

Design and Technology

Intent – what do we want to achieve?	<p>We aim for Design & Technology to be an inspiring, challenging and practical subject. Using creativity and imagination, children design, make and evaluate products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We want our children to learn how to take risks and become resourceful by drawing on their learning in maths, science, engineering, computing and art. We want our children to become designers of the future – chefs, architects and engineers.</p>
Implementation – how will we achieve this?	<p>Learning will begin in the EYFS, when children explore and use a variety of materials through a combination of child initiated and adult directed activities. They have opportunities to learn to use different media and materials to express their own ideas and begin to think about how and why things are made. Children make plans and construct with a purpose in mind using a variety of resources, using simple tools to develop skills safely. There are also plenty of opportunities to cook and prepare food using good health and hygiene routines. Children grow, harvest and cook their own salad and vegetables during the spring and summer months.</p> <p>In KS1:</p> <p>Design:</p> <ul style="list-style-type: none"> • Design should be rooted in real life, relevant contexts to give meaning to the learning. • Planned through appropriate formats: drawing, templates, talking and mock-ups. <p>Make:</p> <ul style="list-style-type: none"> • Children should be given a range of tools for their projects to choose from. • Children should use a wide range of materials and components; textiles, construction equipment and ingredients. <p>Evaluate:</p> <ul style="list-style-type: none"> • Evaluate existing products. • Evaluate their own products against design criteria. <p>In KS2</p> <p>Design:</p> <ul style="list-style-type: none"> • Rooted in real life, relevant contexts to give meaning to the learning. • Researched designs based on functional, appealing products with purpose. • Planned by appropriate methods; annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer aided design. <p>Make:</p> <ul style="list-style-type: none"> • Children can select from a wider range of tools than KS1.

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	<ul style="list-style-type: none">Children should use from and select a wider range of materials and components; textiles, construction equipment and ingredients. <p>Evaluate:</p> <ul style="list-style-type: none">Evaluations should be in comparison to existing products.Children should evaluate against a design criteria.Children should understand how key events and individuals have helped shape design and technology globally – products are in context. <p>Our onsite Forest School will link to developing design and technology skills, as children learn how to use a range of tools safely and effectively.</p>					
Impact – what will be the impact on learning?	Children have a clear understanding of the design process and a good grasp of how to evaluate, develop and improve ideas. Children are inspired to take risks in a safe environment. Outcomes can be evidenced in STEM books, showing how children have generated their ideas before evaluation has taken place. Work is displayed around the school and there is also photographic evidence. In addition, the Forest School leaders document evidence and assess children’s outcomes. Children’s work is assessed against the learning objectives and success criteria for each lesson. Children are encouraged to self and peer assess and teachers use feedback constructively. Teachers are actively encouraged to seek CPD opportunities to improve their practice. Design Technology is monitored by the Federation subject lead.					
Cycle 1 - EYFS						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic						
Cycle 1 – Year 1 & 2						
	Autumn		Spring		Summer	
Topic	Castles		Growing		Under the sea	
Knowledge	<u>Rapunzel towers</u> <ul style="list-style-type: none">Make a strong and stable TowerResearch different types of tower structures.Design a tower based on the book Rapunzel and the design criteria.The Rapunzel tower should stand up on its own.The children should design a tower with a roof, more than 15cm tall and should be decorated for its owner.		<u>Fruit salad</u> <ul style="list-style-type: none">Children will try a range of fruit to decide what to include in their fruit salad, noticing what flavours go well together.The Children will create their ideas based on a design criteria.Children will learn the bridge, claw and fork secure way of cutting.They will learn to use a vegetable peeler and grater.		<u>Punch and Judy puppets</u> <ul style="list-style-type: none">Children will explore different types of puppets hand and finger to fit their own hand and be used in a puppet show.Children will use examples of punch and Judy shows to and information to draw on when developing their own ideas.The children create their ideas following their design criteria, given at	

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	<ul style="list-style-type: none"> Children shall test if the towers are strong with strong wind (hair dryer). They will suggest ways to make their tower stronger. 	<ul style="list-style-type: none"> They will understand where a range of fruit and vegetables come from and understand the principles of a varied diet. Children will evaluate each other's product and give suggestions for improvement. 	<p>the beginning of the project, and go on to create models from felt material.</p> <ul style="list-style-type: none"> Children must decorate their puppets to represent a character. Children will evaluate their product and suggest further improvements.
Skills	<p><u>Construction Mechanics:</u></p> <ul style="list-style-type: none"> Cut materials safely using tools provided. Measure and mark out to the nearest centimetre. Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. 	<p><u>Master Practical Skills:</u></p> <ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from. Understand and use principles of a varied diet. Cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales. Assemble or cook ingredients. 	<p><u>Textiles:</u></p> <ul style="list-style-type: none"> Shape textiles using templates. Join textiles using running stitch, glue, or staples. Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing) Cut materials safely using tools provided. Measure and mark out to the nearest centimetre. Demonstrate a range of cutting and shaping techniques
Skills taught in all topics	<p><u>Design, make, evaluate and review.</u></p> <ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created. Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design. 		

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Vocabulary	Construction, Engineer, buildings, houses, Structure, Joining	Fruit, Nutrients, Pith, Salad, Prepare, Flesh, Chop, cut.	Puppet, Textile, Needle, Thread, Stitch, shape, cut, measure, mark out
FLASHBACK –Links to previous learning			
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors	Marvellous middle- banquet	Marvellous middle- Victorian day	Marvellous middle- seaside day and puppet performance.
Assessment Opportunities			
Cycle 1 – Year 3 & 4			
	Autumn	Spring	Summer
Topic	Rocks, Shocks and Shakes	From Snozzcumbers to Perfect Potions	Dress to Impress

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Knowledge	<p><u>Stone Age Recipes</u></p> <ul style="list-style-type: none"> • The importance of hygiene, when cooking and preparing food. • Safety precautions that must be taken when preparing and cooking food. <p><u>Stone Age Shelter</u></p> <ul style="list-style-type: none"> • That when designing a shelter, the purpose must be considered carefully. • Properties of materials and the importance of considering these and selecting materials carefully when designing and making a product. • Different techniques that they can use for construction. 	<p><u>Roald Dahl Revolting Recipes</u></p> <ul style="list-style-type: none"> • The importance of hygiene, when cooking and preparing food. • Safety precautions that must be taken when preparing and cooking food. <p><u>Potion Packaging</u></p> <ul style="list-style-type: none"> • That like all things, packaging is carefully designed for an audience and a purpose. • That packaging should protect and contain the product, attract the audience, and persuade them to buy it. Packaging should also inform people about the product. • That audience will always depend on what the product is and that different factors can affect the audience. For example, choice of colours and images, the description/information provided, the font used and the slogan. • A NET is what a 3D shape looks like when it is flattened. Nets can be folded to create a 3D shape. Different nets create different shapes. • That when designing packaging, audience and purpose must be considered carefully. 	<p><u>Upcycling:</u></p> <ul style="list-style-type: none"> • That upcycling is part of the recycling movement, encouraging people to reuse old, unwanted items for a new purpose. • How clothing can be upcycled to create new designs. • Techniques that can be used to upcycle clothing <p><u>Sock animals</u></p> <ul style="list-style-type: none"> • That they need to allow for a seam when joining two pieces of fabric together. • Stitches that can be used to join textiles. • Appropriate techniques for decorating textiles.
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Skills	<p><u>Master Practical Skills:</u></p> <ul style="list-style-type: none"> • Prepare ingredients hygienically, using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble and cook ingredients <p><u>Construction Mechanics:</u></p> <ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. 	<p><u>Master Practical Skills:</u></p> <ul style="list-style-type: none"> • Prepare ingredients hygienically, using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble and cook ingredients <p><u>Materials</u></p> <ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques. <p><u>Take inspiration from design throughout history:</u></p> <ul style="list-style-type: none"> • identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. 	<p><u>Textiles:</u></p> <ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles <p><u>Take inspiration from design throughout history:</u></p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study, to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. <p><u>Take inspiration from design throughout history:</u></p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.
Skills taught in all topics	<p><u>Design, make, evaluate and review</u></p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. 		

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	<ul style="list-style-type: none"> • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. 		
Vocabulary	Audience, Purpose, Evaluate, Design, Review, Materials, Waterproof, Durable, Structure, Hygiene, Utensils, Safety, Measure, Grams, Weigh, Millilitres	Audience, Purpose, Evaluate, Design, Protect, Persuade, Attract, Contain, Inform, Join, Net, Cuboid, Cut, Stick, Measure, Draw, Scale, Review	Audience, Purpose, Evaluate, Design, Review, Seam, Join, Stitch, Embroidery, Upcycle, Reuse, repurpose, print. Applique, attach,
FLASHBACK –Links to previous learning	Year 1 and 2- structure	Year 1 and 2- fruit salad	Year 1 and 2 – Punch and Judy hand puppets
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors	Sparkling Start: Making Stone Age Recipes	Fabulous Finish: Roald Dahl Revolting Recipes	Fabulous Finish: Upcycling, creating a futuristic outfit
Assessment Opportunities			
Cycle 1 – Year 5 & 6			
	Autumn	Spring	Summer
Topic	WWII	Ancient Egypt	Chocolate
Knowledge	<p>Know how to safely handle and store ingredients and cooked food. to handle and store ingredients and cooked food safely.</p> <p>Know the importance of personal hygiene when cooking.</p> <p>Know the principles of a healthy and varied diet.</p>	<p>Design a ‘Throne fit for a Pharaoh’</p> <p>Know how to research and develop design.</p> <p>Understand designs should be innovative, functional, appealing and are fit for purpose.</p>	<p>Design a chocolate bar product</p> <p>Know how to research and develop design.</p> <p>Understand designs should be innovative, functional, appealing and are fit for purpose.</p>

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	<p>Know how to follow a recipe accurately. Know how to weigh and measure ingredients accurately. Know how to use oven safely. Understand an element of freedom when refining recipes. Know how to use utensils safely and correctly. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>Know the need to aim at particular individuals or groups.</p> <p>Know how generate, develop, model, and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams and prototypes.</p> <p>Know how to select tools to perform practical tasks with wood. [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Know how to select from and use a wider range of materials and components.</p> <p>Know how to investigate and analyse a range of historical and existing throne designs.</p> <p>Know how to evaluate their ideas and products against their own design criteria.</p> <p>Know the value of the views of others to improve their work.</p> <p>Know how key events and individuals in design and technology have helped shape the world. - Focus on chair designs.</p> <p>Know how to strengthen, stiffen and reinforce more complex structures.</p>	<p>Know the need to aim at particular individuals or groups.</p> <p>Know how to generate, develop, model, and communicate their ideas through discussion, annotated sketches and prototypes.</p> <p>Know how to select from and use a wider range of ingredients.</p> <p>Know how to investigate and analyse a range of chocolate products.</p> <p>Know how to evaluate their ideas and products against their own design criteria.</p> <p>Know the value of the views of others to improve their work.</p> <p>Know that computer-aided design can improve their design process.</p> <p>Know that pattern pieces can be important to developing a product (Nets for packaging & moulds).</p> <p>Apply their understanding of computing to monitor, and analyse so to inform their products.</p>
Skills	MASTER PRACTICAL SKILLS (FOOD):	MATERIALS:	MASTER PRACTICAL SKILLS (FOOD):

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	<ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures. 	<ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper) 	<ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.
Vocabulary	Rations, seasonality, variety of ingredients grown, reared, caught, processed, substitute, microorganisms, allotments, savoury, dig to victory, ingredients, measure, oven, timings, recipes, hygiene, nutrition.	Design brief, product, culture, make, audience, generate, develop, model, communicate ideas, annotated sketches, tools, measure, cut, sand, joints, jynx joint, jig, legacy, historical influence prototypes.	Design brief, product, make, audience, nets generate, develop, model, communicate ideas, annotated sketches, prototypes, market research, ratio, pitch enterprise, industry and the wider environment.
FLASHBACK –Links to previous learning	Year 1 and 2- fruit salad Year 1 and 2- Where in the World, knowledge of food origins Year 3 and 4 – vegetable soup	Year 1&2 Rapunzel Towers.	Year 3 and 4 - potions
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors	Fabulous Finish – Street Party		Fabulous Finish – Chocolate dragon Den.

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Assessment Opportunities			
Cycle 2 - EYFS			
	Autumn 1	Autumn 2	Spring 1
Topic	Spring 2	Summer 1	Summer 2
Cycle 2 – Year 1 & 2			
	Autumn	Spring	Summer
Topic	Where my trainers take me/lets go wild	Once upon a time	Where in the world?
Knowledge	<p>Food Technology: Dips and dippers:</p> <p>Children will know how to plan, make and evaluate their own dip and dipper.</p> <p>Children will know what is a healthy and varied diet.</p> <p>To know of existing products.</p> <p>Explain the food groups and know they have to eat a balance of foods to have a healthy and varied diet.</p>	<p>Mechanics: Exploring sliders and movement:</p> <p>Children design, make and evaluate for a moving storybook</p> <p>Children know that sliders are used in a variety of ways through exploring a variety of different examples of moving story books.</p> <p>Children know that products are designed in different ways because of different 'target markets'.</p>	<p>Food Technology: Soup making/Pizza Making:</p> <p>Design and create a healthy soup/pizza that uses a balanced variety of foods and makes it appealing for a child to eat.</p> <p>Children will know what is a healthy and varied diet.</p> <p>To know of existing products.</p> <p>Explain the food groups and know they have to eat a balance of foods to have a healthy and varied diet.</p>
Skills	Master Practical Skills - Food ...all children will be able to...	Mechanics - Create products using levers, wheels and winding mechanisms.	Master Practical Skills – Food ..all children will be able to...

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	<ul style="list-style-type: none"> cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales Assemble or cook ingredients <p>• Explain ideas about how to eat a balanced, healthy and varied diet. • Give a simple evaluation of a product by explaining their likes and dislikes. • Use kitchen equipment safely and prepare dishes</p> <p>...most children will be able to: • Explain the food groups and know they have to eat a balance of foods to have a healthy and varied diet. • Design a new product that is appealing to themselves and others. • Explore and evaluate existing products.</p> <p>...some children will be able to: • Give specific names, such as protein, to the different groups they eat. • Design a new product that is appealing to themselves and other users based on a design criteria. • Explore existing products and give evaluations that contain some detail.</p>	<p>Design purposeful, functional appealing products for themselves and other users based on design criteria</p> <p>Generate, develop, model, and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>...all children will be able to...</p> <ul style="list-style-type: none"> drawing background pictures drawing the moving parts decide whether to use a side-to-side slider or an up-and-down slider on each page describe the movement of each type of slider <p>...most children will be able to: draw background pictures and label their plan drawings and make their moving part with occasional support</p> <p>...some children will be able to: draw background pictures, clearly label the moving parts and mechanism of a design that has multiple parts, moving in different ways on each page</p>	<ul style="list-style-type: none"> cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales Assemble or cook ingredients <p>• Explain ideas about how to eat a balanced, healthy and varied diet. • Give a simple evaluation of a product by explaining their likes and dislikes. • Use kitchen equipment safely and prepare dishes</p> <p>...most children will be able to: • Explain the food groups and know they have to eat a balance of foods to have a healthy and varied diet. • Design a new product that is appealing to themselves and others. • Explore and evaluate existing products.</p> <p>...some children will be able to: • Give specific names, such as protein, to the different groups they eat. • Design a new product that is appealing to themselves and other users based on a design criteria. • Explore existing products and give evaluations that contain some detail.</p>
Vocabulary	<p>Dips: e.g., hummus, guacamole, salsa, raita, Thousand Island.</p> <p>Dippers: e.g., crackers, breadsticks, carrots, cucumber, pepper, nachos and pitta bread</p> <p>Ingredients: the food that is measured out to use in a recipe/meal or snack</p> <p>Equipment: cooking tools e.g., spoon, knife, bowl, grater, chopping board</p>	<p>Product: An object that is made available for people to use/enjoy</p> <p>Target Market: The intended user of a product.</p> <p>Design Criteria: precise goals that a project must achieve in order to be successful (e.g., bright colours, cartoon pictures, varied movements, large and sturdy sliders so that the moving parts don't break easily)</p>	<p>Knife – Used to cut pieces of food.</p> <p>Rolling pin– a tool used to flatten dough.</p> <p>Scales – measures the weight of ingredients</p> <p>Cheese grater – To grate cheese into smaller pieces.</p> <p>Tomato puree – Crushed tomatoes</p> <p>Fruit and Vegetables – A healthy mixture of vegetables such as tomatoes, peppers and pineapple.</p> <p>Mozzarella – A type of Cheese</p>

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		Mechanism, Model, Sliders, Template, Adapt, Design criteria, Input	Ham – A type of meat. Pepperoni – A type of meat. Dough – A mixture of flour and water.
FLASHBACK –Links to previous learning			
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors			
Assessment Opportunities	<p>Did the children:</p> <ul style="list-style-type: none"> Cut, peel or grate ingredients safely and hygienically? Measure or weigh using measuring cups or electronic scales? <p>Pupils with secure understanding indicated by: ability to do the above, occasionally needing support</p> <p>Pupils working at greater depth indicated by: ability to do the above only needing initial support</p>	<p>Did the children:</p> <ul style="list-style-type: none"> Use technical language during the lesson? Consider how they wanted different parts to move? <p>Pupils with secure understanding indicated by: labelling drawings to show which parts of their design will move and in which direction, ability to make, describe, evaluate a moving part with some support</p> <p>Pupils working at greater depth indicated by: Clearly labelling the moving parts and <u>mechanism</u> of a design that has multiple parts, moving in different ways on each page, ability to make, describe and evaluate multiple moving parts with little support.</p>	<p>Did the children:</p> <ul style="list-style-type: none"> Cut, peel or grate ingredients safely and hygienically? Measure or weigh using measuring cups or electronic scales? <p>Pupils with secure understanding indicated by: ability to do the above, occasionally needing support</p> <p>Pupils working at greater depth indicated by: ability to do the above only needing initial support</p>
Cycle 2 – Year 3 & 4			
	Autumn	Spring	Summer
Topic	What's Going on Inside?	Around the World in 80 Days	Invasion!
Knowledge	<u>Autumn Apple Crumble Recipe</u>	<u>Street Food Recipe and Carton design</u>	<u>Make a working catapult:</u>

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	<ul style="list-style-type: none"> The importance of hygiene, when cooking and preparing food. Safety precautions that must be taken when preparing and cooking food. Follow a recipe and make their own version of a fruit crumble <p><u>Operation Style Game</u></p> <ul style="list-style-type: none"> To research about parts of the body – linked to science learning To create a simple circuit – linked to Electricity learning in science To evaluate different games and look at how they are colourful, appealing, whether they are affective or not Create their own operation style game by pulling together all this learning 	<ul style="list-style-type: none"> The importance of hygiene, when cooking and preparing food. Safety precautions that must be taken when preparing and cooking food. Look at different foods from around the world Use one of the countries for inspiration to create and make their own street food. <p><u>Ethnic Sewing patterns</u></p> <ul style="list-style-type: none"> Look at different types of sewing stitches and what they might be used for Practise different types of stitches Look at different patterns from around the world – colours and designs they use Use binca to design and create a pattern from a country of the world – thinking about patterns, colours and symbols/shapes they use 	<ul style="list-style-type: none"> Look at the construction and function of catapults – linked to Roman learning in history Explore different materials to use for designing catapults Build their catapults and test them to see how effectively and the distance they can throw an object <p><u>Ethnic Sewing patterns</u></p> <ul style="list-style-type: none"> Linked to history learning about purses used in Roman times – look at their style, functionality, how they are made and what they were made of Look at different types of sewing stitches and what they might be used for Practise different types of stitches Construct their own version of a Roman purse – using appropriate stitching and sewing techniques
Skills	<p><u>Master practical skills – Food:</u></p> <ul style="list-style-type: none"> Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Follow a recipe. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). 	<p><u>Master practical skills – Food:</u></p> <ul style="list-style-type: none"> Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Follow a recipe. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). 	<p><u>Materials:</u></p> <ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).

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	<p><u>Materials:</u></p> <ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques. <p><u>Electricals and Electronics:</u></p> <ul style="list-style-type: none"> • Create series and parallel circuits 	<p><u>Textiles:</u></p> <ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles <p><u>Take inspiration from design throughout history:</u></p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. 	<ul style="list-style-type: none"> • Select appropriate joining techniques. <p><u>Textiles:</u></p> <ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles <p><u>Construction Mechanics:</u></p> <ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques <p><u>Mechanics:</u></p> <ul style="list-style-type: none"> • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). <p><u>Take inspiration from design throughout history:</u></p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.
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KT Federation Curriculum Progression

Skills taught in all topics	<u>Design, make, evaluate and review</u> <ul style="list-style-type: none"> Design with purpose by identifying opportunities to design. Make products by working efficiently (such as by carefully selecting materials). Refine work and techniques as work progresses, continually evaluating the product design. Use software to design and represent product designs. 		
Vocabulary	Audience, Purpose, Game, Circuit, Electricity, Design, Research, Evaluate, Make, Hygiene, Utensils, Safety, Measure, Grams, Weigh, Millilitres	Audience, Purpose, Evaluate, Design, Review, Seam, Join, Stitch, Embroidery, Applique, attach, Binca	Audience, Purpose, Evaluate, Design, Review, Seam, Join, Stitch, Embroidery, Applique, attach, Felt, Lever, mechanism, construct, function, materials, test, adjust
FLASHBACK –Links to previous learning	Science: Electricity Y1 & 2: Fruit Salad, Dips and Pizza Making	Y1 & 2: Fruit Salad, Dips and Pizza Making Y1&2: Punch and Judy Puppets	Year 1 and 2- moving storybook Y1 & 2: Castles (Rapunzel Towers) Year 1&2: Punch and Judy Puppets
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors	Homework Task – Make a Fabulous Food		
Assessment Opportunities			
Cycle 2 – Year 5 & 6			
	Autumn	Spring	Summer
Topic	Marvellous Me	Solution to Pollution	Ancient Greeks
Knowledge	Design an Automaton for a purpose.	Textiles – Open project (not clothing)	Game

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	<p>Know the need to aim at particular individuals or groups.</p> <p>Know how to generate, develop, model, and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams and prototypes.</p> <p>Know how to select tools to perform practical tasks. [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Know how to select from and use a wider range of materials and components.</p> <p>Know how to evaluate their ideas and products against their own design criteria.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>Know how to strengthen, stiffen and reinforce more complex structures.</p>	<p>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>MAKE SURE DIFFERENT to Year 3 & 4</p>	
Skills	<p>MATERIALS:</p> <ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). 	<p>TEXTILES:</p> <ul style="list-style-type: none"> • Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). 	<p>MATERIALS:</p> <ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).

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	<ul style="list-style-type: none"> • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper) 	<ul style="list-style-type: none"> • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion). <p>MATERIALS:</p> <ul style="list-style-type: none"> • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper) 	<ul style="list-style-type: none"> • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper)
Vocabulary			
FLASHBACK –Links to previous learning	Year 3 and 4 – catapults Year 1 and 2- moving storybooks	Year 3 &	
Enrichment - Sparkling Starts/Marvellous Middles/Fantastic Finishes/Visits & Visitors			
Assessment Opportunities			

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