



St Anne's DT Progression Map



Where possible across all areas: Identify great designers and their work and use research of designers to influence work

EYFS						
Design and Technology Skills	Range 4	UTW/ W - • Notices detailed features of objects in their environment UTW/ W - • Enjoys playing with small world reconstructions, building on first-hand experiences, e.g. visiting farms, garages, train tracks, walking by river or lake	UTW/ T - • Seeks to acquire basic skills in turning on and operating some digital equipment • Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car • Plays with water to investigate "low technology" such as washing and cleaning • Uses pipes, funnels and other tools to carry/ transport water from one place to another	EAD/ M - • Shows an interest in the way sound makers and instruments sound and experiments with ways of playing them, e.g. loud/quiet, fast/slow • Experiments with ways to enclose a space, create shapes and represent actions, sounds and objects • Enjoys and responds to playing with colour in a variety of ways, for example combining colours • Uses 3D and 2D structures to explore materials and/or to express ideas	EAD/ BI - • Uses everyday materials to explore, understand and represent their world – their ideas, interests and fascinations • Begins to make believe by pretending using sounds, movements, words, objects Beginning to describe sounds and music imaginatively, e.g. scary music	PD/ MH - • Uses wheeled toys with increasing skill such as pedalling, balancing, holding handlebars and sitting astride • May be beginning to show preference for dominant hand and/or leg/foot • Turns pages in a book, sometimes several at once • Shows increasing control in holding, using and manipulating a range of tools and objects such as tambourines, jugs, hammers, and mark making tools • Holds mark-making tools with thumb and all fingers
	Range 5	UTW/ W - • Talks about why things happen and how things work	UTW/ T - • Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support • Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets • Shows skill in making toys work by	EAD/ M - • Continues to explore colour and how colours can be changed • Develops an understanding of using lines to enclose a space, and begins to use drawing to represent actions and objects based on imagination, observation and experience • Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing,	EAD/ BI - • Engages in imaginative play based on own ideas or first-hand or peer experiences. • Uses available resources to create props or creates imaginary ones to support play	PD/ MH - • Can grasp and release with two hands to throw and catch a large ball, beanbag or an object • Creates lines and circles pivoting from the shoulder and elbow • Manipulates a range of tools and equipment in one hand, tools include paintbrushes, scissors, hairbrushes, toothbrush, scarves or ribbons



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			pressing parts or lifting flaps to achieve effects such as sound, movements or new images • Plays with a range of materials to learn cause and effect, for example, makes a string puppet using dowels and string to suspend the puppet	making enclosures and creating spaces • Uses tools for a purpose		
	Range 6	UTW/ W - • Knows about similarities and differences in relation to places, objects, materials and living things	UTW/ T - • Completes a simple program on electronic devices	<u>EAD/ M</u> - • Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking • Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding.	<u>EAD/ BI</u> - • Uses combinations of art forms, e.g. moving and singing, making and dramatic play, drawing and talking, constructing and mapping • Responds imaginatively to art works and objects, e.g. this music sounds like dinosaurs, that sculpture is squishy like this [child physically demonstrates], that peg looks like a mouth • Introduces a storyline or narrative into their play • Plays cooperatively as part of a group to create, develop and act out an imaginary idea or narrative	<u>PD/ MH</u> - • Uses simple tools to effect changes to materials • Handles tools, objects, construction and malleable materials safely and with increasing control and intention • Shows a preference for a dominant hand • Begins to use anticlockwise movement and retrace vertical lines • Begins to form recognisable letters independently • Uses a pencil and holds it effectively to form recognisable letters, most of which are correctly formed
	ELG		None Birth to Five Matters: Children require access to a range of technologies, both digital and non-digital in their early lives. Exploring with different technologies	EAD/ M : Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design,	EAD/ BI - Statutory ELG: Being Imaginative and Expressive Children at the expected level of development will: - Invent, adapt and recount narratives and stories with peers and	PD/ MH Statutory ELG: Gross Motor Skills Children at the expected level of development will: - Negotiate space and obstacles safely, with consideration for themselves and others; - Demonstrate strength,



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			through play provides opportunities to develop skills that children will go on to develop in their lifetimes. Investigations, scientific inquiry and exploration are essential components of learning about and with technology both digitally and in the natural world.	texture, form and function; - Share their creations, explaining the process they have used	their teacher	balance and coordination when playing; - Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.
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Year 1	Design	Make	Evaluate																																
Vocabulary	Understanding context, user and purpose	Practical skills and techniques	Existing products																																
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	<p>Begin to generate own ideas for design by drawing on own experiences or from</p>	<p>Make a plan of their product</p>	<p>Talk about their design ideas and what</p>																																



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	reading	Use a range of tools and equipment safely and correctly Choose appropriate materials and components for their product	they are making Suggest how their products could be improved	
Autumn	Technical knowledge		Cross-Curricular Links	
Mechanisms Sliders and levers <div><div>Bridge/guide</div><div>Curve</div><div>Curve forwards backwards</div><div>Cutting</div><div>Input</div><div>Joining/join</div><div>Joint</div><div>Lever</div><div>Linear*</div><div>Masking tape</div><div>Output</div></div> <div><div>Paper fastener/split pin</div><div>Pivot*</div><div>Pull push up down straight</div><div>Shaping</div><div>Simple flap</div><div>Simple slider</div><div>Slider</div><div>Slot</div><div>Straight line</div></div>	Understand about the simple working characteristics of materials and components Understand about the movement of simple mechanisms: levers, sliders	Spoken language – participate in discussion about books and other products with moving parts, taking turns and listening to what others say. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. Children listen and respond appropriately to adults. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. Use spoken language to develop understanding through imagining and exploring ideas. Mathematics – describe position, direction and movement. Use appropriate standard and non-standard measures. Art and design – use colour, pattern, line, shape.		
Spring	Cooking and Nutrition	Cooking and nutrition	Recipe instructions	Cross-Curricular Links
Preparing fruit and vegetables Bring on breakfast!	Where food comes from	Food preparation		



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<div> <div>Ingredients</div> <div>Arranging</div> <div>Choosing</div> <div>Core</div> <div>Cutting</div> <div>Diet</div> <div>Flesh</div> <div>Healthy</div> <div>Investigating</div> <div>Peeling</div> <div>Pip</div> <div>Popular</div> <div>Seed</div> <div>Skin</div> <div>Slicing</div> <div>Squeezing</div> <div>Tasting</div> <div>fruit/vegetables</div> <div>Sensory vocabulary</div> </div>	<p>Know where food comes from</p> <p>- all food comes from plants or animals</p>	<p>Prepare simple dishes safely and hygienically, without using a heat sources</p> <p>Use techniques such as cutting</p> <p>Name and sort foods into the five groups of the 'eat well' plate</p>	<p>Follow a simple recipe supported by an adult.</p> <p>Carryout instructions with a little support.</p>	<p>Spoken language - children develop and use a sensory vocabulary. Ask questions to check understanding; use the correct terminology for equipment and food processes. Ask questions to develop and check understanding, develop technical and sensory vocabulary and build knowledge.</p> <p>Science - understand that plants have leaves, stems, roots, flowers and fruits; understand the importance of growing plants and how seasons affect growth. Talk about a balanced diet, different types of food and hygiene.</p> <p>Writing - develop descriptive writing based on first-hand experience of tasting fruit and vegetables. Instructions on how to use one of the utensils; how to prepare e.g. a fruit for eating.</p> <p>Mathematics - carry out a simple survey to find out which are the favourite fruits/vegetables.</p> <p>Art and design - use and develop drawing skills.</p> <p>Computing - use digital photographs to help order the main stages of making and support children's writing.</p>
<p>Summer</p>	<p>Technical knowledge</p>		<p>Cross-Curricular Links</p>	



St Anne's DT Progression Map



Structures

Freestanding structures

A chair for a bear

Key Individuals- Eileen Gray 1878-1976

Base	Rectangle	
Circle	Side	
Corner	Square	
Cube	Straight	
Cuboid	Structure	
Curved	Surface	Triangle
Cylinder	Thicker	Underneath
Edge	Thinner	Wall
Fix	Top	Wood
Fold	Tower	
Framework		
Join		
Metal		
Plastic		
Point		

Understand about the simple working characteristics of materials and components.

Understand how freestanding structures can be made stronger, stiffer and more stable

Spoken language - participate in discussion about various structures, taking turns and listening to what others say. Ask relevant questions to extend their knowledge and understanding. Build technical vocabulary. Use spoken language to develop understanding through imagining and exploring ideas.

Science - think about the properties of materials that make them suitable or unsuitable for particular purposes.

Mathematics - use appropriate standard and non-standard measures. Recognise and name common 2-D and 3-D shapes.

Art and design - use colour, pattern, line, shape. Use and develop drawing skills.

Geography - use simple fieldwork and observational skills to study the geography of their school and its grounds and the key physical features of its surrounding environment.



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	<p>Generate own ideas for design by drawing on own experiences or from reading</p>	<p>Plan by suggesting what to do next</p> <p>Select from a range of tools and equipment (explaining their choices)</p> <p>Select from a range of materials and components according to their characteristics</p>	<p>Make simple judgements about their products and ideas against design criteria</p> <p>Evaluating products and components used</p>																																



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Autumn	Technical Knowledge		Cross-curricular Links	
Mechanisms Wheels and axles 4 wheel Key Individuals- Frank Hornby <div style="border: 1px solid black; padding: 2px;"> Axles Chassis body cab Fixed free moving Mechanism* Names of tools equipment and materials used Stable (stability) Stiffen Strengthen Vehicle axle holder Wheels </div>	<p><i>Understand about the simple working characteristics of materials and components</i></p> <p><i>Understand about the movement of simple mechanisms: wheels and axles</i></p>		<p>Science - working scientifically: ask simple questions and observe closely. Explore use of everyday materials.</p> <p>Mathematics - number of wheels, more than, less than, equal. measuring length using non-standard and standard units.</p> <p>Spoken Language - use of technical vocabulary. Ask relevant questions to extend understanding and build vocabulary and knowledge. Give well-structured descriptions and explanations. Develop speaking and listening skills. Learn relevant technical vocabulary. Use spoken language to develop understanding through imagining and exploring ideas.</p> <p>Art and Design - use a range of media and materials creatively to design and make products.</p>	
Spring	Cooking and Nutrition	Cooking and nutrition	Recipe instructions	Cross-Curricular Links
Preparing fruit and vegetables Perfect Pizza!	Where food comes from	Food preparation		
	<p>Know where food comes from</p> <p><i>-food has to be farmed, grown elsewhere (e.g. home) or caught</i></p>	<p><i>Use appropriate equipment to weigh and measure ingredients</i></p> <p><i>Know that everyone should eat at least five portions of fruit and</i></p>	<p>Follow a simple recipe supported by an adult.</p> <p>Carryout instructions</p>	<p>Spoken language - children develop and use a sensory vocabulary. Ask questions to check understanding; use the correct terminology for equipment and food processes. Ask questions to develop and check understanding, develop technical and sensory vocabulary and build knowledge.</p> <p>Science - understand that plants have leaves, stems, roots, flowers and fruits; understand the importance</p>



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Summer Cycle B	Technical knowledge		Cross-Curricular Links	
<p>Textiles</p> <p>Templates and joining techniques</p> <p>Decorate</p> <p>Join</p> <p>Joining and finishing techniques</p> <p>Mark out</p> <p>Pattern pieces</p> <p>Template</p> <p>Fabrics and components</p> <p>Names of existing products</p>	<p><i>Understand about the simple working characteristics of materials and components.</i></p> <p><i>Understand how simple 3-D textile products are made, using a template to create two identical shapes.</i></p> <p><i>Understand how to join fabrics using different techniques e.g. running stitch, over stitch, glue, stapling.</i></p>		<p>Spoken language - ask relevant questions to build understanding and their vocabulary. Explain and articulate their ideas orally.</p> <p>Art and design - quick drawings or detailed observational drawings of one product to develop and share ideas. Use colour, pattern, texture, and shape as appropriate.</p> <p>Science - everyday materials. Investigate physical properties of fabric types against suitability for the product to be made.</p> <p>Mathematics - measurement using non-standard and standard units.</p> <p>Computing - use technology purposefully to create and manipulate digital content.</p>	



St Anne's DT Progression Map



Year 3	Design	Make	Evaluate
Vocabulary	Understanding context, user and purpose	Practical skills and techniques	Existing products
Annotated sketches Appealing Characteristics Computer-aided design (CAD) Criteria Cross-sectional* Design brief Design criteria Design specification Exploded diagrams Finishing techniques Fit for purpose Functional (Functionality) Components Control Decision Materials Mechanism Monitor Program Reinforce	Innovative (Innovation) Label Pattern pieces Prototype* Purpose Relevant context Research Template User Aesthetic qualities Authentic Evaluate Reinforce	Begin to measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, include those from art and design, with some accuracy	Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused
	Generating, developing, modelling and communicating ideas	Planning and Making	Own ideas and products
	Share and clarify ideas through discussion Model their ideas using prototypes and pattern pieces Use annotated sketches, cross-sectional drawings and diagrams	Select tools and equipment suitable for the task Select materials and components suitable for the task Order the main stages of making Produce detailed lists of tools, equipment and materials that they need	Identify the strengths and weaknesses of their ideas and products Consider the views of others, including intended users, to improve their work



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Autumn	Technical knowledge		Cross-Curricular Links	
Levers and linkages Creatures and critters mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief	<ul style="list-style-type: none"> Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots. Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> Mathematics - use the vocabulary of position, direction and movement. Use a ruler to measure to the nearest cm, half cm or mm. Spoken language - ask relevant questions to extend knowledge and understanding. Build their technical vocabulary. Art and design - use colour, pattern, line, shape. 	
Spring	Cooking and Nutrition	Cooking and nutrition	Recipe instructions	Cross-Curricular Links
Food Healthy and variety diet Sandwich Snacks Key individuals- Jamie Oliver hygienic, bridge technique, claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading,	Where food comes from <i>Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</i>	Food preparation <i>Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate</i> <i>Measure using grams</i>	Follow a simple recipe with guidance from an adult Carryout instructions independently	Spoken language - developing relevant vocabulary e.g. sensory descriptors. Ask relevant questions to extend their knowledge. Developing relevant technical vocabulary e.g. names of utensils and techniques. Ask relevant questions to extend their knowledge. Consider and evaluate different viewpoints. Use discussion to develop understanding through exploring ideas. Science - using and developing skills of observing and questioning. Humans get nutrition



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baking, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations, name of products, names of equipment, utensils, techniques and ingredients		*Exploded diagrams		from what they eat. Discuss changes of state if heat is used. Art and Design - using and developing drawing skills. Mathematics - presenting results/mass kg/g. Writing - new vocabulary. Use non-fiction texts such as description, explanation and instructions e.g. recipes. Organise their work using e.g. headings, subheadings.
Summer	Technical knowledge		Cross-Curricular Links	
Textiles 2D shape to 3D product Pencil case/ types of stitching fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance	Know that a single fabric shape can be used to make a 3D textiles product Know how to strengthen, stiffen and reinforce existing fabrics. Understand how to securely join two pieces of fabric together *Pattern pieces		Science - physical properties of fabrics. Spoken language - asking and answering questions to develop understanding. Through discussion, participate actively initiating and responding to comments. Develop technical vocabulary. Give well-structured descriptions of e.g. finishing techniques Mathematics - nets of shapes and accurate measurements mm/cm. History - investigating textiles and textile products from age being studied Mathematics - Accurate measurement mm/cm. Science - identify and compare the suitability of a variety of fabrics for particular uses. Art and design - investigating visual and tactile qualities of fabrics and using colour and pattern appropriately. Using a range of tools and decorative techniques. Develop sketching techniques. Writing - written evaluation of their product, organising it under headings	



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Vocabulary <div> <div> Annotated sketches Appealing Characteristics Computer-aided design (CAD) Criteria Cross-sectional* Design brief Design criteria Design specification Exploded diagrams Finishing techniques Fit for purpose Functional (Functionality) </div> <div> Innovative (innovation) Label Pattern pieces Prototype* Purpose Relevant context Research Template User </div> </div> <div> <div> Components Control Decision Materials Mechanism Monitor Program Reinforce </div> <div> Aesthetic qualities Authentic Evaluate Reinforce </div> </div>	<p>Understanding context, user and purpose</p> <p><i>Gather information about the needs and wants of particular individuals and groups</i></p> <p><i>Develop their own design criteria and use these to inform their ideas</i></p> <p><i>Research designs</i></p> <p>Generating, developing, modelling and communicating ideas</p> <p><i>Share and clarify ideas through discussion</i></p> <p><i>Model their ideas using prototypes and pattern pieces</i></p> <p><i>Use annotated sketches, cross-sectional drawings and diagrams</i></p>	<p>Practical skills and techniques</p> <p><i>Measure, mark out, cut and shape materials and components with some accuracy</i></p> <p><i>Assemble, join and combine materials and components with some accuracy</i></p> <p><i>Apply a range of finishing techniques, include those from art and design, with some accuracy</i></p> <p>Planning and Making</p> <p><i>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</i></p> <p><i>Explain their choice of materials and components according to functional properties and aesthetic qualities</i></p> <p><i>Produce detailed lists of tools, equipment and materials that they need</i></p>	<p>Existing products</p> <p><i>Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused</i></p> <p>Own ideas and products</p> <p><i>Identify the strengths and weaknesses of their ideas and products</i></p> <p><i>Consider the views of others, including intended users, to improve their work</i></p>



St Anne's DT Progression Map



Autumn	Technical knowledge		Cross-Curricular Links																											
<div>Electrical systems</div> <div>Simple circuits and switches</div> <div>Night lights.</div> <div>Key individuals- Thomas Edison (and early versions of electric lamps)</div> <table><tr><td>Battery</td><td></td></tr><tr><td>Battery holder</td><td>Names of switches and components</td></tr><tr><td>Bulb</td><td>Output device</td></tr><tr><td>Bulb holder</td><td>Parallel circuit</td></tr><tr><td>Conductor</td><td>Program</td></tr><tr><td>Connection</td><td>Push-to-break switch</td></tr><tr><td>Control</td><td>Push-to-make switch</td></tr><tr><td>Crocodile clip</td><td>Series circuit</td></tr><tr><td>Fault</td><td>Series circuit</td></tr><tr><td>Flowchart</td><td>System</td></tr><tr><td>Input device</td><td>Toggle switch</td></tr><tr><td>Insulator</td><td>Wire</td></tr><tr><td>Monitor</td><td></td></tr></table>	Battery		Battery holder	Names of switches and components	Bulb	Output device	Bulb holder	Parallel circuit	Conductor	Program	Connection	Push-to-break switch	Control	Push-to-make switch	Crocodile clip	Series circuit	Fault	Series circuit	Flowchart	System	Input device	Toggle switch	Insulator	Wire	Monitor		<div>Understand how simple electrical circuits and components can be used to create functional products</div> <div>Crumble</div> <div>*Cross-sectional diagrams</div>		<div>Spoken language - participate in discussion and evaluation of battery-powered products. Ask relevant questions to extend knowledge and understanding. Build their technical vocabulary. Asking questions to check understanding, develop technical vocabulary and build knowledge. Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments. Develop understanding through speculating, hypothesising, imagining and exploring ideas.</div> <div>Science - know how to construct simple series circuits and have a basic understanding of conductors, insulators and open and closed switches.</div> <div>Computing - design, write and debug programs that accomplish specific goals, including controlling physical systems.</div> <div>Art and design - using and developing drawing skills.</div>	
Battery																														
Battery holder	Names of switches and components																													
Bulb	Output device																													
Bulb holder	Parallel circuit																													
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Connection	Push-to-break switch																													
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Flowchart	System																													
Input device	Toggle switch																													
Insulator	Wire																													
Monitor																														
Spring	Cooking and Nutrition	Cooking and nutrition	Recipe instructions	Cross-Curricular Links																										
<div>Food</div> <div>Seasonal food and understanding how</div>	<div>Where food comes from</div>	<div>Food preparation</div>																												



St Anne's DT Progression Map



<p>produce can be fresh, pre-cooked and processed.</p> <p>hygienic, bridge technique, claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading, baking, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations, name of products, names of equipment, utensils, techniques and ingredients</p>	<p><i>Know that seasons may affect the food available</i></p> <p><i>Know that food ingredients can be fresh, pre-cooked and processed</i></p> <p>*Exploded diagram</p>	<p><i>Know that to be active and healthy, food is needed to provide energy for the body</i></p> <p><i>Follow a recipe</i></p>	<p>Follow a simple recipe with guidance from an adult</p> <p>Carryout instructions independently</p>	<p>Spoken language - developing relevant vocabulary e.g. sensory descriptors. Ask relevant questions to extend their knowledge. Developing relevant technical vocabulary e.g. names of utensils and techniques. Ask relevant questions to extend their knowledge. Consider and evaluate different viewpoints. Use discussion to develop understanding through exploring ideas.</p> <p>Science - using and developing skills of observing and questioning. Humans get nutrition from what they eat. Discuss changes of state if heat is used.</p> <p>Art and Design - using and developing drawing skills.</p> <p>Mathematics - presenting results/mass kg/g.</p> <p>Writing - new vocabulary. Use non-fiction texts such as description, explanation and instructions e.g. recipes. Organise their work using e.g. headings, subheadings.</p>
<p>Summer Cycle A</p>	<p>Technical knowledge</p>		<p>Cross-Curricular Links</p>	
<p>Mechanical systems Hydraulics</p>	<p>Understand how pneumatic/ hydraulic systems create</p>		<p>Spoken language - participate in discussion and evaluation of examples of products that use hydraulics. Ask relevant</p>	



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Hydraulic Heads

components, fixing, attaching, tubing, syringe, plunger, hydraulic system, input movement, process, output movement, syringe, tube control, compression, pressure, inflate, deflate, pump, seal, air-tight, user, purpose, function

movement.

questions to extend knowledge and understanding. Build technical vocabulary. Consider and evaluate different viewpoints.

Science - identify and compare the suitability of a variety of everyday materials for particular uses. When evaluating, make systematic and careful observations and take accurate measurements.

Mathematics - measure, compare, add and subtract: lengths, volume and capacity.

Art and design - use and develop drawing techniques. Use colour, pattern, line, shape.



St Anne's DT Progression Map



Year 5	Design	Make	Evaluate
Vocabulary	Understanding context, user and purpose	Practical skills and techniques	Existing products
<div> <div> Annotated sketches Appealing Characteristics Computer-aided design (CAD) Criteria Cross-sectional* Design brief Design criteria Design specification Exploded diagrams Finishing techniques Fit for purpose Functional (Functionality) Components Control Decision Materials Mechanism Monitor Program Reinforce </div> <div> Innovative (innovation) Label Pattern pieces Prototype* Purpose Relevant context Research Template User Aesthetic qualities Authentic Evaluate Reinforce </div> </div>	<p>Carry out research, using surveys, interviews, questionnaires and web-based resources</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups</p> <p>Develop a simple design specification to guide their thinking</p> <p>Recognise when their products have to fulfil conflicting requirements</p>	<p>Accurately measure to nearest cm/ mm mark out, cut and shape materials and components</p> <p>Accurately assemble, join and combine materials/components</p> <p>Accurately apply a range of finishing techniques, including those from art and design</p> <p>Demonstrate resourcefulness, e.g. make refinements</p>	<p>Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are</p>
	Generating, developing, modelling and communicating ideas	Planning and Making	Own ideas and products
	<p>Generate innovative ideas, drawing on research</p> <p>Make design decisions, taking account of constraints such as time, resources and cost</p> <p>Develop prototypes</p> <p>Use computer-aided design</p>	<p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>Explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>Formulate step-by-step plans as a guide to making</p> <p>Produce detailed lists of tools, equipment and materials that they need</p>	<p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p> <p>Compare their ideas and products to their original design specification</p>



St Anne's DT Progression Map



Autumn	Technical knowledge	Cross-Curricular Links
<p>Mechanisms: Cams Wooden cam toy Key individuals- Abbie Huddy, engineer</p> <p>cam, snail cam, off-centre cam, peg cam, pear shaped cam follower, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, reciprocating motion annotated sketches, exploded diagrams mechanical system, input movement, process, output movement</p>	<p><i>Understand how cams, pulleys and gears create movement</i></p>	<p>Spoken language - ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Listen and respond appropriately, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints. Listen and respond appropriately. Use relevant strategies to build their vocabulary.</p> <p>Computing - use search technologies for research purposes and be discerning when evaluating digital content.</p> <p>Science - forces and movement: explore the effects of simple machines on movement. Identify and compare the suitability of a variety of everyday materials for particular uses. Explore the effects of simple machines on movement.</p> <p>Mathematics - use mathematical vocabulary to describe position, direction and movement. Choose and use appropriate standard units (i.e. cm/mm) to estimate and accurately measure length/height.</p> <p>Art and design - use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape.</p> <p>Writing - purpose of writing e.g. for planning and evaluation</p>
Spring	Technical knowledge	Cross-Curricular Links
<p>Textiles Combining different fabric shapes</p> <p>seam, seam allowance,</p>	<p><i>Know that a 3D textiles product can be made from a combination of fabric shapes</i> <i>Know fabrics can be strengthened, stiffened and reinforced where appropriate.</i></p>	<p>Spoken language - ask questions, formulate, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints.</p> <p>Science - work scientifically investigating properties of fabrics. Children plan different types of scientific enquiries to answer questions.</p> <p>History - significant person/people in their locality linked to textiles and products e.g. William Morris, Amanda Wakeley (homework)</p>



St Anne's DT Progression Map



wadding, reinforce, right side, wrong side, hem, template, pattern pieces name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper	*Pattern pieces		Mathematics – apply knowledge of how 2-D nets can be formed into 3-D shapes; apply skills of accurate measuring using standard units i.e. cm/mm. Art and design – investigate methods of adding colour, pattern and texture on to textiles and how to make their own textiles through weaving or felt making.	
Summer	Cooking and Nutrition Where food comes from	Cooking and nutrition Food preparation	Recipe instructions	Cross-Curricular Links
Food Celebrating culture and seasonality Soups ingredients, spice, herbs, fat, sugar, carbohydrate, protein, nutrition, healthy, varied, savoury, source, seasonality, utensils, combine, stir, pour, mix, sprinkle, crumble, design specification, research, evaluate, design brief, peel, chop, dice, grate, dissolve, bridge hold, claw grip, simmer	Understand how food is processed into ingredients that can be eaten or used in cooking *Exploded diagram if applicable	Know that different foods contain different substances - nutrients, water and fibre - that are needed for health Understand the need for correct storage Measure accurately	Follow a simple recipe independently Carryout modifications to recipes	Mathematics and computing – making use of mathematical and computing skills to present results of sensory evaluations graphically, handling and interpreting data. Mathematics – measuring mass kg/g. Understand and use approximate equivalences between metric and imperial units. Computing – use technology purposefully to retrieve digital content. Spoken language – developing relevant vocabulary including sensory descriptors. Give well-structured explanations. New technical vocabulary. Articulate and justify answers and opinions. Listen and respond to adults and peers. Science – using and developing skills of



St Anne's DT Progression Map



				<p>observing, questioning, changing state of ingredients. Properties of materials and changes of state. Recognise the impact of diet on the way their bodies function.</p> <p>Geography - distribution of natural resources i.e. food.</p> <p>Art and design - using and developing drawing skills.</p> <p>Writing - purpose of writing e.g. for planning and evaluation</p>
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Year 6	Design	Make	Evaluate
Vocabulary	Understanding context, user and purpose	Practical skills and techniques	Existing products
<div> <div> Annotated sketches Appealing Characteristics Computer-aided design (CAD) Criteria Cross-sectional* Components Control Decision Materials Mechanism Monitor Program Reinforce </div> <div> Innovative (innovation) Label Pattern pieces Prototype* Purpose Relevant context Research Template User </div> </div>	<p><i>Carry out research, using surveys, interviews, questionnaires and web-based resources</i></p> <p><i>Identify the needs, wants, preferences and values of particular individuals and groups</i></p> <p><i>Develop a simple design specification to guide their thinking</i></p>	<p><i>Accurately measure to nearest mm, mark out, cut and shape materials and components</i></p> <p><i>Use techniques that involve a number of steps</i></p> <p><i>Accurately apply a range of finishing techniques, including those from art and design</i></p> <p><i>Refine design and explain reasons for refinement</i></p>	<p><i>Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are</i></p>



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<p>Aesthetic qualities</p> <p>Authentic</p> <p>Evaluate</p> <p>Reinforce</p>	Recognise when their products have to fulfil conflicting requirements			
	Generating, developing, modelling and communicating ideas		Planning and Making	Own ideas and products
	<p>Generate innovative ideas, drawing on research</p> <p>Make design decisions, taking account of constraints such as time, resources and cost</p> <p>Develop prototypes</p> <p>Use computer-aided design</p>	<p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>Explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>Formulate step-by-step plans as a guide to making</p> <p>Produce detailed lists of tools, equipment and materials that they need</p>	<p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p> <p>Compare their ideas and products to their original design specification</p>	
Autumn	Technical knowledge		Cross-Curricular Links	
Electrical systems/ more complex switches Fairground rides	<p>Understand how more complex electrical circuits and components can be used to create functional products</p> <p>Understand how to program a computer to control their products</p> <p>Understand how to program a computer to monitor changes in the environment / control their products</p>		<p>Spoken language - ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Use relevant strategies to build their vocabulary.</p> <p>Computing - use search technologies for research purposes and be discerning when evaluating digital content. Use search technologies for research purposes and be discerning when evaluating digital content.</p> <p>Mathematics - understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm.</p>	



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<table><tr><td>Axle</td><td>Motor</td></tr><tr><td>Circuit</td><td>Output</td></tr><tr><td>Circuit diagram</td><td>Process</td></tr><tr><td>Drive belt</td><td>Pulley</td></tr><tr><td>Driver*</td><td>Ratio</td></tr><tr><td>Electrical system</td><td>Rotation</td></tr><tr><td>Follower*</td><td>Spindle</td></tr><tr><td>Gear</td><td>Switch</td></tr><tr><td>Input</td><td>Transmit*</td></tr><tr><td>Mechanical system</td><td></td></tr></table>	Axle	Motor	Circuit	Output	Circuit diagram	Process	Drive belt	Pulley	Driver*	Ratio	Electrical system	Rotation	Follower*	Spindle	Gear	Switch	Input	Transmit*	Mechanical system		Microbit <i>*Cross-sectional diagrams</i>	Science – apply knowledge and understanding of circuits, switches, conductors and insulators. Recognise that some mechanisms, including pulleys and gears, allow a smaller force to have a greater effect. Apply knowledge and understanding of circuits, switches, conductors and insulators in the design of the final product. Art and design – use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape
Axle	Motor																					
Circuit	Output																					
Circuit diagram	Process																					
Drive belt	Pulley																					
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Electrical system	Rotation																					
Follower*	Spindle																					
Gear	Switch																					
Input	Transmit*																					
Mechanical system																						
Spring (must be covered in Y6 as we come off cycle a/b)	Technical Knowledge	Cross-curricular links																				
Mechanisms: Cams Wooden cam toy - Tree houses Key individuals- Abbie Hutty, engineer cam, snail cam, off-centre cam, peg cam, pear shaped cam follower, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, reciprocating motion annotated sketches, exploded diagrams	<i>Understand how cams, pulleys and gears create movement</i> *	Spoken language – ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Listen and respond appropriately, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints. Listen and respond appropriately. Use relevant strategies to build their vocabulary. Computing – use search technologies for research purposes and be discerning when evaluating digital content. Science – forces and movement: explore the effects of simple machines on movement. Identify and compare the suitability of a variety of everyday materials for particular uses. Explore the effects of simple machines on movement. Mathematics – use mathematical vocabulary to describe position, direction and movement. Choose and use appropriate standard units (i.e. cm/mm) to estimate and accurately measure length/height. Art and design – use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape.																				



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mechanical system, input movement, process, output movement			Writing - purpose of writing e.g. for planning and evaluation	
Summer	Cooking and Nutrition	Cooking and nutrition	Recipe instructions	Cross-Curricular Links
Food Celebrating culture and seasonality Food from distant places How can we adapt a recipe? Ingredients? Quantity? ingredients, spice, herbs, fat, sugar, carbohydrate, protein, nutrition, healthy, varied, savoury, source, seasonality, utensils, combine, stir, pour, mix, sprinkle, crumble, design criteria, research, evaluate, design brief, peel, chop, dice, grate, dissolve,	Where food comes from <i>Know that a recipe can be adapted a by adding or substituting one or more ingredients</i>	Food preparation <i>Know that recipes can be adapted to change the appearance, taste, texture and aroma</i> <i>Work out ratios in recipes</i>	Follow a simple recipe independently Carryout modifications to recipes	Mathematics and computing - making use of mathematical and computing skills to present results of sensory evaluations graphically, handling and interpreting data. Mathematics - measuring mass kg/g. Understand and use approximate equivalences between metric and imperial units. Computing - use technology purposefully to retrieve digital content. Spoken language - developing relevant vocabulary including sensory descriptors. Give well-structured explanations. New technical vocabulary. Articulate and justify answers and opinions. Listen and respond to adults and peers. Science - using and developing skills of observing, questioning, changing state of ingredients. Properties of materials and changes of state. Recognise the impact of diet on the way their bodies function. Geography - distribution of natural resources i.e. food.



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bridge hold, claw grip, simmer				Art and design - using and developing drawing skills. Writing - purpose of writing e.g. for planning and evaluation
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