

Design & Technology Long Term Plan 2025-2026

DT Units

	EYFS		Key Stage 1		Key Stage 2			
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Term	Use of areas within the setting to promote the use of DT skills and also development of language relevant to DT		Textiles: Templates and joining techniques. Puppets for retelling "the true story of the 3 little pigs". <i>Linked to class reader and writing</i>	Mechanisms: Sliders and levers. Design a moving firework picture. <i>Link to Art – colour.</i>	Structures – Shell structures using CAD. moving Christmas package using Tinkercad. <i>Link to computing and programming.</i>	Mechanical systems: Pneumatics. Designing a catapult for use in the Roman army. <i>Link to Romans.</i>	Food: Celebrating culture and seasonality. Bread making – using a variety of different flavours.	Structures: Frame structures. Make a frame structure to Roman nature garden. <i>Link to London and the structures of the Shard.</i>
Spring Term			Mechanisms: Wheels and axle Pull along car for themselves.	Food: Preparing fruit and vegetables. Making vegetable soups using	Food: Healthy and varied diets. Develop a filled pitta bread.	Food: Healthy and varied diet. Design and make a healthy pizza.	Textiles: Using CAD in textile design. Designing a shopping bag	Food: Celebrating culture and seasonality. Designing biscuits with a limited range

		<i>class reader traditional toys.</i>	<i>peeling, grating and different grips for cutting.</i>		<i>Making pizza dough.</i>	<i>using Wild Things CAD. Link to computing.</i>	<i>of resources that needs to keep well. Link to WWII and rationing.</i>
Summer Term		Food: Preparing fruit and Vegetables. Making fruit smoothies using chopping, grating and juicing.	Structures – freestanding structures. Designing beach huts that stand alone. Link to Beach study and the coast.	Textiles: 2D to 3D design. Designing and making a purse. Link to Art – printing.	Electrical Pneumatics. Circuits and switches. Making headtorches. Link to Science.	Electrical Pneumatics. Monitoring and control. Design an electronic moneybox for keeping money safe. Use of Micro:bits	systems: Pneumatics. Cams. catapult for toy for a child in Year 1.

Knowledge is Power...

EYFS	<u>Autumn I</u>	<u>Autumn II</u>	<u>Spring I</u>	<u>Spring II</u>	<u>Summer I</u>	<u>Summer II</u>
Knowledge & Practical Knowledge	Children in the EYFS have access to a range of resources through continuous provision which allow for exploration of DT and the development of skills. They link in with the following ELG's: Physical: Fine motor skills. Use a range of small tools. PSED: Managing Self. Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Expressive Arts and Design.: Creating with Materials. 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.					
Vocabulary	Tools build make construct food					

Year 1	Autumn	Spring	Summer
Knowledge	Know how simple 3-D textile products are made, using a template to create two identical shapes. E.g. a hand puppet. • Know how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Know how to use different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. • Know and use technical vocabulary relevant to the project	Know how to explore and use wheels, axles and axle holders. Know the difference between fixed and freely moving axles. • Know how to use fixed and freely moving axles. Know technical vocabulary relevant to the project.	Know where a range of fruit comes from. E.g Strawberries, melons, apples, pears, bananas, mangoes. Know how to prepare and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of the Eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.
Practical Knowledge	Designing • Know how to design a functional and appealing product for a chosen user and purpose based on simple design criteria. • Know how to generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. Making • Know how to select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. E.g use of pencils, scissors, Sellotape, glue. • Know how to select from and use textiles according to their characteristics including felt, paper, cotton. Evaluating • Know how to explore and evaluate a range of existing textile products relevant to the project being undertaken including different hand puppets. • Know how to say they like and what they would change about their puppet.	Designing Know how to generate initial ideas and simple design criteria through talking and using own experiences. To draw a simple labelled plan of their wheels and axles. Making Know how to select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. To use simple saws, washers and masking tape. Know how to select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. Evaluating Know how to explore and evaluate a range of products with wheels and axles and are able to say how they work. Toy cars, bikes, lorries. Know how to say what has worked well with their product and what they would change.	Designing • Know how to design a simple fruit product that is for a diversity cooking event. • Know how to generate initial ideas and design criteria through investigating a variety of fruit including mangoes, bananas, strawberries, pears, melons and apples. • Know how to write a simple list of ingredients they will need to use. Making • Know how to use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Know how to select from a range of fruit according to their characteristics e.g. colour, texture and taste to create a chosen product. Evaluating • Know how to taste and evaluate a range of fruit and say what they like and don't like and why. • Know how to evaluate their finished product and say what they would change next time.
Vocabulary	Join template textiles	Wheels Axles movement	Chopping grating peeling

Year 2	Autumn	Spring	Summer
Knowledge	Know how to explore and use sliders and levers. Know that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project.	Know where a range of fruit and vegetables come from e.g. farmed or grown at home. Including carrots, onions, potatoes, peppers, Know about and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell plate. Know and use technical and sensory vocabulary relevant to Designing	Know how to make freestanding structures stronger, stiffer and more stable. Know and use technical vocabulary relevant to the project
Practical Knowledge	Designing - Know how to generate ideas based on simple design criteria and their own experiences, explaining what they could make – a Christmas card, moving picture. - Know how to develop, model and communicate their ideas through drawings and mock-ups with card and paper. To make a mock up of a simple lever and a simple slider. Making - Know how to select and use tools, explaining their choices, to cut, shape and join paper and card. Scissors, glue, glue gun, card, paper, paper fasteners. - Know how to use simple finishing techniques suitable for the product they are creating including paints, crayons, pens, glitter, cotton wool. Evaluating - Know how to explore a range of existing books and everyday products that use simple sliders and levers – doors, trolleys etc. - Know how to evaluate their product by discussing how well it works and what they would change next time.	Designing - Know how to design appealing products for a particular user based on simple design criteria. - Know how to generate initial ideas and design criteria through investigating a variety of fruit and vegetables. - Know how to communicate these ideas through talk and drawings – writing instructions. Making - Know how to use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. - Know how to select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. Evaluating - Know how to taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. - Know how to evaluate ideas and finished products against design criteria, including intended user and purpose.	Designing - Know how to generate ideas based on simple design criteria and their own experiences, explaining what they could make. - Know how to develop, model and communicate their ideas through talking, mock-ups with paper and labelled drawings. Making - Know how to plan by suggesting what to do next. - Know how to select and use tools, skills and techniques, explaining their choices. Including scissors, glue guns, pencils, rulers, small saws. - Know how to select new and reclaimed materials and construction kits to build their structures, including lolly sticks, plastic bottles, paper. - Know how to use simple finishing techniques suitable for the structure they are creating, including paint, pens and pva glue to waterproof it. Evaluating - Know how to explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. - Know how to evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.
Vocabulary	Sliders levers arc	Grip cutting safety grown	Freestanding structure stable

Year 3	Autumn	Spring	Summer
Knowledge	Know how to develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. Know how to develop and use knowledge of how to construct strong, stiff shell structures. Know and use technical vocabulary relevant to the project.	- Know how to use appropriate equipment and utensils to prepare and combine food. - Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Meat, fish, vegetables. - Know and use relevant technical and sensory vocabulary appropriately	- Know how to strengthen, stiffen and reinforce existing fabrics. - Know how to securely join two pieces of fabric together. - Know the need for patterns and seam allowances. - Know and use technical vocabulary relevant to the project.
Practical Knowledge	Designing - Know how to generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product. - Know how to develop ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas. Making - Know how to plan the order of the main stages of making. - Know how to select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. Use of word and Tinkercad. - Know how to explain their choice of materials according to functional properties and aesthetic qualities. - Know how to use computer-generated finishing techniques suitable for the product they are creating. Evaluating - Know how to investigate and evaluate a range of shell structures including the materials, components and techniques that have been used. Including packaging for different purposes, bags, mugs. - Know how to test and evaluate their own products against design criteria and the intended user and purpose.	Designing - Know how to generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. - Know how to use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Making - Know how to plan the main stages of a recipe, listing ingredients, utensils and equipment. - Know how to select and use appropriate utensils and equipment to prepare and combine ingredients. Including mixers and ovens. - Know how to select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Evaluating - Know how to carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. - Know how to evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	Designing - Know how to generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. - Know how to produce annotated sketches, prototypes, final product sketches and pattern pieces. Making - Know how to plan the main stages of making. - Know how to select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. - Know how to select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern. Evaluating - Know how to investigate a range of 3-D textile products relevant to the project. Pencil cases, bags, cushions. - Know how to test their product against the original design criteria and with the intended user. - Know how to take into account others' views through simple surveys. - Know how to understand how a key event/individual has influenced the development of the chosen product and/or fabric.
Vocabulary	CAD Shell structure packaging net.	Healthy varied develop	fastenings patterns reinforce

Year 4	Autumn	Spring	Summer
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Knowledge	• Know about and use pneumatic mechanisms including simple pumps and catapults. • Know and use technical vocabulary relevant to the project.	• Know how to use appropriate equipment and utensils to prepare and combine food. Oven, blender, knives. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Pizza, yeast, tomato sauces, mozzarella, Italian meats. • Know and use relevant technical and sensory vocabulary appropriately.	• Know about and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. • Know how to apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project.
Practical Knowledge	Designing • Know how to generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user. • Know how to use annotated sketches and prototypes to develop, model and communicate ideas. Making • Know how to order the main stages of making. • Know how to select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. • Know how to select from and use finishing techniques suitable for the product they are creating. Evaluating • Know how to investigate and analyse books, videos and products with pneumatic mechanisms. • Know how to evaluate their own products and ideas against criteria and user needs, as they design and make.	Designing • Know how to generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Know how to use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Making • Know how to plan the main stages of a recipe, listing ingredients, utensils and equipment. • Know how to select and use appropriate utensils and equipment to prepare and combine ingredients. • Know how to select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Evaluating • Know how to carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Know how to evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	Designing • Know how to gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • Know how to generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. Making • Know how to order the main stages of making. • Know how to select from and use tools and equipment to cut, shape, join and finish with some accuracy. • Know how to select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. Evaluating • Know how to investigate and analyse a range of existing battery-powered products. • Know how to evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.
Vocabulary	Pneumatics catapult component	varied processed consumption	Electrical systems circuits switches

Year 5	Autumn	Spring	Summer
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Knowledge	• Know how to use utensils and equipment including heat sources to prepare and cook food. <i>Know how to use equipment about seasonality in relation to food products and the source of different food products. Different types of bread including sourdough, focaccia, ciabatta.</i> • Know and use relevant technical and sensory vocabulary	<i>Know how a 3D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</i> <i>Know how fabrics can be strengthened, stiffened and reinforced where appropriate.</i>	<i>Know about and use electrical systems in their products.</i> <i>Know how to use computer control systems in products.</i> <i>Know how to use computing to program, monitor and control their products.</i> <i>Know how to explore</i>
Practical Knowledge	Designing • Know how to generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Know how to explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Know how to use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. Making • Know how to write a step-by-step recipe, including a list of ingredients, equipment and utensils • Know how to select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Know how to make, decorate and present the food product appropriately for the intended user and purpose. Evaluating • Know how to carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Know how to evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. • Know how key chefs have influenced eating habits to promote varied and healthy diets.	Designing • Know how to generate innovative ideas through research including surveys, interviews and questionnaires. • Know how to develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes including using computer-aided design. Use of • Know how to design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Use of Wildflower design app. Making • Know how to produce detailed lists of equipment and fabrics relevant to their tasks. Fabric scissors, needles, thread, felt, clasps, cotton. • Know how to formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Know how to select from and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. Evaluating • Know how to investigate and analyse textile products linked to their final product. Different styles of bags made of a variety of fabrics. • Know how to compare the final product to the original design specification. • Know how to test products with intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Know how to consider the views of others to improve their work.	Designing • Know how to develop a design specification for a functional product that responds automatically to changes in the environment. • Know how to generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams. Making • Know how to formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Know how to competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. • Know how to create and modify a computer control program to enable their electrical product to respond to changes in the environment. Use of Microbits. Pressure pads. Evaluating • Know how to continually evaluate and modify the working features of the product to match the initial design specification. • Know how to test the system to demonstrate its effectiveness for the intended user and purpose. .
Vocabulary	Seasonality flavours	CAD functional appealing	Monitoring controlling modify

Year 6	Autumn	Spring	Summer
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Knowledge	<i>Know how to strengthen, stiffen and reinforce 3-D frameworks.</i> Know and use technical vocabulary relevant to the project.	- Know how to use utensils and equipment including heat sources to prepare and cook food. <i>Know about seasonality in relation to food products and the source of different food products.</i> - Know and use relevant technical and sensory vocabulary.	<i>Know that mechanical systems have an input, process and an output.</i> <i>Know how cams can be used to produce different types of movement and change the direction of movement.</i> Know and use technical vocabulary relevant to the project.
Practical Knowledge	Designing - Know how to carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. - Know how to develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. - Know how to generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. Making - Know how to formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. - Know how to competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. - Know how to use finishing and decorative techniques suitable for the product they are designing and making. Evaluating - investigate and evaluate a range of existing frame structures. - Know how to critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. - Know how to research key events and individuals relevant to frame structures.	Designing - Know how to generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. - Know how to explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. - Know how to use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. Making - Know how to write a step-by-step recipe, including a list of ingredients, equipment and utensils - Know how to select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. - Know how to make, decorate and present the food product appropriately for the intended user and purpose. Evaluating - Know how to carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. - Know how to evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. - Know how key chefs have influenced eating habits to promote varied and healthy diets.	Designing - Know how to generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. - Know how to develop a simple design specification to guide their thinking. - Know how to develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. Making - Know how to produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. - Know how to select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. Evaluating - Know how to compare the final product to the original design specification. - Know how to test products with the intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - Know how to consider the views of others to improve their work. - Know how to investigate famous manufacturing and engineering companies relevant to the project.
Vocabulary	<i>Frame structure formulate critical evaluation</i>	<i>Rationing innovative</i>	<i>Cam input process output process</i>