

Design and Technology Curriculum

Nursery			
Educational programmes: Revised EYFS framework 2021			
Expressive arts and design			
The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.			
	Autumn	Spring	Summer
	Offer a variety of natural and man-made materials e.g. 'junk' recycled materials, twigs, shells.		
Learning priorities	Explore properties of different objects /materials: moving, combining, lining up and stacking. Significant people: Andy Goldsworthy, sculptor	Begin to use selected parts to create simple constructions and models. Use simple tools to join, fix, cut etc.	Begin to make constructions and models with a purpose, deciding / planning what to make. Use tools with increasing control to support model-making.
Retrieval Vocabulary		Poke, pull, pinch, squeeze, pat, move, line up, stack	Poke, pull, pinch, squeeze, pat, move, line up, stack, mould, roll, squash, place, build, balance, join, stick, click, make, cut, tear, stick
New Vocabulary	Poke, pull, pinch, squeeze, pat, move, line up, stack	Mould, roll, squash, place, build, balance, join, stick, click, make, cut, tear, stick	Curl, twist, loop, shape, tap, fix

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Reception			
Educational programmes: Revised EYFS framework 2021			
Expressive arts and design			
The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.			
	Autumn	Spring	Summer
	Offer and extend a variety of natural and man-made materials e.g. 'junk' recycled materials, twigs, pine cones and different types of glue (e.g. PVA, glue sticks, flour & water)		
Learning priorities	Independently make constructions, using own ideas and available loose parts. Show increasing skills with combining, lining up, stacking etc.	Build and de-construct loose part models / constructions to represent real life / imaginary objects and experiences. Handle tools and materials with increasing control.	Make imaginative structures, using tools with control. Explore a wide range of materials, making simple forms and applying simple decorative features where wanted. Significant people: Barbara Hepworth, sculptor
Retrieval Vocabulary	pulling, poking, patting, lining up, stacking	Place, build, balance, join	Tab, fringe, tie, wrap, improve
New Vocabulary	Roll, cut, flatten, slot, fold, wedge	Cone, spiral	Pierce, separate

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KS1 National Curriculum General: 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]. 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.					
Year 1	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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. 	<ul style="list-style-type: none"> Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. 	<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. 	<ul style="list-style-type: none"> Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.
	Autumn		Spring		Summer
Key concept	Global Goal 12 – Responsible consumption and production Theme: Recycling		Global goal 4 – Quality education Theme: Learn through play		Global Goal 2 – Zero hunger Theme: Fruit dishes
Learning Outcome	Make a phonics cushion for comfort and phoneme practice. Purpose: to be used in Phonics and library sessions Significant people: Lucienne Day (gender) British textile designer of 1950s and 60s		Make a game to support knowledge of number bonds to 10 including a moving mechanism. Purpose: to be played with a partner at the end of a maths lesson Significant people: Lizzie Magie (gender) Monopoly game inventor		Create a healthy fruit snack Significant people: James Coke (disability) ‘The Disabled Chef’ has MS but cooks from his wheelchair
Sequence of learning	<ul style="list-style-type: none"> Research different cushion products to evaluate components including shapes, materials, colours, textures and comfort levels. Through labelled pictures, design a comfortable cushion which is large enough to seat a child. Consider how to make the cushion attractive, comfortable as well as educational on multiple phonic sounds relevant to that particular child. Make cushions from recycled material in line with prior designs and with the use of a template, selecting the materials and joining method (e.g. tying, gluing and stapling). Use and evaluate the cushions during Phonics sessions and library trips, focussing on their attractiveness, comfort and educational support. 		<ul style="list-style-type: none"> Research and evaluate levers and sliders, how they are used and discuss how we could incorporate them into our game (e.g. levers made with paperclips, pipe cleaners and split pins or sliding parts to reveal answers) Design a game using a moving mechanism independently or in groups. Include a labelled drawing and then generate a scrap paper mock up. Make a game using own design. Select their own materials and joining techniques. Choose the most appropriate scale, materials and equipment. Play and evaluate the games. Discuss what features provided the best experience for learning and fun. 		<ul style="list-style-type: none"> Research and discuss a wide range of fruit and vegetables, discussing differences between healthy and unhealthy foods. Research and discuss which parts of the world/countries different fruits and vegetables come from. Taste and evaluate a range of small pieces of fruit. Design a healthy fruit snack using pictures, labels and a bullet pointed recipe list, thinking about a wide choice of presentations (discuss fruit pictures, fruit roll ups, smoothies, sorbets etc.) attractiveness of the dish and combining 3 chosen fruits which complement each other in flavour and texture Make a healthy snack including 3 fruits, selected by each child, working hygienically. Taste and evaluate our own healthy fruit snacks. Which flavours/ingredients did you prefer and why? How did you create an attractive finish?

Year 1	Autumn	Spring	Summer
Retrieval Vocabulary	Design, recycle, awareness, important, material, make, product, draw, computer, shape, cut, equipment, resources, mock-up, construct, finish, waterproof, waste	Design, material, make, product, draw, computer, shape, cut, equipment, resources, mock-up, construct, finish	Flavour, taste, acidity, sweetness, fruity, nutty, creamy, bitter, sour, recipe, compliment, ingredient, dry, moist, bland, spicy, savoury, rich, salty, sugary, greasy, sour
New Vocabulary	Template, stapling, research, evaluate	Levers, sliders, mechanism	Recipe, presentation, combining, hygienic

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KS1 National Curriculum					
General: 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]. 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.					
Year 2	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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. 	<ul style="list-style-type: none"> Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. 	<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. 	<ul style="list-style-type: none"> Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.
	Autumn		Spring		Summer
Key concept	Global Goal 15- Life on Land Theme: Sustainability		Global Goal 12—Responsible consumption and production Theme: Upcycling		Cooking Global Goal 2: Zero hunger Theme: Protein foods
Learning Outcome	Make a minibeast microhabitat Purpose: to be a safe, warm environment for mini-beast Significant people: architect René Hougard and product designer Alexander Qual of furniture which encourages biodiversity		Make bags from recycled materials Purpose: to use the bags for a fashion show Significant people: fashion designer/ dressmaker Elizabeth Keckley freed herself from slavery and designed for the most influential women in Washington (ethnicity)		Make no bake protein snacks Significant people: Ted Allen famous chef who presents Food Network (LGBT)
Sequence of learning	<ul style="list-style-type: none"> Research and discuss the best materials to create a microhabitat out of recycled materials and materials sourced from the field. Evaluate and critique (using understanding from science) which microhabitat minibeasts would prefer e.g. light and dry, light and damp, dark and dry, dark and damp. Research different microhabitats to inspire individuality. Discuss why it is important to protect ecosystems of minibeasts eg pollination, food chains links etc. Design own microhabitat. Choose appropriate materials for structure. Understand the purpose of why they are making the microhabitat. Make a mock up/model of own microhabitat to test stability before making own full-size project to put in the forest school area. Leave in school garden over weekend and evaluate effectiveness as a habitat. 		<ul style="list-style-type: none"> Research a wide range of existing bags. Discuss the purpose of bags and look at different designs, consider who the user might be and how the product has been designed with the user in mind. Discuss sustainable fashion and how we can reduce how much clothing we buy. What else can we do with our old clothes? How can we make people aware of the problems to do with throwaway fashion? Design a bag and inner label (using computer aided design CAD). Create a label linked to sustainable fashion and recycling clothes. Consider shaping and finishing of the product Make a bag using recycled clothing and simple joining techniques. E.g. stapling, tying, gluing or simple stitching. Model the bags during a fashion show, then evaluate own bags and bags made by others. 		<ul style="list-style-type: none"> Research protein snacks. What are they? How are they made? Consider fat, sugar and protein content. Taste and evaluate different existing protein snacks. Taste bars and balls, with a variety of flavours. Describe likes and dislikes Discuss how to maintain a healthy, balanced and varied diet. Discuss where some of the ingredients come from. Discuss why protein is important. What is the benefit or having a diet that is high in protein? Taste a range of individual ingredients. Design a no bake protein snacks, including labelled diagrams and simple instructions for their recipe. Make a no bake protein snack with more than 3 ingredients. Taste and evaluate high protein snacks made by self and peers. Which flavours/ingredients were preferred and why? How did they create an appetising finish on their product?

Year 2	Autumn	Spring	Summer
Retrieval Vocabulary	gather, recycle, food chain, materials, plastic, paper, wood, life, structure	textiles, fabric, plan, mock-up, create, finish, evaluate, sustainable	Flavour, taste, bitter, sour, recipe, compliment, ingredient, dry, moist, bland, spicy, savoury, rich, salty, greasy, sour
New Vocabulary	Microhabitat, sourced, suited	Renewable, prototype, throw-away fashion	Protein, organic, seasonality

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Year 3	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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 	<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. 	<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. 	<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.
	Autumn		Spring		Summer
Key concept	Global Goal 12 - Responsible consumption and production Theme: Recycling		Global Goal 4 -Quality education Theme: Learn through play		Global Goal 2: Zero hunger Theme: Energy foods
Learning Outcome	Create a plant container from recycled materials Purpose: to observe and nurture a healthy plant over time Significant people: Rekha Mistry, gardening writer and horticultural graduate (ethnicity)		Make a moving picture to describe an event/character in Ancient Egypt Purpose: to perform to the class using the moving picture as a prop Significant people: Nick Park creator of Wallace and Gromit and moving picture expert		Create a healthy, hand held savoury snack, using pastry and fillings Significant people: French chef Nina Métayer voted World's Best Pastry Chef 2023 (first woman to be awarded) (gender)
Sequence of learning	<ul style="list-style-type: none"> Research different types of plant containers. Discuss the purpose of plant containers and their features through exploring different designs, eg Clay plant pots, rope hanging baskets, wooden containers etc Discuss plastic pollution in the ocean, plastics in landfill and what we can do instead of continuing to buy single use plastic bottles/containers. How can we combat these issues? Discuss recycling and reusing/repurposing and natural materials, eg cardboard, clay, wood, repurposed plastic. Design a plant container using either natural materials or repurposed plastic, to be decorated with natural materials, using a cross sectional diagram. Construct a paper model of the prototype for the plant container. Make a plant container using recycled or natural materials. Consider the most appropriate way to join together, cut and shape the materials. Evaluate the container for durability, functional drainage and how successfully the container allows the plant to thrive Provide opportunities for children to observe plants growing over time. 		<ul style="list-style-type: none"> Research and explore different products with a range of mechanisms, with a focus on levers and linkages. Using annotated sketches, design a moving character or picture, including labels of the use of materials and joining techniques. Create a cardboard prototype. Think about size and pieces and design. Make own moving picture/character, including a mechanism, using wood. Use and evaluate own and others' moving picture/character. Have they achieved an attractive or appealing aesthetic product? Was the final product eye-catching for the audience? 		<ul style="list-style-type: none"> Research where our food comes from. Look at the different places we can source vegetables. Discuss where and how a variety of ingredients are grown and processed, eg vegetables-grown, pastry-processed. Discuss seasonality what time of year certain vegetables are grown. Taste a range of vegetables individually and types of pastry, eg puff pastry, short crust, filo. Design a healthy pastry snack with 2 or more fillings, eg a ball, tart, wrap, roll etc. Prepare and cook the healthy pastry snack by baking. Taste and evaluate the healthy pastry snack focusing on presentation, smell, taste and its ability to hold its form when eaten.

Year 3	Autumn	Spring	Summer
Retrieval Vocabulary	Design, material, make, product, draw, measure, online, computer, shape, cut, equipment, resources, mock-up, paper prototype, game cards, spinner, construct, finish	Research, develop, design criteria, functional, appealing, products, model, discussion, annotated sketches, prototypes, recycling, reuse	Dish, healthy balanced meal, carbohydrates, protein, food groups, vegetables, flavour, taste, acidity, sweetness, fruity, nutty, creamy, bitter, sour, recipe, seasonality, ingredient, dry, moist, bland, spicy, savoury, rich, salty, sugary, greasy, sour
New Vocabulary	Cross-sectional diagram, repurposed, pollution	Linkages, innovative, exploded diagrams	Source, processed, compliment

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Year 4	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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 	<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. 	<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. 	<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.
	Autumn		Spring		Summer
Key concept	Global Goal 12 – Responsible consumption and production Theme: Recycling		Global Goal 6 – Clean water and sanitation Theme: Health		Global Goal 2 – Zero hunger Theme: Reduce sugar intake
Learning Outcome	Make waterproof items from recycled materials. Purpose: to test in a class experiment Significant people: Leo Baekeland, Belgian chemist, inventor of the first fully synthetic plastic		Make a pulley system to extract what from a ‘Roman well’ Purpose: to participate in a class race to collect the most water in a set amount of time. Significant people: Archimedes, Greek Mathematician and engineer is one of the most famous of all time and used compound pulley systems		Create a low sugar baked dessert. Significant people: Nadiya Hussain (religion & ethnicity) Winner of BBC Bake-off
Sequence of learning	<ul style="list-style-type: none"> Discuss recycling and how it helps to look after our planet. Think about items we use and throw away eg. plastic bags/ plastic bottles and the impact this has. Research existing waterproof items eg wellington boots, poncho, hats, umbrellas, with a focus on the properties of the materials. Design an item that uses recycled materials that is waterproof and can keep somebody dry in the rain, using a detailed annotated sketch or a patterned piece. Make a waterproof item from recycled materials, to fit a Year 4 child. Evaluate your own and others products through a class experiment, focus on the product’s ability to repel water, keep the user dry. 		<ul style="list-style-type: none"> Discuss the progression of how Romans went from sourcing clean water from wells to developing aqueduct technology. Research the use of pulleys and gears and recap the use of leavers and linages and the ways in which these mechanisms can be used. Physically explore how the mechanisms work. Design a container and pulley system which allows water to be collected and drawn up by at least 60cm using annotated sketches and computer aided design. Make a pulley system using wire, string or wool for the rope and wood, plastic or metal for the wheel, container and weight. Evaluate your own and others’ products through a class challenge by monitoring whose project is the most effective through collecting the most water in the time given. 		<ul style="list-style-type: none"> Discuss effects of sugar on teeth and body with a focus on nutrition and healthy eating (Look at the benefits of low sugar or natural sugar alternative) Discuss where sugar cane grows and how it is processed. Research and taste a range of desserts that contain a mixture of natural sugars/low in artificial sugars. Design own dessert using natural sugars/low in sugar, with two or more ingredients. Prepare and cook a low sugar dessert using a range of cutting, grating and slicing techniques. Taste own dessert and the desserts of peers. Evaluate the desserts. Which desserts were still sweet although sugar content was reduced, or only natural sugars were used?

Year 4	Autumn	Spring	Summer
Retrieval Vocabulary	Research, develop, design criteria, innovative, functional, appealing, products, generate, develop, model, discussion, annotated sketches exploded diagrams, prototypes, recycling, reuse	Research, design criteria, innovative, functional, appealing, products, generate, develop, model, discussion, annotated sketches exploded diagrams, prototypes, recycling, reuse	Flavour, taste, acidity, sweetness, fruity, nutty, creamy, bitter, sour, recipe, compliment, ingredient, dry, moist, bland, spicy, savoury, rich, salty, sugary, greasy, sour, slicing, grating, natural sugars, free sugars, food hygiene, alternative
New Vocabulary	Patterned piece, impact, repel	Pulleys, gears, develop	Nutrition, artificial, natural sugars

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Year 5	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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 	<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. 	<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. 	<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.
	Autumn		Spring		Summer
Key concept	Global Goal 13: Climate Action Theme: Important signs		Global Goal 4- Quality Education Theme: Forces and Materials		Global Goal 2: Zero hunger Theme: Traditional dishes
Learning Outcome	Make a climate change protest sign Purpose: to use as part of a demonstration to raise awareness Significant people: Thomas Fisk Goff, English painter and designer of the infamous 'Hollywood' sign		Make a floating Vehicle Purpose: to transport a small object in water Significant people: Robert Fulton, inventor and builder of the first steamboat		Make Anglo Saxon bread and stew Significant people: Taiwanese baker Wu-Pao Chun, winner of Master Baker at the Paris Bakery Masters competition (ethnicity)
Sequence of learning	<ul style="list-style-type: none"> Research the meaning of a protest and the success criteria of signs used in protests (e.g. memorable slogans, clear message, easy to carry/hold etc.) Research different form s of signs (e.g. banners, placards, sandwich boards etc.) Include the most effective elements from the research process to incorporate into their own project. Design a protest sign in groups of 4 using annotated sketches ensuring it is lightweight, robustly constructed, can be comfortably carried and has a clear memorable message. Use a range of materials including wood, plastic and fabric to make a sign which can be used effectively in a real-life protest. 		<ul style="list-style-type: none"> Research existing forms of floating vehicles and the advantages and drawbacks of their features (e.g. canoes, catamarans, dinghies, ferries, rafts, speedboats). Design a floating vehicle in groups of 4 cross-sectional diagrams considering how to ensure it will float, be stable, be streamlined, waterproof and watertight. Make a floating vehicle using a range of materials, including wood, plastic, polystyrene and cardboard, selecting materials based on whether they are waterproof and buoyant and forming a shape that is stable, while using watertight joining techniques. Evaluate how effectively the floating vehicles could transport new settlers across the ocean to North America during a class experiment (i.e. Lego people being transported from one side of the water tray to the other). Assess whether the project was stable or could be easily flipped over, was waterproof and 		<ul style="list-style-type: none"> Research the traditional diet of people living during Anglo Saxon times. Explore a variety of recipes for both bread and stew. Design a vegetable/ meat alternative stew and loaf of bread, including an exploded diagram, selecting the most favourable elements from the research strand to incorporate into their own product. Consider nutritional value of ingredients, complimenting of flavours and presentational styles (e.g. plaited bread) Make a traditional stew by slicing and chopping vegetables and meat alternative products and boiling on the hob after adding stock. Make a loaf of traditional bread by adding chosen dry ingredients to a bowl and slowly adding yeast and water to form a dough, then kneading and forming into desired shape, then baking in the oven.

	<ul style="list-style-type: none"> Evaluate the success of the signs in terms of how memorable the slogans were, how easy they were to carry, how eye-catching they were in a crowd etc. 	watertight or allowed water in and whether it was buoyant or sunk under additional weight.	<ul style="list-style-type: none"> Evaluate own and others dishes by tasting them at a class Beowulf Great Hall re-enactment of a famous dramatic scene. Assess based on how aesthetically pleasing the dish is, the balance of flavours and consistency and how well it is cooked.
Year 5	Autumn	Spring	Summer
Retrieval Vocabulary	Design, important, material, make, product, computer, shape, cut, equipment, resources, mock-up, finish	Research, develop, design criteria, innovative, functional, appealing, products, generate, develop, model, discussion, annotated sketches exploded diagrams, prototypes, recycling, reuse	Dish, healthy balanced meal, carbohydrates, food groups, vegetables, flavour, taste, acidity, sweetness, fruity, nutty, creamy, bitter, sour, recipe, compliment, ingredient, dry, moist, bland, spicy, savoury, rich, salty, sugary, greasy, sour
New Vocabulary	Awareness, protest, construction	Buoyant, watertight, stable	Compliment, consistency, yeast, knead

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KS2 National Curriculum General: 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]. 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.					
Year 6	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Knowledge, understanding and skills	<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. 	<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 	<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. 	<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. 	<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.
	Autumn		Spring		Summer
Key concept	Global Goal 16- Peace, Justice and Strong Institutions Theme: Protecting Life		Global Goal 3 –Good Health and Well-being Theme: Mindfulness		Global Goal 7- Affordable and Clean Energy Theme: Electricity
Learning Outcome	Make a WWII shelter Purpose: to create a safe protected space Significant people: Engineers and designers of the Anderson shelter, William Paterson and Oscar Carl Kerrison		Make a plush memory keepsake Purpose: to evoke happy memories in the recipient Significant people: Margarete Steiff, creator of one of the world's first teddy bears (gender and disability)		Make a fairground buzzer game Purpose: To test each other's skills and steady hands Significant people: WWII RAF electrician and inventor of the original electric buzz wire game, Robert Scrimshaw
Sequence of learning	<ul style="list-style-type: none"> Research a range of existing shelters which exist/existed to protect citizens during WWII times (e.g. Anderson shelters, underground bunkers, materials used, designed for maximum shock absorption etc.) Take inspiration from various existing shelters when designing own shelter, bearing in mind the necessary strong construction and the ability to absorb impact. Use a cross-sectional diagram to showcase the different layers involved in the construction. Make a shelter with a WWII citizen in mind (represented by an egg) using more sophisticated joining techniques (e.g. hot glue gunning) and a range of materials (wood, cardboard and plastic). Evaluate own and others projects during a class experiment in which the shelters are tested by dropping an increasing amount of weight onto them 		<ul style="list-style-type: none"> Research existing keepsakes, what they are used for, why they are popular, what they mean to people, why they are special etc. Link to kindness Calendar and how we promote the spreading of kindness as a school. Design a plush soft toy keepsake in the shape of an animal, flower or favourite shape initially plotting out the basic form on a pattern piece using paper. Detail the materials that will be used (e.g. felt, cotton, denim, cord) and chosen joining techniques (e.g. gluing, stapling, running stitch, loop stitch, cross stitch). Make the keepsake with the chosen recipient in mind (a sibling, friend, parent) considering the colours, decoration and finish they will enjoy and appreciate the most. Ensure that the success criteria is met in that it evokes happy memories in the recipient. 		<ul style="list-style-type: none"> Research circuits and how they function and existing electronic games which use them in order to work. Design an electronic buzzer fairground style game which requires a circuit using computer programming. Make a buzzer fairground style game which uses a circuit that includes a switch that can be turned off and on and a buzzer which sounds on contact. Evaluate one another's projects by playing each other's games and assessing strengths against agreed success criteria.

	(representing an air strike) and monitoring at which point the citizen (the egg) can no longer survive.	<ul style="list-style-type: none"> • Evaluate own project with the support of a short questionnaire/rating system filled in by the recipient assessing how well presented the project was, how personal it felt and reminded them of happy memories. 	
Year 6	Autumn	Spring	Summer
Retrieval Vocabulary	Design, awareness, important, material, make, product, draw, computer	shape, cut, equipment, resources, construct, finish, research, develop, design criteria,	innovative, functional, appealing, products, generate, develop, model, discussion, annotated sketches, prototypes, recycling, reuse
New Vocabulary	Structurally sound, withstand, shock-absorption	Prototype, pattern piece, loop stitch	Exploded diagram, computer programmed,

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