



# Backworth Park Primary School Knowledge and Skills Progression Grid Design Technology

	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
<b>EYFS</b>	<p>Talk about what they want to make.</p> <p>Make observations about the features of object.</p> <p>Use their senses to explore and describe objects.</p> <p>Think of some ideas of their own.</p> <p>Plan how best to approach a task.</p> <p>Represent their ideas through drawings, labels and captions.</p> <p>Make a list of resources they will need.</p>	<p>Make models of their own choosing.</p> <p>Explore making, with different equipment including new ways of joining (e.g. split pins, staples, tags, string).</p> <p>Explain what they are making. Select appropriate resources, materials and tool.</p> <p>Name and explain which tools they are using and why.</p> <p>Use tools safely.</p> <p>Use tools to manipulate materials (use scissors or a knife to cut).</p>	<p>Identify success and next steps.</p> <p>Change their strategy as needed, e.g- rearranging materials.</p> <p>Talk about features of their creations.</p> <p>Share their creations, explaining the process they have used.</p> <p>Can build towers, arches and other structures by balancing materials and judging other elements such as weight and shape.</p>	<p>Build structures/models and attach/join resources together using a range of materials such as tape, glue, string, split pins, etc.</p> <p>Can identify which joining materials are best to use after a trial and error approach.</p> <p>Can use small construction materials to build (lego), adding moving parts such as wheels.</p> <p>Use technical vocabulary such as join, attach, create, design.</p> <p>Be aware that ingredients are available from a range of sources (shops, markets, grown at home.</p>	<p>Select and use appropriate tools needed for a recipe.</p> <p>Use tools effectively and safely (stir, spread, knead, chop).</p> <p>Identify and use the appropriate ingredients for a recipe.</p> <p>Complete basic hygiene tasks (e.g. wash hands).</p> <p>Talk about foods they like and dislike with reasons.</p> <p>Discuss the food that they eat during special occasions or cultural celebrations (e.g. birthday, Chinese New Year, etc.).</p> <p>Be willing to try new foods.</p> <p>Understand the importance of healthy food choices such as fruits and vegetables.</p>
<b>Year 1</b>	<p>Generate ideas from their own experience.</p> <p>Begin to understand and meet a single design criteria.</p> <p>Talk about their ideas and say what will be done.</p>	<p>Follow basic safety rules with support.</p> <p>Join two materials together with different methods, e.g. glue, staples, pins.</p>	<p>Explore existing products explaining what they like and dislike.</p> <p>Recognise what they have done well and talk about what could be improved.</p>	<p>Talk about materials and mechanisms in familiar products.</p> <p>Begin to understand and use the term component.</p> <p>Explore and use levers and sliders</p>	<p>Discuss and develop an awareness of where food comes from.</p> <p>Have an awareness of hygiene and safety.</p> <p>Measure using teaspoons, tablespoons etc.</p>



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	<p>Make a list of materials and tools they will need.</p> <p>Draw pictures of what they want to do with labels and some text.</p> <p>Generate and develop a mock up product.</p> <p>Use sliders and levers in plans.</p>	<p>Use scissors or a knife to cut, sometimes with help or using a simple template.</p> <p>Make simple models not necessarily with a purpose.</p> <p>Use simple construction kits e.g. lego.</p>	<p>With support evaluate their product in relation to the design criteria.</p>		<p>Begin to understand the benefits of fruit and vegetables.</p> <p>With close supervision, use the bridge hold to cut harder foods using a serrated vegetable knife (eg apple pieces).</p>
Year 2	<p>Generate ideas and plan what to do next using their experience of materials and components.</p> <p>Use plans with labels, lists and technical vocabulary to show how to put their ideas into Practice.</p> <p>Understand and meet a single design criteria.</p> <p>Use their knowledge of some working characteristics of materials when designing.</p> <p>Use wheels and axles in plans</p>	<p>Follow basic safety rules.</p> <p>Measure out and cut materials independently.</p> <p>Begin to select tools for cutting, shaping, joining and finishing.</p> <p>Select tools, materials and techniques from a selection, appropriate to the job.</p>	<p>Explore existing products explaining what they like and dislike and what is useful/not useful.</p> <p>Recognise what they have done well and talk about what could be improved.</p> <p>Evaluate their product in relation to the design criteria.</p>	<p>Identify materials and mechanisms in familiar products.</p> <p>Understand and use the term component.</p> <p>Explore how structures can be made stronger, stiffer and more stable.</p> <p>Explore and use wheels and axles.</p>	<p>Have an awareness of where food comes from.</p> <p>Know about hygiene and safety.</p> <p>Measure using simple scales or balances.</p> <p>Know the benefits of healthy food</p> <p>With close supervision, use the bridge hold to cut harder foods using a serrated vegetable knife (eg apple pieces).</p> <p>Understand and use the term ingredient.</p>
Year 3	<p>Generate ideas using their prior knowledge of materials and processes e.g. Science and Art.</p> <p>Create annotated sketches with technical vocabulary and a brief</p>	<p>With support identify potential risks and how to avoid them.</p> <p>Measure and cut out in precise detail.</p>	<p>Investigate a range of products to see how they work.</p> <p>Say how the product will be useful to the user.</p>	<p>Apply what they know about materials and joints to strengthen, stiffen and reinforce structures.</p> <p>Apply what they know about mechanisms to create movement</p>	<p>Know where ingredients have come from.</p> <p>Understand main rules of food hygiene.</p>



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	<p>description of their method. (Use ICT where possible).</p> <p>Begin to research and develop simple design criteria.</p> <p>Design products that are functional and purposeful.</p> <p>Research products using the internet.</p>	<p>Select appropriate tools for cutting, shaping, joining and finishing.</p> <p>Make separate elements of a model before combining into the finished article.</p> <p>Begin to select materials according to their function and appearance.</p> <p>Make finished products neat and tidy.</p>	<p>Seek out the views and judgements of others.</p> <p>Evaluate their product in relation to the design criteria and explain how it has been successful and how it could be improved.</p>	<p>when planning and designing (levers and linkages).</p> <p>Apply what they know about electrical systems in their products, e.g. electrical circuits.</p>	<p>Follow a recipe, weighing out ingredients appropriately.</p> <p>Begin to recognise how eating different food groups creates a varied diet.</p> <p>Select and use appropriate tools/skills when mixing, slicing, spreading etc.</p> <p>With close supervision, use the claw grip to cut soft foods using a serrated vegetable knife (eg tomato).</p>
Year 4	<p>Research existing products, materials and techniques to help generate their ideas.</p> <p>Research and develop simple design criteria.</p> <p>Create annotated sketches and cross section diagrams with technical vocabulary (Use ICT where possible).</p> <p>Write a brief description of their method, showing the order of working in plans</p>	<p>Identify potential risks and discuss how to avoid them.</p> <p>Measure and cut out using centimetres and weigh in grams.</p> <p>Suggest and select appropriate tools for cutting, shaping, joining and finishing.</p> <p>Combine a number of components together in different ways.</p> <p>Select materials according to their function and appearance.</p> <p>Make sure that completed products are carefully finished</p>	<p>Test and evaluate commercial products, describing how a commercial product works.</p> <p>Can alter and adapt original plans following discussion and evaluation.</p> <p>Evaluate their product in relation to the design criteria and explain how it has been successful and how it could be improved.</p> <p>Understand how key events and individuals helped shape the world in which we live (e.g. George Stephenson).</p>	<p>Apply what they know about mechanisms to create movement when planning and designing.</p> <p>Apply what they know about materials and joints to strengthen, stiffen and reinforce complex structures.</p> <p>Use scoring and folding for precision.</p> <p>Apply what they know about electrical systems in their products, e.g. different individual components.</p> <p>Apply their knowledge of conductors and insulators.</p>	<p>Understand where and how ingredients have been produced.</p> <p>Understand main rules of food hygiene.</p> <p>Begin to select their own ingredients when cooking or baking.</p> <p>Recognise how eating different food groups creates a varied diet.</p> <p>Select and use appropriate tools/skills when mixing, slicing, spreading etc.</p> <p>With close supervision, use the claw grip to cut soft foods using a serrated vegetable knife (eg tomato).</p>



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<p><b>Year 5</b></p>	<p>Collect and use information from a target group to generate ideas.</p> <p>Research and develop multiple design criteria.</p> <p>Create ongoing annotated plans and exploded diagrams, which are adapted as work progresses. (Use ICT where possible).</p> <p>Produce step by step plans, thinking ahead to the order of their work.</p> <p>Calculate the amount of materials needed, use this to estimate cost.</p> <p>Generate, develop, model and communicate their ideas through prototypes and pattern pieces.</p>	<p>Identify potential risks and explain how to avoid them.</p> <p>Measure accurately to centimetres and grams.</p> <p>Combine materials for strength and to improve how the product looks.</p> <p>Use permanent and temporary fastenings to join with a greater range of techniques e.g. Staples.</p>	<p>Test and evaluate commercial products, understanding how this information supports their own designs.</p> <p>Develop their designs through their own reflection and the evaluation of others.</p> <p>Carry out tests before making improvements.</p> <p>Identify where evaluation has led to improvement.</p> <p>Understand how key events and individuals helped shape the world in which we live (e.g. Tyne Bridge).</p>	<p>Apply what they know about mechanisms to create movement when planning and designing.</p> <p>Apply what they know about materials and joints to strengthen, stiffen and reinforce complex structures in a variety of ways.</p> <p>Understand how wheels, axels, turning mechanisms, hinges and levers all work together.</p>	<p>Understand where and how ingredients have been grown, reared and processed, discussing seasonality and fair trade.</p> <p>Evaluate food by taste, texture, flavour, health benefits etc.</p> <p>Adapt an existing recipe to design their own dish.</p> <p>Prepare a range of predominantly savoury dishes.</p> <p>Understand food hygiene and safe food storage.</p> <p>With close supervision, use the claw grip to cut soft foods using a serrated vegetable knife (eg tomato).</p>
<p><b>Year 6</b></p>	<p>Collect and use information from a target group to generate ideas, taking the user's views.</p> <p>Research and develop multiple design criteria to meet an identified need by selecting ingredients or materials.</p> <p>Create ongoing annotated plans and prototypes, which are adapted as work progresses. (Use ICT where possible).</p>	<p>Identify potential risks and explain how to avoid them.</p> <p>Measure accurately to centimetres and grams.</p> <p>Make informed choices of tools and materials based on function and aesthetics.</p> <p>Justify their choices of tools, materials and techniques.</p>	<p>Test and evaluate commercial products, understanding how this information supports their own designs.</p> <p>Use robust testing to improve models and finished products, documenting and evaluating the process.</p> <p>Refine the quality of the finished product, including making annotations on the design</p>	<p>Apply what they know about mechanisms to create movement when planning and designing (gears, pulleys and cams).</p> <p>Apply what they know about materials and joints to strengthen, stiffen and reinforce complex structures in a variety of ways.</p> <p>Add electricity to create motion, sound or light.</p>	<p>Understand where and how ingredients have been grown, reared and processed, discussing seasonality and fair trade.</p> <p>Evaluate food by taste, texture, flavour, health benefits etc.</p> <p>Adapt an existing recipe to design their own dish.</p> <p>Prepare a range of predominantly savoury dishes.</p>



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	<p>Use additional sketches to show other ways of doing things and use these to justify choices.</p> <p>Produce step by step plans, thinking ahead to the order of their work.</p> <p>Calculate the amount of materials needed, use this to estimate cost.</p> <p>Make more complex designs to include a combination of other mechanisms.</p>			<p>Use their knowledge of mechanical systems in products (gears, cams and pulleys).</p> <p>Use their knowledge of computing to program, monitor and control products.</p>	<p>Work in a safe and hygienic way.</p> <p>With close supervision, use the claw grip to cut soft foods using a serrated vegetable knife (eg tomato).</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Use proportions when cooking by doubling and halving recipes</p>
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