

# Progression in Design and Technology

<b>National Curriculum</b>	<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and [playgrounds, the local community, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>✓ design purposeful, functional, appealing products for themselves and others based on design criteria</li> <li>✓ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>✓ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>✓ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>✓ explore and evaluate a range of existing products</li> <li>✓ evaluate their ideas and products against design criteria</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>✓ build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>✓ explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products</li> </ul> <p><b>Cooking and nutrition</b></p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <ul style="list-style-type: none"> <li>✓ use the basic principles of a healthy and varied diet to prepare dishes</li> <li>✓ understand where food comes from.</li> </ul>
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	<b>Year 1</b>			<b>Year 2</b>		
	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
	<p><b>Books with moving parts (E.g. pop up, lift the flap, moving wheel, levers)</b></p> <p><b>Christmas card with a lever (E.g. Santa up the chimney)</b></p>	<p><b>Puppets</b></p> <p><b>Mother’s Day cards</b></p>	<p><b>Make a product with a hinge (Take away salad box?)</b></p> <p><b>Make a salad</b></p>	<p><b>Making bread &amp; Food Based Enterprise Day</b></p> <p><b>Christmas Cards and Calendars</b></p>	<p><b>Make a flood rescue vehicle</b></p> <p><b>Mother’s Day cards</b></p>	<p><b>Rainforest diorama (Incorporating a winding mechanism – pulley system)</b></p> <p><b>Father’s Day Cards</b></p>
<b>Focus for the term</b>	<p>Explore and share a range of books with moving parts.</p> <p>Discuss the books with levers and sliders and explain how they work experimenting with each.</p> <p>Look at examples of simple sliders/levers with backgrounds and characters. Design own and make a simple slider. (side to side), then a lever mechanism.</p> <p>Christmas card to use a slider mechanism. (Up, down)</p>	<p>Explore and share a range of puppets. Include marionette, finger, glove, shadow and stick. Discuss how each puppet works.</p> <p>Make a labelled design of their own Alien glove puppet.</p> <p>Use a template to draw shape of puppet. Sew sides of puppet using a running stitch.</p> <p>Use puppet to tell a story.</p> <p>Evaluate puppet.</p>	<p>Explore a range of hinges (See Hinges box in resource cupboard). Walk around the school identifying hinged objects.</p> <p>Make a hinge using a pipe cleaner.</p> <p>Design a box to hold a salad. Children to have pictures/toy versions of items with hinges to refer to: treasure chests, jewellery box, lunchbox.</p> <p>Make box to hold salad to be used for ‘Summer Salad Picnic’</p> <p>Evaluate box against design criteria.</p>	<p>Use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.</p> <p>Understand the sources of ingredients for bread, and different types of bread.</p> <p>Make food-based item for Enterprise Day.</p>	<p>Build a rescue vehicle to drive on Canvey Island in the event of a flood. Look at designs, discuss what would be needed. Design the car, build and then evaluate. Using axles, wheels.</p>	<p>What do you need to include in your design to create a successful diorama? Discuss layers of the rainforest as well as using the depth of the box to place items in the diorama. Design diorama, what materials will they need? Where will they come from? Collect materials and use tools to create and assemble their diorama evaluate their finished piece against their original design</p>

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<b>Design</b>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking and drawing</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and others based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>
<b>Make</b>	<ul style="list-style-type: none"> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> </ul>	<ul style="list-style-type: none"> <li>select from and use a wide range of materials and components, including textiles according to their characteristics</li> </ul>	<ul style="list-style-type: none"> <li>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including ingredients according to their characteristics</li> </ul>	<ul style="list-style-type: none"> <li>select from and use a wide range of materials and components, including ingredients, according to their characteristics</li> </ul>	<ul style="list-style-type: none"> <li>select from and use a wide range of materials and components, including construction materials, according to their characteristics</li> </ul>	<ul style="list-style-type: none"> <li>select from and use a wide range of materials and components, including ingredients according to their characteristics</li> </ul>
<b>Technical Knowledge</b>	<ul style="list-style-type: none"> <li>explore and use mechanisms [levers and sliders] in their products</li> </ul>		<ul style="list-style-type: none"> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>explore and use mechanisms - wheels and axles - in their products</li> </ul>	<ul style="list-style-type: none"> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>explore and use mechanisms [levers, sliders and winding mechanisms] in their products</li> </ul>
<b>Cooking and Nutrition</b>			<ul style="list-style-type: none"> <li>use the basic principles of a healthy and varied diet to prepare dishes</li> <li>understand where food comes from.</li> </ul>	<ul style="list-style-type: none"> <li>use the basic principles of a healthy and varied diet to prepare dishes</li> <li>understand where food comes from.</li> </ul>		

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<b>Vocabulary</b>	Explore, discuss, create, design, mechanics, mechanism, lever, pull, push, up, down, move, side to side, evaluate, improve, product	Textiles, material, shape, templates, cut, stitch, sew, running stitch, thread, needle, design, make, decorate, colour, evaluate	Cut, peel, grate, chop, slice, select, choose, knife, grater, arrange, design, experiment, taste, crunch, ingredients, prepare safely, hygienically.  Construct, tools, cut, safety, demonstrate, shape, technique, experiment, curl, fold, glue, hinge, combine, stiffer, stronger, strengthen, product, design, make, evaluate.	Measure, weigh, ingredients, recipe, method, dough, knead, prove, rolling pin, electronic scales, oven, degrees, heat, yeast, flour, butter, mix, rub, roll, design, twist, pinch, shape, evaluate, refine, improve, prepare safely, food hygiene.	Create, design, drilling, screwing, gluing, nailing, product, techniques, skills, wheels and axles, construct, join, make.	Create, design, mechanics, winding mechanism, pulley, lever, , rotate, wind, up, wind down, purpose, product, evaluate, improve, change, alter, re-evaluate, refine.
<b>Key Questions</b>	Can you explore and list the moving parts in a book? What impact do they have when you read the book? What is a lever/slider? What function does it have?	What are the 5 main types of puppets? How do they move? What simple actions can be applied by hand when wearing a glove puppet?	What is a kennel? What is its function/purpose? What features must a kennel have? What is a hinge? Where do you see them?	Where did it come from? What is it made into? How does it change? How do we stay hygienic? What did you like? What was challenging?	What is a wheel and axle? What function does it have? How will I create my own to make my product move?	What is a pulley? What function does it have? How will you make it rotate?
<b>Key resources</b>	Examples of books with moving parts. Box in resource cupboard. Range of pop up/moving part bks to explore. Card, Sellotape, masking tape, scissors, paperclips, stapler, PVA, glue gun.	Examples of puppets. Box in resource cupboard to add to. Coloured felts, craft scissors, embroidery threads, needles, material scraps, wiggly eyes, glue gun	Explore a of a range of kennels from visuals Medium-sized cardboard boxes, scissors, stanley knife, coloured paper, PVA glue, felt tips, Pritt stick.	Ingredients for making bread. Mixing bowl, electronic and non-electronic scales, measuring spoons, wooden spoon, baking tray, oven.	Plastic wheels, doweling rods, small boxes or balsa wood, saws, vice, blu tac, masking tape, scissors, glue gun, drills, screws, felt tips, coloured paper.	Shoe boxes, card, coloured paper, templates, pulley, string, masking tape, sellotape, felt tips, Pritt stick, bubble wrap, material scraps, cellophane, coloured dough.
<b>Visits and Visitors</b>		Puppet maker or puppeteer visit?	Trip to Morrison's 'From Food to Fork' style visit. (Summer 2)  Invite parents in for a 'Summer Salad' and lemonade picnic?	Roots to Food? Workshop	Canvey Flood talk by an eyewitness. X-curricular links to History. Flood Exhibition – War Memorial Hall. Re: Janet CCA	Visit to Belfair's Wood
<b>Whole School Projects (assemblies)</b>		Young Enterprise Day (Spring 2)			Young Enterprise Day (Spring 2)	

# Progression in Design and Technology

	Nursery			Reception		
	Autumn	Spring	Summer	Autumn	Spring	Summer
<b>Nursery Year A</b>  <b>Possible experiences</b>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking Tortilla pizza</li> <li>• Cooking Fairy cakes</li> <li>• Cooking Salt dough</li> <li>• Cooking Rocky road</li> <li>• Cooking Savoury biscuit</li> </ul> <ul style="list-style-type: none"> <li>• Threading, weaving</li> <li>• Small world play</li> <li>• Loose parts play</li> <li>• Collage</li> <li>• Develop cutting skills</li> </ul>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking Scones</li> <li>• Cooking Ham and cheese muffins</li> <li>• Cooking Sausage rolls</li> <li>• Cooking Brownies</li> <li>• Cooking Bread rolls</li> </ul> <ul style="list-style-type: none"> <li>• Junk modelling</li> <li>• Space rockets</li> <li>• Threading, weaving</li> <li>• Small world play</li> <li>• Loose parts play</li> <li>•</li> </ul>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking Smoothies</li> <li>• Cooking Cookies</li> <li>• Cooking Jelly boats</li> <li>• Cooking Fruit skewers</li> </ul> <ul style="list-style-type: none"> <li>• Make playdough (dough disco)</li> <li>• Loose parts play</li> <li>• Threading, weaving</li> <li>• Small world play</li> <li>• Loose parts play</li> <li>• Collage</li> <li>• Develop cutting skills</li> </ul>	<u>Let's Celebrate...</u> <b>I wonder what/ who is special?</b>  <b>Cooking –</b> Pizza puff pin wheels  <b>Building</b> with Duplo/Lego to make houses/buildings <b>Manipulate clay</b> to make Diva lamps	<u>Down at the bottom of the garden...</u> <b>I wonder what lives there?</b>  <b>Cooking -</b> <ul style="list-style-type: none"> <li>- Easter nests</li> <li>- Fruit smoothies</li> </ul> Junk modelling/castle. Making own Supertato and super veg	<u>Spectacular stories and super seaside's...</u> <b>I wonder what happens next?</b>  <b>Cooking -</b> <ul style="list-style-type: none"> <li>- Gingerbread men</li> </ul> <ul style="list-style-type: none"> <li>- Bridges for Gingerbread men to cross</li> <li>- Three Little Pigs junk modelling</li> <li>- Build a boat that floats</li> <li>- Pirate and Mermaid role play (maps, hats, telescopes)</li> </ul>
<b>Nursery Year B</b>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking french bread pizzas</li> <li>• Cooking dinosaur biscuits</li> <li>• Cooking cheese straws</li> <li>• Cooking blueberry muffins</li> <li>• Cooking bread rolls</li> <li>• Cooking stained glass gingerbread</li> </ul> <ul style="list-style-type: none"> <li>• Loose parts play</li> <li>• Small world play</li> <li>• Collage</li> <li>• Develop cutting skills</li> </ul>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking – cheese scones</li> <li>• Cooking fairy cakes</li> <li>• Cooking milk shakes</li> <li>• Cooking cake pops</li> <li>• Cooking fruit kebab</li> <li>• Cooking Easter brownies</li> </ul> <ul style="list-style-type: none"> <li>• Loose parts play</li> <li>• Small world play</li> <li>• Collage</li> <li>• Develop cutting skills</li> </ul>	<b>Cooking -</b> <ul style="list-style-type: none"> <li>• Cooking carrot star bites</li> <li>• Cooking flap jacks</li> <li>• Cooking pizza pin wheels</li> <li>• Cooking cookie bars</li> <li>• Cooking sandwiches</li> <li>• Cooking ice lollies</li> </ul> <ul style="list-style-type: none"> <li>• Loose parts play</li> <li>• Small world play</li> <li>• Collage</li> <li>• Develop cutting skills</li> </ul>			
<b>Nursery Skills Progression (Linked to Development Matters)</b>	PD – To use scissors to make snips in paper PD- To use a comfortable grip when exploring mark making tools EAD – To select and use activities and resources - To explore colour mixing (primary colours) - To explore different materials	PD – To use scissors to cut straight lines PD – To show preference for dominant hand when exploring mark making tools EAD – To draw simple shapes EAD – To join different materials and explore different textures	PD – To use scissors to cut out simple shapes PD – Begin to use tripod grip when using pens and pencils PD - To draw simple pictures representing a face with a circle EAD – To confidently explore a range of media and name colours UtW – To explore how things work			
<b>Reception Skills Progression (Linked to Development Matters)</b>				EAD – To select and use activities and resources with more independence EAD – To talk confidently about their creations PD – To use one-handed tools and equipment with a comfortable grip	PD -To develop their small motor skills so that they can use a range of tools competently, safely and confidently EAD – To create collaboratively sharing ideas, resources and skills EAD – To explore, use and refine a variety of artistic effects to express their ideas and feelings	PD – To weigh, mix, roll and cut PD – To use a range of small tools, including scissors, paintbrushes and cutlery EAD – To safely use and explore a variety of materials, tools and techniques experimenting with colour, design, texture, form and function EAD – To confidently share their creations, explaining the process they have used

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<b>Reception ELGs</b>				<p><b>Fine Motor Skills ELG</b> Children at the expected level of development will:</p> <ul style="list-style-type: none"><li>• Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases;</li><li>• Use a range of small tools, including scissors, paint brushes and cutlery;</li><li>• Begin to show accuracy and care when drawing.</li></ul> <p><b>Creating with Materials ELG</b> Children at the expected level of development will:</p> <ul style="list-style-type: none"><li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function;</li><li>• Share their creations, explaining the process they have used;</li><li>• Make use of props and materials when role playing characters in narratives and stories.</li></ul>
<b>EYFS Experiences throughout the year:</b> Loose parts play, inside and outside, Lego/Duplo/Popoids/Blocks, large scale construction, access to materials/tools/resources during continuous provision.				