

Progression in DT

Key Concepts	RECEPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
STRAND: Design	<p>Through opportunities for exploratory play in continuous provision and planned learning experiences, EYFS children will:</p> <p>Design using hand gestures, arranging and re-arranging materials and components, talking and listening.</p> <p>Context will sometimes be set by teacher, sometimes by the children e.g. story based, home school, playground.</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</p>	<p>Think of some ideas of my own.</p> <p>Explain what I want to do.</p> <p>Describe my design by using pictures, model mock-ups and words.</p> <p>Design a product for myself and others following design criteria.</p>	<p>Think of ideas and plan what to do next.</p> <p>Choose the best tools and materials.</p> <p>Give a reason why these are best tools or materials.</p> <p>Describe my design by using pictures, diagrams, model mock-ups, and words.</p> <p>Design a product for others following design criteria.</p>	<p>Show that my design meets a requirement.</p> <p>Put together a plan which shows the order and also what equipment and tools I need.</p> <p>Describe my design using an accurately labelled sketch.</p>	<p>Show that my design meets a range of requirements.</p> <p>Put together a step-by-step plan which shows the order and also what equipment and tools I need.</p> <p>Describe my design using an accurately labelled sketch and words.</p> <p>Say how realistic my plan is.</p> <p>Can I take account of the ideas of others when designing?</p>	<p>Come up with a range of ideas after I have collected information.</p> <p>Take a user's view into account when designing.</p> <p>Produce a detailed step-by-step plan.</p> <p>Suggest some alternative plans if needed.</p> <p>Use simple cross sectional planning to show my design.</p> <p>Produce prototypes to show my ideas.</p>	<p>Use a range of information to inform my design.</p> <p>Use market research to inform plans.</p> <p>Work within constraints.</p> <p>Follow and refine my plan if necessary.</p> <p>Justify my plan to someone else.</p> <p>Consider culture and society in my designs.</p> <p>Use exploded diagrams to show my designs.</p>
STRAND: Make	<p>Construct with a purpose in mind, using a variety of resources</p> <p>Use simple tools and techniques competently and appropriately to shape, assemble and join.</p> <p>Have frequent opportunities to explore construction kits.</p> <p>Begin to talk about products I have made.</p>	<p>Explain what I am making.</p> <p>Select tools and equipment to cut, shape, join and finish.</p> <p>Choose the right materials.</p> <p>Follow procedures for safety and hygiene.</p>	<p>Explain what I am making and why my audience will like it.</p> <p>Join things (materials/components) together in different ways.</p> <p>Choose materials and explain why they are being used depending on their characteristics.</p> <p>Follow procedures for safety and hygiene.</p>	<p>Use equipment and tools accurately.</p> <p>Tell if my finished product is going to be good quality.</p> <p>Follow procedures for safety and hygiene.</p>	<p>Show I am conscience of the need to produce something that will be liked by others.</p> <p>Show a good level of expertise when using a range of tools and equipment.</p> <p>Explain how my product will appeal to the audience.</p> <p>Use a range of tools and equipment expertly.</p> <p>Follow procedures for safety and hygiene.</p>	<p>Explain why my finished product is going to be of good quality.</p> <p>Explain how my product will appeal to the audience.</p> <p>Use a range of tools and equipment expertly.</p> <p>Think about the functionality of my work.</p> <p>Follow procedures for safety and hygiene.</p>	<p>Use tools and materials precisely.</p> <p>Change the way I am working if needed.</p> <p>Think about the aesthetic qualities of my work.</p> <p>Think about the functionality of my work.</p> <p>Follow procedures for safety and hygiene and understand the process of risk assessment.</p>

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<p>STRAND: Evaluate</p>	<p>Share their creations, explaining the process they have used</p>	<p>Talk about my own work. – likes / dislikes. Talk about existing products and say what is good and not so good about them.</p>	<p>Describe what went well with my work. Judge my work against the design criteria.</p>	<p>Think of how I will check if my design is successful. Begin to explain how I can improve my original design. Evaluate what I would do differently if I did it again and why.</p>	<p>Begin to explain how I can improve my original design. Evaluate my product, thinking of both appearance and the way it works.</p>	<p>Check that my design is the best it can be and if it can be improved. Evaluate appearance and function against the original criteria. Test and evaluate my final product to see if it is fit for purpose.</p>	<p>Test and evaluate my final product to see if it is fit for purpose. Evaluate what would improve it. Evaluate if different resources would have improved my product.</p>
<p>STRAND: Electrical & mechanical components</p>					<p>Theme: Science - Electrical Board Game Explore and describe how electrical circuits can be created and controlled. Discuss in depth the hazards and safety issues associated with electricity. Explore and program a simple control device.</p>		<p>Theme: World War Two - Moving Vehicles Understand and use electrical systems in their products eg switches, bulbs and motors</p>
<p>STRAND: Axles, pulleys and gears</p>			<p>Theme: The Great Fire of London - Fire Engines Attach a fixed axle to a chassis and add wheels ensuring that they can move freely.</p>				<p>Theme: World War Two - Moving Vehicles Design and build a working model where the speed of movement can be controlled. Explore & Understand how more advance mechanical systems used in their product enable changes in movement and force. Explain how the number of teeth of a gear affects the speed of rotation.</p>

Progression in DT

<p>STRAND: Food Technology</p>		<p>Theme: The Light Keeper's Lunch – Fruit</p> <p>Sort and classify food into food groups, e.g. vegetables, pulses, cereals, dairy etc.</p> <p>Measure and weigh accurately using cups and spoons.</p> <p>Work safely and hygienically.</p>	<p>Theme: Seasonal produce – fruit crumble</p> <p>Use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where food comes from.</p>	<p>Context: Making pizzas (Understanding bread)</p> <p>Gain an understanding of the ways in which specific food groups apply to the principles of a healthy and varied diet.</p> <p>Identify what needs to be done in order to work safely and hygienically when working on a range of tasks.</p> <p>Measure and weigh using standard units.</p>	<p>Theme: Titanic</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>Measure and weigh specific amounts using standard units</p> <p>Give reasons for the way in which food processing can affect the taste, appearance, texture and colour of food.</p>	<p>Theme: Industrial Revolution – Healthy Workhouse Broth</p> <p>Talk about the physical and chemical changes that take place when food is cooked, e.g. heated and cooled</p> <p>Talk about how the properties of certain foods can affect the final product.</p> <p>Know and understand the practice needed in terms of food hygiene and kitchen safety.</p> <p>Select the appropriate methods and equipment for measuring, e.g. time, dry goods, liquids etc.</p>	
<p>STRAND: Mechanisms</p>		<p>Theme: fireworks - Moving pictures</p> <p>Deconstruct a simple slider and describe how it works.</p> <p>Construct a simple slider independently.</p> <p>Make a lever by joining card strips with paper fasteners.</p>		<p>Theme: Romans – Catapults</p> <p>Design a catapult to launch a given weight</p> <p>Construct a lever that allows a load to project over a given height/obstacle.</p>	<p>Theme: Jumanji Board Game</p> <p>Create a range of sliders and levers to produce horizontal and vertical movement.</p> <p>Combine sliders and levers to produce a range of movements.</p>		<p>Theme: Science - Animals inc. Humans: Automated Animals</p> <p>Discuss the relationship between a cam and follower, an off-centre cam, a peg cam, a pear-shaped cam and a snail cam.</p> <p>Make adjustments to the settings of equipment and machinery such as sewing machines and drilling machines.</p>

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<p>STRAND: Structures</p>	<p>Junk modelling</p>		<p>Theme: Computing Fact File - Photo frame</p> <p>Strengthen 2D frames by adding diagonal bracing struts.</p> <p>Make a rectangular frame from strip wood.</p> <p>Use materials to make simple joints, glue, tape and paper clips.</p>	<p>Theme: Stone Age - Round Houses</p> <p>Deconstruct and assemble the net of a range of basic 3D shapes.</p> <p>Join 2D frames to create 3D structures. Make rectangular frames of different sizes using strip wood, reinforcing with cross braces.</p> <p>Use a range of materials to make joints.</p>		<p>Theme: Packaging</p> <p>Create nets and templates accurately in a range of sizes.</p> <p>Use a range of increasing methods to strengthen 3D structures and frames.</p> <p>Build a range of structures using a wide range of effective materials.</p>	<p>Theme: Science - Animals inc. Humans - Automated Animals</p> <p>Make use of specialist equipment to mark out materials.</p> <p>Select the most appropriate method to strength 3D structures and frames.</p> <p>Apply a range of finishing techniques, including those from art and design, to a broad range of materials including textiles, metals, polymers and woods.</p> <p>Use a wider more complex range of materials, components and ingredients, taking into account their properties.</p>
<p>STRAND: Textiles</p>			<p>Theme: Cushions</p> <p>Talk about the similarities and differences between textiles based on the characteristics of an increasing range of materials.</p> <p>Use a simple pattern with increasing accuracy.</p> <p>Cut and join fabrics using running stitch, over sewing and buttons.</p> <p>Decorate fabric by applying beads and sequins.</p>		<p>Theme: Anglo-Saxon Purses</p> <p>Make and use a paper pattern that includes a seam allowance.</p> <p>Sew using a range of stitches including, backward running stitch and over sewing.</p> <p>Use a wide range of techniques to add colour, texture and pattern to fabric.</p>	<p>Theme: Brazil - Masks</p> <p>Select appropriate materials to create a product.</p> <p>Create increasingly complex patterns and templates with more than one part that are accurately measured.</p> <p>Identify the most effective finishing technique in order to maximise the aesthetic value of the product.</p>	<p>Theme: Egyptians – Slippers</p> <p>Use a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives.</p> <p>Investigate and develop skills in modifying the appearance of materials including textiles and other manufactured materials e.g. dying and appliqué</p>