



Design Technology Curriculum Overview



Subject	Autumn	Spring	Summer
EYFS	<p>In the EYFS, children are given opportunities to create with materials and be imaginative and expressive through both child-initiated learning and directed learning which often has cross-curricular links. By the end of the EYFS, though Physical Development children will have been given the opportunity to:</p> <p><i>Use large-muscle movements to wave flags and streamers, paint and make marks.</i></p> <p><i>Use one-handed tools and equipment, for example, making snips in paper with scissors.</i></p> <p><i>Explore how things work.</i></p> <p><i>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a different city with buildings and a park.</i></p> <p><i>Explore different materials freely, in order to develop their ideas about how to use them and what to make, e.g through making structures.</i></p> <p><i>Develop their own ideas and then decide which materials to use to express them.</i></p> <p><i>Create closed shapes with continuous lines and begin to use these shapes to represent objects.</i></p> <p><i>Progress towards a more fluent style of moving with developing control and grace.</i></p> <p><i>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</i></p> <p><i>Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.</i></p> <p><i>In PSED they will: Create collaboratively; sharing ideas, resources and skills.</i></p>		
Nursery Cake and biscuit making at least 3 times a year	<p>EAD Birth to 5 Matters Range 3: Notices and becomes interested in the transformative effect of their action on materials and resources</p> <p>Junk modelling ongoing in CIL</p> <p>Kites on windy days ongoing in CIL</p> <p>Autumn Vegetables and fruit topics:</p> <p>Oliver's vegetables story: Making Vegetable soup</p> <p>Dark/Light topics</p> <p>Owl Babies story</p> <p>Adult supporting cutting bottom of card tubes to make tabs for Owls.</p> <p>Dark/Light Topic</p> <p>Supported Clay Diva lamps for Diwali</p>	<p>EAD Birth to 5 Matters Range 4:</p> <p>Uses 3D and 2D structures to explore materials and/or to express ideas</p> <p>Junk modelling ongoing in CIL</p> <p>Kites on windy days ongoing in CIL</p> <p>Making simple puppets for small role play</p> <p>Traditional Stories:</p> <p>3 Billy Goats Gruff:</p> <p>Creating bridges using a variety of construction</p> <p>Eggs/New life</p> <p>Peeling a hard boiled egg and mashing it to make Egg sandwiches</p>	<p>EAD Birth to 5 matters Range 5:</p> <p>Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces</p> <p>Junk modelling ongoing in CIL</p> <p>Kites on windy days ongoing in CIL</p> <p>Traditional stories with Castles:</p> <p>Construct castles</p> <p>Healthy Eating and Minibeasts topic:</p> <p>Cutting and making a fruit kebab using fruit from Hungry Caterpillar story with support</p> <p>People who help us:</p>

	Christmas cutting activities		Making a police badge Seaside Seaside mobiles using created sea creatures
Reception Cake and biscuit making at least 3 times a year	<p>EAD Birth to 5 matters Range 5: <i>Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces</i></p> <p>Junk modelling ongoing in CIL Kites on windy days ongoing</p> <p>Autumn Vegetables and fruit topics: <u>Supertato story</u> Designing and Making traps for the Evil Pea <i>Design and using different materials for a purpose.</i> Oliver's vegetables story: Vegetable soup Handa's Surprise story: Make a fruit basket <i>Fastening skills</i></p> <p>Dark and light topic: Owl Babies story Cutting bottom of card tube to make tabs to make standing Owls (adding feathers and googly eyes)</p> <p>Making Rockets (linked to Maths attaching cones) Clay Diva lamps for Diwali Christmas tree/snowflake cutting</p>	<p>EAD Birth to 5 matters Range 6: <i>Uses tools for a purpose</i> <i>Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking</i> <i>- Share their creations, explaining the process they have used;</i></p> <p>Making simple puppets for small role play</p> <p>Traditional Stories: 3 Billy Goats Gruff: Creating bridges using a variety of construction Chinese New Year: Dragon/lion puppets, explore concertina/fan techniques</p> <p>Eggs/New life Peeling a hard-boiled egg and mashing it to make Egg sandwiches</p>	<p>EAD design ELG <i>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</i></p> <p>Traditional stories with Castles: Construct castles</p> <p>Healthy Eating and Minibeasts topic: Cutting and Making a fruit kebab using fruit from Hungry Caterpillar story Making fruit smoothies</p> <p>People who help us: Making a police badge</p> <p>Seaside topic Seaside mobiles using created sea creatures Making Ice cream</p>
Vocabulary	design, plan, create, join, stick, cut, bend, slot, smooth, bendy, bumpy, handle, snip, cut, squeeze, punch, pinch, pattern, ingredients, weigh, roll, seeds, root, leaves, stem, bud, juicy, sweet, sour, dry,	design, plan, create, join, open, measure, bigger, shorter, longer, thinner, temporary, permanent, materials, push, pull, separate, fix, snip, cut, squeeze, punch, pinch, under, over, bridge, break, safe, peel, mash, mix,	Design, plan, create, bumpy, snip, cut, squeeze, thumb, fingers, thread, punch, pinch, push, pull, through, under, over, up, down, pattern, build, vocabulary, taller, shorter, front, back, safety, knife, blade,

	wet, bitter, chewy, watery, rough, spiky, hollow, blade, slice, blend		sharp, tool, edge, handle, chop, slice, cut, chopping board, kebab, stick, healthy lifestyle, mind, body, brain
Year 1	<p>Structures: Constructing a windmill</p> <p><i>Identify some features that would appeal to the client (a mouse) and create a suitable design.</i></p> <p><i>Explain how their design appeals to the mouse.</i></p> <p><i>Make stable structures, which will eventually support the turbine, out of card, tape and glue.</i></p> <p><i>Make functioning turbines and axles that are assembled into the main supporting structure.</i></p> <p><i>Say what is good about their windmill and what they could do better.</i></p>	<p>Textiles: Puppets</p> <p><i>Design a purposeful, appealing puppet for themselves based on specific criteria.</i></p> <p><i>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and (where appropriate), ICT.</i></p> <p><i>Select from and use a range of tools and equipment to perform practical tasks.</i></p> <p><i>Select from and use a wide range of materials and components.</i></p> <p><i>Evaluate their ideas and product (their puppet) against the design criteria.</i></p>	<p>Cooking and nutrition: Fruit and vegetables</p> <p><i>Describe fruits and vegetables and explain why they are a fruit or a vegetable.</i></p> <p><i>Name a range of places that fruits and vegetables grow.</i></p> <p><i>Describe basic characteristics of fruit and vegetables.</i></p> <p><i>Prepare fruits and vegetables to make a smoothie.</i></p>
Vocabulary	axle, bridge, design, design criteria, model, net, packaging, structure, template, unstable, stable, strong, weak	decorate, design, fabric, glue, model, hand puppet, safety pin, staple, stencil, template	blend, compare, evaluate, fruit, juice, plant, seed, stem, tree, blender, cut, flavour, healthy, juicer, recipe, select, table knife, vegetable, chopping board, design, fork, ingredients, leaf, root, smoothie, taste, vine
Year 2	<p>Cooking and nutrition: A balanced diet</p> <p><i>Name the main food groups and identify foods that belong to each group.</i></p> <p><i>Describe the taste, texture and smell of a given food.</i></p> <p><i>Think of four different wrap ideas, considering flavour combinations.</i></p> <p><i>Construct a wrap that meets the design brief and their plan.</i></p>	<p>Textiles: Making pouches</p> <p><i>Sew a running stitch with regular-sized stitches and understand that both ends must be knotted.</i></p> <p><i>Prepare and cut fabric to make a pouch from a template.</i></p> <p><i>Use a running stitch to join the two pieces of fabric together.</i></p> <p><i>Decorate the pouch using materials provided.</i></p>	<p>Mechanisms: Fairground wheels</p> <p><i>Design and label a wheel.</i></p> <p><i>Consider the designs of others and make comments about their practicality or appeal.</i></p> <p><i>Consider the materials, shape, construction and mechanisms of their wheel.</i></p> <p><i>Label their designs.</i></p> <p><i>Build a stable structure with a rotating wheel.</i></p> <p><i>Test and adapt their designs as necessary.</i></p> <p><i>Follow a design plan to make a completed model of the wheel.</i></p>

Vocabulary	appearance, chopping board, dairy, diet, ingredients, proteins, smell, spreads, balanced, combination, design, evaluate, grate, menu, review, snip, table knife, carbohydrates, cut, design brief, feel, grater, oils, scissors, spread, taste	decorate, fabric, fabric glue, knot, needle, needle threader, running stitch, sew, template, thread	design, design criteria, wheel, Ferris wheel, pods, axle, axle holder, frame, mechanism
Year 3	<p>Spring 1 - Structures: Constructing a castle</p> <p><i>Draw and label a simple castle that includes the most common features. Recognise that a castle is made up of multiple 3D shapes. Design a castle with key features which satisfy a given purpose. Score or cut along lines on the net of a 2D shape. Use glue to securely assemble geometric shapes. Evaluate their work by answering simple questions.</i></p>	<p>Cooking and nutrition: Eating seasonally</p> <p><i>Explain that fruits and vegetables grow in different countries based on their climates. Understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste the best then. Know that eating seasonal fruit and vegetables has a positive effect on the environment. Design their own tart recipe using seasonal ingredients. Understand the basic rules of food hygiene and safety. Follow the instructions within a recipe.</i></p>	<p>Textiles: Cross stitch and applique – a cushion or Egyptian collar</p> <p><i>To learn how to sew cross-stitch and applique. To design a product and its template. To decorate fabric using applique and cross-stitch. To assemble parts into a fabric product.</i></p>
Vocabulary	2D, 3D, castle, design, key features, net, scoring, shape, stable, stiff, strong, structure, tab	appearance, complementary, design, fruit, ingredients, mountain, seasonal, taste, tropical, arid, country, evaluate, grate, Mediterranean, peel, seasons, temperate, vegetable, climate, cut, export, import, mock-up, polar, snip, texture, weather	applique, running stitch, embellish, silk, tear, matt, pinking, cross-stitch, patch, template, polyester, water-resistant, shiny, fabric, thread, cotton, wrinkle, breathable, biodegrade
Year 4	<p>Mechanical systems: Making a slingshot car</p> <p><i>Work independently to produce an accurate, functioning car chassis. Design a shape that is suitable for the project. Attempt to reduce air resistance through the design of the shape.</i></p>	<p>Cooking and nutrition: Adapting a recipe</p> <p><i>Follow a recipe, with some support. Describe some of the features of a biscuit based on taste, smell, texture and appearance. Adapt a recipe by adding extra ingredients to it.</i></p>	<p>Electrical systems: Torches</p> <p><i>Identify electrical products and explain why they are useful. Help to make a working switch. Identify the features of a torch and how it works. Describe what makes a torch successful.</i></p>

	<p><i>Produce panels that will fit the chassis and can be assembled effectively using the tabs they have designed.</i></p> <p><i>Construct car bodies effectively.</i></p> <p><i>Conduct a trial accurately and draw conclusions and improvements from the results.</i></p>	<p><i>Plan a biscuit recipe within a budget.</i></p>	<p><i>Create suitable designs that fit the success criteria and their own design criteria.</i></p> <p><i>Create a functioning torch with a switch according to their design criteria.</i></p>
Vocabulary	<p>chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model, template</p>	<p>adapt, budget, comment, cream, cut, fold, layout, multiplication, sieve, addition, buttery, compare, crunchy, design, hygiene, market research, opinion, sift, appearance, combine, construct, cuboid, evaluate, ingredients, modify, pounds, target audience</p>	<p>battery, conductor, electricity, switch, design criteria, LED, target audience, theme, equipment, bulb, circuit, insulator, component, diagram, model, input, aesthetics, ingredients, buzzer, circuit diagram, series circuit, design, evaluation, shape, recyclable, assemble, packaging</p>
Year 5	<p>Textiles: Stuffed toys</p> <p><i>Design a stuffed toy, considering the main component shapes of their toy.</i></p> <p><i>Create an appropriate template for their stuffed toy.</i></p> <p><i>Join two pieces of fabric using a blanket stitch.</i></p> <p><i>Neatly cut out their fabric.</i></p> <p><i>Use applique or decorative stitching to decorate the front of their stuffed toy.</i></p> <p><i>Use blanket stitch to assemble their stuffed toy, repairing when needed.</i></p> <p><i>Identify what worked well and areas for improvement.</i></p>	<p>Cooking and nutrition: What could be healthier?</p> <p><i>Understand how beef gets from the farm to our plates.</i></p> <p><i>Present a subject as a poster with clear information in an easy to read format.</i></p> <p><i>Contribute ideas as to what a 'healthy meal' means.</i></p> <p><i>Notice the nutritional differences between different products and recipes.</i></p> <p><i>Recognise nutritional differences between two similar recipes and give some justification as to why this is.</i></p> <p><i>Work as a team to amend a Bolognese recipe with healthy adaptations.</i></p> <p><i>Follow a recipe to produce a healthy Bolognese sauce.</i></p> <p><i>Design packaging that promotes the ingredients of the Bolognese.</i></p>	<p>Mechanical systems: Making a pop-up book</p> <p><i>Produce a suitable plan for each page of their book.</i></p> <p><i>Produce the structure of the book.</i></p> <p><i>Assemble the components necessary for all their structures and mechanisms.</i></p> <p><i>Hide the mechanical elements with more layers using spacers where needed.</i></p> <p><i>Use a range of mechanisms and structures to illustrate their story and make interactive for the users.</i></p> <p><i>Use appropriate materials and captions to illustrate the story.</i></p>

Vocabulary	accurate, annotate, appendage, blanket-stitch, design criteria, detail evaluation, fabric, sew, shape, stuffed toy, stuffing, template	abattoir, beef, cross-contamination, enhance, farm, ingredients, nutrient, preference, recipe, adaptation, brand, cut, equipment, grate, label, nutrition, press, safety, balanced, cook, design, evaluate, hygiene, measure, nutritional value, process, theme	design, input, motion, mechanism, criteria, research, reinforce, model
Year 6	<p>Electrical systems: Steady hand game</p> <p><i>Explain simply what is meant by 'form' (the shape of a product) and 'function' (how a product works).</i></p> <p><i>State what they like and dislike about an existing children's toy and why.</i></p> <p><i>Learn about skills developed through play and apply this knowledge in a survey of one or more children's toys.</i></p> <p><i>Identify the components of a steady hand game.</i></p> <p><i>Design a steady hand game of their own according to the design criteria, using four different perspective drawings.</i></p> <p><i>Create a secure base for their game, with neat edges that relate to their design.</i></p> <p><i>Make and test a functioning circuit and assemble it within a case.</i></p>	<p>Structure: Playgrounds</p> <p><i>Create five apparatus designs, applying the design criteria to their work.</i></p> <p><i>Make suitable changes to their work after peer evaluation.</i></p> <p><i>Make roughly three different structures from their plans using materials available.</i></p> <p><i>Complete their structures, improving the quality of their rough versions and applying some cladding to a few areas.</i></p> <p><i>Secure their apparatus to a base.</i></p> <p><i>Make a range of landscape features using a variety of materials which will enhance their apparatus.</i></p>	<p>Cooking and nutrition: Come dine with me!</p> <p><i>Find a suitable recipe for their course.</i></p> <p><i>Record the relevant ingredients and equipment needed.</i></p> <p><i>Follow a recipe, including using the correct quantities of each ingredient.</i></p> <p><i>Write a recipe, explaining the process taken.</i></p> <p><i>Explain where certain key foods come from before they appear on the supermarket shelf.</i></p>
Vocabulary	assemble, benefit, buzzer, component, design, fine motor skills, function, LED, battery, bulb, circuit, conductor, design criteria, fit for purpose, gross motor controls, user, battery pack, bulb holder, circuit symbol, copper, evaluation, form, insulator	apparatus, design criteria, equipment, playground, landscape features, cladding	balance, complement, enhance, flavours, research, preparation, storyboard, bitter, cookbook, equipment, ingredients, pairing, salty, sweet, bridge method, cross-contamination, farm to fork, method, recipe, sour, umami