

Hitherfield Primary School Progression Framework for: Design Technology

Design Technology Curriculum Map

Year	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Nursery Adults are aware of stages the stages of development in EAD and use this to interact with children within Continuous Provision in the most appropriate way	Explore different materials freely, to develop their ideas about how to use them and what to make Examples of modelled activities might include: making an owl or drawing a friend	Examples of modelled activities might include: sculpting animals using clay, using natural resources such as leaves and twigs to make hedgehog pictures, using junk modelling to make pets for the vet /pet shop, christmas cards and decorations, handprint animal calendars	Examples of modelled activities might include: sculpting aliens using clay, using natural resources such as leaves and twigs to make space maps, using junk modelling to make rockets and space helmets for the Space Station, or making Chinese dragon and fans for Luna New Year.	Examples of modelled activities might include: constructing houses and bridges from bricks or boxes, natural resources such as leaves and twigs or making Easter cards and Easter bunnies.	Examples of modelled activities might include: clay minibeasts, homes for bugs and worms, symmetrical butterfly pictures, drawings of flowers and plants, using the garden for natural pigments.	Examples of modelled activities might include: role-play props, pirate costumes, jewellery and treasure, drawing maps
Reception Adults are aware of stages the stages of development in EAD and use this to interact with children within Continuous Provision in the most appropriate way	Whole school project Cutting Skills Matisse - the Cut Outs			Joining Animal masks	Healthy Eating Creating a healthy snack	Cutting Skills Woodwork
Year 1		Tye dye fabric	Design and make a puppet	Cooking and nutrition Fruit salad/fruit kebabs		
Year 2			Design and make a wheeled vehicle		Textiles- Weaving	Cooking and nutrition Dips and dippers
Year 3	Cooking and nutrition Healthy breakfast (eg.smoothie/muesli/ porridge/ oat bar)		Mechanical posters		Make a Saxon style model building/village	

Year 4	Headdress for carnival			Design and make a Kite	Cooking and nutrition Bread making	
Year 5	Wooden framed lantern (with an electrical component)	Cooking and nutrition Global food that represents our Lambeth community				Free standing structures/ marble run
Year 6		Cams: Automata animals	Cooking and nutrition: Egyptian style salad and flatbread	Jewellery making (fastenings)		

Progression of skills in Design Technology

Statutory Framework Objectives	EYFS:	Key Stage 1:	Key Stage 2:
	<p>Creating with Materials ELG</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>Development Matters statements in bold.</p>	<p>Design</p> <ul style="list-style-type: none"> • design purposeful, functional, appealing products for themselves and other users based on design criteria; • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make</p> <ul style="list-style-type: none"> • 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. <p>Evaluate</p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products; • evaluate their ideas and products against design criteria. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • 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. <p>Cooking and Nutrition</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes; • understand where food comes from. 	<p>Design</p> <ul style="list-style-type: none"> • 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>Make</p> <ul style="list-style-type: none"> • 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>Evaluate</p> <ul style="list-style-type: none"> • 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>Technical Knowledge</p> <ul style="list-style-type: none"> • 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>Cooking and Nutrition</p> <ul style="list-style-type: none"> • 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.

Year	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Skill: Design	<p>Explore different materials freely, to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p>	<p>Explore, use and refine a variety of artistic effects to express their ideas and feelings</p>	<p>Have own ideas and explain what I want to do.</p> <p>Use pictures and some words to plan.</p> <p>Design a product following simple design criteria</p>	<p>Have own ideas, explain what I want to do and describe how</p> <p>Describe design using pictures, words and diagrams</p> <p>Design a product following design criteria</p> <p>Choose best tools and materials, and explain choices</p>	<p>Create a design criteria and plan which shows function, purpose, order, equipment and tools</p> <p>Describe design using an accurately labelled sketch and words</p> <p>Make design decisions</p>	<p>Show design meets a range of requirements and is fit for purpose</p> <p>Explain how a product will work.</p> <p>Begin to create own design criteria</p> <p>Produce a plan which includes an annotated sketch</p> <p>Make and explain design decisions considering availability of resources</p>	<p>Create own design criteria</p> <p>Produce a logical, realistic plan and explain it to others.</p> <p>Make design decisions considering resources.</p> <p>Clearly explain how the product will work.</p>	<p>Come up with innovative design ideas and identify features of design that will appeal to the intended user</p> <p>Create own design criteria</p> <p>Follow and refine a logical plan.</p> <p>Use annotated sketches and diagrams</p> <p>Make design decisions, considering, resources</p> <p>Clearly explain how each part of product will work, and how they are fit for purpose</p>
Skill: Make	<p>Join different materials and explore different textures.</p> <p>Begin to experiment with materials.</p>	<p>Return to and build on their previous learning, refining ideas and developing their ability to represent them</p> <p>Create collaboratively, sharing ideas, resources and skills</p>	<p>Explain what I am doing and consider what I need to do next</p> <p>Select tools/ equipment to cut, shape, join, finish and explain choices</p> <p>Measure, mark out, cut and shape, with support</p> <p>Choose suitable materials and explain choices</p> <p>Work in a safe manner</p>	<p>Join materials/ components together in different ways</p> <p>Measure, mark out, cut and shape materials and components, with support.</p> <p>Choose suitable materials and explain choices</p> <p>Use finishing techniques to make product look good</p> <p>Work safely</p>	<p>Select suitable tools/equipment, and materials, explain choices.</p> <p>Work safely using tools and equipment</p> <p>Begin to measure, mark out, cut and shape, assemble, join and combine materials/ components with some accuracy</p> <p>Begin to apply a range of finishing techniques with some accuracy</p>	<p>Select suitable tools and equipment and use accurately</p> <p>Select appropriate materials, fit for purpose; explain choices</p> <p>Work through a plan in order.</p> <p>Measure, mark out, cut, assemble, join and combine materials/components with some accuracy</p>	<p>Use selected tools/ equipment with good level of precision</p> <p>Select appropriate materials, fit for purpose.</p> <p>Create and follow detailed step-by-step plan</p> <p>Mainly measure, mark out, cut, assemble, join and combine materials/components and apply a range of finishing techniques</p>	<p>Use selected tools and equipment precisely</p> <p>Produce suitable lists of tools, equipment, materials needed and which are fit for purpose</p> <p>Create, follow, and adapt detailed step-by-step plans</p> <p>Explain how a product will appeal to user</p> <p>Accurately measure, mark out, cut, assemble, join and combine materials/components</p>

								and apply a range of finishing techniques Use techniques that involve a number of steps
Skill: Evaluate	Look and talk about what they have produced, describing simple techniques and media used.	Look and talk about what they have produced, describing simple techniques and media used	Talk about my work, linking it to what I was asked to do Talk about existing products considering: use, materials, how they work, and say what is and isn't good Begin to talk about what could make product better	Describe what went well, thinking about design criteria, what I would do differently if I were to do it again and why Talk about existing products considering: use, materials, how they work.	Use design criteria to evaluate finished product Say what I would change to make design better	Refer to design criteria while designing and making and use criteria to evaluate product Begin to explain how I could improve original design Discuss by whom, when and where products were designed	Evaluate quality of design while designing and making Evaluate finished product against specification, considering purpose and appearance. Test and evaluate final product Evaluate and discuss existing products.	Evaluate quality of design while designing and making; is it fit for purpose? Evaluate ideas and finished product against specification, stating if it's fit for purpose Test and evaluate final product; explain the effect different resources may have had Do thorough evaluations of existing products
Skill: Technical skills/ knowledge	Cutting: Ripping with hands Begin to use a scissor grip but may not be secure Joining: Glue (PVA or glue stick) Sellotape Begin to join flat surfaces successfully	Cutting: Scissors & Shaped scissors Confident use of scissors e.g. cutting out a shape, sticking to a line Use more complex cutting tools e.g. saw in woodwork while supervised Joining: Join surfaces of different shapes: tape, bands, stitching, paperclips, staples, tags, hole punch Combine resources Develop joining	Describe differences in materials Suggest ways to make material/product stronger Measure, cut and manipulate textiles to make a product, with some support Choose suitable textiles	Begin to understand how to use wheels and axles Measure and join textiles together to make a product, and explain how I did it Carefully cut textiles to produce accurate pieces	Begin to understand simple mechanical systems that use levers and linkages Work accurately to make cuts and holes Join materials and begin to make strong structures	Measure carefully to avoid mistakes Attempt to make product strong by making a strong, stiff structure Explain how to join things in a different way to strengthen structures Select most appropriate tools / techniques	Select materials carefully, considering intended use of product and appearance Explain how product meets design criteria Measure accurately enough to ensure precision Ensure product is strong and fit for purpose Begin to reinforce and strengthen a 3D frame Think of a range of ways to join things	Select materials carefully, considering intended use of the product, the aesthetics and functionality. Explain how product meets design criteria Refine product after testing, considering aesthetics, functionality and purpose Make product attractive and strong Use a range of joining techniques

		techniques, e.g. Tabs for glueing and hinges						Use cams to create movement
Skill: Cooking and Nutrition	Cooking: Combining different ingredients, and then cooling or heating (cooking) them UW: Talk about the differences between materials and changes they notice. PSED: Be increasingly independent in meeting their own care needs, e.g., brushing teeth, washing and drying their hands thoroughly. PSED: Make healthy choices about food, drink, activity and toothbrushing.	PSED: Manage their own needs - personal hygiene PSED: Know and talk about the different factors that support their overall health and wellbeing: including healthy eating Create a healthy snack	Describe textures Wash hands & clean surfaces Think of interesting ways to present food Say where some foods come from, (i.e. plant or animal) Discuss how fruit and vegetables are healthy Cut, peel and grate safely, with support	Understand the importance of hygiene Understand the importance of varied diet Say where food comes from (animal, underground etc.) Describe how food is farmed, home-grown, caught Explain there are groups of food and describe “five a day” Cut, peel and grate with increasing confidence	Prepare, cook and use equipment safely and hygienically Think about how to grow plants to use in cooking Begin to understand food comes from UK and wider world Describe how healthy diet= variety/balance of food/drinks Explain how food and drink are needed for active/healthy bodies. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Prepare, cook and use equipment safely and hygienically and explain why this is important Understand ingredients can be fresh, pre-cooked or processed Understand about food being grown, reared or caught in the UK or wider world Describe eat well plate and how a healthy diet=variety / balance of food and drinks Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Explain how and why to be safe / hygienic Understand seasonality of foods Describe how different cultures use different ingredients and this is linked to where they are grown or traded Explain how there are different substances in food / drink needed for health Prepare and cook some savoury dishes safely and hygienically Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, with increasing confidence.	Explain seasonality of foods and how different cultures use ingredients depending on availability and regionality Name some types of food that are grown, reared or caught in the wider world Prepare and cook savoury dishes safely and hygienically including the use of a heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading.