

Design Technology - End Points Planning Document



Our Vision: Understand and developing a knowledge of how they can use technology creatively to enrich their life and that of others

National Curriculum Objectives Substantive Knowledge EYFS ELGs	Disciplinary Knowledge: Progressive skills	Disciplinary Knowledge: Progressive skills	Progressive vocabulary (recorded in red and black) and Resources (recorded in red)
	Progressive skills may be used to support End Points. This will depend on cohort and class needs	End Points are our objectives that all children will work towards to achieve subject outcomes.	

Year R

<p>Expressive Arts and Design (EAD)</p> <p>ELG: Creating with Materials (Statutory)</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; • Share their creations, explaining the process they have used; • Make use of props and materials when role playing characters in narratives and stories. 	<p>Plan, ideas, design, make, build, construct, join, shape, tools, change, like, dislike, different, improve, healthy, unhealthy, fruit, vegetable, clean, safe, ingredients, cut, sew.</p> <p>Scissors, glue, Sellotape, cardboard, bowl, spoon, butter knife, fabric, paint, decorative items</p>
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Year 1

<p>DESIGN</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 ICT.</p>	<p>Can I talk about my ideas?</p> <p>Can I use pictures and words to describe my design?</p> <p>Can I explain which tools and materials I will need?</p>	<p>Can I describe how something works?</p> <p>Can I explain to someone else how I want to make my product?</p> <p>Can I make a simple plan before making?</p>	<p>Design, product, ideas, draw, plan</p>
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<p>MAKE</p> <p>Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Can I select tools and materials from a range offered by the teacher?</p> <p>Can I measure, mark out and cut using scissors?</p> <p>Can I assemble, join and combine materials? (glue, tape, split pins)</p> <p>Can I use simple finishing techniques?</p>	<p>Can I use my own ideas to make something?</p> <p>Can I choose appropriate resources and tools?</p>	<p>Tools, cut, join, build, shape</p> <p>Scissors, glue, pins, Sellotape, material, fabric, decorative items, ruler, pens</p>
<p>EVALUATE</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>	<p>Can I explore and evaluate a range of existing products?</p> <p>Can I say what I like about my work?</p>	<p>Can I say what I liked about my work and other people's work?</p> <p>Can I identify where my evaluations have led to improvements in my products?</p>	<p>Evaluate, explore, products, like, dislike</p>
<p>TECHNICAL KNOWLEDGE</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products.</p>	<p>Can I build freestanding structure exploring how it can be made stronger?</p> <p>Can I explore and use mechanisms in my products? (levers and sliders)</p>	<p>Can I make my model stronger?</p> <p>Can I make a product which moves?</p>	<p>Strong, build, stiffer, more stable,</p> <p>levers, sliders, pins, Sellotape, glue, scissors, wheels, axles, ruler</p>
<p>COOKING AND NUTRITION</p> <p>Use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where food comes from.</p>	<p>Can I use butter knives and food scissors safely to cut food with help?</p>	<p>Can I cut food safely?</p>	<p>Ingredients, recipe, healthy.</p> <p>Prepare, cut</p> <p>Butter knife, scissors, chopping board, bowl, plate</p>
Year 2			
<p>DESIGN</p> <p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p>	<p>Can I think of ideas and plan what to do next, based on what I know about materials and components?</p>	<p>Can I think of an idea and plan what to do next?</p>	<p>Design, product, ideas, draw</p> <p>Purpose, function, develop, model, template, design criteria, mock-up</p>

Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups and where appropriate ICT.	Can I use models, pictures and words to describe my design?		
<p>MAKE</p> <p>Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Can I select and use a range of tools, materials and equipment to make my product?</p> <p>Can I measure in cm?</p> <p>Can I assemble, join and combine materials? (glue, tape, split pins, staples)</p>	<p>Can I choose tools and materials and explain why I have chosen them?</p> <p>Can I measure materials to use in a model or structure?</p>	<p>Tools, cut, join, build, shape Equipment, finish, materials, components, textiles, construct, measure</p> <p>Scissors, card, ruler, tape measure, glue, pins, Sellotape, staples, fabric, decorative items</p>
<p>EVALUATE</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>	<p>Can I recognise what I have done well in my work?</p> <p>Can I identify where my evaluations have led to improvements?</p>	<p>Can I explain what went well with my work?</p> <p>Can I explain why I have chosen specific textiles?</p>	<p>Evaluate, explore, products Design criteria, like, dislike, textiles, choice, explain</p>
<p>TECHNICAL KNOWLEDGE</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products.</p>	<p>Can I explore and use mechanisms in my products e.g. wheels and axles?</p> <p>Can I measure, mark out, cut and join fabric?</p> <p>Can I select appropriate materials from their properties?</p>	<p>Can I join materials and components in different ways?</p>	<p>Strong, build, stiffer, more stable, levers, sliders</p> <p>Structure, mechanisms, wheels and axles, fabric, properties, mark, cut, join, fabric, appropriate, materials, measure, ruler, scissors, tape, staples, glue, material, fabric, card, wood, tape measure, ruler, thread</p>
<p>COOKING AND NUTRITION</p> <p>Use the basic principles of a healthy and varied diet to prepare dishes.</p>	<p>Can I talk about where food comes from?</p> <p>Can I describe the properties of the food ingredients?</p>	<p>Can I describe the ingredients I am using?</p>	<p>Varied diet, food origins Ingredients, recipe, healthy. prepare</p>

Understand where food comes from.			Butter knife, scissors, chopping board, grater, bowl, plate, scales
Year 3			
<p style="text-align: center;">DESIGN</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, models and sketches.</p>	<p>Can I generate ideas after thinking about who will use them and what they will be used for?</p> <p>Can I plan a sequence of actions?</p> <p>Can I communicate my design ideas in a variety of ways?</p>	<p>Can I prove that my design meets some set criteria?</p> <p>Can I design a product and make sure it looks attractive?</p> <p>Can I produce an annotated sketch of my design?</p>	<p>Research, annotate, sketch, appealing, suitability, function</p>
<p style="text-align: center;">MAKE</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 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>Can I select the tools, techniques and materials needed to make my product?</p> <p>Can I measure, mark out and cut materials accurately?</p>	<p>Can I follow a step-by-step plan, choosing the right equipment and materials?</p> <p>Can I work accurately to measure, make cuts and make holes?</p>	<p>appropriate, technique, accurately, quality, plan, template, measure, mark out, cut, shape, join, accurate, tools, ruler, scissors, tape, staples, glue, material, fabric, card, wood, decorative items, tape measure</p>
<p style="text-align: center;">EVALUATE</p> <p>Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and Consider the views of others to improve their work</p>	<p>Can I reflect on my work and identify improvements needed?</p>	<p>Can I explain how I have improved my original design?</p>	<p>investigate, analyse, successful, criteria, improve, reflect, evaluate</p>

<p>TECHNICAL KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>	<p>Can I build a shell structure exploring how it can be made stronger and more stable?</p> <p>Can I assemble, join and combine fabric using glue, tying or a simple stitch?</p>	<p>Can I make a product which uses a shell structure?</p> <p>Can I make a textile product that combines fabric?</p>	<p>Reinforce, strengthen, technique, folding, rolling, shaping, joining, Material, fabric, card, balsa wood, glue, Sellotape, staples, decorative items, pins</p>
<p>COOKING AND NUTRITION Understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p>	<p>Can I cook a variety of predominantly savoury dishes?</p> <p>Can I use a range of cooking techniques?</p>	<p>Can I describe how food ingredients come together?</p>	<p>Savoury, bacteria, germs Butter knife, scissors, chopping board, grater, bowl, plate, scales, cooking items (baking trays, pans etc.), Sharper knife for cutting (if decided by teacher)</p>
<p>Year 4</p>			
<p>DESIGN Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, models and sketches.</p>	<p>Can I develop and explain my ideas clearly?</p> <p>Can I plan the making process, suggesting a sequence of actions or alternatives if needed?</p>	<p>Can I use ideas from other people when designing?</p> <p>Can I produce a plan and explain it?</p>	<p>Purposeful, attach, measurements, cm, design, template, plan, modify, sequence, appeal</p>

<p>MAKE</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</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>Can I measure, mark out and cut accurately?</p> <p>Can I use finishing techniques to strengthen and improve the appearance of my product?</p>	<p>Can I present a product in an interesting way?</p> <p>Can I measure accurately?</p> <p>Can I persevere and adapt my work when my original ideas do not work?</p>	<p>Functional, measure, mark, cut, finishing techniques, strengthen,</p> <p>Scissors, card, ruler, tape measure, glue, pins, Sellotape, staples, fabric, decorative items, wood, hacksaw, bench hook, jinx jointers</p>
<p>EVALUATE</p> <p>Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and Consider the views of others to improve their work</p>	<p>Can I investigate and evaluate a range of existing products?</p> <p>Can I identify improvements needed?</p>	<p>Can I evaluate and suggest improvements for my designs?</p> <p>Can I evaluate products for both their purpose and appearance?</p>	<p>purpose, appearance, views, justify</p>
<p>TECHNICAL KNOWLEDGE</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>	<p>Can I use electrical components in my product?</p> <p>Can I use mechanisms to make things move in different ways?</p>	<p>Can I make a product that uses electrical components?</p> <p>Can I make a mechanism that uses levers and linkages?</p>	<p>Circuit, buzzer, lamp, switch, battery, wire, levers, linkages</p> <p>Electrical components as needed to link with science work</p>

<p>COOKING AND NUTRITION</p> <p>Understand and apply the principles of a healthy and varied diet</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p>	<p>Can I explain the importance of hygiene?</p> <p>Can I present my food product so that it impresses the intended user?</p>	<p>Can I explain how to be both hygienic and safe when using food?</p> <p>Can I present my food attractively?</p>	<p>Varied, diet, all food groups, grown, reared</p>
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Year 5

<p>DESIGN</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>	<p>Can I develop my own design criteria after carrying out appropriate research?</p> <p>Can I plan the making process, suggesting a sequence of actions?</p> <p>Can I communicate my ideas in a variety of ways?</p>	<p>Can I come up with a range of ideas after collecting information from different sources?</p> <p>Can I produce a detailed step by step plan?</p> <p>Can I explain how a product will appeal to a specific audience?</p>	<p>User, sources, diagram, step by step, process, research, annotated sketches, pattern pieces</p>
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<p>MAKE</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according</p>	<p>Can I select tools, techniques and materials needed to make my product?</p> <p>Can I use joins that are flexible to allow for dismantling or folding?</p>	<p>Can I use a range of tools and equipment competently?</p> <p>Can I make a prototype before I make a final version?</p>	<p>functional properties, aesthetic qualities</p> <p>Scissors, card, ruler, tape measure, glue, pins, Sellotape, staples, fabric, decorative items, wood, hacksaw, bench hook, jinx jointers</p>
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<p>to their functional properties and aesthetic qualities</p>			
<p>EVALUATE Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and Consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p>	<p>Can I investigate and evaluate a range of existing products thinking about my own design criteria?</p>	<p>Can I evaluate appearance and function against original criteria?</p>	<p>Functionality, positive feature, draw backs, investigate, evaluate</p>
<p>TECHNICAL KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products.</p>	<p>Can I build a frame structure, exploring how it can be made stronger and more stable? Can I assemble, join and combine fabric using glue, tying or stitching?</p>	<p>Can I make a textile product using a range of stitches? Can I make a frame structure?</p>	<p>Pattern, running stitch, back stitch, seam Material, fabric, thread, decorative items, scissors, materials for making a frame structure, glue, scissors, card, wood, hacksaw, bench hook, jinx jointers</p>
<p>COOKING AND NUTRITION Understand and apply the principles of a healthy and varied diet</p>	<p>Can I prepare and cook predominantly savoury dishes safely and hygienically? Can I use a range of techniques?</p>	<p>Can I show that I can be both hygienic and safe in the kitchen? Can I combine ingredients to make a savoury dish?</p>	<p>Ripe, chilled, harvest, seasonal, seasoned Butter knife, scissors, chopping board, grater, bowl, plate, scales,</p>

<p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>			<p>cooking items (baking trays, pans etc.), Sharper knife for cutting, wooden spoon, spatula</p>
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Year 6

<p>DESIGN</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>	<p>Can I develop my own design criteria after carrying out appropriate research and justify my choices?</p> <p>Can I generate ideas after thinking about who will use them and what they will be used for?</p>	<p>Can I justify my plans in a convincing way?</p> <p>Can I show that I consider culture and society in my plans and designs?</p>	<p>User, sources, diagram, step by step, process, research, annotated sketches, pattern pieces Market research, culture, society, exploded diagram, prototype</p>
<p>MAKE</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according</p>	<p>Can I suggest alternative ways of making a product if the first attempt fails?</p> <p>Can I measure, mark out and cut materials accurately to the nearest mm?</p>	<p>Can I follow and refine my plans?</p> <p>Can I measure accurately in mm?</p>	<p>functional properties, aesthetic qualities components, finishing Scissors, card, ruler, tape measure, glue, pins, Sellotape, staples, fabric, decorative items, wood, hacksaw, bench hook, jinx jointers</p>

<p>to their functional properties and aesthetic qualities</p>			
<p>EVALUATE Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and Consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p>	<p>Can I reflect on my work and identify improvements needed? Can I understand how key events and individuals in design and technology have helped shape the world?</p>	<p>Can I show that I can test and evaluate my products? Can I understand the importance of design in the world?</p>	<p>functionality, positive feature, draw backs, investigate, evaluate Analyse, critique,</p>
<p>TECHNICAL KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products.</p>	<p>Can I use mechanisms to make things move in different ways? Can I use electrical components in my products?</p>	<p>Can I make a product using gears / pulleys / cams? Can I use electrical systems in my product?</p>	<p>Pattern, running stitch, back stitch, seam Gears, pulleys, cams, electrical components, reinforce, Gears, pulleys, cams, electrical equipment as needed (link to science work), buzzers, bulbs, switches, pins, glue, wood, tape measure, ruler, wires, cell</p>
<p>COOKING AND NUTRITION Understand and apply the principles of a healthy and varied diet</p>	<p>Can I explain that food is grown, reared or caught? Can I describe how seasons affect what food is available?</p>	<p>Can I explain what seasonality means and where some foods originate from?</p>	<p>Ripe, chilled, harvest, seasonal, seasoned Refrigerated, frozen, rancid, stale, mouldy, expiration date</p>

<p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>Can I prepare and cook predominantly savoury dishes safely and hygienically?</p>	<p>Can I use a range of techniques to make predominantly savoury dishes?</p>	<p>Butter knife, scissors, chopping board, grater, bowl, plate, scales, cooking items (baking trays, pans etc.), Sharper knife for cutting, peeler, wooden spoon, spatula</p>
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