



Knowledge and Skills – Progression Ladder

Subject: Design and Technology (DT)							
YEAR GROUP	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<b>Design:</b>	Use talk & listening to: <ul style="list-style-type: none"> <li>● Explore new vocabulary</li> <li>● Explain why things happen/how they work</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b>.</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b>.</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what an increasing range of <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b> (single/group).</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what an increasing range of <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b> (single/group)..</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what an increasing range of <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b> (single/group).</li> </ul>	<ul style="list-style-type: none"> <li>● Knows what an increasing range of <b>products</b> are, their <b>purpose</b>/who may be the <b>user</b> (single/group).</li> </ul>
		<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for a <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon existing similar products.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for a <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon existing similar products.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for a <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon an increasing range of similar or linked products.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for a <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon an increasing range of similar or linked products.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for an innovative <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon an increasing range of similar or linked products.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop <b>design criteria</b> for an innovative <b>product</b> that meets the <b>purpose</b> and <b>requirements</b> of the <b>user</b> based upon an increasing range of similar or linked products.</li> </ul>



**Knowledge and Skills – Progression Ladder**

	<ul style="list-style-type: none"> <li>Carefully develop and share ideas, experiences and imagination independently or collaboratively.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through talking, drawing, <b>templates, mock-ups</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through talking, drawing, <b>templates, mock-ups</b> (and ICT - Seesaw).</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion, <b>annotated sketches and prototypes</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion, <b>annotated sketches, cross-sectional diagrams and prototypes</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion, <b>annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Generate, develop, model and communicate ideas through discussion, <b>annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</b>.</li> </ul>
<b>Technical Knowledge: Processes</b>	<ul style="list-style-type: none"> <li>Understand some important processes and changes in the natural world and around them.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and use <b>mechanisms (sliders)</b> in their products.</li> <li>Build <b>structures</b>, exploring how they can be made <b>stronger, stiffer</b> and more <b>stable</b> e.g. <b>soft, hard, fabrics, materials, folding</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and use <b>mechanisms levers, wheels and axles</b> (London Landmarks – London Eye, cranes), in their products.</li> <li>Build <b>structures</b>, exploring how they can be made <b>stronger, stiffer</b> and more <b>stable</b> e.g. <b>leverage, weight-loading, strong shapes</b> e.g. <b>arches/triangles etc.</b></li> </ul>	<ul style="list-style-type: none"> <li>Understand and use <b>mechanical systems</b> in their <b>products (pulleys)</b>.</li> <li>Apply their understanding of how to <b>strengthen, stiffen and reinforce</b> more complex structures e.g. through joining techniques e.g. <b>gluing and taping, tying and cutting</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Understand and use <b>mechanical systems</b> in their <b>products (levers and pulleys)</b>.</li> <li>Apply their understanding of how to <b>strengthen, stiffen and reinforce</b> more complex structures e.g. through joining techniques e.g. <b>gluing and taping, folding, sticking</b>.</li> <li>Understand and use <b>electrical systems</b> in their <b>products (series circuits)</b> incorporating</li> </ul>	<ul style="list-style-type: none"> <li>Understand and use <b>mechanical systems</b> in their <b>products (cams)</b>.</li> <li>Apply their understanding of how to <b>strengthen, stiffen and reinforce</b> more complex structures through joining techniques e.g. <b>split pins, slot joints, tab joints, brace joints</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Apply their understanding of how to <b>strengthen, stiffen and reinforce</b> more complex structures joining techniques e.g. <b>folding, bending, gluing, taping</b>.</li> <li>Apply their understanding of <b>computing</b> to <b>programme, monitor and control</b> their products.</li> </ul>



Knowledge and Skills – Progression Ladder

					switches, bulbs, buzzers and motors).		
<b>Make: Tools and Equipment</b>	<ul style="list-style-type: none"> <li>Know a range of joining techniques, such as gluing, taping, tying, stapling etc</li> <li>Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>gluing, taping, tying, stapling, sewing, needles, running stitch, thread, PVA glue, stapler, scissors, knotting, hole punch.</b></li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>gluing, taping, tying, stapling, sewing, needles, thread, PVA glue, stapler, scissors, knotting, hole punch, knives, cutters. Blanket stitch, rulers, sieve.</b></li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>knives, gluing, taping, PVA glue, stapler, stapling, scissors, knotting, hole punch, split pins/fasteners, chopping board, skewer, colander, rulers</b></li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>knives, gluing, taping, stapling, stapler, PVA glue, scissors, hole punch, knives, PVA glue, stapler, chopping board, spoons, bowls, graters, saucepans, forks, hob, microwave, rulers, split pins, glue guns, , frying pan</b></li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>knives, gluing, taping, stapling, stapler, PVA glue, scissors, hole punch, split pins/fasteners, hob, bowls, wooden spoons, wooden frame, trays, sponge, glue guns, rulers, saws</b></li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of <b>tools and equipment</b> to perform practical tasks for <b>cutting, joining and finishing</b>, accurately e.g. <b>knives, gluing, taping, PVA glue, stapler, stapling, scissors, hole punch, chopping board, grater, bowl, weighing scales, sieve, cutters, split pins/fasteners, rulers, saws, glue guns, needles, cross stitch, needles, thread, back stitch, running stitch, knotting</b></li> </ul>



**Knowledge and Skills – Progression Ladder**

<p><b>Make: Materials</b></p>	<ul style="list-style-type: none"> <li>Identify a range of materials.</li> <li>Use various construction materials and tools effectively with precision and to solve problems.</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 e.g. paper, card, felt, lolly sticks, string, wool, tissue paper, ribbon, buttons, googly eyes, fabrics.</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. e.g. paper, card, felt, lolly sticks, string, wool, tissue paper, ribbon, buttons, gems, fabrics, bread (and its ingredients/toppings)</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. e.g. bottle caps, wooden/Dowling rod, string, paper, card, lolly sticks, string, wool, cling film.</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. e.g. matchsticks, wooden/Dowling rods, paper, card, lolly sticks, string, wool, tissue paper, fabrics, lightbulbs, wires, switches, batteries, noodles/stir fry ingredients</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. e.g. paper, card, oils, chocolate/topping ingredients</li> </ul>	<ul style="list-style-type: none"> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. e.g. wooden/Dowling rod, paper, card, felt, lolly sticks, string, wool, tissue paper, ribbon, buttons, googly eyes, fabrics, paper mâché, tins etc</li> </ul>
<p><b>Evaluate: Critiquing own work</b></p>		<ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products e.g. kites</li> </ul>	<ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products. e.g. crown jewels, London landmarks.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products. e.g. greenhouses, kebabs.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products: e.g. Chinese takeaway/menus</li> </ul>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products. e.g. chocolate products/packaging, Egyptian paper, puppet theatres</li> </ul>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products e.g. previous Anderson shelter models, food products</li> </ul>



**Knowledge and Skills – Progression Ladder**

		<ul style="list-style-type: none"> <li>Evaluate their ideas against given <b>design criteria</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate their ideas against their own <b>design criteria</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate and improve their ideas against their own <b>design criteria</b> and consider the views of others to improve their work.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate and improve their ideas against their own <b>design criteria</b> and consider the views of others to improve their work.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate and improve their ideas (e.g. plans and final products) against their own <b>design criteria</b> and consider the views of others to improve their work.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate and improve their ideas (e.g. plans and final products) against their own <b>design criteria</b> and consider the views of others to improve their work.</li> <li>Understand how key <b>events</b> (<b>World War II</b>, tourism) and <b>individuals</b> (<b>Anderson</b>, <b>Alexander Carlile</b>) in design and technology have helped shape the world.</li> </ul>
<b>Nutrition and Cooking: Food</b>		<ul style="list-style-type: none"> <li><i>Understand where food comes from (taught across the curriculum).</i></li> </ul>	<ul style="list-style-type: none"> <li>Use the basic principles of a <b>healthy</b> and <b>varied</b> diet to prepare dishes (<b>baking, kneading, shaping, combining, sieving</b>).</li> </ul>	<ul style="list-style-type: none"> <li>Understand the principles of a <b>healthy</b> and <b>varied</b> diet.</li> <li><b>Prepare</b> (<b>chopping, slicing, combining, cutting</b>) and make a dish.</li> <li>Understand <b>seasonality</b>, and know where and how a <b>variety of</b></li> </ul>	<ul style="list-style-type: none"> <li>Understand the principles of a <b>healthy</b> and <b>varied</b> diet.</li> <li><b>Prepare and cook</b> (<b>chopping, heating, slicing, mixing, cutting, grating</b>) a variety of predominantly <b>savoury dishes</b> using</li> </ul>	<ul style="list-style-type: none"> <li><b>Prepare and cook</b> a dishes (<b>mixing, melting, solidifying, cooling, shaping, heating</b>) using a range of cooking techniques (<b>boiling</b>).</li> </ul>	<ul style="list-style-type: none"> <li>Understand the principles of a <b>healthy</b> and <b>varied</b> diet.</li> <li><b>Prepare and cook</b> (<b>rolling, mixing, kneading, grating, chopping, sieving</b>), a variety of predominantly <b>savoury dishes</b> using a range of</li> </ul>



**Knowledge and Skills – Progression Ladder**

				<p>ingredients are grown, reared, caught and processed.</p>	<p>a range of cooking techniques (frying)</p> <ul style="list-style-type: none"><li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li></ul>		<p>cooking techniques (baking).</p>
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