

Curriculum Overview Document DT

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	<p>Projects linked to early Design and Technology. Food and Hygiene: Baking biscuits Structure: Exploring different materials linked the 3 little pigs. Textiles: Exploring textiles and materials to make dolly peg characters.</p> <p>Continuous Provision Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue. Join different materials and explore different textures Provide children with a range of materials to construct with. Develop cutting techniques and scissor skills (cutting along given lines). Develop precision when sticking a variety of materials (e.g., chick, given outline, glue and feathers) Use a range of objects to build with – bricks, stickle bricks, Lego, wooden blocks etc.</p>					
Year 1	<p>Structure – Rolling Toy Exploring joining techniques (tabs & brackets) to create a strong standing or rolling toy. Links to history topic.</p>		<p>Mechanisms – Pulleys & Levers Using sliders to create a moving picture (simple lever mechanism). Links to art topics.</p>		<p>Food & Hygiene - Fruit Salads. Introduction to chopping ingredients and considering how they work together. Links to geography topic.</p>	
Year 2	<p>Structure - Towers Creating towers using toothpicks and sweets/marshmallows, exploring how to use shape & positioning, bracing and scaffolding to strengthen and make them free standing. Key Skills: Using card strips/levers to create a pop-up mechanism (e.g., Valentine cards, Christmas cards). Links to RE.</p>		<p>Mechanisms – Axel to create movement Creating a wheeled vehicle using a spinning axel (considering the positioning & size of materials) that is powered by a sail.</p>		<p>Textiles – Running Stitch Using a running stitch to create a 2D bookmark.</p>	
Year 3	<p>Structure – Nets & Templates Using nets & templates to create a prototype (e.g., Elf house, picture frame, lunch box). Strengthening using cladding (& introducing rendering) building on the use of tabs & brackets. Links to maths topics. Key Skills: Mexican Salsa & Guacamole. Blending and pureeing ingredients.</p>		<p>Textiles – African Weaving Using weaving to create a strong material that follows a pattern/design Key Skills: CAD – Creating simple 3D models of forest school vehicles, following a plan.</p>		<p>Mechanism - Pulleys Creating a crane using a pulley (building on lifting by combining materials to share weight).</p>	
Year 4	<p>Food & Hygiene - Fake Away Pizza Building on chopping ingredients to shape using the bridge & claw technique. Combining ingredients considering layout. Possible enrichment opportunities: Visit to/from Pizza Hut, Dominos, Morrison's or Asda and link school. Links to geography topic. Key Skills: CAD – Creating virtual mosaics. Comparing designing by hand with designing using ICT.</p>		<p>Mechanisms – Wind-Up Movement Shaping plastic and cardboard elements to create a self-propelled vehicle (e.g. boat or car) with a wind- up mechanism, comparing the use different methods of propulsion (e.g., wind up, push, pull, hydraulic, electric balloon). Links to science (materials). Key Skills: Electronics – Creating a basic circuit with Raspberry Pi devices to light up LEDs within a character cut-out.</p>		<p>Structure - Kites Combining recycled materials (shopping bags) to create a kite that is fit for purpose (including the application of appropriate strengthening techniques – e.g., rendering). Links to science (materials). Key Skills: Electronics – Creating a step counter with the BBC:Microbit</p>	
Year 5	<p>Textiles – Blanket Stitch & Applique Using a blanket stitch & appliqué to create a 3D Christmas decoration.</p>		<p>Mechanisms – Pulleys & Levers – CAM toy Creating a basic cam toy (building of shaping and joining card to create movement – lift rather than slide). Key Skills: Exploded diagrams – exploring the elements of a biro pen that clicks. Key Skills: Exploration of how gears can be used to increase the moment and change the direction of a force.</p>		<p>Structure & Electronics – Buzz Wire Game Measuring & shaping wire to create a buzz wire game. Insert an electrical circuit with a switch. Insert a buzzer (swap with LED from last year). Compare strengthening flat & free-standing objects. Links to science (conductors & insulators) Key Skills: Using market research to create toothbrush prototypes to appeal to KS1 children (molding & shaping plasticine).</p>	
Year 6	<p>Food & Hygiene - Soup Consolidating chopping ingredients to facilitate blending & cooking vegetable soup. Key Skills Using CAD to create a 3D model of a Viking Long ship..</p>		<p>Mechanisms – Wind-Up Movement using Wire Revisit wind-up mechanisms and reapply to create a “flying” leaf using wire. Compare the similarities & differences between a machine-made butterfly mechanism and our twirling leaves (plastic vs. wire). Key Skills: Exploded diagrams – exploring the elements of our wind up mechanism.</p>		<p>Structure – Upcycled Structure Cutting, joining & strengthening to create a bug hotel using recycling and natural materials. Selecting materials that are fit for purpose & considering sustainability. Key Skills: Electronics – Use Raspberry Pi devices to program LEDs to send simple messages using Morse Code.</p>	