types of wind turbines.</p> <p>Pupils explore the materials used for different types of wind turbines.</p> |

| Year Group | Autumn | Spring | Summer |
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| Year 3 | <p align="center">Structures Clay models of Stone Age houses</p> <p>NC: 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 NC: 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 NC: build structures, exploring how they can be made stronger, stiffer and more stable NC: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> | <p align="center">Cooking and Nutrition Making a Smoothie</p> <p>NC: 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 NC: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design NC: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately NC: 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 NC: investigate and analyse a range of existing products NC: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work NC: understand and apply the principles of a healthy and varied diet NC: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques NC: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> | <p align="center">Pneumatics Moving Monsters</p> <p>NC: 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 NC: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology NC: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] NC: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics NC: investigate and analyse a range of existing products NC: evaluate and evaluate a range of existing products NC: evaluate their ideas and products against design criteria and consider the views of others to improve their work NC: understand how key events and individuals in design and technology have helped shape the world NC: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> |
| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE Designing- Generate and develop realistic ideas and design criteria collaboratively and through conducting research of Stone Age homes. <i>What materials were used then? What are the resources available to us? What design will I go for? What difficulties may I encounter?</i> Making – Develop basic understanding of what structures are and how they can be made stronger, stiffer and more stable Evaluate- To talk about their ideas and how they used their plan to construct the clay model of a Stone age house. How did they find working in the group?</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES Explore Stone Age architecture – Stonehenge, built with layers of stones Explore the used primitive stone tools during the Stone Age</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE Designing – Select ingredients by highlighting the taste, texture and the health benefits it brings. Making- Design to include a pictorial representation of how they want the smoothie to look as well as written instructions on how to make the smoothie. Evaluate - Tasting and evaluating user’s preference; evaluating ideas and finished products against original criteria.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES Using various sources (internet, recipe books, magazines and books) to explore various designs, consistencies and flavours of smoothies. Exploring different types of garnishes to make the drink more aesthetically appealing. Exploring additional ingredients that bring other benefits i.e. using crushed ice will ensure the smoothie is cold, using ice-cream rather than milk will ensure the smoothie is a lot thicker, etc.</p> <p>HEALTH & WELL-BEING The knowledge of how ingredients are used in different recipes The knowledge of different blending techniques Nutrition: Fruit is also high in sugar; therefore, we must also eat fruit in moderation. Operating safely with sharp objects.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE Designing –Explore objects/toys that need air to make them work Explore how pneumatics can be used to make parts of the monster move Making - Construct effective pneumatic systems Know of techniques for fixing components Investigate ways of using their pneumatic systems with other materials to control movement Evaluate - Know how to evaluate their product as a team and suggest improvements</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES Learning all about simple pneumatic systems Seeing and comparing different examples of pneumatic systems Learning that changes in air pressure can cause movement</p> <p>HEALTH & WELL-BEING Work safely and accurately with a range of simple hand tools Why do we have pneumatic systems? How do they help us? What precautions must be taken when producing pneumatic systems? Think of examples where pneumatic systems could be potentially dangerous.</p> |

| Year 4 | Cooking and Nutrition The Great Bread Bake-off!- Roman bread | Textiles Sewing related to Anglo - Saxons | Structures Design a New Bridge |
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| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing- Explore wide variety of bread products from a variety of cultural traditions</p> <p>Compare the processes involved in making bread products – commercial and domestic</p> <p>How did the Romans make their bread? Are the techniques used today?</p> <p>Making – Follow instructions to create Roman Bread</p> <p>Evaluate – To evaluate a product against the recipe and indicate any improvements that could be made</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>History of bread making - earliest bread was made in or around 8000 BC in the Middle East, specifically Egypt</p> <p>Breads from around the world</p> <p>HEALTH & WELL-BEING</p> <p>Ensure there are clear expectations on how to operate safely, particularly with sharp and/or electrical objects.</p> <p>Ensure that the Safe Preparation Skills Adult Guidance is followed.</p> <p>Discussion of food allergies and intolerances.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing – Generate design criteria for an appealing, functional product for specific users.</p> <p>Making – Produce annotated sketches, prototypes, final product sketches and pattern pieces.</p> <p>Practice different types of sewing techniques</p> <p>Select fabrics and fastenings according to their functional characteristics.</p> <p>Evaluating – Test their product against the original criteria and with the intended user.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Research Anglo Saxon textiles, technique and designs</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing – Explore existing designs</p> <p>Research different bridge structures.</p> <p>Investigate and design paper bridges</p> <p>Making- Build innovative, functional, appealing, structures that are fit for purpose.</p> <p>Evidence how products can be made stronger and more stable.</p> <p>Use finishing techniques to strengthen and improve the appearance of their models.</p> <p>Evaluating – Evaluate finished bridge using criteria</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <ul style="list-style-type: none"> - Looking at how the design and structure of bridges have changed, over time. - Looking at how engineering techniques have developed, over time. - Exploring how structures are reinforced. - Exploring how materials have developed; the formation of composite materials has meant that we have better materials as the new material has many desirable properties. - Core principle: Materials and their properties. This is an important area to consider when designing, particularly where structures are concerned. Engage pupils with this theory by showing them a clip of the Millennium Bridge acting like jelly on the day of opening. This is due to the scientific theory of resonance. The bridge was closed and additional materials were installed under the bridge to prevent such scenarios again; dampers were installed. - Core principle: Strengthening. Though this isn't the main focus, children will be testing and then adding additional material, to increase the load the bridge can withstand, before showing any signs of deformation. |

| Year Group | Autumn | Spring | Summer |
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| Year 5 | <p align="center">Cooking and Nutrition Perfect Pizzas</p> | <p align="center">Structures Ancient Greek Structures</p> | <p align="center">Mechanisms Solar Ovens</p> |
| | <p>NC: 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>NC: 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>NC: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>NC: 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> <p>NC: 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</p> <p>NC: improve their work understand how key events and individuals in design and technology have helped shape the world</p> <p>NC: understand and apply the principles of a healthy and varied diet</p> <p>NC: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>NC: 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>NC: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</p> | <p>NC: 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>NC: 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>NC: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>NC: 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> <p>NC: investigate and analyse a range of existing products</p> <p>NC: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>NC: understand how key events and individuals in design and technology have helped shape the world</p> <p>NC: apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> | <p>NC: 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>NC: 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>NC: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>NC: 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> <p>NC: investigate and analyse a range of existing products</p> <p>NC: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>NC: understand how key events and individuals in design and technology have helped shape the world</p> |
| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing and Making - Consolidation of prior knowledge and sharing experiences with bread. Make links to Y4 and what they learnt in terms of the bread-making process</p> <p>Research, evaluate and investigate a range of existing Pizzas to determine which ingredients taste better? What shape or design do I want? What toppings do I want? Where these ingredients are generally sourced? Are they seasonal?</p> <p>Evaluating - Evaluating their final outcome against their original design.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Who invented pizza? Baker Raffaele Esposito from Naples is often given credit for making the first such pizza pie.</p> <p>The history of Pizza - Flatbreads with toppings were consumed by the ancient Egyptians, Romans and Greeks</p> <p>Understand different jobs and processes involved in baking pizza</p> <p>HEALTH & WELL-BEING</p> <p>Ensure there are clear expectations on how to operate safely</p> <p>To handle food safely</p> <p>Ensure that the Safe Preparation Skills Adult Guidance is followed.</p> <p>Discussion of food allergies and intolerances.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Contextualising the learning: Making links to prior learning and experiences. Research different types of columns, features of columns, innovative designs, etc. Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.</p> <p>Making- Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.</p> <p>Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.</p> <p>Evaluating - Verbalising their thoughts with subject-specific vocabulary- what went well, what didn't go so well and what improvements they could make. <i>These could be additional features to include within their monument.</i></p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Exploring images of various monuments and their architectural designs</p> <p>Research key events and individuals relevant to frame structures.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Making links to the wind turbines children produced in Y2 as part of D&T. Research solar ovens - How does a solar oven work? What components does a solar oven need to cook food successfully? What factors impact the success of solar cooking? If solar cooking is such a good alternative energy solution, why isn't it more popular with people and governments? Can solar ovens be used for anything else besides cooking food?</p> <p>Marking- To develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if first attempts fail. Resilience is essential.</p> <p>Evaluating - Verbalising their thoughts with subject-specific vocabulary- what went well, what didn't go so well and what improvements they could make.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Who invented the solar oven?</p> <p>Look at the history of solar coking – How has it changed over time?</p> <p>What are the benefits of Solar cooking?</p> <p>Make links to Y2 and point out the large windmill near Gallions Reach Tesco (near the roundabout) which most our pupils would have seen. Additionally, point out solar panels that we see on many homes. The way solar ovens work is based on the same principles of solar panels.</p> <p>Core scientific principle: The Sun provides us with heat and light, allowing for life on Earth. It is the Sun's rays, where we can capture the energy and use it for alternative things such as powering our homes with electricity.</p> |

| Year 6 | Textiles Sewing a pin cushion | Cooking and Nutrition Great British bake off | Electricity Circuits |
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| Key concepts | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing - Recap and revise: Sewing and the different types of stitching used in different everyday items. To develop a clear idea of what has to be done, planning which stitches to use, following a design they have created</p> <p>Making- suggesting alternative methods of making if first attempts fail. Resilience is essential. Innovation: Use a combination of different stitches within their design.</p> <p>Evaluating- To verbalise their method, evaluations and overall improvements.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Generate and communicate innovative ideas through research. Understanding of audience and purpose, and ensuring that their physical product is aligned with it Investigate and analyse textile products linked to their final product</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing and Making - Generate and explore innovative ideas through research and discussion to develop a design brief. Write a step-by-step recipe, including a list of ingredients, equipment and utensils. Use appropriate utensils and equipment accurately, make, decorate and present a food product for the intended user and purpose.</p> <p>Evaluating- Evaluate a range of relevant products and ingredients and the final product with reference to the design brief and specification. Understand seasonality and the source of different food products Peer assessment: Tasting and reviewing each other’s cakes using the two stars and a wish strategy.</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>Get inspiration from famous British Bakers – Mary Berry, Nadiya Hussain</p> <p>HEALTH & WELL-BEING</p> <p>Ensure there are clear expectations on how to operate safely, Ensure that the Safe Preparation Skills Adult Guidance is followed. Discussion of food allergies and intolerances.</p> | <p>MASTER PROCESS OF DESIGN AND BE INNOVATIVE</p> <p>Designing- Develop a design specification for a functional product that responds automatically to changes in the environment. Making- Formulate a step-by-step plan to making, listing tools, equipment, materials and components. Evaluating - Test and evaluate the system to demonstrate its effectiveness for the intended user and purpose. Know and use technical vocabulary relevant to the project</p> <p>TAKE INSPIRATION FROM DESIGN THROUGHOUT HISTORY AND DRAW UPON CORE DISCIPLINES</p> <p>History: Learn about electrical advances over time</p> <ul style="list-style-type: none"> In about 600 BC, the Ancient Greeks discovered that rubbing fur on amber (fossilized tree resin) caused an attraction between the two – and so what the Greeks discovered was actually static electricity. Researchers and archaeologists in the 1930s discovered pots with sheets of copper inside that they believe may have been ancient batteries meant to produce light at ancient Roman sites. Similar devices were found in archaeological digs near Baghdad meaning ancient Persians may have also used an early form of batteries. But by the 17th century, many electricity-related discoveries had been made, such as the invention of an early electrostatic generator, the differentiation between positive and negative currents, and the classification of materials as conductors or insulators. <p>HEALTH & WELL-BEING</p> <p>- Why do we have electricity? Can we operate without it? What are the major drawbacks? - Developing more efficient circuits and lightbulbs e.g. energy-saving bulbs - Staying safe: Teaching and learning of conductors and insulators - Health and safety: When operating with equipment and/or making circuits, it is vital that children are sensible and safe.</p> |