



Design Technology - Progression of Knowledge, Skills and Vocabulary

EYFS	Characteristics of effective learning	Early Learning Goals
	<p>Children show curiosity about objects, people and events. They question why things happen and explore reasons. Children engage in open-ended activities and show resilience in these activities.</p> <p>Children think of their own ideas during their play. Children are supported to find ways to solve problems. They test their ideas and are supported to improve their ideas.</p>	<p><u>Creating with Materials:</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Share their creations, explaining the process they have used.</p> <p><u>Fine Motor Skills:</u> Use a range of small tools, including scissors, paintbrushes and cutlery.</p> <p><u>Managing Self:</u> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.</p> <p><u>Building Relationships:</u> Work and play co-operatively and take turns with others.</p> <p><u>Self-Regulation:</u> Set and work towards simple goals, being able to wait for what they want and control their immediate impulses where appropriate.</p> <p><u>Speaking:</u> Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses.</p>



SKILLS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Design</p>	<p>Verbally tell someone about their design ideas.</p> <p>Share their design ideas through simple drawings.</p> <p>Follow a given simple design criteria to design an appealing product.</p>	<p>Share ideas based on a simple design criteria, created by their own experiences.</p> <p>Develop, model and communicate their ideas through talking and labelled drawings.</p>	<p>Generate realistic ideas through discussions.</p> <p>Create a design criteria for an appealing, functional product.</p> <p>Develop, model and communicate their ideas through annotated sketches, mock-ups and models.</p>	<p>Use research to develop a design criteria.</p> <p>Create a design criteria for an appealing, functional product.</p> <p>Develop, model and communicate their ideas through annotated sketches, mock-ups and models. Consider the views of others to improve their designs.</p>	<p>Use research to inform the design of products, including surveys, interviews and questionnaires.</p> <p>Use computing to aid research. (Brunel's Bridge Builder)</p> <p>Create a design brief and design criteria for an appealing, functional product.</p> <p>Communicate ideas through discussion, annotated sketches and diagrams and prototypes.</p> <p>Select from and use a wider range of materials, according to their functional and aesthetic qualities - children should be given freedom to explore different materials.</p>	<p>Use research to inform the design of products, including surveys, interviews and questionnaires.</p> <p>Create a design brief and design criteria for an appealing, functional product.</p> <p>Communicate ideas through discussion, annotated sketches and diagrams and prototypes.</p> <p>Communicate ideas through pictorial representations of electrical circuits or circuit diagrams.</p>



<p>Make</p>	<p>Cut along straight lines, curved lines and shapes marked out by a template.</p> <p>Learn how to safely use scissors to perform practical tasks.</p> <p>Roll, fold, tear and cut paper and card.</p> <p>Learn the following joining techniques: tape, flange, stapling</p> <p>Explore how to make strong structures.</p>	<p>Say what the next stage of the making process is.</p> <p>Re-visit the joining techniques: tape flange, stapling.</p> <p>Learn how to use slots to join materials together.</p> <p>Learn how to use split pins to join materials together.</p> <p>Select materials that are suitable for the task based on their properties.</p> <p>Use simple finishing techniques suitable for the products they are creating.</p> <p>Use the correct tools safely to peel, grate and chop foods.</p>	<p>Plan the main stages of making a product.</p> <p>Learn how to fold paper to follow a design process.</p> <p>Learn how to use a ruler to effectively fold paper or card.</p> <p>Re-visit joining techniques: flange and slot joins.</p> <p>Select from and use simple finishing techniques suitable for their product they are creating.</p> <p>Use a sieve when combining ingredients.</p> <p>Mix, stir and combine wet and dry ingredients.</p>	<p>Create simple joins with wood (modelling clay, elastic bands, tape, string)</p> <p>Use the right tools to slice, mix, spread, bake and knead.</p> <p>Weigh ingredients to an appropriate level of accuracy. Using a jug to measure liquids and using digital weighing scales.</p> <p>With very close supervision, use a heat source (toaster/microwave) when cooking - understanding and observing the safety precautions undertaken by adults when using heat source.</p> <p>Using butter/fat to grease a baking tray.</p>	<p>Scoring card to create folds.</p> <p>Revisit tabs joining method.</p> <p>Practise accurate cutting skills.</p> <p>Understand and use mechanical systems in products, e.g. pulleys.</p> <p>Learn how to strengthen, stiffen and reinforce more complex structures.</p> <p>Using paper clips to stiffen folded paper.</p>	<p>Children develop joining and shaping skills - using chicken wire and Modroc to create a volcano structure.</p> <p>Build frameworks using a range of materials.</p> <p>Accurately use a measuring jug and weighing scales.</p> <p>With supervision, confidently use both the bridge hold and claw grip to cut the same food using a knife.</p> <p>With supervision, confidently peel harder food using a peeler (eg apple, potato).</p>
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			<p>Knead and shape dough.</p> <p>Measure ingredients using spoons, measuring jugs and digital weighing scales.</p> <p>With close supervision, grate foods (zesting)</p> <p>Understand and use gears and pulleys</p>	<p>Use a masher to mash foods to a smooth texture.</p> <p>Learn how to crack an egg.</p> <p>Complete a simple stitch.</p> <p>Use a template when creating a textile product.</p> <p>Use glue/stitching/stapling to decorate textiles.</p>		<p>With supervision, finely grate hard foods (eg zesting).</p> <p>With support, use a can opener and open ring-pull tins.</p> <p>Use hands to mix wet and dry ingredients.</p> <p>Use a rolling pin to create even dough.</p>
Evaluate	<p>Say what they like and dislike about existing products.</p> <p>Evaluate against a given design criteria. (Tick/Smiley Face)</p>	<p>Explore a range of existing products.</p> <p>Evaluate their product by discussing how well it works against their design criteria.</p>	<p>Explore a range of existing products related to their design criteria.</p> <p>Test their product against the original design criteria.</p> <p>Evaluate their ongoing work and their final product, referring to the design criteria.</p>	<p>Investigate and evaluate a range of existing products. Thinking about the materials, components and techniques that are used.</p> <p>Test their product against the original design criteria and the intended user (if possible).</p>	<p>Investigate and evaluate a range of existing products. Thinking about the materials, components and techniques that are used.</p> <p>Compare their final product to the original design specification and record their evaluations.</p> <p>Critically evaluate the quality of design,</p>	<p>Investigate and evaluate a range of existing products. Thinking about the materials, components and techniques that are used.</p> <p>Compare their final product to the original design specification and record their evaluations.</p>



				Evaluate their ongoing work and their final product, referring to the design criteria and views of others.	manufacturing, functionality and purpose. Consider the views of others to improve their ongoing work.	Critically evaluate the quality of design, manufacturing, functionality and purpose. Consider the views of others to improve their ongoing work.
Skills Vocabulary	planning, investigating, design, evaluate, make, user, product, design criteria	investigating, planning, design, make, evaluate, user, purpose, ideas, product, function, design criteria	user, purpose, design, model, evaluate, annotated sketch, functional, prototype, label, drawing, design criteria, appealing	design brief, design criteria, user, purpose, design, model, evaluate, annotated sketch, functional, prototype, label, drawing, design criteria, appealing	design decisions, functionality, user, purpose, design specification, design brief, evaluate, research, mock-ups, prototype, manufacturing, components	design decisions, functionality, user, purpose, design specification, design brief, evaluate, research, mock-ups, prototype, manufacturing, components, pictorial representations
KNOWLEDGE	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food	n/a: Children do not access Food and Nutrition lessons during Year 1.	<u>Recipes</u> Baking Bread - London's Burning Topic Launch Onion Bhajjis - Indian Spice	<u>Recipes</u> <u>Project Friday</u> 1. Egyptian Flatbread 2. Fig rolls Understand what makes a healthy and balanced diet.	<u>Recipes</u> <u>Project Friday</u> 1. Scrambled egg on toast. 2. Yoghurt & Banana Biscuits p163 Know to be active and healthy, food and	Recipe: Honey Oat Cakes or Honey Shortbread Understand how different foods are produced in different areas of the world.	<u>Recipes:</u> <u>Project Friday</u> 1. Pizza 2. Salad with Tzatziki Dressing Understand how different foods are



		<p>Understand that we need a balanced diet to be healthy and active.</p> <p>Know that food comes from plants and animals and identify foods from each group and understand how they are grown.</p> <p>Know basic food safety rules, e.g. washing hands, tying back long hair, wearing clean aprons.</p>	<p>Know how to use equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients and whether they are grown, reared or caught.</p> <p>Know basic food safety rules, e.g. washing hands, tying back long hair, wearing clean aprons.</p>	<p>drink are needed to provide the body with energy.</p> <p>Know the importance of a healthy breakfast.</p> <p>Know how to use equipment and utensils to prepare and combine food.</p> <p>Know about a range of fresh and processed ingredients and whether they are grown, reared or caught.</p> <p>Know basic food safety rules, e.g. washing hands, tying back long hair, wearing clean aprons, removing jewellery and nail varnish.</p>	<p>Know appropriate portion sizes.</p> <p>Understand about seasonality in relation to food products and the source of different food products.</p> <p>Know how to accurately use digital weighing scales, measuring jugs and measuring spoons.</p> <p>Know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>Know basic food safety rules, e.g. washing hands, tying back long hair, wearing clean aprons, removing jewellery and nail varnish.</p>	<p>produced in different areas of the world.</p> <p>Know appropriate portion sizes.</p> <p>Understand about seasonality in relation to food products and the source of different food products.</p> <p>Know how to accurately use digital weighing scales, measuring jugs and measuring spoons.</p> <p>Know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>Know basic food safety rules, e.g. washing hands, tying back long hair, wearing clean aprons, removing</p>
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						jewellery and nail varnish.
Food Vocabulary	n/s	balanced diet, names of fruit and vegetables, slice, peel, chop, grate, animal, plant, meat, knead	balanced diet, names of fruit and vegetables, slice, peel, chop, grate, animal, plant, meat, fresh, processed, grown, reared, caught, hygienic, knead	balanced diet, names of food from each food group, slice, peel, chop, grate, combine, whisk, crack, animal, plant, meat, fresh, processed, grown, reared, caught, hygienic, eatwell	balanced diet, names of food from each food group, slice, peel, chop, grate, combine, whisk, crack, animal, plant, meat, fresh, processed, grown, reared, caught, hygienic, heat source, measure, weigh, seasonality, vitamins, nutrients, carbohydrate, protein	balanced diet, names of food from each food group, slice, peel, chop, grate, combine, whisk, crack, animal, plant, meat, fresh, processed, grown, reared, caught, hygienic, heat source, measure, weigh, seasonality, vitamins, nutrients, carbohydrate, protein, portion control
Structures	<p>Know how to make freestanding structures stronger, stiffer and more stable.</p> <p>Know how to join materials using tape, stapling and flange joins.</p>	<p>Know how to make freestanding structures stronger, stiffer and more stable.</p> <p>Know to join materials using tape, stapling and split pins.</p> <p>Know how to create flange and slot joins.</p>	<p>Develop and use knowledge of how to construct strong, stiff, stable structures.</p> <p>Develop and use knowledge of nets of cubes and cuboids (where appropriate).</p> <p>Know to join materials using</p>	<p>Develop and use knowledge of how to construct strong, stiff, stable structures.</p> <p>Develop and use knowledge of nets of cubes and cuboids (where appropriate).</p> <p>Know how to create simple joins with wood.</p>	<p>Know how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand how key events in design and technology have helped shape the world.</p>	<p>Know how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand how key events in design and technology have helped shape the world.</p>



			tape, stapling and split pins. Know how to create flange and slot joins.			
Structures Vocabulary	cut, fold, join, fix, structure, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, straight, curved	cut, fold, join, fix, structure, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, straight, curved	3D shape, net, cube, cuboid, edge, face, length, width, breadth, scoring, joining, flange, slot, assemble, material, stiff, strong, weak,	3D shape, net, cube, cuboid, edge, face, length, width, breadth, scoring, joining, flange, slot, assemble, material, stiff, strong, weak,	frame, framework, structure, stiffen, strengthen, reinforce, stability, join, net, scoring, assemble	frame, framework, structure, stiffen, strengthen, reinforce, stability, join, net, scoring, assemble
Textiles	Understand how to join fabrics using different techniques, e.g. stitch, glue, stapling Know how to finish a product using textile resources.			Understand that stitches can be used for joining or effect. Know how to use a template. Know the impact of pattern and colour.		Create own simple sewing patterns. Know how to complete simple cross-stitch. Choose textiles materials based on their aesthetic qualities.
Textiles Vocabulary	joining, tools, fabrics, materials, pattern, template, decorate, finish					pins, needles, thread, cross-stitch, pattern, embroidery



Mechanisms	<p>Explore and use levers and pop-up mechanisms.</p> <p>Understand that different mechanisms produce different types of movement.</p>	<p>Explore and use levers and pop-up mechanisms.</p> <p>Understand that different mechanisms produce different types of movement.</p>	<p>Understand and use pulley mechanisms.</p> <p>Know how individuals in Design Technology have helped shape the world.</p>	<p>Understand and use lever mechanisms.</p>	<p>Understand and use slider and lever and linkage mechanisms.</p>	<p>Understand and use gears, pulley, lever and linkage mechanisms.</p> <p>Understand and use complex pop-up mechanisms.</p>
Mechanisms Vocabulary	<p>lever, pop-up, card, join, pull, push, up, down, straight, forwards, backwards</p>	<p>lever, pop-up, card, join, pull, push, up, down, straight, forwards, backwards</p>	<p>mechanism, pulley, pivot, system</p>	<p>load, lever, fulcrum, mechanism</p>	<p>mechanism, slider, lever and linkage, input, output, process</p>	<p>mechanism, slider, lever and linkage, input, output, axle, process, chamfer</p>
Electrical Systems						<p>Understand and use electrical systems in their products.</p> <p>Apply their understanding of computing to control their products.</p>
Electrical Systems Vocabulary						<p>wire tripper, battery, battery holder, terminal block, wire, motor, connector</p>