

Curriculum 22 DT Progression Document

Year Group	AUTUMN		SPRING Geography Driver		SUMMER	
1	Childhood DT Topic – Shade and Shelter		Bright Lights, Big City DT Topic - Taxi		School Days DT Topic - Chop, Slice & Mash	
	Skills <ul style="list-style-type: none"> Construct simple structures, models or other products using a range of materials. Create a design to meet simple design criteria. Select and use a range of materials, beginning to explain their choices. Describe the similarities and differences between two products. Name and explore a range of everyday products and describe how they are used. 	Knowledge <ul style="list-style-type: none"> A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. A shelter is a structure designed to give protection from weather or danger. A strength is something that is good about a piece of work. A weakness is an area that could be improved. 	Skills <ul style="list-style-type: none"> Construct simple structures, models or other products using a range of materials. Create a design to meet simple design criteria. Describe the similarities and differences between two products. Name and explore a range of everyday products and describe how they are used. Talk about their own and each other's work, identifying strengths or 	Knowledge <ul style="list-style-type: none"> A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. Two products can be compared by looking at a set of criteria and scoring both products against each one. An axle is a rod that is connected to the centre of a wheel, which allows it to turn. 	Skills <ul style="list-style-type: none"> Create a design to meet simple design criteria. Select the appropriate tool for a simple practical task. Talk about their own and each other's work, identifying strengths or weaknesses and offering support. Measure and weigh food items using non-standard measures, such as spoons and cups. Select healthy ingredients for a fruit or vegetable salad. Sort foods into groups by 	Knowledge <ul style="list-style-type: none"> A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. Some foods need to be prepared before eating. Peeling, slicing, chopping, grating, tearing or mashing are different methods of preparing foods. Fruits and vegetables can be mixed to

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	<ul style="list-style-type: none"> • Talk about their own and each other's work, identifying strengths or weaknesses and offering support. • Construct simple structures, models or other products using a range of materials. • Follow the rules to keep safe during a practical task. 	<ul style="list-style-type: none"> • Rules are made to keep people safe from danger. • Safety rules include always listening carefully, following instructions and using equipment only when told to. 	<p>weaknesses and offering support.</p> <ul style="list-style-type: none"> • Use wheels and axles to make a simple moving model. 	<ul style="list-style-type: none"> • A chassis is the frame of a vehicle. • A strength is something that is good about a piece of work. • A weakness is an area that could be improved. • Most vehicles that move on land have axles and wheels that are fixed to a chassis. • An axle fixed to a chassis has freely moving wheels. • A freely moving axle has fixed wheels. 	<p>whether they are from an animal or plant source.</p> <ul style="list-style-type: none"> • Follow the rules to keep safe during a practical task. 	<p>make a healthy salad.</p> <ul style="list-style-type: none"> • Salad dressings can improve the flavour of salads. • Fruit and vegetables are an important part of a healthy diet. • It is recommended that people eat at least five portions of fruit and vegetables every day. • Some foods come from animals, such as meat, fish and dairy products. • Some come from plants, such as fruit and vegetables. • Rules are made to keep people safe from danger. • Safety rules include always
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						listening carefully, following instructions and using equipment only when told to.
2	Movers and Shakers DT Topic –Remarkable Recipes		Coastline DT Topic – Beach Huts		Magnificent Monarchs DT Topic – Cut, Stitch and Join	
	<p>Skills</p> <ul style="list-style-type: none"> • Generate and communicate their ideas through a range of different methods. • Select the appropriate tool for a task and explain their choice. • Prepare ingredients by peeling, grating, chopping and slicing. • Explain why a designer or inventor is important. • Explain how closely their finished 	<p>Knowledge</p> <ul style="list-style-type: none"> • Tools have characteristics that make them suitable for specific purposes. For example, a knife is good for cutting food because it has a sharp metal edge. • School kitchen staff are important people because they design and provide healthy meals. • A healthy diet should include meat or fish, 	<p>Skills</p> <ul style="list-style-type: none"> • Generate and communicate their ideas through a range of different methods. • Select the appropriate tool for a task and explain their choice. • Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. • Explain how closely their finished 	<p>Knowledge</p> <ul style="list-style-type: none"> • Properties of components and materials determine how they can and cannot be used. • Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. 	<p>Skills</p> <ul style="list-style-type: none"> • Generate and communicate their ideas through a range of different methods. • Select the appropriate tool for a task and explain their choice. • Use different methods of joining fabrics, including glue and running stitch. • Choose appropriate components and materials and suggest ways of manipulating them to achieve 	<p>Knowledge</p> <ul style="list-style-type: none"> • A running stitch is a basic stitch used to join two pieces of fabric. • Properties of components and materials determine how they can and cannot be used. • Embellishment is a decorative detail or feature added to something to make it more attractive. • A brand is a name, term, design, or symbol identifying a

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	<p>products meet their design criteria and say what they could do better in the future.</p> <ul style="list-style-type: none"> • Prepare ingredients by peeling, grating, chopping and slicing. • Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. • Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). • Work safely and hygienically in construction and cooking activities. 	<p>starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables.</p> <ul style="list-style-type: none"> • Food comes from two main sources: animals and plants. • Milk comes mainly from cows but also from goats and sheep. • Eggs belong to the animal product category. • They are laid by female animals. The most common types eaten by humans include chicken and duck eggs. 	<p>products meet their design criteria and say what they could do better in the future.</p> <ul style="list-style-type: none"> • Explore how a structure can be made stronger, stiffer and more stable. 		<p>the desired effect.</p> <ul style="list-style-type: none"> • Add simple decorative embellishments, such as buttons, prints, sequins and appliqué. • Compare different or the same products from the same or different brands. • Explain how an everyday product could be improved • Explain why a designer or inventor is important. • Explain how closely their finished products meet their design criteria and say what they could do better in the future. 	<p>seller's products or services.</p> <ul style="list-style-type: none"> • There are many home products made from fabric. • Examples of fabric based products in the home include cushions, curtains, blinds and carpets. • The Cath Kidston brand was an important British brand which began in the 1990s. • It was easily recognisable for its floral patterned fabric and use of classic British iconography including the Red London Bus and London black cab. • A finished product can be
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		and wiping up spills.				
3	Through the Ages DT Topic –Cook well, eat well		Rocks, Relics and Rumbles DT Topic – Make It Move		Emperors and Empires DT Topic – Greenhouse	
	<p>Skills</p> <ul style="list-style-type: none"> • Develop design criteria to inform a design. • Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. • Describe how key events in design and technology have shaped the world. • Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). 	<p>Knowledge</p> <ul style="list-style-type: none"> • Design criteria are the exact goals a project must achieve to be successful. • These criteria might include the product's use, appearance, cost and target user. • There are five main food groups: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives 	<p>Skills</p> <ul style="list-style-type: none"> • Develop design criteria to inform a design. • Use tools safely for cutting and joining materials and components. • Plan which materials will be needed for a task and explain why. • Explain how an existing product benefits the user. • Suggest improvements to their products and describe how to implement them, beginning to take the views 	<p>Knowledge</p> <ul style="list-style-type: none"> • Design criteria are the exact goals a project must achieve to be successful. • These criteria might include the product's use, appearance, cost and target user. • Materials for a specific task must be selected on the basis of their properties. For example greenhouses need transparent or translucent materials. Availability and cost have 	<p>Skills</p> <ul style="list-style-type: none"> • Develop design criteria to inform a design. • Use tools safely for cutting and joining materials and components. • Plan which materials will be needed for a task and explain why. • Explain how an existing product benefits the user. • Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. • Explain the similarities and 	<p>Knowledge</p> <ul style="list-style-type: none"> • Design criteria are the exact goals a project must achieve to be successful. • These criteria might include the product's use, appearance, cost and target user. • Materials for a specific task must be selected on the basis of their properties. For example greenhouses need transparent or translucent materials. Availability and cost have

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	<ul style="list-style-type: none"> • Prepare and cook a simple savoury dish. • Identify and name foods that are produced in different places. • Use appliances safely with adult supervision. 	<p>(milk, cheese and yoghurt) and fats (oils and spreads).</p> <ul style="list-style-type: none"> • Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet. • Preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning. • Safety rules must be followed when using electricity. Fingers and other objects must not be put into electrical outlets, anything with a cord or plug 	<p>of others into account.</p> <ul style="list-style-type: none"> • Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. 	<p>also got to be considered.</p> <ul style="list-style-type: none"> • Asking questions can help others to evaluate their products. For example, asking someone whether the materials selected helped achieve the purpose of the model. • Cams are devices that can convert circular motion into up-and-down motion. • The cam is fixed to the axle and the follower sits on the cam. When the axle is rotated, the follower moves up and down, following the 	<p>difference between the work of two designers.</p> <ul style="list-style-type: none"> • Create shell or frame structures using diagonal struts to strengthen them. 	<p>also got to be considered.</p> <ul style="list-style-type: none"> • Particular products are designed for specific tasks. For example designing a product to help grow plants will require certain materials. • Asking questions can help others to evaluate their products. For example, asking someone whether the materials selected helped achieve the purpose of the model. • Work from different designers can be compared by assessing specific criteria, such as their visual impact, fitness
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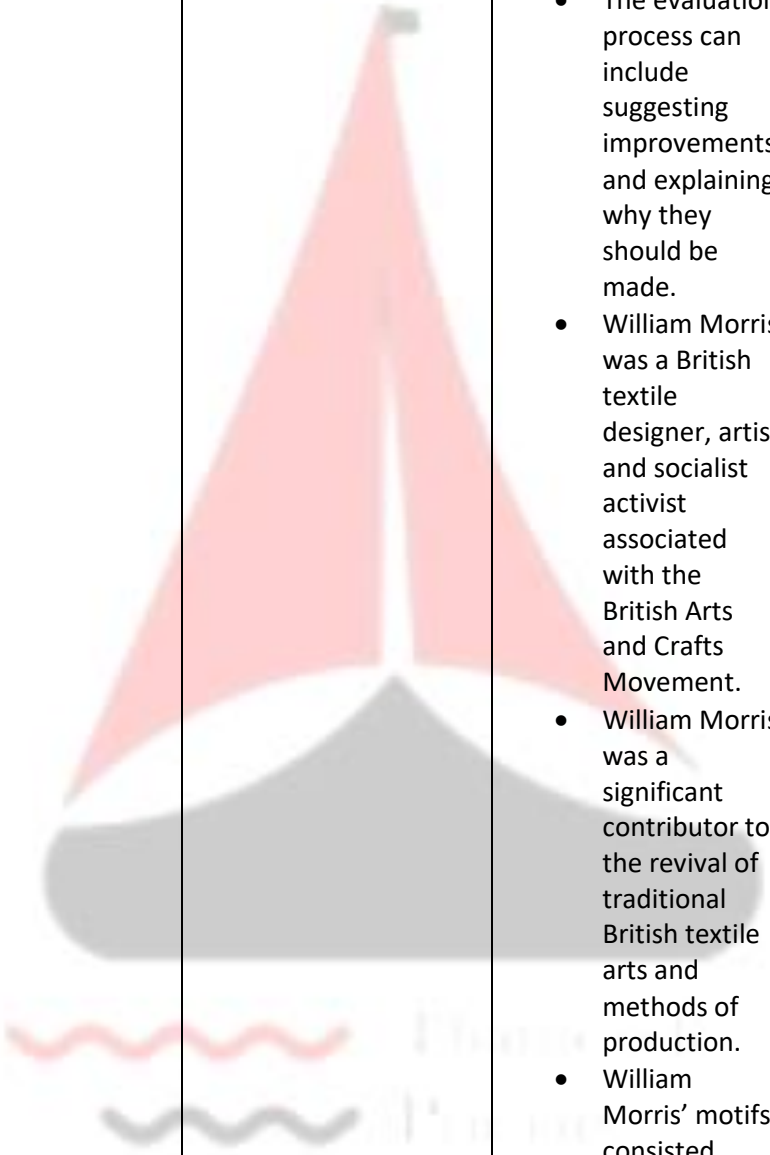
		<p>should never be used around water and a plug should never be pulled out by its cord.</p>		<p>shape of the cam.</p> <ul style="list-style-type: none"> • Different shaped cams produce different patterns of movement in the follower. 		<p>for purpose and target market.</p> <ul style="list-style-type: none"> • Diagonal struts create triangular shapes within a frame structure. • Adding diagonal struts to a frame structure adds strength and stability.
4	<p>Invasion DT Topic – Warp & weft</p>		<p>Misty Mountain, Winding River DT Topic – Functional and Fancy Fabrics</p>		<p>Ancient Civilisations DT Topic – Tomb Builders</p>	
	<p>Skills</p> <ul style="list-style-type: none"> • Choose from a range of materials, showing an understanding of their different characteristics. 	<p>Knowledge</p> <ul style="list-style-type: none"> • Visual qualities of a yarn can include its colour, elasticity, pattern and texture. 	<p>Skills</p> <ul style="list-style-type: none"> • Use annotated sketches and exploded diagrams to test and communicate their ideas. • Select, name and use tools with adult supervision. • Hand sew a hem or seam using a running stitch. • Choose from a range of 	<p>Knowledge</p> <ul style="list-style-type: none"> • Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way. 	<p>Skills</p> <ul style="list-style-type: none"> • Choose from a range of materials, showing an understanding of their different characteristics. • Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and 	<p>Knowledge</p> <ul style="list-style-type: none"> • Characteristics of materials, such as rigidity, strength and smoothness will affect the success of a working model. • Evaluation can be done by considering whether the product does what it was designed to

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			<p>materials, showing an understanding of their different characteristics.</p> <ul style="list-style-type: none"> • Create detailed decorative patterns on fabric using printing techniques. • Create and complete a comparison table to compare two or more products. • Investigate and identify the design features of a familiar product. • Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when 	<ul style="list-style-type: none"> • A hem runs along the edge of a piece of cloth or clothing. It is made by turning under a raw edge and sewing to give a neat and quality finish. • Fabrics can be natural or synthetic. • Natural fabrics include cotton, silk and wool. • Synthetic fabrics include Lycra, polyester and nylon. • Block printing and fabric paint are used to create decorative, repeated patterns on fabrics. • A comparison table is an organised way 	<p>those of others when making improvements.</p> <ul style="list-style-type: none"> • Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. 	<p>do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made.</p> <ul style="list-style-type: none"> • The evaluation process can include suggesting improvements and explaining why they should be made. • Simple machines make physical jobs easier by changing the strength or direction of a force. • There are six simple machines: pulley, lever, wheel and axle, wedge,
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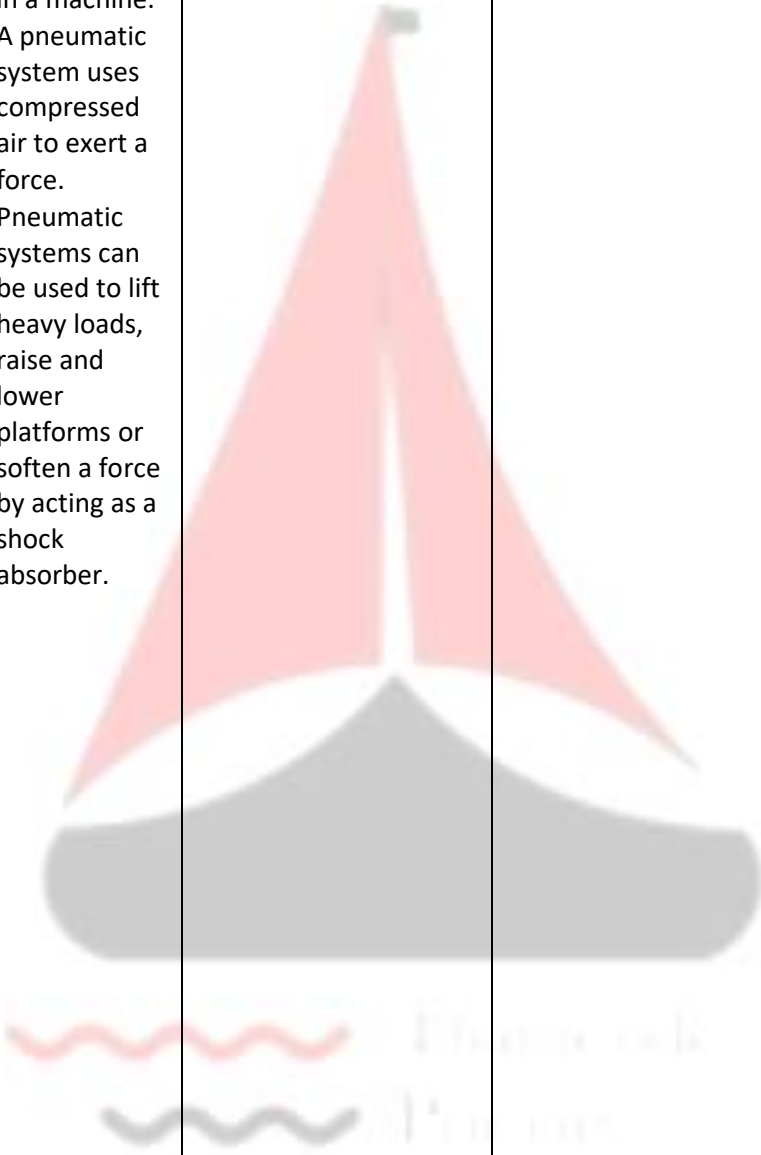
			<p>making improvements.</p> <ul style="list-style-type: none"> • Explain how and why a significant designer or inventor shaped the world. 	<p>to compare products.</p> <ul style="list-style-type: none"> • Design features are the aspects of a product's design that the designer would like to emphasise. For example, the use of a particular material or a feature that makes the product durable. • Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the 		<p>inclined plane and screw.</p> <ul style="list-style-type: none"> • Simple machines can be combined to make complex, compound machines. For example, a wheelbarrow combines a lever with a wheel and axle. •
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				<p>changes were made.</p> <ul style="list-style-type: none">• The evaluation process can include suggesting improvements and explaining why they should be made.• William Morris was a British textile designer, artist and socialist activist associated with the British Arts and Crafts Movement.• William Morris was a significant contributor to the revival of traditional British textile arts and methods of production.• William Morris' motifs consisted mainly of		
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				leaves, flowers, fruits and birds.		
5	Dynamic Dynasties DT Topic – Moving Mechanisms		Sow, Grow, Farm DT Topic – Eat the Seasons		Groundbreaking Greeks DT Topic - Architecture	
	<p>Skills</p> <ul style="list-style-type: none"> Name and select increasingly appropriate tools for a task and use them safely. Select and combine materials with precision. Survey users in a range of focus groups and compare results. Test and evaluate products against a detailed design specification and make adaptations as they develop the product. Build a framework using a range of materials to 	<p>Knowledge</p> <ul style="list-style-type: none"> Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria. Testing a product against the design criteria will highlight anything that needs improvement or redesign. Mechanisms and systems can work together to perform a function. A strong and stable structure is necessary to 	<p>Skills</p> <ul style="list-style-type: none"> Evaluate meals and consider if they contribute towards a balanced diet. Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. Describe what seasonality means and explain some of the reasons why it is beneficial. 	<p>Knowledge</p> <ul style="list-style-type: none"> A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions. Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one. Seasonality is the time of year when the harvest or flavour of a 	<p>Skills</p> <ul style="list-style-type: none"> Use pattern pieces and computer-aided design packages to design a product. Select and combine materials with precision. Skill Explain how the design of a product has been influenced by the culture or society in which it was designed or made. Test and evaluate products against a detailed design specification and make adaptations as they develop the product. 	<ul style="list-style-type: none"> Knowledge Computer-aided design (CAD) is the use of specialised computer software to design objects. CAD designs can also be made into objects using 3-D printers. The design of products needs to take into account the culture of the target audience. The ancient Greeks developed the Classical form of architecture that has been copied for thousands of years. Testing a product

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	<p>support mechanisms.</p> <ul style="list-style-type: none"> • Use mechanical systems in their products, such as pneumatics. • Explain the functionality and purpose of safety features on a range of products. 	<p>support mechanisms in a machine.</p> <ul style="list-style-type: none"> • A pneumatic system uses compressed air to exert a force. • Pneumatic systems can be used to lift heavy loads, raise and lower platforms or soften a force by acting as a shock absorber. 		<p>type of food is at its best.</p>	<ul style="list-style-type: none"> • Describe the social influence of a significant designer or inventor. • Build a framework using a range of materials to support mechanisms. 	<p>against the design criteria will highlight anything that needs improvement or redesign.</p> <ul style="list-style-type: none"> • A Roman architect called Vitruvius said that successful buildings should have firmitas (stability), utilitas (useful space) and venustas (an attractive appearance). • Support, stiffness and stability can be created by using triangular shapes to create strong frameworks, columns to support roofs and overlapping brickwork patterns.
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6	<p>Maafa DT Topic – Food for Life</p>		<p>Frozen Kingdom DT Topic - Engineer</p>		<p>Britain at war DT Topic – Make Do and Mend</p>	
<p>Skills</p> <ul style="list-style-type: none"> • Create a detailed comparative report about two or more products or inventions. • Analyse how an invention or product has significantly changed or improved people's lives. • Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. • Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet. • Follow a recipe that requires a variety of 	<p>Knowledge</p> <ul style="list-style-type: none"> • Sliced bread is processed. It can contain many more ingredients than homemade bread, including preservatives and artificial ingredients. • A processed food is changed during preparation and includes processes, such as cooking, freezing, pasteurising, or the addition of ingredients. • Processed foods can be convenient and increase availability, but often lack of nutrients 	<p>Skills</p> <ul style="list-style-type: none"> • Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. • Choose the best materials for a task, showing an understanding of their working characteristics. • Create a detailed comparative report about two or more products or inventions. • Analyse how an invention or product has significantly changed or improved people's lives. 	<p>Knowledge</p> <ul style="list-style-type: none"> • Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost 	<p>Skills</p> <ul style="list-style-type: none"> • Select appropriate tools for a task and use them safely and precisely. • Pin and tack fabrics in preparation for sewing and more complex pattern work. • Choose the best materials for a task, showing an understanding of their working characteristics. • Use different methods of fastening for function and decoration, including press studs, Velcro and buttons. • Create a detailed comparative report about two or more 	<p>Knowledge</p> <ul style="list-style-type: none"> • Deconstructing garments identifies how they were made, the materials used and their properties. • Hand stitches include running stitch, blanket stitch and whip stitch. • It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability. 	

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	<p>techniques and source the necessary ingredients independently.</p> <ul style="list-style-type: none"> • Explain how organic produce is grown. 	<p>and contain unhealthy ingredients when compared to whole foods.</p> <ul style="list-style-type: none"> • An iterative process starts with requirements and continues by creating a product, testing it, and revising it before creating a better version. • The iterative process is a series of steps that are repeated, improving the product with each cycle. • Eating a balanced diet is a positive lifestyle choice that should be sustained over time. 	<ul style="list-style-type: none"> • Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. • Present a detailed account of the significance of a favourite designer or inventor. • Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. 	<p>and availability.</p> <ul style="list-style-type: none"> • Bridge structures have changed over time. This is due to factors such as technology, design innovation and new and better access to materials. • An iterative process starts with requirements and continues by creating a product, testing it, and revising it before creating a better version. • The iterative process is a series of steps that are repeated, improving the product with each cycle. • Significant engineers 	<p>products or inventions.</p> <ul style="list-style-type: none"> • Analyse how an invention or product has significantly changed or improved people's lives. 	<ul style="list-style-type: none"> • Products and inventions can be compared using a range of criteria, such as the impact on society, ease of use, appearance and value for money. • Make Do and Mend was a campaign run by the Ministry of Information during the Second World War to encourage people to recycle and repurpose their old clothes rather than buy new. • The Make Do and Mend campaigns aimed to limit the amount of labour and materials used in clothes production, so
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		<ul style="list-style-type: none"> • Food packaging provides important nutritional information about the food inside. • Ingredients can usually be bought at supermarkets, but specialist shops may stock different items such as specialist vegetables or coffees. • Greengrocers sell fruit and vegetables, butchers sell meat, fishmongers sell fresh fish and delicatessens usually sell some unusual prepared foods, as well as cold meats and cheeses. 		<p>have improved, safety, people's lives and trade through their constructions.</p> <ul style="list-style-type: none"> • Significant bridges include: the Menai Bridge, Clifton Suspension Bridge and Forth Bridge. • Strength can be added to a framework by using multiple layers or changing its shape. • Triangles do not collapse or distort easily and so are used in architecture to provide support and stability. 		<p>that it could be used to support the greater war effort.</p>
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		<ul style="list-style-type: none">• Whole foods have not been changed from their natural form.• Organic whole foods are grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives.				
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