

Design and Technology Skills Progression



Foundation

Projects

DT is taught through continuous provision linked to the following EYFS projects:

Term 1 – Me and my community/Autumn

Term 4 – Ready, steady, grow

Term 2 – Once upon a time/Sparkle and shine

Term 5 – Why do ladybirds have spots?

Term 3 – Starry night/Winter wonderland

Term 6 – Big wide world/moving on

<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>		
<p>To learn how everyday objects work by dismantling things.</p> <p>To discuss what they notice about objects.</p> <p>To talk about what they would like to make and why.</p>	<p>To begin to use the language of designing and making, e.g. join, build and shape.</p> <p>To learn about planning and adapting initial ideas to make them better.</p> <p>To select appropriate materials and tools.</p>	<p>To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.</p> <p>To experiment with colour, design, texture, form and function.</p> <p>To construct with a purpose, using a variety of resources.</p> <p>To replicate structures with materials/components.</p> <p>To discuss how to make an activity safe/hygienic.</p> <p>To record experiences by drawing, writing and voice recording.</p>				<p>To begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.</p> <p>To adapt work if necessary.</p> <p>To dismantle, examine and talk about existing objects/structures.</p> <p>To consider and manage some risks.</p> <p>To describe textures.</p>	<p>To begin to understand some of the tools, techniques and processes involved in food preparation.</p> <p>To practise pouring, stirring, mixing and blending.</p> <p>To have basic hygiene awareness.</p> <p>To discuss the use of senses.</p> <p>To understand a need for variety in food.</p> <p>To begin to understand that eating well contributes to good health.</p>

Vocabulary for Learning

Investigate Product	Criteria Design Drawing Evaluate Function Ideas	<p>General: experiment, change, tools, materials, use, build, make, cut, fasten, finish, join, saw, shape, stick</p> <p>Textiles: applique batik embroidery finish join knit print sew stitch thread weave, design, evaluate, improve, model, plan, product, template, test, buttons, fastening, hook-and-eye loom needle pin pinking shears poppers</p>	Better Don't Like Evaluate Ideas Improve Like	Bake Beat Blend Chop Combine Cook	Heat Knead Mash Meal Melt Mix
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	<p>Make Picture</p>	<p>press stud scissors tape measure thimble thread, cotton, dye, fabric, felt, ribbon, silk, wool</p> <p>Structures: frame, man-made, natural, rigid, solid, connector, frame, materials, nut and bolt, contain, protect, span, support, clamp, glue gun, hammer, hole punch, nail, safety goggles, sandpaper, screw, screwdriver, tape measure</p> <p>Mechanisms: wheels and axle, body, cab, dowel, gear, chassis, lever, pull, pulley, push, slot, slider, bridge, guide, fastener, pivot,</p>	<p>Materials Product Use Worse</p>	<p>Cream Crumble Cut Dice Diet Drain Fold Food Grate Healthy</p> <p>Peel Pour Recipe Safety Slice Snack Stir Weigh Whisk</p>
<u>Knowledge</u>				
<p>Items can be taken apart to see how they work.</p>	<p>Items can be put together by joining them.</p> <p>We can use art and construction resources to build.</p> <p>Different tools can be used to shape an item.</p> <p>Planning helps you develop ideas.</p> <p>Different tools do different jobs.</p>	<p>Scissors, pastry cutters and hole punches can be used to cut materials.</p> <p>Staplers can be used to attach materials together.</p> <p>Rolling pins can be used for flattening materials.</p> <p>It is important to use resources safety.</p>	<p>Changes can be made during the making process.</p> <p>Items can be taken apart to see how they work.</p> <p>Texture is how a material feels when you touch it.</p>	<p>When cooking we need to wash out hands before and after.</p> <p>Pouring, stirring, mixing and blending can all be used when cooking.</p> <p>You should ask an adult's permission before cooking.</p> <p>When cooking you need to start with clean surfaces and clean cooking tools.</p> <p>We have to be careful with hot surfaces and sharp tools.</p>

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Year 1

<u>Projects</u>									
Term 1 – Dinosaur Planet Term 2 – Superheroes Term 3 – Splendid Skies					Term 4 – Bright Lights, Big City Term 5 – The Enchanted Woodland Term 6 – Moon Zoom!				
<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>		
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>				
Make Pudding Lane (T4)	Mask making (T2)	Sockasaurus Rex (T1)	Woodland Crowns (T5)	Large-scale landscapes (T4) Nests and Dens (T5)	Moon Buggy (T6)	Space Toys (T6) Success (T6)	Superfoods (T2)		
To can investigate and analyse the materials used for buildings in 1666. Look at a range of existing product. Identify basic features of an existing product.	To create a design to meet simple design criteria based of observations of examples. To use labels when designing. (ongoing) To begin to think about equipment needed. (ongoing)	To use scissors accurately to cut simple shapes out of material. To securely attach 3D elements to material using glue.	To select and use a range of natural and man-made resources to create a product.	To build a structure using construction kits to ensure stability. To build a structure using natural resources to ensure durability and stability.	To use wheels and axles to make a simple moving model.	To explore the uses of a range of products and suggest improvements. To evaluate and talk about their own and each other's work, identifying strengths.	To use senses to describe how particular foods smell and taste. To identify healthy foods that we need to grow strong and stay fit and well. To follow simple recipes to prepare fruit and vegetable kebabs.		
<u>Vocabulary for Learning</u>									
Combustible Straw Structure Thatched Roof Timber Frames Tudor Style Wood	Criteria Design Equipment Label Sketch	Attach Embellish Material Secure Stick Template	Acorn Berries Intertwine Leaves Man-Made Natural Rustic Secure Seeds	Durable Habitat Interlocking Stable Structure	Axels Connect Mechanisms Rod Spindle Vehicle Wheel	Compare Dislike Evaluate Improve Like Improvement Weaknesses	Opinion Product Purpose Strength Success Texture	Bitter Crisp Crunchy Hear Juicy Sight Smell	Sour Sweet Taste Taste Buds Texture Touch

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Knowledge							
Some materials are more combustible than others.	Design criteria are the explicit goals that a project must achieve.	Material is a form of textile which can be attached together in different ways.	Products can be made using a range of natural and man-made resources.	<p>A structure can be made durable by interlocking resources.</p> <p>A construction set is a set of standardized pieces that allow for the construction of a variety of different models.</p>	An axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.	<p>All products are designed for a specific purpose.</p> <p>A strength is a good quality of a piece of work.</p>	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.

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Year 2

<u>Projects</u>							
<u>Term 1</u> – Street Detectives				<u>Term 4</u> – Land Ahoy!			
<u>Term 2</u> – Beat, Band, Boogie!				<u>Term 5</u> – The Scented Garden			
<u>Term 3</u> – Beachcombers				<u>Term 6</u> – Towers, Tunnels and Turrets			
<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>		
	Tubs & Planters (T5)	Scented Bags (T5)	Scented Bags (T5)	Model Making (T1) Building a Castle (T6) Marshmallow & Spaghetti Bridges (T6)	Draw Bridges (T6)	Evaluating Our Structures (T6) Marshmallow & Spaghetti Bridges (T6)	Bakery Shop (T1)
<p>To look at a range of existing product identifying key features.</p> <p>To identify the key materials used in an existing product understanding why they have been chosen.</p>	<p>To select and use the appropriate tool for a planting and grow explaining their choice.</p> <p>To identify why a tool is appropriate for a task apply knowledge of different properties of materials.</p> <p>To continue to discuss, plan and design models prior to constructing. (ongoing)</p>	<p>To use scissors with greater accuracy to cut simple shapes out of material.</p> <p>To begin to attach material together using a running stitch.</p>	<p>To evaluate the effectiveness of natural resources on producing a desired scent for their product.</p>	<p>To choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.</p> <p>To secure material together using the attachment techniques of I brace and tabs.</p> <p>To secure circular materials together using the attachment techniques of the flange.</p>	<p>To use levers and pulleys to make a draw bridge which opens and closes.</p>	<p>To explain how closely their finished products meet their design criteria and say what they could do better in the future.</p> <p>To evaluate their own and each other's work, identifying strengths.</p> <p>To evaluate the effectiveness of a structure and adapting it to meet design criteria.</p>	<p>To prepare ingredients by peeling, grating, chopping and slicing.</p> <p>To apply knowledge of healthy foods that we need to grow strong and stay fit and well when choosing ingredients.</p>

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				To explore how a structure can be made stronger, stiffer and more stable.			
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Vocabulary for Learning

Design	Appropriate	Felt	Fragrant	Attach	Recycle	Fulcrum	Design Criteria	Bake
Design Criteria	Characteristics	Knot	Knead	Circular	Robust	Lever	Evaluate	Chop
Evaluate	Gardening	Needle	Measure	Collapse	Scale	Mechanism	Improvements	Grate
Function	Properties	Running Stitch	Mortar	Features	Secure	Pulley	Reflect	Ingredients
Ideas	Suitable	Sewing	Pestle	Flange	Stiffen		Review	Measure
Investigating	Tool	Stitch	Roll Out	Fragile	Strong		Strengths	Melt
Make		Thread	Scent	Join	Stronger		Success	Peel
Planning			Squeeze	Model	Suitable		Test	Recipe
Product			Texture	Quality			Weaknesses	Sieve
Purpose				Components				Slice
User				Construct				Varied Diet
				Strengthen				
				Structure				
				Unsuitable				

Knowledge

	Different tools have characteristics that make them suitable for specific purposes.	Materials can be attached through sewing. Running stitch is a type of sewing stitch which can attach materials together.	Different scents can be created from natural resources which can produce different responses in the consumer.	<p>The I brace attachment is a way to connect two pieces with a 90° angle.</p> <p>Tabs is a ways of securely attaching two or more materials together at a corner.</p> <p>The flange is an attachment technique used to securely attachment circular</p>	<p>A mechanism makes a job easier to do</p> <p>Levers consist of a rigid bar that rotates around a fixed point, called a fulcrum. They reduce the amount of work needed to lift a heavy object.</p>	<p>Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.</p>	<p>Some ingredients need to be prepared before they can be cooked or eaten. There are many ways to prepare ingredients: peeling skins using a vegetable peeler, such as potato skins; grating hard ingredients, such as cheese or chocolate; chopping vegetables, such as onions and peppers and slicing</p>
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				<p>materials together.</p> <p>Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares.</p> <p>A broader base will also make a structure more stable.</p>			<p>foods, such as bread and apples.</p>
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Year 3

<u>Projects</u>										
<u>Term 1</u> – Tribal Tales <u>Term 2</u> – Mighty Metals <u>Term 3</u> – Predator!					<u>Term 4</u> – Tremors <u>Term 5</u> – Urban Pioneers <u>Term 6</u> – Gods and Mortals					
<u>Investigate</u>		<u>Design</u>		<u>Make / Technical Knowledge</u>				<u>Evaluate</u>		<u>Food and Nutrition</u>
				<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>			
Stone Age Tools (T1)		Stone Age Tools (T1) Designing a pair of wings (T6)		Parachute (T2)	Stone Age Tools (T1)	Den Building (T4 or Trip)	How do levers help us? (T2)	Stone Age Tools (T1) Spinners! (T2)		Fruit Smoothie Making (T3)
To identify and analyse the design features of the existing product of Stone Age tools identify the key features and their purpose.		To create a design to meet the design criteria and historical context. To use labels when designing identifying the choices in materials used and attachment techniques planned for. To plan which materials and attachment techniques will be needed for a task and explain why based on their properties.		To investigate a range of materials to evaluate their effectiveness as a parachute based up their properties. To use preliminary findings to design an effective parachute.	To using lashing (rope technique) to secure and fasten two or more items together in a somewhat rigid manner.		To investigate a range of everyday items which use levers by identifying the effort, load and fulcrum. To understand the importance of levers in these items.	To evaluate their own and other's work against the original success criteria identifying strengths, weaknesses and ways of improvement. To evaluate the effectiveness of different materials on a product based on their design criteria.		To be able to identify what constitutes and healthy diet. To select complementary flavours for a smoothie based on the design criteria.
<u>Vocabulary for Learning</u>										
Burins	Properties	Annotate	Lashing	Air resistance	Attach		Effort	Adapt	Carbohydrate	
Chiselled	Raffia	Attach	Malleable	Nylon	Lashing		Force	Air Resistance	Dairy	
Feature	Resource	Design	Materials	Parachute	Rigid		Fulcrum	Design Criteria	Fats	
Flakes	Scrapers	Durable	Properties	Plasticine	Rope		Lever	Effectiveness	Fruit	
Flint	Stone	Effective	Rigid		Secure			Evaluate	Proteins	
Flint Blades	Stone Awls	Flange	Rope					Improvements	Vegetables	
Hand Axes	Wood	Flexible	Secure					Material		

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Needles Hammerstones Harpoon Points	Wool Fold Gusset Support L Brace Label Attachments Design Criteria	Sew Slot Stitch Tabs Tie				Success Success Criteria Weakness	
Knowledge							
<p>Stone age tools were predominantly made from stone (flint) as it was one of the sharpest instruments available and was easily chiselled or flaked into sharp points which were then used as tools.</p>	<p>Design criteria are the exact goals a project must achieve to be successful.</p> <p>These criteria might include the product's use, appearance and target user.</p> <p>Materials for a specific task must be selected on the basis of their properties. These include physical properties as well as availability and cost.</p> <p>Different attachment techniques are more suited to different materials.</p>	<p>Materials for a specific task must be selected on the basis of their properties.</p>	<p>Lashing is an arrangement of rope, wire, or webbing with linking device used to secure and fasten two or more items together in a somewhat rigid manner.</p>		<p>Levers consist of a rigid bar that rotates around a fixed point, called a fulcrum. They reduce the amount of work needed to lift a heavy object.</p>	<p>Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.</p> <p>Different materials can have different effects. Designers have to evaluate and choose the most effective material for their product.</p>	<p>There are five main food groups that should be eaten regularly as part of a balanced diet: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet.</p>

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Year 4

<u>Projects</u>							
Term 1 – I am Warrior! Term 2 – Playlist Term 3 – Burps, Bottoms and Bile				Term 4 – Misty Mountain Sierra Term 5 – Blue Abyss Term 6 – Traders and Raiders			
<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>		
Shield Making (T1) Poor Romans! (T1) Roman legacy (T1) Musical instruments (T2) Anglo-Saxon homes (T6)	Shield Making (T1) Poor Romans! (T1) Making instruments (T2) Digestive T-shirt (T3) Anglo-Saxon homes (T6)	Digestive T-shirt (T3)	Shield Making (T1) Making instruments (T2)	Anglo-Saxon homes (T6)	Bioluminescent fish (T5)	Shield Making (T1) Poor Romans! (T1) Making instruments (T2) Anglo-Saxon homes (T6)	Poor Romans! (T1) Healthy snacks (T3)
<p>To identify and analyse the design features of the existing product of Roman shields, identify the key features and their purpose.</p> <p>To identify how decorative features are used to enhance a product's appearance.</p> <p>To complete a comparison table to compare two or more food products.</p> <p>To investigate and analyse the design and impact of Roman inventions on modern society.</p> <p>To investigate and identify the design features of a musical instrument such as</p>	<p>To create a design to meet the design criteria and historical context with greater accuracy.</p> <p>To use labels when designing, identifying the choices in materials used and attachment techniques planned for with greater accuracy.</p> <p>To create a design to meet the design criteria of a food product using annotations and labels to communicate ideas in a visual, detailed</p>	<p>To use a range of stitches to add detail and affix texture to fabric when creating a wearable digestive system t-shirt.</p>	<p>To replicate your design when producing a shield ensuring that product resembles the original time period.</p> <p>To use the appropriate attachment techniques when adding a handle to ensure it is fastened securely.</p> <p>To select, name and use appropriate tools to perform the practical task of</p>	<p>To create a prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them using appropriate attachment techniques.</p>	<p>To incorporate a simple series circuit into a model. To design and create a bioluminescent creature using a simple series circuit to provide part/all of the light features.</p>	<p>To evaluate their own and other's work against the original success criteria identifying strengths, weaknesses and ways of improvement with increasing accuracy.</p> <p>To evaluate their own and other's work against the original success criteria identifying strengths, weaknesses and ways of improvement with greater accuracy.</p> <p>To evaluate their own and other's work against the design features of a musical</p>	<p>To select complementary ingredients to produce a savoury product. To apply the skills of weighing, mixing, kneading, shaping, proving, and baking when produce a loaf of bread.</p> <p>To design a healthy packed lunch and explain why it is healthy applying knowledge of different food groups.</p>

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<p>how components are joined together to create and amplify a range of sounds.</p> <p>To investigate and identify the design features of an Anglo-Saxon house.</p>	<p>way.</p> <p>To use existing product design features to gain inspiration when designing a new instrument based upon those currently on the market.</p> <p>To use annotated sketches to communicate their ideas when designing a wearable digestive system t-shirt.</p> <p>To create design criteria for an Anglo-Saxon home based up research and apply this when producing annotated sketches to communicate ideas.</p>		<p>making a musical instrument.</p>			<p>instrument such as how the components are joined together to create and amplify a range of sounds.</p> <p>To identify what has worked well and what aspects of their Anglo-Saxon house could be improved, acting on their own suggestions and those of others when making improvements.</p>	
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Vocabulary for Learning

Amplify	Investigate	Annotate	Location	Blanket Stitch		Attach	Battery	Accuracy	Alternatives
Analyse	Medium	Contrast	Materials	Cross Stitch		Craft Knives	Bulb	Adapt	Baking
Appearance	Moist	Design	Savoury	Fabric Glue		Fasten	Cell	Alterations	Calories
Aroma	Pattern	Durable	Size	Needle		Flange	Circuit	Amplification	Carbohydrates
Bitter	Properties	Effective	Slot	Running Stitch		Flaps	Complete	Compare	Dairy
Boss	Scutum	Evolve	Stitch	Textile		Fold	Conductor	Components	Dough
Comparison	Sharp	Flange	Strong	Thread		Frame Structures	Crocodile Clips	Design Criteria	Fats
Components	Shield	Flaps	Stuffing			Glue Guns	Incomplete	Evaluate	Ferment
Contrast	Smooth	Flavour	Sturdy			Gusset Support	Series Circuit	Feedback	Fermentation
Crispy	Society	Fold	Tabs			Jink	Switch	Improve	Fruit
Crumb	Sound Wave	L Brace	Tie			L Brace	Wire	Improvements	Kneading
Crumbly	Sour	Label				Prototype		Market Research	Mixing
Decorative	Strong	Annotation				Reinforce		Quality	Proofing
Design	Sturdy					Resource		Reflect	Proteins

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Dry Feature Gable Roof Hollow Impact Influence Ingredients Invention Existing Product Natural Appearance Natural Material Resonance Chamber Roman Numerals Thatched Roofs	Sweet Symmetrical Texture Vibrate Well Baked Well Risen Wreath	Attachment Techniques Attachments Communication Complement Design Criteria Design Features Existing Products Gable Roof Gusset Support Ingredients Inspiration Natural Appearance Natural Material Proportion Thatched Roofs			Scissors Secure Slot Supervision Tabs Tie Time Period Tool		Sound Creation Strengths Success Success Criteria Successful Weakness	Proving Shaping Vegetables Weighing Yeast
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Knowledge

<p>Roman shields were predominantly made from wood glued together.</p> <p>The metal boss (called the umbo) was useful for knocking the enemy off balance.</p> <p>The shields weigh approximately 10 kg and is made from 3 sheets of wood glued together to create a curve.</p> <p>Strong leather and bronze edging were used to make shields sturdier.</p> <p>The lightning bolts signify Jupiter, king of the Roman Gods. These wings are eagles wings. The eagle was the symbol of the Roman</p>	<p>Design criteria are the exact goals a project must achieve to be successful. These criteria might include the product's use, appearance and target user.</p> <p>Design criteria are the exact goals for the taste, texture and appearance of a food product.</p> <p>Existing products have specific design features which can be built upon and evolved as part of new products.</p> <p>Annotated sketches and exploded diagrams</p>	<p>Stitches include running stitch, cross stitch and blanket stitch.</p>	<p>There are a range of different attachment techniques to join two or more items together. Different attachment techniques are more appropriate based on the product being created.</p> <p>Different materials and components have a range of properties, making them suitable for different tasks. It is important to</p>	<p>A prototype is a mock-up of a design that will look like the finished product but may not be full size or made of the same materials. Shell and frame structures can be strengthened by gluing several layers of card together, using triangular shapes rather than squares, adding diagonal support struts and using 'jinks' corners (small, thin pieces of card cut into a right-angled</p>	<p>An electrical circuit can be used in a model, such as a lighthouse. It can be controlled using a switch.</p>	<p>Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.</p> <p>Finished products can be compared to original design criteria to see how closely they match. Market research enables designers to receive valid feedback about the effectiveness and quality of their product. Improvements and alterations can then be made.</p> <p>Feedback can enable a</p>	<p>Kneading is the process of working ingredients together to form a dough, stretching the strands of gluten in the dough. Proving is the process of resting the dough and allowing it to release gases resulting in it rising.</p> <p>A healthy packed lunch might include a brown or wholemeal bread sandwich containing eggs, meat, fish or cheese, a piece of fresh fruit, a low-sugar yoghurt, rice cake or popcorn and a drink, such as</p>
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<p>army. The colour Red was the symbol of Mars, the Roman God of war. The wreath symbolises victory. The name of each soldier was written on his shield. The Romans often strapped sheepskin around the wooden handle of their shield to make the grip more comfortable.</p> <p>A comparison table can be used to compare products by listing specific criteria and impact on the user. Significant designers and inventors can shape the world and influence future inventions.</p> <p>A comparison table can be used to compare products by listing specific criteria on which each product can be judged or scored which can influence a designer when choosing appropriate ingredients.</p> <p>Sound is created by a vibrating object. Sound travels as a wave through a medium. Instruments are created to enable it to produce a range of high and low sounds. Some instruments have a resonance chamber to</p>	<p>show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way.</p> <p>When designing, it is important to plan for different attachment techniques to consider the ways in which the materials planned for will be attached together.</p>		<p>select the correct material or component for the specific purpose, depending on the design criteria.</p> <p>Different attachment techniques are more appropriate based the size and shape of the components being attached.</p> <p>Useful tools for cutting include scissors, craft knives, junior hacksaws with pistol grip and bench hooks. Useful tools for joining include glue guns. Tool are selected based on the materials being used and should only be used with adult supervision and safety rules must be followed.</p>	<p>triangle and glued over each joint to straighten and strengthen them).</p>		<p>craftsperson to understand strengths, weaknesses and next steps in the making process to improve their product further.</p> <p>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 changes were made. Evaluation also includes suggesting improvements and explaining why they should be made.</p>	<p>water or semi-skimmed milk.</p>
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<p>enhance the transfer of energy from a sound source.</p> <p>Anglo-Saxon houses were built with wood and had thatched roofs. At West Stow in Suffolk, archaeologists found the remains of an early Anglo-Saxon village and reconstructed it, using Anglo-Saxon methods. They found that the village was made up of small groups of houses built around a larger hall. Each family house had one room with a hearth and fire for cooking, heating and light. A metal cooking pot hung from a chain above the fire.</p>							
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Year 5

<u>Projects</u>							
<u>Term 1</u> – Pharaohs <u>Term 2</u> – Alchemy Island <u>Term 3</u> – Stargazers				<u>Term 4</u> – Allotment <u>Term 5</u> – Beast Creator <u>Term 6</u> – Peasants, Princes and Pestilence			
<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>		
Shadufs (T1)	Shadufs (T1)	Moonscapes (T3)	Spacecraft (T3)	Minibeast hotel (T5)	Shadufs (T1)	Shadufs (T1)	Seasonal planting (T4) Healthy recipes (T4)
<p>To investigate and disassemble a shaduf to identify the design features.</p> <p>To understand how to fix and strengthen structures when evaluating existing products.</p>	<p>To generate, develop, model and communicate ideas for the creation of a shaduf through discussion and annotated sketches explaining how mechanism will be included in the finished product.</p>	<p>To select and combine materials with precision to produce a mixed media collage to represent the moonscape.</p> <p>To combine stitches and fabrics with imagination to create a mixed media collage.</p> <p>To use the skill of applique to attach materials together using stitching and gluing.</p>	<p>To use tools safely for cutting and joining wooden materials and components.</p>	<p>To use natural resources such as stacked wooden crates, house bricks, logs, stones, hay, plant pots, garden canes, loose bark and compost to construct a minibeast hotel, making sure it is shaped, joined and finished into structurally sound and sturdy hideaway.</p> <p>To apply attachment techniques suitable for natural resources to make a strong and sturdy shelter which would withstand</p>	<p>To understand and use the mechanical system of levers in the creation of the product of a shaduf.</p>	<p>To evaluate the effectiveness of a lever mechanism within my shaduf.</p>	<p>To describe what seasonality means and explain some of the reasons why it is beneficial.</p> <p>To use an increasing range of preparation and cooking techniques including dicing, peeling, grating, boiling, steaming and sautéing to cook a savoury dish of soup.</p>

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				the natural elements.			
Vocabulary for Learning							
Anchored Counterbalance Counter-Weight Fulcrum Lashing Lever Mechanism Shaduf Strength Tripod	Aesthetic Annotated Design Function Materials Sketches	Applique Blanket Stitch Collage Embellishment Fabric Glue Materials Mixed Media Needle Running Stitch Stitching Textile Textural Texture Thread	Axel Bench Hook Blade Electrical Component Hacksaw Motor Pistol Grip Saw Wheels Wood	Finished Joined Natural Natural Elements Structure Sturdy	Anchored Beam Bind Counter-Weight Fulcrum Hinge Lashing Lever Mechanism Pivot Rigid Rotating Tripod	Effective Design Criteria Functional	Boiling Carbon Footprint Dicing Grating Harvest Ingredients Method Peeling Sautéing Savoury Seasonal Seasonality Steaming Transport
Knowledge							
A shadoof or shaduf is an irrigation tool. It is highly efficient, and has been known since 3000 BCE. The shaduf is used to lift water from a water source onto land or into another waterway or basin. The mechanism comprises a long counterbalanced pole on a pivot, with a bucket attached to the end of it.	The principle of the lever was used in a shaduf. A long lever pivoted near one end with a platform or water container hanging from the short arm and counterweights attached to the long arm. A man could lift several times his own weight by pulling down on the long arm.	A collage is artwork made by sticking materials, such as scraps of paper or fabric, onto a background. A mixed media collage is made using various materials and media, such as ink and paint. Applique is a technique where pieces of material are attached to another material	Specific tools can be used for cutting, such as saws. Wood can be joined using glue, nails, staples, or a combination of these. Safety rules must be followed to prevent injury from sharp blades. These rules include using a bench hook to keep the wood still, using a junior hacksaw	Materials should be cut and combined with precision.	A lever is a simple machine consisting of a beam or rigid rod pivoted at a fixed hinge, or fulcrum. A lever is a rigid body capable of rotating on a point on itself.	Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is

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		by stitching or gluing.	with a pistol grip and working under adult supervision.				usually cheaper. Savoury dishes usually have a salty or spicy flavour rather than a sweet one. Foods can be prepared and cooked in different ways to achieve different results.
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Year 6

<u>Projects</u>							
<u>Term 1</u> – A Child’s War				<u>Term 4</u> – Frozen Kingdom			
<u>Term 2</u> – Water Worlds				<u>Term 5</u> – Blood Heart			
<u>Term 3</u> – Darwin’s Delights				<u>Term 6</u> – Hola Mexico!			
<u>Investigate</u>	<u>Design</u>	<u>Make / Technical Knowledge</u>				<u>Evaluate</u>	<u>Food and Nutrition</u>
		<u>Textiles</u>	<u>Product</u>	<u>Structure</u>	<u>Mechanisms</u>		
Toys from the 1940s (T1) Anderson shelters (T1)	River Model (T2) Stethoscopes (T5)		River Model (T2)	Anderson shelters (T1)	Micro:Bits (T3)	River Model (T2)	Mexican foods (T6) Savoury Mexican dishes (T6)
<p>To identify and analyse the design features of the existing products of toys created in 1940s identify the key features, materials used and their purpose.</p> <p>To analyse how an invention or product has significantly changed or improved people's lives during World War II.</p>	<p>To develop design criteria for a functional and appealing river model that is fit for purpose, communicates educational information clearly in a range of ways.</p> <p>To use annotated sketches to communicate ideas clearly when designing a river model including materials and attachment techniques.</p> <p>To systematically test and record the results when investigating the effectiveness of different materials in the manufacture of a stethoscope.</p>		To use a range of different methods of attachment when making a river model ensuring the finished design is functional and aesthetically pleasing for the target audience.	To select the most appropriate materials and frameworks for different structures, explaining what makes them strong.	<p>To create and debug programs to control a MicroBit using a variety of inputs.</p> <p>To use variables and sensors to detect changes in the environment and use these to control outputs on the MicroBit.</p> <p>To use a built-in sensor to display the temperature using graphical output and then to program it to be calibrated using inputs.</p>	To evaluate their work against the original success criteria identifying strengths, weaknesses and identify when and where modifications were made to a product as a result of ongoing evaluation by themselves.	<p>To create a detailed comparative report about two or more food products applying knowledge of the principles of a healthy and varied diet.</p> <p>To follow a recipe that requires a variety of techniques, source the necessary ingredients and mathematical thinking of measuring and time management.</p>

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					To use selection to program MicroBits to send messages from one to another using Radio waves.		
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Vocabulary for Learning

Attachment Design Criteria Evaluate Features Investigate Material Purpose	Annotated Appearance Attachment Design Criteria Diagram Effective Manufacture Material Purpose Resource Sketch Stethoscope		Aesthetically Pleasing Attachment Design Educational Features Product River Model Target Audience	Anderson Shelter Attach Flange Flaps Fold Framework Gusset Support L Brace Prototype Reinforce Rigid Secure Slot Strengthen Structure Tabs Tie	Data Packets Input Media Microbit Program Protocols Repetition Software Transferred	Alterations Design Criteria Evaluate Improvements Manufacture Modification Ongoing Refine Strength Weaknesses	Avocado Combine Crumble Fat Fold Healthy Herb Knead Method Mix Nutrients Nutrition Papaya Carbohydrate Guacamole Horchata Drink Ingredients Quantities Sweet Potato	Protein Recipe Salsa Spice Sprinkle Squash Stir Sugar Tortilla Utensils Varied Vitamins Whisk
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Knowledge

Games made out of paper and card were popular during the war, because they were cheaper to make and paper was not scarce. Old metal toys were sometimes given by their owners to be melted down to help in the war effort.	Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be communicated in a range of ways, including through discussion, annotated			Strength can be added to a framework by using multiple layers. For example, corrugated cardboard can be placed with corrugations	A micro:bit is a pocket-sized computer that introduces kids to how software and hardware work together. It is an interactive and	Design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process. Evaluating a product while it's being manufactured, and	Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced
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<p>People's lives have been improved in countless ways due to new inventions and designs. For example, the Morrison shelter, designed by John Baker in 1941, was an indoor air-raid shelter used in over half a million homes during the Second World War. It saved the lives of many people caught in bombing raids.</p>	<p>sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>The stethoscope was first invented in 1816 by René Laennec.</p>			<p>running alternately vertically and horizontally. Triangular shapes can be used instead of square shapes because they are more rigid. Frameworks can be further strengthened by adding an outer cover.</p> <p>Anderson shelters were one of the many forms of protection that people used against air raids during World War II. they were constructed in people's gardens and were buried in the ground halfway and covered over with a thick layer of earth.</p>	<p>programmable device that consists of various input-output features such as LED light displays, sensors, buttons, etc.</p>	<p>explaining these evaluations to others, can help to refine it.</p>	<p>diet.</p> <p>A recipe provides information to prepare a dish, including ingredients, quantities and a method. They may also contain nutritional information.</p>
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