

D&T Progression Map

<p>EYFS Framework</p> <p>Personal, Social and Emotional Development ELG: Self-Regulation Set and work towards simple goals, being able to wait for what they want and control their impulses when appropriate; Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.</p> <p>ELG: Fine Motor Skills Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy when drawing.</p> <p>Expressive Arts and Design ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the processes they have used.</p>

<p>National Curriculum</p> <p>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.</p>
--

	Designing	Making	Evaluating	Technical Knowledge	Food Technology
KS1	<p>Design - purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Explore and evaluate a range of existing products evaluate their ideas and products against design criteria.</p>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p>
KS2	<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p>	<p>Investigate and analyse a range of existing products, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p>	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p>

Reception	
EYFS End Points (Related Early Learning Goals)	'I can.../I am/will...', 'We will...' and 'I know...' Statements
<p><u>Personal, Social and Emotional Development</u></p> <p>ELG: Self-Regulation</p> <ul style="list-style-type: none"> • Can set and work towards simple goals, and is able to wait for what they want and control their impulses when appropriate. • Gives focused attention to what the teacher says, responding appropriately even when engaged in activity, and shows an ability to follow instructions involving several ideas or actions. <p>ELG: Fine Motor Skills</p> <ul style="list-style-type: none"> • Uses a range of small tools, including scissors and paint brushes. • Is beginning to show accuracy when drawing. <p><u>Expressive Arts and Design</u></p> <p>ELG: Creating with Materials</p> <ul style="list-style-type: none"> • Safely uses and explores a variety of materials, tools and techniques, experimenting with form and function. • Shares their creations, explaining the processes they have used. 	<p><u>Linking to Y1 Food Product (Sweet Snack) Unit:</u></p> <ul style="list-style-type: none"> • I am starting to understanding the importance of healthy food choices. • I will make pan con tomate on Hispanic day. • We will discuss the importance of healthy eating and drinking. <p><u>Linking to Y1 Free Standing Structures Unit:</u></p> <ul style="list-style-type: none"> • Cardboard boxes and other construction materials can be used to build large scale models. <p><u>Linking to Y1 Toys (Moving Pictures) Unit:</u></p> <ul style="list-style-type: none"> • I can use junk modelling, paint and other materials to make a selection of transport vehicles. I can refine my ideas and my ability to represent them. • I can work as a team to make a hot-air balloon, a bus etc. sharing ideas, resources, and skills.

Year 1				
KS1 DT Curriculum NC End Points: <u>Designing:</u> Is able to design purposeful, functional, appealing products for themselves and other users based on design criteria. Can generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <u>Making:</u> Is able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. <u>Evaluating:</u> Can explore and evaluate a range of existing products evaluate their ideas and products against design criteria. <u>Technical Knowledge</u> Can build structures, exploring how they can be made stronger, stiffer and more stable. Is able to explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <u>Food Technology:</u> Uses the basic principles of a healthy and varied diet to prepare dishes, understanding where food comes from.	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2	Spring 2	Summer 2
	Topic	Summer: Food (Selecting and Preparing Raw Ingredients: Fruit Snack)	Freestanding Structures (Rockets)	Toys: Moving Pictures
	Key Knowledge	<ul style="list-style-type: none"> It is important to wash hands before preparing food and also to wash fruit before we eat it. Simple utensils can be used to process food and make it easier to eat. Fruit is an essential part of a balanced diet and 5 portions of fruit and vegetables are recommended per day. Fruit and vegetables can be farmed or grown at home. A Fruit usually contains a plant or tree's edible seed. A Vegetable is a plant used for food. Nutrients are the things in food that the body needs to remain healthy. Pith is the soft white lining inside fruit such as oranges. A fruit Salad is a cold dish of fresh and/or cooked fruit. Sensory evaluation is when senses are used to evaluate qualities such as appearance, smell, taste, texture (mouth feel). A Kebab has cooked and/or fresh ingredients on a skewer. 	<ul style="list-style-type: none"> Apollo 11 was the spaceflight that first landed humans on the Moon and they will Design and create a rocket replica ensuring that it is freestanding. To know how to join components together effectively. Know that a range of tools can be used for different purposes: cutting, sticking, curling, bending, joining etc. To understand how structures can be made stronger and stiffer. 	<ul style="list-style-type: none"> Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. Understand the steps to make a moving picture or toy. Understand that products are designed for users based on criteria, and what simple criteria for a moving toy could be: the mechanism should work smoothly, it should make the right type of movement.
	Cross Curricular Links	<ul style="list-style-type: none"> Science: Healthy Diet Literacy: Writing instructions 	<ul style="list-style-type: none"> Maths: 2D and 3D shapes Science: Materials History - link with space topic 	<ul style="list-style-type: none"> History Topic: Toys from the Past
Key Skills	<ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose. 	<ul style="list-style-type: none"> Explore initial ideas using drawings and mock-ups. Use tools for different purposes: cutting, sticking, curling, bending, joining etc. Select and use a range of materials and components, such as paper, card, plastic and wood according to their characteristics. Build structures by selecting appropriate materials and investigating ways to strengthen them. Evaluate their ideas throughout the process and review their products against original criteria. 	<ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences Develop, model and communicate their ideas through drawings and mock-ups with card and paper. Plan and suggest steps in the creation phase. Select and use tools, explaining their choices, to cut, shape and join paper and card. 	
School Context				
<ul style="list-style-type: none"> Children use fruit from planters on the roof garden and edible playground. Consider why organic ingredients might be used and where these can be sources in the local area or grown from seed. 	<ul style="list-style-type: none"> Relate to school workshop about rockets in space. Identify structures in the school environment that are free standing. 	<ul style="list-style-type: none"> Make a moving picture book as a class to show EYFS classes examples of toys from the past. 		

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

Year 3				
KS2 DT Curriculum NC End Points: Designing <ul style="list-style-type: none"> Can use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Making: <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Evaluating: <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understands how key events and individuals in design and technology have helped shape the world. Technical Knowledge: <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. Food technology: <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 2	Spring 2	Summer 1
	Topic	Autumn: Bread Based Product	Spring: Shell Structures (Anderson Shelters)	Summer: Mechanical Systems (Pneumatics)
	Key Knowledge	<ul style="list-style-type: none"> A range of utensils can be used for a range of techniques to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking. The food's appearance is how it looks to the eye. The food's texture is how the product feels in the mouth. Sensory evaluation means evaluating food products in terms of the taste, smell, texture and appearance. A preference test means trying different things (foods) and deciding which is preferred. A strawberry huller is tool to remove the stalk and leaves from a strawberry. Processed food includes ingredients that have been changed in some way to enable them to be eaten or used in food preparation and cooking. 	<ul style="list-style-type: none"> The Anderson Shelter was designed (in 1938) by William Peterson and Oscar Carl Kerrison, in response to a request from the Home Office. It was named after Sir John Anderson, who was responsible for preparing air-raid precautions immediately before the start of WWII Anderson shelters were very effective at saving lives and preventing injuries during the war The Morrison Shelter was an indoor shelter, in the form of a table with a cage-like construction beneath it. It was designed by John Baker and named after Herbert Morrison, the Minister of Home Security at the time. To use understanding of how the shape of a structure can influence its strength (Anderson shelter – arch, Morrison shelter – four 'legs' as support and lid) and how their own structure can be strengthened by internal support and exterior reinforcement. Know how to use and manipulate materials in order to create a structure 	<ul style="list-style-type: none"> A Pneumatic system is one that works using gases (air). A Hydraulic system is one that works using liquids (water). Energy produced by pneumatic systems can be more flexible, less costly, more reliable and less dangerous than some actuators and electric motors. There are lots of familiar examples - examples-of-pneumatics.html Something that is squashed, such as air in a tube, is compressed. The 'input' is what goes into a system and 'output is what comes out A point about which a lever turns is called a pivot. Pressure is the force used on an object or surface. Inflating something is filling it with air or a gas to make it swell up and deflating is removing the pressurised air to allow an object, like a balloon, to shrink. A Syringe is a tube with a nozzle and plunger for sucking and blowing air or liquids. A System is a set of related parts or components used to create an outcome. In a pneumatic system, the 'input movement' is where the user pushes or pulls a syringe or pump. The 'output movement' is where the object at the end of the tube moves.
Cross Curricular Links	<ul style="list-style-type: none"> Science: Healthy Diet/hygiene 	History - WW2 links to local shelters.		
Key Skills	<ul style="list-style-type: none"> Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Plan the main stages of a recipe, listing ingredients, utensils and equipment. Select and use appropriate utensils and equipment to prepare and combine ingredients. Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Know and use relevant technical and sensory vocabulary appropriately. 	<ul style="list-style-type: none"> Use research to inform the design criteria for a shelter suitable to the context of an era. To investigate the construction of existing structures and evaluate their own design against the design criteria Use existing designs to inform own and communicate ideas through discussion, annotated sketches, cross-sectional diagrams and computer aided design (word.doc with shape manipulation) Compare designs and understand the necessary features of a suitable structure (considering locational aspects; indoor/outdoor, speed of accessibility, strength and space). 	<ul style="list-style-type: none"> Investigate, analyse and evaluate familiar objects that use air to make them work e.g. bicycle pump, balloon, inflatable swimming aids, foot pump for inflating an air bed. What does the air do? How has it been used in the design of these products? How can air be used to move heavy objects? Construct a simple pneumatic system by joining a balloon to 5mm tubing and then to a washing-up liquid bottle. What happens to the air when you squeeze the bottle? What happens when you let go? Can you lift a soft toy or a note pad using a balloon? Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. Use annotated sketches and prototypes to develop, model and communicate ideas. Order the main stages of making. Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. Select from and use finishing techniques suitable for the product they are creating. Investigate and analyse books, videos and products with pneumatic mechanisms. Evaluate their own products and ideas against criteria and user needs, as they design and make. Understand and use pneumatic mechanisms. Know and use technical vocabulary relevant to the project. 	
School Context				
<ul style="list-style-type: none"> Use herbs from the edible playground and rooftop planters to flavour dishes. 	WW2 links to local shelters in Stoke Newington Look at different building structures in the local area – how the design is shaped for different purposes.			

KS2 DT Curriculum NC End Points: Designing <ul style="list-style-type: none"> Can use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Making: <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Evaluating: <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world. Technical Knowledge: <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. Food technology: <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	Term	Autumn	Spring	Summer
	Half Term Coverage	Autumn 1	Spring 2	Summer 2
	Topic	Textiles (Fastening Wallet or Purse)	Pop up Café (Food Technology)	Levers and Linkages
Key Knowledge	<ul style="list-style-type: none"> To know how to specify a design to make it more appealing to a specific target group. To know different types of stitches for the purpose of functionality and aesthetics. Know and use technical vocabulary relevant to the project. Know how to evaluate their product against the product criteria they have generated individually, as a means to improve their work. 	<ul style="list-style-type: none"> Particular dishes are associated with different cultures and places some ingredients are easier to grow in some parts of the world than in others (owing to conditions such as climate) and are often found in dishes that originate where they are found Some ingredients are more readily available at certain times of the year than others, owing to changes in climate. Ingredients are grown under different farming practices and organic ingredients can be more expensive Some flavours complement each other more than others and some ingredients go well together A healthy dish can involve more than one food group, or one food group if it is part of a healthy balanced diet. Local restaurants cater for the local community and menus are designed so that they appeal to lots of people. Food being served to the public is regulated in accordance with good food hygiene practices. washing hands and ingredients, where appropriate, reduces microorganisms and cooking instructions are important for this purpose too. Ingredients, flavours and textures can be changed through boiling, grilling, baking and frying. 	<ul style="list-style-type: none"> Levers and linkage are mechanisms are devices that are used to create movement in a product. Humans have used levers since the stone age The earliest remaining writings regarding levers date from the 3rd century BC and were provided by the ancient Greek mathematician, Archimedes, who was the first to mathematically describe how levers multiply force. A shadoof is type of lever that was used in Egypt; It is a pole with a weight on one end and was used to lift water from a well or river for irrigation. It was in common use by 2000 BC. It is still used in many areas of Africa and Asia to draw water. There are four types of lever: linear, reciprocating, rotary, oscillating. To know and distinguish between fixed and loose pivots. A lever is a rigid bar which moves around a pivot; they are used in many everyday products. Linkage - the card strips joining one or more levers to produce the type of movement required are used as 'linkage'; this term is also used to describe the lever and linkage mechanism as a whole. The Slot is the hole through which a lever is placed to enable part of a picture to move. The Guide or bridge is a short card strip used to keep lever and linkage mechanisms in place and control movement. A paper fastener that joins card strips together is a 'loose pivot'. A paper fastener that joins card strips to the backing card is a 'fixed pivot'. A system is a set of related parts or components used to create an outcome. Systems have an input, process and an output. In a lever and linkage mechanism, the 'input movement' is where the user pushes or pulls a card strip. The 'output movement' is where one or more parts of the picture move. 	
Cross Curricular Links		<ul style="list-style-type: none"> Computing : Document and annotate process using SeeSaw Science : Observing changes of state, understanding allergies and bacteria, questioning and exploring these concepts Maths : through market research recording feedback and establishing results. Through pricing and budgeting products. Geography: Climates 	<ul style="list-style-type: none"> History: Stone Age (Y3) Ancient Greece (Y6) Ancient Egypt (Y5) Art and design – use colour, pattern, line, shape. 	
Key Skills	<ul style="list-style-type: none"> Design and make a functional purse or wallet with a fastening, communicating initial ideas through annotated sketches Use research into the features of an appealing functional purse/wallet to inform design criteria Select and use a range of tools to perform practical tasks; stitching and sewing (joining), cutting and systematically work through phases of a design. Investigate the effect of different stitches in joining seams and how they contribute to the overall effectiveness and durability of the product. Evaluate the outcome with reference to the design criteria 	<ul style="list-style-type: none"> Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. consider the availability and costings of resources when planning out designs; Make, decorate and present the food product appropriately for the intended user and purpose. Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. Understand how key chefs have influenced eating habits to promote varied and healthy diets. Select and use a range of utensils, including knives, chopping boards, weighing scales, measuring jugs, baking trays. Select and use a range of healthy ingredients such as bread, fruits, vegetables and spreads (considering and giving reasons for choices). Review which dishes were most popular and use this as a means to evaluate own dish and suggest improvements, relating this process to real life scenarios (such as developing a menu/informing stock purchase) Review work against own design criteria, including aspects such as presentation, food combinations, popularity and healthiness. 	<ul style="list-style-type: none"> Needs to include the evaluation of existing structures that will inform their own. Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. Use annotated sketches and prototypes to develop, model and communicate ideas. Order the main stages of making. Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. Select from and use finishing techniques suitable for the product they are creating. Investigate and analyse books and evaluate other products with lever and linkage mechanisms prior to making their own. Evaluate their own products and ideas against criteria and user needs, as they design and make. Use skills and techniques to measure, mark out, cut, join and finish. 	
School Context				
		Cross-curricular year group project culminating in a special event, where parents and carers are invited to dine at the Pop-Up Cafe.		Children learn to be aware that levers occur in nature and that the arm and jaw are both examples of levers.

KS2 DT Curriculum NC End Points: Designing <ul style="list-style-type: none"> Can use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Making: <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Evaluating: <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. Technical Knowledge: <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. Food technology: <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	Year 5		Summer	
	Term	Autumn	Spring	Summer
	Half Term Coverage	-	Spring 1	Summer 2
Topic	-	Spring: Food technology (Baking)	Summer: Structures (Bridge Making)	
Key Knowledge		<ul style="list-style-type: none"> To know about the benefits of whole grain flour, opposed to a plain flour and the reasons why some types of bread, such as wholemeal, are healthier than others and can be a source of carbohydrate in a healthy balanced diet. To know that a wheat grain is a seed and how it is harvested and ground at a mill to make flour. https://m.youtube.com/watch?v=y8vLjPctrcU To know about the influence of specific manufacturers and consider the importance and usefulness of market research in this context. To know the importance of clear and accurate food labelling and knowledge of ingredients, with particular reference to food allergies. To know the different tools and ingredients typically involved in bread making and the steps involved in the bread making process Kneading is pulling and squeezing dough to make it smooth. Bran is the hard protective shell of a grain of wheat. Dough is a mixture of flour, yeast and water before it is cooked. Endosperm is the store of food inside a seed. Germ – part of the seed where the root and shoots grow from. Yeast is a tiny plant which makes bubbles of carbon dioxide when mixed with flour and warm water. Unleavened bread – flat bread where yeast has not been added. 	<ul style="list-style-type: none"> To know that there are many different types of bridge: beam, arch, cable-stayed, suspension, cantilever. There are many famous bridge engineers: eg Severn Bridge, Tower Bridge; John Wolfe Barry and Sir Horrace Jones. Different materials can be used: steel, brick, wood, iron, rivets How to work safely using tools and equipment. How to strengthen a material or structure design using materials understand how to assess the quantity of materials needed for a structure. The design of particular bridges makes them particularly successful considering their purpose and location (eg Severn Bridge, Tower Bridge). Cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design can support the design process overall. 	
Cross Curricular Links		<ul style="list-style-type: none"> calculate the cost of the ingredients used in our bread rolls (cross-curricular: maths) create a recipe for making bread by taking notes while watching a recipe video, using features of instructional writing (cross-curricular: literacy) 	<ul style="list-style-type: none"> recognising/describing/building 3D shapes (maths) asking relevant questions, formulate/express opinions, give well-structured descriptions/explanations (literacy skills) comparing materials (science) 	
Key Skills		<ul style="list-style-type: none"> Evaluate a range of bread, through taste, to inform own design criteria which children subsequently review their own product against, considering appearance, flavour, texture and ingredients. Record evaluative data in a table to support comparison Carrying out and articulating the findings of research carried out in groups. Reviewing, considering and suggesting ways in which a recipe could be adapted to be made healthier (eg recipes involving white flour/salt/sugar) Preparing and baking a savoury dish, using specific techniques for purpose. 	<ul style="list-style-type: none"> Evaluate an existing bridge to inform plans and structures. Compare the strengths of different shaped frameworks within 2D structures. Sketch and annotate a plan of their planned bridge. Use computer aided design and exploded diagrams to support the design process. Write a step by step set of instructions to follow for building their bridge, including the tools and materials. Evaluate different materials and their suitability for use in a bridge. Accurately join frameworks using appropriate and robust joins. Work in a team to plan and build a bridge structure Build a bridge following a plan accurately. Evaluate their completed project considering how successful their bridge is according to the original brief. 	
School Context				
		<ul style="list-style-type: none"> Make link to the different types of bread that are served within the school dinner menu, as well as those that are represented during the annual 'Tastes of the World' event. 	<ul style="list-style-type: none"> Visit KS1 playground to observe the bridge and how it is supported. discuss different bridges crossing the Thames and what type they are 	

Year 6					
KS2 Curriculum End Points:	Term	Autumn	Spring	Summer	
	Half Term Coverage	Autumn 2	Spring 2	-	
<p>Designing</p> <ul style="list-style-type: none"> Can use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Is able to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Making:</p> <ul style="list-style-type: none"> Is able to select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Can accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. <p>Evaluating:</p> <ul style="list-style-type: none"> Is able to investigate and analyse a range of existing products. Can evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understands how key events and individuals in design and technology have helped shape the world. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> Applies their understanding of how to strengthen, stiffen and reinforce more complex structures. Understands and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Applies their understanding of computing to program, monitor and control their products. <p>Food technology:</p> <ul style="list-style-type: none"> Understand and can apply the principles of a healthy and varied diet. Can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 	Topic	<u>Motion Figures (Freestanding Structures with an Internal Skeleton Frame)</u>	<u>Mechanical Systems (Moving Vehicles Incorporating Electronics and Pulleys)</u>		
	Key Knowledge	<ul style="list-style-type: none"> To know how to use a wider range of tools and equipment to perform practical tasks (eg hammer, pliers). Knows the value of and is able to make a prototype for design (eg a smaller version in a different medium) to inform subsequent improvement and to support the communication of ideas. Knows how to hold and strike a hammer in smooth and rhythmical motion. Knows how to hold and operate pliers correctly by using the correct grip to shape and form a material Knows how to form different shapes using wire to create the human body whilst in motion. To know how a more complex structure can be supported by an internal frame. 	<ul style="list-style-type: none"> Mechanical systems and pulleys have an input, process and output and that gears and pulleys can be used to speed up, slow down or change the direction of movement. Develop their use of technical vocabulary, for example, knowing how to check that a motor shaft rotates when powered. To know that a frame structure can be reinforced and strengthened with triangular shapes at the corners. Build on existing knowledge of axles and wheels, with a focus on ensuring that fixed axles allow the wheels to rotate freely and continuously when a pulley is attached. Know how to measure and cut different materials, including dowel, accurately and safely. Know the importance of a process of review of each construction phase to ensure that each part works and is secure to achieve a fully effective end product. 		
	Cross Curricular Links	<ul style="list-style-type: none"> Computing - taking pictures of themselves PE - athletic poses and postures History: During this term, children will use 'sketch' to produce a computer-aided design of an Ancient Greek vase 	<ul style="list-style-type: none"> Computing – use search technologies for research purposes and be discerning when evaluating digital content. Art and design – use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape. Science – apply knowledge and understanding of circuits, switches, conductors and insulators in the design of the final product. Mathematics – understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm. 		
	Key Skills	<ul style="list-style-type: none"> Select and use a wider range of tools and equipment to perform practical tasks (including a hammer to join wire to wood, pliers to manipulate a structure into the shape of a figure) and using equipment safely. Draw and photograph the body in motion and use images to inform designs. Evaluate their own and others' products, against design criteria and identifying and communicating how refinement of building processes, as well as the outcome itself, could be improved. 	<ul style="list-style-type: none"> Accurately measure the lengths of square-section wood, sawing and smoothing ends with sandpaper. Build and reinforce a rectangular frame with triangles. Reinforce axles with bearings securing axle holders and checking that wheels move freely. Building a wooden pulley system with a secure fit. Create a chassis in order to hold a motor which will enable the vehicle to be powered. Assess to identify and address potential weaknesses and apply knowledge of strengthening, reinforcing and stiffening. Attach a battery with wires to a motor. Critically evaluate the quality of the design, manufacture, functionality, innovation and fitness for purpose, throughout the process and when the final product is in use, referring back to the design criteria. Follow step-by step plans with referral to lists of tools, equipment and materials needed. 		
	School Context				
		Children test products in the school hall as part of the evaluation process.			