

DT: Key Stage 1

EYFS Framework 2021

Expressive Arts and Design area of learning: The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

Taken from EYFS Framework 2021

Taken from Development Matters 2021

	Designing	Making	Evaluating	Technical Knowledge	Food Technology
EYFS	<ul style="list-style-type: none"> • Begin to show accuracy and care when drawing [ELG: Fine Motor skills] • Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Select appropriate resources • Use gestures, talking and arrangements of materials and components to show design • Use contexts set by the teacher and myself • Use language of designing and making (join, build, shape, longer, shorter, heavier etc.) 	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paint brushes and cutlery [ELG: Fine Motor skills] • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function [ELG: Creating with materials] • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills. • Construct with a purpose, using a variety of resources • Use simple tools and techniques • Build / construct with a wide range of objects • Select tools & techniques to shape assemble and join • Replicate structures with materials / components • Discuss how to make an activity safe and hygienic • Record experiences by drawing, writing, voice recording 	<ul style="list-style-type: none"> • Share their creations, explaining the process they have used [ELG: Creating with materials] • Adapt work if necessary • Dismantle, examine, talk about existing objects/structures • Consider and manage some risks • Practice some appropriate safety measures independently • Talk about how things work • Look at similarities and differences between existing objects / materials / tools • Describe textures 	<ul style="list-style-type: none"> • Show an interest in technological toys 	<ul style="list-style-type: none"> • Begin to understand some food preparation tools, techniques and processes • Practice stirring, mixing, pouring, blending • Discuss how to make an activity safe and hygienic • Discuss use of senses • Understand need for variety in food • Begin to understand that eating well contributes to good health

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		<p><i>Design - purposeful, functional, appealing products for themselves and other users based on design criteria</i></p> <p><i>Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i></p>	<p><i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</i></p> <p><i>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p>	<p><i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i></p>	<p><i>build structures, exploring how they can be made stronger, stiffer and more stable</i></p> <p><i>explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i></p>	<p><i>use the basic principles of a healthy and varied diet to prepare dishes</i></p> <p><i>understand where food comes from</i></p>
Year 1	<ul style="list-style-type: none"> • use own ideas to design something • describe how their own idea works • design a product which moves • explain to someone else how they want to make their product • Develop their design ideas applying findings from their earlier research • make a simple plan before making. 	<ul style="list-style-type: none"> • use own ideas to make something • Select appropriate resources and tools • Make their design using appropriate techniques • With help measure, mark out, cut and shape a range of materials • Use tools eg scissors and a hole punch safely • Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. 	<ul style="list-style-type: none"> • Evaluate their product by discussing how well it works in relation to the purpose • Evaluate their products as they are developed, identifying strengths and possible changes they might make • Evaluate their product by asking questions about what they have made and how they have gone about it. 	<ul style="list-style-type: none"> • make their own model stronger 	<ul style="list-style-type: none"> • cut food safely 	

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		<i>Design - purposeful, functional, appealing products for themselves and other users based on design criteria Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i>	<i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i>	<i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i>	<i>build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i>	<i>use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from</i>
Year 2	<ul style="list-style-type: none"> think of an idea and plan what to do next explain why they have chosen specific materials. Generate ideas by drawing on their own and other people's experiences Develop their design ideas through discussion, observation, drawing and modelling Identify a purpose for what they intend to design and make Identify simple design criteria Make simple drawings and label parts 	<ul style="list-style-type: none"> choose tools and materials and explain why they have chosen them join materials and components in different ways measure materials to use in a model or structure Begin to select tools and materials; use vocabulary to name and describe them Measure, cut and score with some accuracy Use hand tools safely and appropriately Assemble, join and combine materials in order to make a product. 	<ul style="list-style-type: none"> Evaluate against their design criteria Explain what went well with their work Evaluate their products as they are developed, identifying strengths and possible changes they might make Talk about their ideas, saying what they like and dislike about them. 	<ul style="list-style-type: none"> make a model stronger and more stable 	<ul style="list-style-type: none"> weigh ingredients to use in a recipe describe the ingredients used when making a dish or cake 	

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	Textiles	Structures	Mechanisms	Food Technology
Year 1	<p>Fabric</p> <ul style="list-style-type: none"> Join a seam using Velcro or glue. 	<p>Moving pictures</p> <ul style="list-style-type: none"> practise stiffening e.g. use straws/ pipe cleaners/ card strips to reinforce pictures to make them less floppy. 	<p>Moving pictures</p> <ul style="list-style-type: none"> Join materials using tape, glue and paper fasteners. Investigate making simple sliding mechanisms to make a picture move <i>side to side</i> and <i>up and down</i> using card strips and paper fasteners. Investigate simple lever mechanisms using card strips and paper fasteners to create a pivot. Use a hole punch to punch holes for a paper fastener lever. 	<p>Fruit Salad</p> <ul style="list-style-type: none"> cut food safely Use simple hand tools safely.
Year 2	<p>Fabric shape</p> <ul style="list-style-type: none"> Create a template Cut fabric Use running stitch Use a fastening 	<p>Vehicles</p> <ul style="list-style-type: none"> To join wood accurately. To measure and cut dowelling to make an axle. 	<p>Vehicles</p> <ul style="list-style-type: none"> use wheels and axles. Investigate different ways of creating fixed and unfixed axles. 	<p>Cake baking</p> <ul style="list-style-type: none"> weigh ingredients to use in a recipe describe the ingredients used when making a dish or cake

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Designing	Making	Evaluating	Technical Knowledge	Food Technology
<p><i>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</i></p> <p><i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p>	<p><i>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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p>	<p><i>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</i></p> <p><i>understand how key events and individuals in design and technology have helped shape the world</i></p>	<p><i>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> <p><i>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</i></p> <p><i>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</i></p> <p><i>apply their understanding of computing to program, monitor and control their products.</i></p>	<p><i>understand and apply the principles of a healthy and varied diet</i></p> <p><i>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</i></p> <p><i>understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</i></p>
<p>Year 3</p> <ul style="list-style-type: none"> • Design a product and make sure it meets a set of design criteria. • Use annotated diagrams to model ideas. • choose a material for both its suitability and its appearance • Generate ideas for an item, considering its purpose and the user/s • Identify a purpose and establish criteria for a successful product. • Plan the order of their work before starting • Explore, develop and communicate design proposals by modelling ideas of existing products. 	<ul style="list-style-type: none"> • follow a step-by-step plan, choosing the right equipment and materials • select the most appropriate tools and techniques for a given task • Measure, mark out, cut, score and assemble components with more accuracy • Work safely and accurately with a range of simple tools • Think about their ideas as they make progress and be willing change things if this helps them improve their work • Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT 	<ul style="list-style-type: none"> • Disassemble and evaluate familiar products • Evaluate their product against original design criteria e.g. <i>how well it meets its intended purpose</i> • Explain how to improve a finished model • Know why a model has or has not been successful 	<ul style="list-style-type: none"> • know how to strengthen a product by stiffening a given part or reinforce a part of the structure 	<ul style="list-style-type: none"> • describe how food ingredients come together • can talk about which food is healthy and which food is not • know when food is ready for harvesting

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		<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>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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</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>understand how key events and individuals in design and technology have helped shape the world</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>apply their understanding of computing to program, monitor and control their products.</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>understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</p>
Year 4	<ul style="list-style-type: none"> • Generate ideas, considering the purposes for which they are designing • Use ideas from other people when designing • produce a plan and explain it • Persevere and adapt work when original ideas do not work, suggesting alternative methods of making, if the first attempts fail • Communicate ideas in a range of ways, including by sketches and drawings which are annotated • Make labelled drawings from different views showing specific features • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. 	<ul style="list-style-type: none"> • Select appropriate tools and techniques for making their product • Know which tools to use for a particular task and show knowledge of handling the tool • know which material is likely to give the best outcome • Accurately measure, mark out, cut and shape a range of materials • Join and combine materials and components accurately in temporary and permanent ways • Use simple graphical communication techniques e.g. photographs, drawings, diagrams, geometric designs/ engineering drawings (using 3D paper). 	<ul style="list-style-type: none"> • Evaluate products and identify criteria that can be used for their own designs • Evaluate and suggest improvements for design • Evaluate products for both their purpose and appearance • Explain how the original design has been improved • Present a product in an interesting way • Evaluate their work both during and at the end of the assignment • Evaluate their products carrying out appropriate tests 	<ul style="list-style-type: none"> • links scientific knowledge by using lights, switches • use IT where appropriate to add to the quality of the product 	<ul style="list-style-type: none"> • know how to be both hygienic and safe when using food • bring a creative element to the food product being designed 	
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		<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>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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</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 understand how key events and individuals in design and technology have helped shape the world</p>	<p>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>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 understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</p>
Year 5	<ul style="list-style-type: none"> • Come up with a range of ideas after collecting information from different sources • produce a detailed, step-by-step plan • Use cross sectional diagrams to model ideas. • explain how a product will appeal to a specific audience for a purpose. • Use CAD to communicate design ideas. (emblem for hat) • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail • Use results of investigations, information sources, including ICT when developing design ideas 	<ul style="list-style-type: none"> • Use a range of tools and equipment competently • Make a prototype before making a final version • Select appropriate materials, tools and techniques • Measure and mark out accurately • Cut and join with accuracy to ensure a good-quality finish to the product 	<ul style="list-style-type: none"> • Suggest alternative plans; outlining the positive features and draw backs • Evaluate appearance and function against original criteria • Test and evaluate ideas to improve outcome of product throughout the making process • Evaluate product personally and seek evaluation from others 	<ul style="list-style-type: none"> • use knowledge to improve a made product by strengthening, stiffening or reinforcing 		

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<p><i>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</i></p>	<p><i>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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p>	<p><i>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</i></p>	<p><i>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.</i></p>	<p><i>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 understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</i></p>
<p>Year 6</p> <ul style="list-style-type: none"> • Use market research to inform plans and ideas. • Communicate their ideas through detailed labelled drawings and exploded diagrams to model ideas. • Follow and refine original plans • Justify planning in a convincing way • Show that culture and society is considered in plans and designs • Use CAD to communicate design ideas (Vehicle body) • Develop a design specification • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways • Plan the order of their work, choosing appropriate materials, tools and techniques 	<ul style="list-style-type: none"> • know which tool to use for a specific practical task • know how to use any tool correctly and safely • know what each tool is used for • explain why a specific tool is best for a specific action • Assemble components make working models • Construct products using permanent joining techniques • Make modifications as they go along 	<ul style="list-style-type: none"> • know how to test and evaluate designed products • explain how products should be stored and give reasons • evaluate product against clear criteria • Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels • Evaluate against their original criteria and suggest ways that their product could be improved 	<ul style="list-style-type: none"> • use electrical systems correctly and accurately to enhance a given product • know which IT product would further enhance a specific product • use knowledge to improve a made product by strengthening, stiffening or reinforcing 	<ul style="list-style-type: none"> • be both hygienic and safe in the kitchen • know which season various foods are available for harvesting • know how to prepare a meal by collecting the ingredients in the first place • understand the difference between a savoury and sweet dish • explain how food ingredients should be stored and give reasons

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Year 3	<p>Drawstring Bag</p> <ul style="list-style-type: none"> • Design a drawstring bag • Use Tie Dye to camouflage. • Create a hem (for drawstring using running stitch • Join the seam using over stitch • Use running stitch to add initials 	<p>Shell Structures</p> <ul style="list-style-type: none"> • Use tools to measure, mark out, cut, score, shape and assemble • Construct strong, stiff shell structures using layers, corrugating and ribbing (layers of straws) • Use nets of cubes and cuboids and, where appropriate, more complex 3D shapes. (possible CAD using Microsoft WORD) • Use saws safely to accurately cut wood. • To join wood using strengthening techniques to create a 3D structure. 	<ul style="list-style-type: none"> • Investigate fastenings. • Construct hinges to open and close a box. 	
Year 4	<p>Cushions</p> <ul style="list-style-type: none"> • Create a seam • Use a sewing machine • Applique designs onto the cushion • Use stitches to join fabric e.g. running stitch, over stitch & back stitch. • Edge using blanket stitch 	<p>Spotlight</p> <ul style="list-style-type: none"> • Select appropriate tools and techniques for making their product • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques • Join and combine materials and components accurately in temporary and permanent ways 	<p>Spotlight</p> <ul style="list-style-type: none"> • Make a simple circuit incorporating a battery, light bulb, switch and connecting wires. • Investigate making switches that operate in different ways (press, turn, push) 	<p>Dough Based Product</p> <ul style="list-style-type: none"> • Follow a recipe • Measure ingredients • Knead dough • Use tools safely to slice, chop and grate ingredients.
Year 5	<p>Hat</p> <ul style="list-style-type: none"> • Measure circumference of heads • Create seams • Strengthen hat structure • Use running stitch, back stitch, blanket stitch. • Sewing machine seams • CAD and 3D printer to create a badge to attach to hat 	<p>Moving Toy</p> <ul style="list-style-type: none"> • Cut and join wood using accurate measurements. • Use techniques to strengthen and stiffen structures. 	<p>Moving Toy</p> <ul style="list-style-type: none"> • To understand that different shaped CAMs create different movements • Create a CAM mechanism • Use a drill to make off centre hole. 	
Year 6	<p>Clothing</p> <ul style="list-style-type: none"> • Measure people to work out sizes. • Create templates. • Pin, sew and stitch materials together. • To use a sewing machine. • Combine different fabric shapes. • CAD and 3D printer to create buttons/ fastenings 	<p>Vehicles</p> <ul style="list-style-type: none"> • Create body of truck using 3D nets (possible CAD using Microsoft WORD) • Use joining techniques to reinforce a structure. 	<p>Vehicles</p> <ul style="list-style-type: none"> • design a product that requires pulleys or gears. • To control speed and direction using pulleys and gears. • To create electrical circuits with switches. 	<p>Healthy dish</p> <ul style="list-style-type: none"> • work within a budget to create a meal • Follow a complex recipe. • Understand how an oven/hob is used to heat and cook food. • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Use a range of tools to chop, slice, blend and grate food stuffs