

Design Technology – Curriculum Progression Map

Cycle A Term 1/2	Scrumdiddlyumptious - Roald Dahl (Whole school topic)						
	Lights, Camera, Action!			Footsteps through time		Bouncing Bombs	
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	Textiles – Hats <i>Design and create a party hat for our Christmas party</i>	Textiles – Puppets <i>Make a Christmas puppet for our nativity setting.</i>		Food – Dips and Dippers <i>Create a tasty, healthy dip with accompanying dipping sticks for our Christmas party</i>		Food – Caribbean Fruit Cocktails <i>Create a smoothie which we can serve at our Christmas party</i>	
Early Learning Goals (EYFS)	Pupils will be learning to:	Pupils should be taught to:		Pupils should be taught to:		Pupils should be taught to:	
National Curriculum	<ul style="list-style-type: none"> Use a range of small tools, including scissors and paint brushes. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. 	<ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and other users based on design criteria. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including textiles, according to their characteristics. Evaluate their ideas and products against design criteria. 		<ul style="list-style-type: none"> Generate, model and communicate their ideas through discussion and annotated, sketches. Select from and use a range of materials and components, including ingredients, according to their functional properties and aesthetic qualities. Investigate and compare a range of existing products. Understand the principles of a healthy and varied diet. Evaluate their ideas and products against their own design criteria. 		<ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities. Investigate and analyse a range of existing products. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	

				<ul style="list-style-type: none"> • Understand and apply the principles of a healthy and varied diet. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
Substantive and Disciplinary Knowledge and Skills	<ol style="list-style-type: none"> 1. Explore a range of textiles and materials, looking at uses, purposes and suitability for purpose. 2. Explore a range of materials, tools and techniques. Experiment with ways in which these materials can be joined securely. 3. Think about clothing for a purpose and select materials that can be used to create a piece of clothing. 4. Use simple tools to effect changes in materials. Handle tools and materials safely. 5. Construct with a purpose in mind using a range of resources. Manipulate materials to create a planned effect. Select tools and techniques in order to assemble and join materials. 	<ol style="list-style-type: none"> 1. To know what design criteria is and how it can be used to create a product. 2. To know which equipment is needed to sew material together. To know and use key vocabulary, as relevant to the project: seam, thread, stitch. 3. Design a puppet. 4. Create a puppet, sewing the material together effectively at the seams. Thread and use a needle safely. 5. To know how to evaluate their own and each other's product against the design criteria and suggest improvements. 	<ol style="list-style-type: none"> 1. Learn about how a variety of ingredients are grown, reared, caught and processed, deepening their understanding of organic and free-range practices. 2. Reviewing which dishes were most popular and using this as a means to plan own dish and suggest improvements. 3. Learn the importance of hygiene practices when handling food, including the use of separate chopping foods for meat, washing equipment and hands (micro-organism awareness). 4. Selecting and using a range of utensils. Selecting and using a range of healthy ingredients, (considering and giving reasons for choices). 5. Reviewing work against own design criteria, including aspects such as presentation, food combinations, popularity and healthiness 	<ol style="list-style-type: none"> 1. Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. 2. Learn about seasonality and Fairtrade Learn the origins of different smoothies from around the world. 3. Design: Know that recipes can be adapted to change the appearance, taste, texture and aroma. Know that a recipe can be adapted by adding or substituting one or more ingredients. 4. Learn how to prepare and cook a variety of dishes safely and hygienically. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing. 5. Reviewing work against own design criteria, including aspects such as presentation, food combinations, seasonality and healthiness

Vocabulary KSI KS2	Soft, rough, wool, woolly, warm, thick, stripy, logo, circular, cylinder, sphere, rounded, mould, fix, join, push, squeeze, and pinch. join, fix, cut, add, attach,	Designing e.g. user, label, mock-up, evaluate, Making e.g. plan, template, fabric, cutting out, sewing, needle, running stitch, Knowledge and understanding, e.g. puppet, seam, stitch, thread, strong, quality, features, strengthen, reflective symmetry,	Designing e.g. texture, taste, appearance, healthy, preference, criteria, questionnaire, and data. Knowledge and understanding e.g. dip, ingredients, food groups, hygiene, high risk, healthy eating, 'Eatwell plate'	Design specification, blend, names of islands, research, climate, design brief, consumer, appearance, tourist, nutritional vocabulary, texture, odour
Key questions	<ol style="list-style-type: none"> 1. What material is the hat made from? 2. What interesting features does the hat have? 3. Who do they think the hat is designed for? 4. What fabric do you think would be most suitable for a sun hat? What fabric is not suitable for use in making a sun hat? 5. Can you create a sun hat? How will you create the peak? 	<ol style="list-style-type: none"> 1. How many parts is it made from? 2. What is it joined with? How is it finished? Why do you think these joining techniques have been chosen? How is it fastened? Who might use it and why? 3. What parts will the product need to have and what will it be made from? What size will it be? How will it be joined and finished? 4. How has the puppet been put together? What type of fabric has been used? What has been added? 5. Who might the puppet have been made for? How well has it been made? 	<ol style="list-style-type: none"> 1. What ingredients have been used? Which food groups do they belong to? What substances are used in the products e.g. nutrients, water and fibre? 2. How do the sensory characteristics affect your liking for the food? 3. Where and when are the ingredients grown? Where do different meats/fish/cheese/eggs come from? How and why are they processed? 4. Can you design and make a healthy dipping sauce and dipping sticks? 5. How appealing and attractive is your product? 	<ol style="list-style-type: none"> 1. What ingredients are sourced locally/in the UK/from overseas? 2. What are the key ingredients needed to make a particular product? How have ingredients been processed? 3. What is the nutritional value of a product? 4. What ingredients help to make the product sweet/smooth/fruity etc? 5. What is the impact of added ingredients/finishes/shapes on the finished product?

Cycle A Term 3/4	Humanities Weather and Seasons Humanities Hot and Cold Places			Belonging to a Community Romans Rule!		Swords and Sandals By Royal Appointment	
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	Food – Fruit Kebabs <i>Create a healthy snack</i>	Food – Vegetable Kebabs/Salad <i>Create a healthy snack which looks</i>		Mechanisms - Mighty Mascots <i>Design and create a school mascot.</i>		Textiles – Designer Bags	

		<i>appealing and includes a range of different vegetables.</i>		<i>Design a bag for a specific purpose knowing what features it is going to have and how is it going to be carried</i>
Early Learning Goals (EYFS) National Curriculum	<p>Pupils will be learning to:</p> <ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. • Use a range of small tools, including scissors, paint brushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; 	<p>Pupils should be taught to:</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. • Design purposeful, functional, appealing products for themselves and other users based on design criteria. • Select from and use a wide range of materials and components, including ingredients, according to their characteristics. • Explore and evaluate a range of existing products. • Evaluate their ideas and products against design criteria. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, aimed at particular groups. • Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer-aided design. • Select from and use a wide range of tools and equipment to perform practical tasks. • Understand and use mechanical systems in their products. 	<p>Pupils should be taught to:</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. • Select from and use a wider range of tools and equipment to perform practical tasks. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
Substantive and Disciplinary Knowledge	<ol style="list-style-type: none"> 1. Understand the need for variety in their diet. 2. To taste a range of foods and decide on foods that would be suitable as a snack. 3. Make healthy choices. 4. Use tools confidently to make fruit kebabs. 5. Design and make their own fruit kebabs, thinking about foods that would help to 	<ol style="list-style-type: none"> 1. To know the food groups that different healthy foods belong and demonstrate by selecting appropriate combinations for a singular meal. 2. To know the source of their food. To know that some ingredients are easier to acquire according to the season. 3. To plan a dish of nutritional value. To know the purpose of different tools and which to select for use in preparing food 	<ol style="list-style-type: none"> 1. Learn that air is used to help some mechanisms move and understand flow/direction of air. Understand the basic working principle of a syringe. 2. Understanding and using simple pneumatic mechanisms. Investigating, analysing and evaluating familiar objects that use air to make them work, considering how this can be applied on a larger scale involving heavier objects. Knowing and using technical 	<ol style="list-style-type: none"> 1. Learn about using materials for specific products and uses. Know products have a target audience. 2. Using research and develop design criteria to inform the design of innovative, functional, appealing product that are fit for purpose, aimed at particular individuals or group. 3. Accurately measure to nearest mm, mark out, cut and shape materials and components.

	increase appearance and flavour.	(e.g. colander, sieve, spatula, peeler). 4. Prepare a meal safely, using a range of equipment appropriately. To know how to wash, peel, slice and grate vegetables, selecting and use appropriate kitchen equipment safely and purposefully. To begin to use and be aware of a range of methods of food preparation. 5. Evaluate the success of their own and others' dishes, involving critique of how dishes could be improved.	vocabulary relevant to the project. 3. Generating realistic and appropriate ideas for a design of a moving toy using a pneumatic mechanism through discussion. Using annotated sketches and prototypes to develop, model and communicate ideas. 4. Make a moving toy using a pneumatic mechanism by selecting and using finishing techniques suitable for the product being created. Ordering the main stages of a production process. Selecting from and using appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. 5. Evaluating own products and ideas against criteria and user needs.	Selecting from and using a wide range of materials and components according to their functional properties and aesthetic qualities. 4. Accurately assemble, join and combine materials/ components. Use a wider range of materials and components, including textiles. 5. Accurately apply a range of finishing techniques, including those from art and design. 6. Evaluate final product and demonstrate resourcefulness, e.g. make refinements.
Vocabulary KSI KS2	Soft, hard, smooth, spiky, bumpy, hairy, long, round, colourful, furry, squashy, crunchy, squeaky, fruity, sweet, juicy, bitty, sour Names of fruits.	sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, , ingredients, tasting, popular, design, evaluate, criteria	components, fixing, attaching, tubing, plunger, pneumatic system, input movement, process, output movement, control, compression, pressure, pump, seal, air-tight linear, rotary, oscillating, purpose, function, prototype, design criteria, innovative, appealing, design brief, constraints,	seam, seam allowance, wadding, reinforce, hem, template, pattern pieces, name of textiles and fastenings used, pinking shears, fastenings, iron transfer, annotate, functionality, innovation, authentic, mock-up, prototype
Key questions	1. What would you call this food? What words can you use to describe how it looks?	1. What is this called? Who has eaten this fruit/vegetable before? Where is it grown? When can it be harvested?	1. Who might it be for? What is its purpose? 2. What part moved and how did it move? What materials have	1. Is the product functional or decorative?

	<ol style="list-style-type: none"> Have you tasted this fruit before? What does it taste like? What else do you know about this fruit? What time of day will this dish be eaten? What ingredients will you use? How will you make it? What sort of container will you put it in? How will you make it look good so your friend wants to eat it? 	<ol style="list-style-type: none"> What are its taste, smell, texture and appearance? What will it look like if we peel it or cut it in half? What are the different parts called? What words can we use to describe the shape, colour, feel, taste? What do you prefer and why? What might we want to include in our product to meet our user's preferences? Which fruit/vegetables might be the best for our product to match the occasion/purpose? 	<p>been used? How effective do you think it is and why?</p> <ol style="list-style-type: none"> What else could move? Can you design make a moving toy with a pneumatic system? How functional was your pneumatic system in your toy? 	<ol style="list-style-type: none"> Who would use this product? What is its purpose? What design decisions have been made? Do the textiles used match the intended purpose? What components have been used to enhance the appearance? To what extent is the design innovative?
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Cycle A Term 5/6	Humanities Sarah Forbes Bonetta – a significant individual			Cracking Contraptions		Up the chimney	
	Know Your Place - local history (Whole school topic)						
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	Structure – Chairs for the 3 Bears <i>Build a chair for the bears to sit on at our teddy bear's picnic</i>	3D Structure (external) <i>Build a waterproof shelter that 6 people can fit in</i>		Operation game/Shaky Hand Tester <i>Design and make an operation style game that contains a buzzer and a switch</i>		Structures – Bird Hides <i>Research, design and build a bird hide to be used at Arlington Reservoir</i>	
Early Learning Goals (EYFS) National Curriculum	<p>Pupils will be learning to:</p> <ul style="list-style-type: none"> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Use a range of small tools, including scissors, paint brushes and cutlery. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through talking, drawing, templates and mock-ups. Select from and use a wide range of materials and components, including construction materials and textiles, according to their characteristics. 		<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through discussion, annotated, sketches, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of materials and components, including construction and materials, 		<p>Pupils should be taught to:</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. Select from and use a wider range of tools and equipment to perform practical tasks. 	

	<ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role playing characters in narratives and stories. 	<ul style="list-style-type: none"> • Evaluate their ideas and products against design criteria. 	<p>according to their functional properties and aesthetic qualities.</p> <ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world. • Understand and use electrical systems in their products. 	<ul style="list-style-type: none"> • Select from and use a wider range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Substantive and Disciplinary Knowledge	<ol style="list-style-type: none"> 1. To know that shapes and structures with wide, flat bases or legs are the most stable. To understand that the shape of a structure affects its strength. To know that a structure is something which has been formed or made from parts. 2. To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. To know that a 'strong' structure is one which does not break easily. 3. Exploring the features of structures. 4. Comparing the stability of different shapes. 	<ol style="list-style-type: none"> 1. To know how to join components together effectively. To understand how structures can be made stronger and stiffer. 2. Know that a range of tools can be used for different purposes. Use tools for: cutting, sticking, curling, bending, joining etc. 3. Explore initial ideas using drawings and mock-ups. Select and use a range of materials and components, such as paper, card, plastic and wood according to their characteristics. 4. Build structures by selecting appropriate materials and investigating ways to strengthen them. 5. Evaluate their ideas throughout the process and review their 	<ol style="list-style-type: none"> 1. Using research and developing design criteria to inform the design of innovative, functional, appealing product that are fit for purpose, aimed at particular individuals or groups 2. Know how to make an electrical circuit - responding to a brief. 3. Sketching and annotating a plan of their planned product 4. Making a product which contains a working circuit. Selecting materials and tools required. 5. Understanding the importance of evaluating products and can discuss their work and the work of others fairly. 	<ol style="list-style-type: none"> 1. To know that structures can be strengthened by manipulating materials and shapes. To understand that in the real world, design can impact users in positive and negative ways. 2. To understand what a 'footprint plan' is. To know that a prototype is a cheap model to test a design idea. 3. Designing a bird hide structure considering how the structure will be used, considering effective and ineffective designs. 4. Building a structure drawing upon new and prior knowledge of different structures. Measuring, marking and cutting wood to create an effective bird hide.

	5. Testing the strength of own structures. Evaluating the strength and stability of own structure.	products against original criteria.		5. Improving a design plan based on peer evaluation. Using a range of materials to reinforce and add decoration to structures. 6. Testing and adapting a design to improve it as it is developed. Identifying what makes a successful structure.
Vocabulary KSI KS2	Stable, stability, wide base, strength, collapse, heavy, light, user, purpose, plan, model, label, joiner, splay, glue, fixed joint, finish, fabric, swivel, folding chair, reclining	structure, framework, base, edge, surface, corner, curved metal, cuboid, cube, cylinder design, evaluate, user, purpose, ideas, design criteria, product, function	series circuit, fault, connection, toggle, push to make switch, push to break switch, insulator, conductor, crocodile clip control, program, system, input device, output device, prototype, design criteria, innovative, appealing, design brief	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, design specification, innovation, functional
Key questions	<ol style="list-style-type: none"> 1. Do they look comfortable? Are they the same size? Why might they be different sizes? 2. What material is made from? Why do they think that material has been used? 3. How many legs does it have? Why are they placed near the edges? 4. Who do you think it was designed for? 5. Where would the chair be used? Can you draw a chair and label the parts? 	<ol style="list-style-type: none"> 1. What are the structures called and what is their purpose? 2. Who might use them? What materials have been used? Why have these been chosen? 3. How have the parts been joined together? 4. How have the structures been made strong enough? 5. How have they been made stable? 6. Can they support an object on top of their structures without it falling over or breaking? 	<ol style="list-style-type: none"> 1. How does the product work? What are its key features and components? 2. How does the switch work? Is the product manually controlled or controlled by a computer? 3. How might different types of switches be useful in different types of products? 4. What materials have been used and why? 5. How is it suited to its intended user and purpose? 	<ol style="list-style-type: none"> 1. How well does the frame structure meet users' needs and purposes? 2. Why were materials chosen? 3. When was it made? Who made it? Where was it made? 4. What methods of construction have been used? 5. How has the framework been strengthened, reinforced and stiffened? 6. How does the shape of the framework affect its strength? How innovative is the design?

Cycle B Term 1/2	Marvellous Me! Humanities -My family history Whole School Topic						
	Lights, Camera, Action!			Ancient Achievers!		All fired up and ready to go	
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	Structures – Toys <i>Make a Christmas toy which can be sold as gifts for the Christmas fair</i>	Mechanisms – Moving Pictures. <i>Make a moving Christmas card</i>		Food – Spring Rolls and Mince Pies <i>Create a new spring roll or Mince pies to be sold at the Christmas fair.</i>		Food – Soups and Christmas Ginger Biscuits <i>Create a healthy and nutritious soup and ginger biscuits to be sold at the Christmas fair</i>	
Early Learning Goals (EYFS) National Curriculum	<p>Pupils will be learning to:</p> <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes and cutlery. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks. Evaluate their ideas and products against design criteria. Explore and use mechanisms in their products. 		<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Generate, model and communicate their ideas through discussion and annotated, sketches. Select from and use a range of materials and components, including ingredients, according to their functional properties and aesthetic qualities. Investigate and compare a range of existing products. Understand the principles of a healthy and varied diet. Evaluate their ideas and products against their own design criteria. 		<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities. Investigate and analyse a range of existing products. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Understand and apply the principles of a healthy and varied diet. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. 	

<p>Substantive and Disciplinary Knowledge</p>	<ol style="list-style-type: none"> 1. Explore and test materials and structures to evaluate which are able to move. Explain how some technology works by exploring parts by pressing, lifting, twisting to say how it works. 2. Use their knowledge and understanding to help them to design and make a toy that will move in different ways e.g. joints and wheels.. 3. Explore a range of materials, tools and techniques, making sure to handle tools safely. Use simple tools to effect changes in materials. 4. Construct with a purpose in mind using a range of resources. Select tools and techniques in order to assemble and join materials. 5. Evaluate their work, adapting it where necessary and explaining what they have changed and why. 	<ol style="list-style-type: none"> 1. Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. 2. 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. 3. 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. 4. Select and use tools, explaining their choices, to cut, shape and join paper and card. 5. Evaluate final product and steps taken in the creation phase. 	<ol style="list-style-type: none"> 1. Know the food groups. Develop their knowledge of how vegetables are grown from seed and can be prepared for eating. Children learn that some ingredients are easier to acquire according to the season. 2. Planning and preparing a dish of nutritional value. 3. Learn about the purpose of different kitchen tools and which to select for use in preparing food. 4. Prepare food- wash, peel, slice and grate fruit and vegetables. Preparing a dish safely, using a range of equipment appropriately for different purposes. 5. Making and presenting food in an aesthetically pleasing way and evaluating the success of their own and others' dishes involving critique of how dishes could be improved. 	<ol style="list-style-type: none"> 1. Researching calorific content of different types of soups and consider which is most nutritious. 2. Know that food packaging includes information on calorific and allergies. Examine advice on nutrition and allergies on packaging. 3. Learn about seasonality, Fairtrade and the origins of different soups from around the world. 4. Generating developing, modelling and communicating their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Understand and can apply the principles of a healthy and varied diet. Demonstrate resourcefulness, e.g. make refinements. 5. Making soups: Selecting and combining ingredients for a healthy soup. Accurately assemble, join and combine materials/ components. Use techniques that involve a number of steps. Evaluating different soups.
<p>Vocabulary KS1 KS2</p>	<p>hinge, slider, flap, paper fastener, joint, wheel, axle, finish, direction, user</p>	<p>slider, lever, pivot, slot, bridge/guide card, join user, purpose, ideas, design criteria, product, function</p>	<p>texture, appearance, preference, hygienic, edible, reared, caught, frozen, tinned, processed, healthy/varied diet, design criteria,</p>	<p>yeast, dough, bran, wholemeal, unleavened, baking soda, varied, gluten, dairy, allergy, intolerance, source, seasonality, utensils, fold, knead, design specification, innovative,</p>

			purpose, user, annotated sketch, sensory evaluations	
Key questions	<ol style="list-style-type: none"> 1. Who do you think would like to play with it? How does the toy move? 2. What is the mechanism called? What materials is it made from? Why do you think those materials have been chosen? What do you like/dislike about it? 3. How does the toy stand up? How is the toy joined together? How many parts does it have? What does it look like? How does it move? 4. What mechanisms will they use? 5. Does the toy move well? Does it move correctly? Is it a quality finish? 6. What have they learnt? What could they target next time to make their work even better? 	<ol style="list-style-type: none"> 1. What is it? Who is it for? What is it for? What do you think will move? How will you make it move? 2. What part of the product moved and how did it move? How do you think the mechanism works? What else could move in the product? How well does it work? 3. How does the slider move? How does the lever move? 4. Which part of the mechanism is the pivot? 5. What does the movement of the slider and lever remind you of? 	<ol style="list-style-type: none"> 1. What ingredients have been used? Which food groups do they belong to? 2. What substances are used in the products e.g. nutrients, water and fibre? 3. How do the sensory characteristics affect your liking for the food? 4. Where and when are the ingredients grown? Where do different meats/fish/cheese/eggs come from? How and why are they processed? 	<ol style="list-style-type: none"> 1. What ingredients are sourced locally/in the UK/from overseas? 2. What are the key ingredients needed to make a particular product? 3. How have ingredients been processed? What is the nutritional value of a product? 4. What ingredients help to make the product spicy/crisp/crunchy etc? 5. What is the impact of added ingredients/finishes/shapes on the finished product?

Cycle B Term 3/4	Humanities Hot and Cold Places			Under the Canopy Traders and Raiders		Frozen Kingdom To Infinity and Beyond	
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	Mechanisms – A method of transport <i>Design and make a suitable carriage for _____</i>	Food - Fantastic Fruit <i>To know what are healthy foods and why it is important to eat a variety of fruit.</i>		Shell Structures – Anglo-Saxon Casket <i>Research, design and create an Anglo Saxon Casket</i>		Electrical Systems – Alarmed Vehicles <i>Design a security system which will keep a vehicle safe and secure</i>	
Early Learning Goals (EYFS)	Pupils will be learning to:	Pupils should be taught to:		Pupils should be taught to:		Pupils should be taught to:	

<p>National Curriculum</p>	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paint brushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. 	<ul style="list-style-type: none"> • Use the basic principles of a healthy and varied diet to prepare dishes. • Understand where food comes from. • Design purposeful, functional, appealing products for themselves and other users based on design criteria. • Select from and use a wide range of materials and components, including ingredients, according to their characteristics. • Explore and evaluate a range of existing products. • Evaluate their ideas and products against design criteria. 	<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. • Select from and use a wider range of tools and equipment to perform practical tasks. • Select from and use a wider range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. 	<ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • Select from and use a wider range of materials and components, including construction and materials, according to their functional properties and aesthetic qualities. • Understand how key events and individuals in design and technology have helped shape the world. • Understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products
<p>Substantive and Disciplinary Knowledge</p>	<ol style="list-style-type: none"> 1. Explore a range of materials, tools and techniques. 2. Use simple tools to effect changes in materials. 3. Handle tools and materials safely. 4. Construct with a purpose in mind using a range of resources. 5. Select tools and techniques in order to 	<ol style="list-style-type: none"> 1. Taste and evaluate a range of fruit to determine the intended user's preferences. 2. Generate initial ideas and design criteria through investigating a variety of vegetables. 3. Design appealing products for a particular user based on simple design criteria. Communicate these ideas through talk and drawings. 	<ol style="list-style-type: none"> 1. Research and evaluate a range of historic shell structures including the materials, components and techniques used. Know and use technical vocabulary relevant to the project. 2. Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product 	<ol style="list-style-type: none"> 1. Learn about, understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors. 2. Using research and develop design criteria to inform the design of innovative, functional, appealing product that are fit for purpose, aimed at particular individuals or group.

	assemble and join materials.	<ol style="list-style-type: none"> 4. Select from a range of fruit according to their characteristics. Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. 5. Evaluate ideas and finished products against design criteria, including intended user and purpose. 	<ol style="list-style-type: none"> 3. Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. . Explain their choice of materials according to functional properties and aesthetic qualities. 4. Order the main stages of making. Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. 5. Develop and use knowledge of how to construct strong, stiff shell structures. Use finishing techniques suitable for the product they are creating. 6. Test and evaluate their own products against design criteria and the intended user and purpose. 	<ol style="list-style-type: none"> 3. Generating, developing, modelling and communicating their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern. 4. Making a product which contains a working circuit to sound an alarm 5. Writing a step by step set of instructions to follow for building their product including the tools and materials. 6. Evaluating their product
Vocabulary KSI KS2	vehicle, wheel, axle, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used	sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, design, evaluate, criteria	shell structure, net, vertex, edge, face, breadth, capacity marking out, scoring, adhesives, corrugating, ribbing, text, graphics, evaluating, design criteria, innovative, prototype	series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart
Key questions	<ol style="list-style-type: none"> 1. How do you think the wheels move? How do you think the wheels are fixed on? Why do you think the product has this number of wheels? Why do you 	<ol style="list-style-type: none"> 1. Who has eaten this fruit/vegetable before? Where is it grown? When can it be harvested? What are its taste, smell, texture and appearance? 2. What will it look like if we peel it or cut it in half? What are the different parts called? 	<ol style="list-style-type: none"> 1. What is the purpose of the shell structure – protecting, containing, presenting? 2. What material is it made from? How has it been constructed? Are the materials recyclable or reusable? 	<ol style="list-style-type: none"> 1. Who have the products been designed for and for what purpose? 2. How and why is a computer control program used to operate the products?

	<p>think the wheels are round?</p> <ol style="list-style-type: none"> 2. What is your carriage going to look like? How is it going to move? 3. What are you going to use to make your carriage? 	<p>What words can we use to describe the shape, colour, feel, taste? What do you prefer and why?</p> <ol style="list-style-type: none"> 3. What might we want to include in our product to meet our user's preferences? 4. Which fruit/vegetables might be the best for our product to match the occasion/purpose? 	<ol style="list-style-type: none"> 3. How has it been stiffened i.e. folded, corrugated, ribbed, laminated? 4. What size/shape/colour is it? What information does it show and why? 5. How attractive is the design? 	<ol style="list-style-type: none"> 3. What input devices, e.g. switches, and output devices, e.g. bulbs, have been used?
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Cycle B Term 5/6	Humanities Sarah Forbes Bonetta – a significant individual			Let's Grow!		Footsteps through time	
	A Country Garden (Whole School topic)						
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept (End Points)	<p>Textiles – 3 Bears Picnic Blanket</p> <p><i>Design and create a blanket for our teddy bear's picnic</i></p>	<p>Textiles – Fancy a bag?</p> <p><i>Make a bag for something that is important to you E.g. shopping bag, lunch bag, beach bag, iPad bag</i></p>	<p>Textiles – Lost Words Patchwork</p> <p><i>Design and make a patch for our class patchwork quilt based on your favourite 'Lost Words' nature</i></p>	<p>Mechanical Systems – Fairground Ride</p> <p><i>Use gears or pulleys to create a new and exciting fairground ride</i></p>			
Early Learning Goals (EYFS) National Curriculum	<p>Pupils will be learning to:</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors and paint brushes. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. • Make use of props and materials when role 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria. • Select from and use a range of tools and equipment to perform practical tasks. • Select from and use a wide range of materials and components, including textiles, according to their characteristics. • Evaluate their ideas and products against design criteria. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, aimed at particular groups. • Generate, model and communicate their ideas through discussion, annotated • Sketches and pattern pieces. • Select from and use a wide range of tools and equipment to perform practical tasks. 	<p>Pupils should be taught to:</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 			

	playing characters in narratives and stories.		<ul style="list-style-type: none"> Evaluate their ideas and products against their own design criteria. 	<ul style="list-style-type: none"> Select from and use a wider range of tools and equipment to perform practical tasks. Understand and use mechanical systems in their products.
Substantive and Disciplinary Knowledge	<ol style="list-style-type: none"> Sort, match, name materials- natural and manmade. Cut, fold, crumple, tear and overlap a range of materials working on different scales. Represent a given idea based on properties such as colour or texture. Convey clear intentions in an image e.g. based on a story. Select and combine materials and textiles to make patterns and pictures. Use paints, dyes, crayons and other media to make designs on textiles. Weave on simple frames for different effects. Join position and manipulate materials with tying, gluing, simple stitching. 	<ol style="list-style-type: none"> 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. Thread and use a needle safely To know and use key vocabulary, as relevant to the project: seam, thread, stitch. Design a puppet, sewing the material together effectively at the seams. Create a puppet, sewing the material together effectively at the seams. Know how to evaluate their own and each other's product against the design criteria and suggest improvements. 	<ol style="list-style-type: none"> Use research into the features of an appealing product to inform design criteria. Learn different types of stitches for the purpose of functionality and aesthetics. Know and use technical vocabulary relevant to the project. Investigating the effect of different stitches in joining seams and how they contribute to the overall effectiveness and durability Designing an appealing and functional patchwork quilt, communicating initial ideas through annotated sketches. Selecting and using a range of tools to perform practical tasks; stitching and sewing (joining), cutting and systematically working through phases of a design. Know how to evaluate their product against the product criteria they have individually generated as a means to improve their work. 	<ol style="list-style-type: none"> Understand that the mechanism in an automata uses a system of cams, axles and followers. Understand how linkages change the direction of a force. Understand that different shaped cams produce different outputs. Experiment with a range of cams, creating a design for a fairground ride based on a choice of cam to create a desired movement. Understand that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. Understand and draw cross-sectional diagrams to show the inner-workings of a design. Measuring, marking and cutting components accurately. To understand how to use a bench hook and saw safely. Assembling components accurately to make a stable frame.

				5. Evaluate the work of others and receiving feedback on own work: describe changes they would make/do if they were to do the project again an apply points of improvement to their toys.
Vocabulary KSI KS2	Fabric, textiles, materials, re-use, charity shop, cotton, man-made, country, weaving Environment, pattern, label, transport, seams	purpose, mock up, simple product analysis (CAFÉ QUE): cost, aesthetics, function, ergonomics, quality, user and environment) 3Rs: reducing, reusing and recycling, sewing, running stitch, textiles, seam, stitch, thread.	fastening, compartment, structure, finishing technique, stiffening, templates, stitch, seam, seam allowance aesthetics, function,	pulley, drive belt, gear, rotation, spindle, ratio, transmit, axle, motor circuit, exploded diagrams, mechanical system, electrical system, authentic
Key questions	<ol style="list-style-type: none"> 1. Do we need to use new fabrics when we can re-use those that we already have? 2. Where do textiles come from? What is it made of? 3. What fabrics would you like to use? 4. What would you like the picnic blanket to look like? 5. What will I need to use? 	<ol style="list-style-type: none"> 1. How many parts is it made from? What is it joined with? How is it finished? 2. Why do you think these joining techniques have been chosen? How is it fastened? 3. Who might use it and why? 4. What parts will the product need to have and what will it be made from? 5. What size will it be? How will it be joined and finished? 	<ol style="list-style-type: none"> 1. What is its purpose? Which one is most suited to its purpose? What properties/characteristics does the fabric have? Why has this fabric been chosen? 2. How has the fabric been joined together? How effective are its fastenings? How has it been decorated? Does its decoration have a purpose? 3. What would the 2-D pattern piece look like? What are its measurements? 4. How might you change the product? 	<ol style="list-style-type: none"> 1. How innovative is the product? What design decisions have been made? What type of movement can be seen? 2. What types of mechanical components are used and where are they positioned? 3. What are the input, process and output of the system? 4. How well does the product work? Why have the materials and components been chosen? 5. How well has it been designed? How well has it been made?