

# Design and Technology Progression and Coverage Nursery – Year 2



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Nursery</b>	<p><b>Communication and Language:</b>  <i>Respond to simple questions or comments about creations verbally or using gestures.</i>  <i>Develop a wider range of vocabulary.</i>  <i>Understand a question or instruction that has two parts.</i>  <i>Understand 'why' questions.</i></p>					
	<p><b>PSED:</b>  <i>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.</i>  <i>Collaborate with peers on shared projects in addition to individual creations.</i></p>					
	<p><b>PD:</b>                      Build and transport on large scale outdoors with loose parts.                      Transport blocks, build in rows, horizontally or stack vertically.                      Explore age-appropriate construction kits.                      Choose the right resources to carry out their own plan.                      Use one-handed tools and equipment, for example, making snips in paper with scissors.                      Use simple joining skills using glue and masking tape.</p>					
	<p><b>Cooking Techniques:</b> Stir, mash with a fork or potato masher - such as to make biscuit dough, vegetable soup and ice-cream as well as prepare a range of healthy snacks.</p>					
	<p><b>Maths:</b>                      Talk about and explore 2D and 3D shapes using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.                      Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.                      Combine shapes to make new ones - an arch, a bigger triangle etc.                      Talk about and identify the patterns around them.</p>					
	<p><b>UW:</b>                      Use all their senses in hands on exploration of natural materials, including fruit and vegetables.                      Explore collections of materials with similar and/or different properties.                      Talk about what they see, using a wide vocabulary.                      Explore how things work.                      Explore and talk about different forces they can feel.                      Talk about the differences between materials and changes they notice.</p>					



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	<p><b>EAD:</b> Engage in imaginative role-play where they create and use indoor and outdoor environments based on the designed and made world. Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Join different materials and explore different textures - - such as to decorate a greeting card or create a decoration for a special occasion.</p>					
	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Reception</b>	<p><b>Communication and Language:</b> Listen carefully to instructions and follow them accurately when using tools and practising techniques. Develop technical vocabulary and learn how to express their ideas for what they want to design and make. Ask questions to find out more and to check they understand what has been said to them. Use talk to articulate their ideas and thoughts to help work out problems and explain how their own and others' products work, their purpose and say who they think they are for. Talk about what makes activities safe when using tools.</p>					
	<p><b>PSED:</b> Collaborate with peers on shared projects in addition to individual creations. Show resilience and perseverance in the face of challenge. Manage own needs (linked to evaluating what makes activities safe or unsafe – hygienically)</p>					
	<p><b>PD:</b> Build on large scale outdoors with loose parts. Den building using a variety of resources. Create more complex structures with understanding of pattern, shape and balance. Develop more complex tearing and folding skills to make simple flaps and hinges. Develop their small motor skills so that they can use a range of tools competently, safely and confidently, for simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape, stapler, hole punch, sewing and weaving tools (including fabrics using simple techniques) <b>Cooking Techniques:</b> Cutting soft fruit and vegetables, grating ingredients, beating cake mixture and folding in egg.</p>					
	<p><b>Maths:</b> Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns. Compare length, weight and capacity.</p>					
	<p><b>UW:</b> Explore the natural world around them to support learning about products and environments that have been designed and made by people.</p>					



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	<b>EAD:</b> Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Explored and used different fabrics. • Cut and joined fabrics with simple techniques.		
	<b>Autumn 1:</b> <b>Structures – Freestanding Structures</b>	<b>Spring 1:</b> <b>Mechanisms – Sliders &amp; Levers</b>	<b>Summer 1:</b> <b>Cooking &amp; Nutrition – fruit-based product</b>

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<b>Year 1</b>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate ideas based on simple design criteria and their own experiences, explaining what they could make.</li> <li>• Develop, model and communicate their ideas through talking, mock-ups and drawings.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Plan by suggesting what to do next.</li> <li>• Select and use tools, skills and techniques, explaining their choices.</li> <li>• Select new and reclaimed materials and construction kits to build their structures.</li> <li>• Use simple finishing techniques suitable for the structure they are creating.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.</li> <li>• Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Know how to make freestanding structures stronger, stiffer and more stable.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate ideas based on simple design criteria and their own experiences, explaining what they could make.</li> <li>• Develop, model and communicate their ideas through drawings and mock-ups with card and paper.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Plan by suggesting what to do next.</li> <li>• Select and use tools, explaining their choices, to cut, shape and join paper and card.</li> <li>• Use simple finishing techniques suitable for the product they are creating.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Explore a range of existing books and everyday products that use simple sliders and levers.</li> <li>• Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Explore and use sliders and levers.</li> <li>• Understand that different mechanisms produce different types of movement.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Design appealing products for a particular user based on simple design criteria.</li> <li>• Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</li> <li>• Communicate these ideas through talk and drawings.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</li> <li>• Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</li> <li>• Evaluate ideas and finished products against design criteria, including intended user and purpose.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</li> <li>• Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>.</li> <li>• Know and use technical and sensory vocabulary relevant to the project.</li> </ul>
	<p><b>Autumn 2:</b>  <b>Textiles – Templates and Joining Techniques</b></p>	<p><b>Spring 2:</b>  <b>Mechanisms – Wheels and Axles</b></p>	<p><b>Summer 2:</b>  <b>Cooking &amp; Nutrition – vegetable based product</b></p>



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<b>Year 2</b>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Design a functional and appealing product for a chosen user and purpose based on simple design criteria.</li> <li>• Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing.</li> <li>• Select from and use textiles according to their characteristics.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing textile products relevant to the project being undertaken.</li> <li>• Evaluate their ideas throughout and their final products against original design criteria.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Understand how simple 3-D textile products are made, using a template to create two identical shapes.</li> <li>• Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling.</li> <li>• Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate initial ideas and simple design criteria through talking and using own experiences.</li> <li>• Develop and communicate ideas through drawings and mock-ups.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.</li> <li>• Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of products with wheels and axles.</li> <li>• Evaluate their ideas throughout and their products against original criteria.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Explore and use wheels, axles and axle holders.</li> <li>• Distinguish between fixed and freely moving axles.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Design appealing products for a particular user based on simple design criteria.</li> <li>• Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</li> <li>• Communicate these ideas through talk and drawings.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</li> <li>• Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</li> <li>• Evaluate ideas and finished products against design criteria, including intended user and purpose.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</li> <li>• Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>.</li> <li>• Know and use technical and sensory vocabulary relevant to the project.</li> </ul>
	<p><b>Autumn:</b> <b>Structures – Textiles</b></p>	<p><b>Spring:</b> <b>Mechanical Systems – Levers and Linkages</b></p>	<p><b>Summer:</b> <b>Healthy and Varied Diet</b></p>







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<b>Lower KS2</b>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate design criteria for an appealing, functional product for specific users.</li> <li>• Produce annotated sketches, prototypes, final product sketches and pattern pieces.</li> </ul> <p><b>Making:</b></p> <ul style="list-style-type: none"> <li>• Order the main stages of making</li> <li>• Select fabrics and fastening according to their functional characteristics.</li> <li>• Select from and use appropriate tools to measure, tape, cut and join fabric with some accuracy.</li> </ul> <p><b>Evaluating:</b></p> <ul style="list-style-type: none"> <li>• Evaluate their own products against the original criteria and with the intended user.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Know and use technical vocabulary relevant to the project</li> <li>• Know how to create a paper pattern/template with side seams</li> <li>• Understand the importance of recycling</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate realistic ideas and their own design criteria through discussion, focussing on the needs of the user</li> <li>• Use annotated sketches and prototypes to develop, model and communicate ideas.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Order the main stages of making.</li> <li>• Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</li> </ul> <p>Select from and use finishing techniques suitable for the product they are creating.</p> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Investigate and analyse books and, where available, other products with lever and linkage mechanisms</li> <li>• Evaluate their own products and ideas against criteria and users needs, as they design and make.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Understand and use linkage mechanisms</li> <li>• Distinguish between fixed and loose pivots</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>• Generate ideas and develop design criteria for an appealing product for a user and purpose.</li> <li>• Plan the main stages of a recipe, listing ingredients, utensils and equipment.</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>• Select from a range of ingredients to make appropriate food products.</li> <li>• Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Carry out and record evaluations of a variety of ingredients and products.</li> </ul> <p><b>Technical knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Know a range of appropriate ingredients, and whether they are grown, reared, or caught.</li> </ul>
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## Design and Technology Progression and Coverage Nursery – Year 2

### Important Scientists

 <p><b>Ruth Benerito (1916 - 2013)</b> was an American scientist, who is most famous for inventing wash-and-wear. cotton fabrics, which allow for more wrinkle-free and durable clothing as well as flameproof fabric.</p>	 <p><b>Mary Anderson (1866 – 1953)</b> was an American businesswoman who invented windscreen wipers.</p>	 <p><b>Sir James Dyson (1947 -)</b> is a British inventor, best known for inventing the bagless Dyson vacuum cleaner.</p>
 <p><b>Fiona Fairhurst (1971 -)</b> is a former British professional swimmer, who invented the Speedo Fastskin suit after studying sharks and noticing the little ridges in their skin as being able to reduce friction.</p>	 <p><b>Karl Benz (1844 - 1929 )</b> inventor, best known for inventing the first practical modern car, called the Benz Patent-Motorwagen.</p>	 <p><b>Gerald Anderson Lawson (1940-2011)</b> was an electric engineer who invented the first video game console as well as leading the team that pioneered the commercial video game cartridge.</p>