
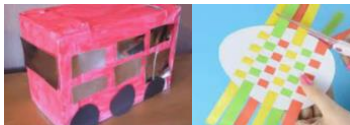


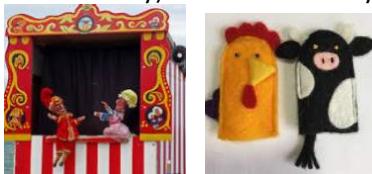












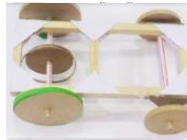
St Chad's Curriculum 2022

Design and Technology Long Term Plan Cycle A			
Year group	Autumn	Spring	Summer
EYFS	<p><u>Happily Ever After/Jesus is the Reason for the Season</u></p> <p><u>Make</u></p> <p>Build a bridge or a boat, for the Gingerbread Man to cross the river Playdough gingerbread men Ant pies in the mud kitchen</p> 	<p><u>Life's a Journey/ God's Wonderful World</u></p> <p><u>Make</u></p> <p>Junk model London buses Huge London bus using play blocks Make hatching eggs using split pins Make party decorations Paper weaving – Easter Cards</p> 	<p><u>Commotion in the Ocean / Nature's Kitchen</u></p> <p><u>Make</u></p> <p>Junk model submarines Salt dough fish (Nursery) Create superhero vegetables with pipe cleaners, googly eyes and pieces of fabric Superhero mask/ capes Superhero laser goggles or cuffs using card Design and make evil pea traps</p> 
Y1/2	<p><u>Local Heros</u></p> <p><u>Mechanics</u> - Propeller boat</p> <p>Design and make a propeller boat and see whether you can avoid an iceberg!</p>  <p>John Ericsson invented the ship propeller.</p>	<p><u>We do like to be beside the seaside</u></p> <p><u>Textiles</u> - Puppet Making</p> <p>Create a Seaside Puppet Show to share with the EYFS (i.e Punch and Judy) or link to Pathways Book</p>  <p>Make puppets and build a class theatre to tell their stories!</p> <p>Jim Henson – muppets</p>	<p><u>Where would you prefer to live England or Africa?</u></p> <p><u>Materials</u> - African Paper Mask</p> <p>Design and make a paper mask for your new tribe</p>  <p>Mlle Hipolyte – contemporary animal masks</p>







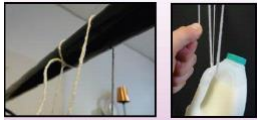




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<p>Y3/4</p>	<p><u>Local Detectives</u> <u>Electronics/Construction</u> - Miners Lamp</p> <p>Design and make a lamp to help the miners see down the mines.</p>  <p>In the style of the Davy Lamp (Sir Humphry Davy) incorporating a bulb (Thomas Eddison)</p> <p><u>Mechanisms – Pop Up Christmas Cards</u> https://www.youtube.com/watch?v=qGuiUeAdtNc</p>  <p>Designer – Matthew Reinhart</p>	<p><u>Ruthless Romans</u> <u>Construction</u> - Roman Shields</p> <p>Design and make a shield to keep a Roman soldier safe in battle</p>  <p>https://www.redtedart.com/diy-roman-shield-ks2/</p> <p>Contemporary Link – police riot shield designed by Arnold – Are they a similar design?</p>	<p><u>Go Greece Lightening</u> <u>Textiles</u> - Greek sandals</p> <p>Design and make a pair of Greek sandals, to fit your feet</p>  <p>https://www.hamilton-trust.org.uk/topics/unit/1359-making-sandals/</p> <p>Contemporary link – Designer Jimmy Choo</p>
<p>Y5/6</p>	<p><u>War Child</u> <u>Food</u> - Then (rations) and Now</p> <p>Design and bake a main meal on a budget considering seasonality and ratios</p>  <p>Phillip Harburn – first male TV chef 1946</p>  <p>Mary Berry Jamie Oliver Nadiya Hussain Traditional cook School Dinners Great British Bake Off</p>  <p>Michelin Star chef - Heston Blumenthal</p>	<p><u>Trailblazers</u> <u>Materials/Construction/Electronics</u> - Games</p> <p>Design and make a Mayan Temple Marble Run game for the summer fayre (considering costs). <u>Tom Karen</u> - Marble Run inventor</p>  <p>Prototype in card then a large scale whole class model (in wood). Add the electrical element to the design (light, buzzer, switches etc). Apply knowledge of computing to program, monitor and control the product/ use CAD. John Spinello – designer of the buzzer game Operation</p> <p><u>Optional</u> - Whilst working in groups on the main structure. Make peg Mayan Worry dolls.</p>	<p><u>Smashing Saxons</u> <u>Textiles</u> - Anglo Saxon Purses</p> <p>Design and make a fabric money container that doesn't let the money fall out! Use a drawstring, a catch/button or zip</p>  <p>Contemporary wallet designers: Fendi, Louis Vuitton, Dior</p>

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Design and Technology Long Term Plan Cycle B			
Year group	Autumn	Spring	Summer
EYFS	<p><u>Let There Be Light/Let's Celebrate</u></p> <p><u>Make</u></p> <p>Junk model Mr. Bear's house Make a patchwork quilt using different art media Make bear masks Den building outside play – real bricks, real hay/straw/sticks to build with Make a house frame using playdough and straws or marshmallows and pasta Pig snouts using egg boxes and elastic</p> 	<p><u>All Creatures Great and Small/All Aboard the Jolly Roger!</u></p> <p><u>Make</u></p> <p>Spring dream catchers Make salt dough mice Junk model crocodiles Design their own pirate flag and treasure map Salt dough treasure</p> 	<p><u>Stomp, chomp ROAR/A Bucket full of Memories</u></p> <p><u>Make</u></p> <p>Create dinosaurs with half a paper plate and kitchen rolls for legs Make dinosaur heads using an egg box Make a play dough dinosaur and add pasta shape 'spikes' Make something for a teddy so that you won't lose him Create a lost property box Make a split pin teddy bear</p> 
Y1/2	<p><u>Great and Ghastly Events</u></p> <p><u>Construction/Materials</u></p> <p><u>Materials</u> - Build a Bed Design and build a strong bed for the brave soldiers in the Scutari Hospital.</p>  <p>(spaghetti, paper straws, card, wood)</p> <p><u>Construction</u> – Houses Design and make a Tudor and compare to a modern day house – which is the safest?</p>  <p>Designer – Sir Christopher Wren</p>	<p><u>Memory Box</u></p> <p><u>Food</u> - Apple Crumble and Oatcakes</p> <p>Bake a pudding to remind your grandparents of their school dinners Children to make an apple crumble and custard. Invite grandparents in to eat.</p>  <p>Traditional cook – Delia Smith</p> <p>Plus: Local Food - Cheesy Oatcakes</p>  <p><u>Mechanisms</u> - Easter cards – Sliders</p> 	<p><u>Unbelievable UK</u></p> <p><u>Mechanisms</u> - Build a Car</p> <p>Design and make, a moving vehicle to carry an egg safely across uneven ground</p>  <p>Fredrick Bremer first UK car 1892 (Carl Benz 1886 first car)</p>

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<p>Y3/4</p>	<p><u>Incredible Italia!</u> <u>Food</u> - Pizzas and Pasta</p> <p>Bake pizza (base and toppings) for a class party!</p>  <p>Gino D'Campo Massimo Bottura</p>   <p>Extra art: Giuseppe Arcimboldo as cooking won't need many weeks (see the Art Curriculum)</p>	<p><u>Stones and Bones</u> <u>Materials</u></p> <p>Design and make accessories to dress like a caveman</p> <p>Salt Dough Jewellery and Paper Mache Cave Man Axe</p>   <p>https://www.redtedart.com/stone-age-craft-how-to-make-a-paper-axe/ https://www.imagininghistory.co.uk/post/stone-age-activities-crafts-for-kids https://www.imagininghistory.co.uk/post/creating-a-cave-painting</p>	<p><u>Land of the Pharoahs</u> <u>Mechanisms</u> - Pulleys and Levers</p> <p>Design and make a pulley to lift the final block onto a (duplo) pyramid</p>   <p>Designer: Elisha Otis – in 1857 he invented the first pulley elevator in New York</p>
<p>Y5/6</p>	<p><u>Rags to Riches</u> <u>Mechanisms</u> - CAMS Toys</p> <p>Create a new toy for our nursery children</p>  <p>https://www.instructables.com/Mechanical-Cam-Toys/</p> <p>Designer: Jacques de Vaucanson is often regarded as the greatest mechanical toy crafter of all times</p> <p>Apply knowledge of computing to program, monitor and control the product/ use CAD.</p>	<p><u>Raid, Invade, Stayed</u> <u>Construction</u> - A Viking Longship</p> <p>Design and make a Viking Longship that is historically accurate and floats</p>   <p>Apply knowledge of computing to program, monitor and control the product/ use CAD.</p>	<p><u>Amazing Amazon</u> <u>Construction</u> - Amazon Bridge Building</p> <p>Design and build a bridge to span the KS2 playground (How can we make it strong enough?)</p>  <p>The Iron Bridge is a cast iron arch bridge that crosses the River Severn in Shropshire. Opened in 1781, it was the first major bridge in the world to be made of cast iron.</p> <p>Designed by - Thomas Farnolls Pritchard (Built by – Abraham Darby)</p> <p>Apply knowledge of computing to program, monitor and control the product/ use CAD.</p>

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DT Progression of skills, knowledge and vocabulary				
		Physical Development	Expressive Art and Design	PSED/UTW
End of EYFS	Nursery: Skills and Knowledge	<ul style="list-style-type: none"> Use large-muscle movements to wave flags and streamers, paint and make marks. Choose the right resources to carry out their own plan. Use one-handed tools and equipment, for example, making snips in paper with scissors. 	<ul style="list-style-type: none"> Make imaginative 'small worlds' with blocks and construction kits, such as a city with buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Create closed shapes with continuous lines and begin to use these shapes to represent objects. 	<p>PSED</p> <ul style="list-style-type: none"> Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them. <p>UTW</p> <ul style="list-style-type: none"> Explore how things work.
	Reception: Skills and Knowledge	<ul style="list-style-type: none"> Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. 	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. 	
	ELG: Skills and Knowledge	<p>Fine Motor</p> <ul style="list-style-type: none"> Use a range of small tools, including scissors, paintbrushes and cutlery 	<p>Creating with Materials</p> <ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. 	
	Vocabulary	Key vocabulary: tools, scissors and paintbrushes	Key vocabulary: materials, tools, explore, materials, colour, design, texture, form, function, creations , process, evaluate	Key vocabulay: explore, choose

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		Design	Make	Evaluate
End of Y2	Skills	Children design purposeful, functional, appealing products for themselves and other users based on design criteria . They generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.	Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. They select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Children can: <ul style="list-style-type: none"> begin to select and use a range of tools and equipment to cut, shape, join and finish with help, measure and mark out to the nearest cm. cut, shape and score materials with some accuracy; assemble, join and combine materials, components or ingredients in order to make a product. begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations 	Children explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria.
	Knowledge	Children can: <ul style="list-style-type: none"> use their knowledge of existing products and their own experience to create their own ideas design products that have a purpose and explain how it will be suitable for the user plan how the products will look and work, through talking and simple annotated drawings plan and test ideas using templates begin to understand and follow simple design criteria; 	Children can: <ul style="list-style-type: none"> select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. 	Children can: <ul style="list-style-type: none"> explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations. talk about their design ideas and what they are making. as they work, start to identify strengths and possible changes they might make to refine their existing design. evaluate their products and ideas against their simple design criteria

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		<ul style="list-style-type: none"> choose the best tools and materials for the project and explain why they are 		<ul style="list-style-type: none"> talk about what went well and what they would do differently next time
	Vocabulary	Key vocabulary: purposeful, functional, appealing products, design criteria, products, templates, annotated drawings	Key vocabulary: tools, cut, shape, join, finish, materials, components, measure, mark, score, assemble, improve, appearance	Key vocabulary: explore, evaluate, improve, refine, design, product, criteria
		Technical Knowledge Materials and Construction Children build structures, exploring how they can be made stronger, stiffer and more stable.	Technical Knowledge Mechanisms	Technical Knowledge Textiles
	Designer/Crafts Person/Cook	Mlle Hipolyte – contemporary animal masks Sir Christopher Wren - Great Fire of London rebuild	Fredrick Bremer first UK car 1892 Carl Benz 1886 first car John Ericsson invented the ship propeller.	Jim Henson - muppets
	Skills	Children can: <ul style="list-style-type: none"> build simple structures, exploring how they can be made stronger, stiffer and more stable (use joining, rolling, folding, laying bricks to spread out the weight not directly on top of each other and own ideas); use safe ways of cutting materials including a junior hacksaw with support 	Children can: <ul style="list-style-type: none"> explore and create products using mechanisms, such as levers, sliders, wheels and axles 	Children can: <ul style="list-style-type: none"> assemble, join and combine materials, demonstrate how to measure, cut and join fabric to make a simple product. use a basic running stitch or glue to join fabric. begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations
	Knowledge	Children can: <ul style="list-style-type: none"> select from and use a wide range of materials and components, according to their characteristics. talk about and start to understand the simple working characteristics of materials and components. 	Children can: <ul style="list-style-type: none"> say why they have chosen moving parts. 	Children can: <ul style="list-style-type: none"> choose a suitable textile according to their characteristic and explain why.
	Vocabulary	Key vocabulary: strong, stiff, stable, design, components, structures, joining, equipment, material, fabric, shape, glue, cut, fold, staple, join, function, refine, adhesive, template	Key vocabulary: slider, lever, pivot, slot, card, masking tape, join, pull, push, up, down, straight, curve, forwards, backwards, vehicle, wheel, axle, axle holder, cutting, joining, moving, tools, equipment materials	Key vocabulary: textile, assemble, join, combine, materials, measure, cut, product, running stitch, finishing, tools, fabrics, decorate, finish

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		Technical Knowledge Food Children use the basic principles of a healthy and varied diet to prepare dishes. They understand where food comes from.	Technical Knowledge Electronics	
	Cook	Delia Smith – traditional cook	N/A	
	Skills	Children can: <ul style="list-style-type: none"> • with support, follow a simple plan or recipe; • design and prepare simple dishes • follow hygiene procedures (washing hands and cleaning work surfaces); • select and use hand tools and equipment safely such as scissors, graters, safe knives • cut, peel and grate ingredients, • measure and weigh ingredients using measuring cups 		
	Knowledge	Children can: <ul style="list-style-type: none"> • explain where in the world different foods come from; • understand that all food comes from plants or animals and has to be farmed, grown or caught • name and sort foods into the five groups in the Eatwell Guide; • understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why; 		
	Vocabulary	Key vocabulary: healthy, unhealthy, source, fruit, vegetables, carbohydrates, proteins, dairy, oils, clean, safe, dirty, unsafe, amount, ingredients, recipe, weight, cut, peel, grate, slice, farmed, plant, hygiene.		

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		Design	Make	Evaluate
End of Y4	Skills	<p>Children 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. They 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>Children can:</p> <ul style="list-style-type: none"> • use computer-aided design to develop and communicate their ideas where able • use annotated sketches and cross-sectional drawings to develop and communicate their ideas; • test ideas out through using prototypes; 	<p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. They select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Children can:</p> <ul style="list-style-type: none"> • with growing independence, measure and mark out to the nearest cm and millimetre. • cut, shape, score, assemble and join materials/components with some degree of accuracy to make a simple product; • begin to select and use finishing techniques to improve the appearance of a product such as hemming, fabric paints and digital graphics. 	<p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world.</p>

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	Knowledge	<p>Children can:</p> <ul style="list-style-type: none"> use their knowledge of a range of existing products to help generate their ideas; start to explain their choice of materials and components including function and aesthetics; explore different initial ideas before coming up with a final design; design innovative and appealing products that have a clear purpose and are aimed at a specific user identify features that will appeal to that customers; develop and follow a simple design criteria; 	<p>Children can:</p> <ul style="list-style-type: none"> use a wider range of materials and components, including construction materials, textiles, mechanical and electrical components and ingredients, according to their functional properties and aesthetic qualities. select from and use a wider range of tools and equipment to cut, shape, join and finish accurately, explaining their choices 	<p>Children can:</p> <ul style="list-style-type: none"> explore and evaluate existing products, explaining its purpose and whether it is designed well to meet the intended purpose. explore what materials/ingredients products are made from and suggest reasons for this. consider their design criteria as they make progress and alter their plans when needed. begin to consider the views of others and offer feedback evaluate their product against their original design criteria.
	Vocabulary	Key vocabulary: research, design criteria, innovative, functional, appealing products, fit for purpose, intended user, features, customer, aesthetic, annotated sketches, cross sectional drawings, prototypes	Key vocabulary: cut, shape, score, join, assemble, materials, components, functional properites, aesthetics, mark, measure, cm, mm, hemming, finishing techniques, improve, appearance	Key vocabulary: explore, criteria, evaluate, product, purpose, user, needs, design, methods, strengths, areas for development, view, preference, reasons, improve, designer, manufacturer
		Technical Knowledge Materials and Construction Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Technical Knowledge Mechanisms	Technical Knowledge Textiles
	Designer/Crafts Person/Cook	Sir Humphry Davy – Davy Lamp Thomas Eddison – bulb Arnold – contemporary riot shields Cavemen crafts people	Matthew Reinhart – pop up Christmas cards	Greek Craft People Jimmy Choo – contemporary shoe designer
	Skills	<p>Children can:</p> <ul style="list-style-type: none"> know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.use a range of techniques to shape mouldable materials (paper Mache and salt dough) 	<p>Children can:</p> <ul style="list-style-type: none"> use mechanical systems in their products and explain why it was chosen 	<p>Children can:</p> <ul style="list-style-type: none"> begin to use a template join textiles with simple sewing techniques (running stitch, basting stitch, cross stitch); begin to select and use finishing techniques to improve the appearance

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		<ul style="list-style-type: none"> use safe ways of cutting materials including a junior hacksaw 		
	Knowledge	<p>Children can:</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures (joining, folding, layering/corrugated, shape and own ideas) start to consider how materials have both functional properties and aesthetic qualities, and chose the most appropriate material for the project 	<p>Children can:</p> <ul style="list-style-type: none"> understand and explain how mechanical systems such as pulleys and pop ups create movement. 	<p>Children can:</p> <ul style="list-style-type: none"> chose the textile according to their functional properties and appearance begin to develop an understanding of materials and ways they can be attached to each other (glue, tying, sewing) to make a simple product
	Vocabulary	Key vocabulary: strengthen, stiffen, functional properties, aesthetic, material, reinforce, paper Mache, folding, corrugated, shape, measure, mark out, tools, equipment, function, construction, finishing, assemble, measure, cutting, shaping, slots, suitable	Key vocabulary: pulley, rotation, spindle, motion, function, ratio, transmit, axle, annotated drawings, input, output, align, tabs,	<ul style="list-style-type: none"> Key vocabulary: fabric, properties, function, template, attach, running stitch, basting stitch, cross stitch, fastening, structure, finishing technique, strength, weakness, stiffening, templates, stitch, measure
		Technical Knowledge Food Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. They understand seasonality , and know where and how a variety of ingredients are grown, reared, caught and processed.	Technical Knowledge Electronics	
	Designer/Crafts Person/Cook	Gino D'Campo Massimo Bottura	Sir Humphry Davy) – Davy Lamp Thomas Eddison - bulbs	
	Skills	<p>Children can:</p> <ul style="list-style-type: none"> start to independently follow a recipe; prepare and cook a variety of predominantly savoury dishes safely and hygienically; 	<p>Children can:</p> <ul style="list-style-type: none"> add a simple electrical circuit in their product add a switch, bulb alter their product after checking 	

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		<ul style="list-style-type: none"> • use a range of techniques such as whisking, crushing, grating, cutting, kneading and baking; • learn to use a range of tools and equipment safely and appropriately, and learn to follow hygiene procedures; • measure and weigh ingredients to the nearest gram and millilitre; • with support, use a heat source to cook; • present their product in an interesting way 		
	Knowledge	<p>Children can:</p> <ul style="list-style-type: none"> • start to know when (seasonality), where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world; • explain that a healthy diet is made up of a variety and balance of different food and drink, 	<p>Children can:</p> <ul style="list-style-type: none"> • start to understand that electrical systems have an input, process and output, and can be used to create a functional product 	
	Vocabulary	<p>Key vocabulary: savoury, sweet, recipe, appearance, peeling, chopping, grating, mixing, spreading, kneading, whisking, baking, prepare, temperature, taste, texture, hygiene, safety, measure, gram, kilogram, oven, hob, cook, utensils, seasonality, recipe</p>	<p>Key vocabulary: circuit, fault, connection, battery, battery holder, bulb, wire, bulb holder, insulator, conductor, crocodile clip, control, program, system, input, output</p>	

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		Design	Make	Evaluate
End of Y6	Skills	<p>Children 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. They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer-aided design.</p> <p>Children can:</p> <ul style="list-style-type: none"> • use annotated sketches, cross-sectional drawings or exploded diagrams (possibly computer-aided design) to develop and communicate their ideas; 	<p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. They select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Children can:</p> <ul style="list-style-type: none"> • with growing confidence, select from and use a wider range of tools and equipment to cut, shape, join and finish accurately, explaining their choices • select from and use a wider range of materials and components, including construction materials, textiles, mechanical components and ingredients, according to their functional properties and aesthetic qualities. • independently take accurate measurements and mark out • cut, shape and score a range of materials with precision and accuracy. • assemble, join and combine materials and components with accuracy. • confidently select and use finishing techniques to improve the appearance of a product 	<p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world.</p>

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	Knowledge	<p>Children can:</p> <ul style="list-style-type: none"> • use their knowledge of a broad range of existing products to help generate their ideas • use research to inform and develop a detailed design criteria for an innovative, functional and appealing product that is fit for purpose and aimed at a target market; • design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; • explain how particular parts of their products work and what tools they will need; • consider the availability and costings of resources when planning out designs; • apply their understanding of computers to program, monitor and control their products 		<p>Children can:</p> <ul style="list-style-type: none"> • complete detailed analysis of other products on the market. • critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make. • confidently consider the views of others and offer feedback • evaluate their ideas and products against the original design criteria, making changes as needed • evaluate the key events and designs of individuals in design and technology that have helped shape the world
	Vocabulary	<p>Key vocabulary: research, design criteria, innovative, functional, appealing products, fit for purpose, intended user, appeal, annotated sketches, cross sectional drawings, exploded diagrams, costings, enterprise, prototype</p>	<p>Key vocabulary: tools, equipment, cut, shape, join, assemble, finish, accurately, materials, components, construction materials, textiles, mechanical, ingredients, functional properties, aesthetic qualities, precision, finishing techniques, appearance</p>	<p>Key vocabulary: market, manufacture/r, innovate, sustainability, effective, designed, suitable, successful, improvement, intended, impact, products, functional, investigate, methods, analyse, existing, strengths, refine, views, developing, criteria, improve, evaluate, quality, inventor, designer</p>

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		Technical Knowledge Materials and Construction Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures. They apply their understanding of computing to program, monitor and control their products.	Technical Knowledge Mechanisms	Technical Knowledge Textiles
	Designer/Crafts Person/Cook	Tom Karen - Marble Run inventor John Spinello - designer of 'Operation Game' Viking Crafts People – Longboats Thomas Farnolls Pritchard – Designed The Iron Bridge Abraham Darby – Built The Iron Bridge	Designer: Jacques de Vaucanson is often regarded as the greatest mechanical toy crafter of all times	Anglo Saxon Purses – Crafts People Contemporary: Fendi , Louis Vuitton, Dior
	Skills	Children can: <ul style="list-style-type: none"> ensure that their product is strong and fit for the purpose (shape, bracing and own ideas) develop skills in nailing, drilling and sawing to create a product 	Children can: <ul style="list-style-type: none"> use mechanical systems in their products and explain why it was chosen. 	Children can: <ul style="list-style-type: none"> use their own template demonstrate how to measure, tape, pin, cut, shape and join fabric with precision to make a more complex product. join textiles using a greater variety of stitches, such as backstitch, overcast stitch, hemming stitch, blanket stitch; refine the finish using techniques to improve the appearance of their product, such as a more precise scissor cut after roughly cutting a shape.
	Knowledge	Children can: <ul style="list-style-type: none"> ensure that materials chosen have both functional properties and aesthetic qualities; justify why they have chosen a specific material apply their understanding of computing to program, monitor and control a product. 	Children can: <ul style="list-style-type: none"> explain how mechanical systems, such as cams, create movement 	Children can: <ul style="list-style-type: none"> select a textile according to their functional properties and aesthetic qualities. think about how their product could be sold

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	Vocabulary	Key vocabulary: functional, suitability, aesthetic, procedures, accuracy, cutting, shaping, joining, finishing, accuracy, assemble equipment, techniques, measure, mark out, gluing, bracing, sanding, appropriate, finishing, combine, components	Key vocabulary: mechanism, linkage, pivot, slot, bridge, process, output, linear, rotary, oscillating, reciprocating	Key vocabulary: function, aesthetics, template, measure, tape, pin, cut, shape, join, complex, stitches, appearance, commercialism, seam, seam allowance, wadding, reinforce, template, pattern, names of textiles, fastenings, pins, needles, applique, hemming
		Technical Knowledge Food Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. They understand seasonality , and know where and how a variety of ingredients are grown, reared, caught and processed.	Technical Knowledge Electronics	
	Designer/Crafts Person/Cook	Phillip Harburn – First male TV chef 1946 Mary Berry - Traditional cook Jamie Oliver - School dinner influencer Nadiya Hussain - Great British Bake Off Heston Blumenthal - Michelin Star chef	John Spinello – designer of the buzzer game Operation	
	Skills	Children can: <ul style="list-style-type: none"> • prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source; • use a range of cooking techniques, such as griddling, grilling, frying and boiling; • learn to use a range of tools and equipment safely, appropriately and accurately, and learn to follow hygiene procedures; • adapt and refine recipes for appearance, taste, texture and aroma; 	Children can: <ul style="list-style-type: none"> • use different types of circuits in their product • confidently use a number of components in a circuit including a switch, bulb, buzzer and motor 	

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		<ul style="list-style-type: none"> • measure accurately and calculate ratios of ingredients to scale up or down from a recipe; • independently follow a recipe • present their product in an attractive form 		
	Knowledge	<p>Children can:</p> <ul style="list-style-type: none"> • explain and give examples of food that is grown, reared and caught in the UK, Europe and the wider world; • understand about seasonality, how this may affect the food availability and plan recipes according to seasonality; 	<p>Children can:</p> <ul style="list-style-type: none"> • understand that electrical systems have an input, process and output • explain how adding a circuit has improved their product 	
	Vocabulary	<p>Key vocabulary: reared, caught, seasonality, savoury, hygiene, heat, grilling, frying, boiling, refine, texture appearance, aroma, measure, ratio, recipe, temperature, nutrients, substitute, adapting, methods, prepare, cook, peeling, chopping, slicing, baking, melting, whisking, grating, blending, dietary, vegetarian, vegan, fishing</p>	<p>Key vocabulary: buzzer, motor, bulb, bulb holder, battery, battery holder, wire, insulator, conductor, crocodile clip, control, program, system, input, output, series circuit, parallel circuit</p>	