

Design Technology Knowledge Progression Year Group Overview

<p>Thread</p>	<p>Early Learning Goal – Sept 21 ELG: Fine Motor Skills Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases; - Use a range of small tools, including scissors, paint brushes and cutlery; - Begin to show accuracy and care when drawing. <p>Is developing small motor skills so is able to use a range of tools competently, safely and confidently eg pencils for drawing and writing, paint brushes, scissors, knives, forks and spoons.</p> <p>Expressive Arts and Design ELG: Creating with Materials 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; - Creates collaboratively, sharing ideas, resources and skills -Explores, uses and refines a variety of artistic effects to express ideas and feelings - is able to return to and build upon previous learning, refining ideas and developing their ability to represent them. 	<p>Key Stage 1</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>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
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	Reception	Year 1	Year 2
Developing, planning and communicating ideas.	<p>Construct with a purpose in mind, using a variety of resources (All terms)</p> <p>Vocabulary- symmetrical, shape, repeat, Tool names- scissors, sellotape, shape, join, layer, ideas, like, dislike, textures e.g bumpy, smooth</p>	<ul style="list-style-type: none"> • Draw on their own experience to help generate ideas • Suggest ideas and explain what they are going to do • Identify a target group for what they intend to design and make • Model their ideas in card and paper • Develop their design ideas applying findings from their earlier research <ul style="list-style-type: none"> • Communicate these ideas through talk and drawings and mock ups where relevant. • Understand where food comes from, talk about and express ideas (T2, T4, T6) 	<ul style="list-style-type: none"> • 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 • Develop, model and communicate their ideas through talking, mock-ups and drawings. • Have a growing understanding of where food comes from and demonstrate understanding of a healthy diet when making choices. (T1, T3, T4, T6)
Working with tools, equipment, materials and components to make quality products (incfood)	<ul style="list-style-type: none"> • Investigate various construction materials • Realise tools can be used for a purpose <p>Join construction pieces together to build & balance</p> <ul style="list-style-type: none"> • Begin to try out a range of tools & techniques safely • Use simple tools & techniques competently & appropriately • Build & construct with a wide range of objects, selecting and adapting their work where necessary • Select the tool & techniques they need to shape, assemble & join materials they are using • Understand that equipment & tools need to be used safely with food preparation and eating • Can wash & dry hands understanding the importance with food hygiene • Shows understanding of how to transport & store equipment safely (T2, T3, T5) <p>Vocabulary- paint tool names, paint colours, line, colour, shape, thick, thin, pastels- smudge, blend different lines: straight, curved, wavy, dashed texture- bumpy, smooth, rough, shiny, crinkly, Likes/ dislikes- why?</p>	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape • Select and use appropriate fruit and vegetables, processes and tools to perform a job e.g. peel, cut, slice, squeeze, grate and chop safely; marking out, cutting, • Use basic food handling, hygienic practices and personal hygiene • Use simple finishing techniques to improve the appearance of their product (T2, T4, T6) <p>Vocabulary- planning, investigating design, evaluate, make, user, purpose, ideas, product,</p>	<ul style="list-style-type: none"> • Begin to select tools and materials; use vocab' 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 • Cut, shape and join fabric to make a simple garment. Use basic sewing techniques Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Follow safe procedures for food safety and hygiene • Select from a range of ingredients and materials according to their characteristics to create a chosen product, practical tasks, explaining their choices. • Choose and use appropriate finishing techniques (T1, T3, T4, T6) <p>Vocabulary- investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish</p>
Evaluating processes and products	<ul style="list-style-type: none"> • Build & construct with a wide range of objects, selecting and adapting their work where necessary • Look and talk about what they have produced describing simple techniques (T4, T6) <p>Vocabulary- wheel, join, turn, shape, likes, dislikes, colours, paint tool names, thick, thin brush strokes</p>	<ul style="list-style-type: none"> • Taste, explore and evaluate a range of products to determine the intended user's preferences for the product • 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 • Express their own likes and dislikes for the products made. (T2, T4, T6) <p>Vocabulary- fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling,</p>	<ul style="list-style-type: none"> • Evaluate against their design criteria • 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 • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria (T3, T4) <p>Vocabulary- fruit and vegetable names, names of equipment and utensils sensory vocabulary soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, food groups</p>

		cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating design, evaluate, make, user, purpose, ideas, product,	
Technical Knowledge: Mechanisms / mechanical systems	Explore the use of wheels, sliders and levers within their play and equipment accessible. (T6) Vocabulary- wheel, join, turn, slide, lever, shape, likes, dislikes, colours, paint tool names, thick, thin brush strokes	<ul style="list-style-type: none"> • Design and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project. (T4) Vocabulary- planning, investigating design, evaluate, make, user, purpose, ideas, product, slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	<ul style="list-style-type: none"> • Design and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles. • Know and use technical vocabulary relevant to the project. (T3) Vocabulary- investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used
Technical knowledge: structures	Explore creating structures for different purposes with a range of premade equipment (eg blocks, Lego etc) (All Terms)	Experiment with junk modelling/other materials inc natural how to create structures for various purposes – begin to evaluate effectiveness of designs. (T2) Vocabulary- planning, investigating design, evaluate, make, user, purpose, ideas, product, cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder	<ul style="list-style-type: none"> • Know how to make freestanding structures stronger, stiffer and more stable. (T1) Vocabulary- Strong, sturdy, stable, joining, cutting, shaping investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function