Curriculum Overview Document DT

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**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. **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.					
Year 1	**Structure – Rolling Toy** Exploring joining techniques (tabs & brackets) to create a strong standing or rolling toy.		**Mechanisms – Pulleys & Levers** Using sliders to create a moving picture (simple lever mechanism).		**Food & Hygiene - Fruit Salads.** Introduction to chopping ingredients and considering how they work together.	
Year 2	**Structure - Towers** Creating spaghetti and marshmallow towers, exploring how to use shape & positioning 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).*		**Mechanisms – Axel to create movement** Creating a wheeled vehicle using a working axel that can be pulled (considering the positioning & size of materials).		**Textiles – Running Stitch** Using a running stitch to create a 2D bookmark.	
Year 3	**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. ***Key Skills:*** *Mexican Salsa & Guacamole. Blending and pureeing ingredients.*		**Textiles - 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.*		**Mechanism - Pulleys** Creating a crane using a pulley (building on lifting by combining materials to share weight).	
Year 4	**Food & Hygiene - Fake Away Pizza** Building on chopping ingredients to shape using the bridge & claw technique. Combining ingredients considering layout. ***Key Skills:*** *CAD – Creating virtual mosaics. Comparing designing by hand with designing using ICT.*		**Mechanisms – Wind-Up Movement** Shaping plastic to create a self-propelled paddle boat with a wind-up mechanism, comparing the use of push/pull with self-propelled mechanisms (e.g., wind up, balloon). ***Key Skills:*** *Electronics – Creating a basic circuit with Raspberry Pi devices to light up LEDs within a character cut-out.*		**Structure - Kites** Combining materials to create a kite that is fit for purpose (including the application of appropriate strengthening techniques – e.g., rendering). ***Key Skills:*** *Electronics – Creating a step counter with the BBC:Microbit*	
Year 5	**Textiles – Blanket Stitch & Applique** Using a blanket stitch & appliqué to create a 3D Christmas decoration.		**Mechanisms – Pulleys & Levers – CAM toy** Creating a basic cam toy (building of shaping and joining card to create movement – lift rather than slide).		**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. ***Key Skills:*** *Using market research to create toothbrush prototypes to appeal to KS1 children (molding & shaping plasticine).*	
Year 6	**Food & Hygiene - Soup** Consolidating chopping ingredients to facilitate blending & cooking pumpkin soup. ***Key Skills:*** *CAD – Creating a simple 3D computer generated model of a Viking longboat with key features (shield, mast, sail, oars, dragon head).*		**Mechanisms – Wind-Up Movement using Wire** Revisit wind-up mechanisms and reapply to create a "flying" butterfly using wire. Compare the similarities & differences between the two mechanisms (plastic vs. wire). ***Key Skills:*** *CAD – Creating a 3D interactive model of a Ziggurat that can be explored using Minecraft Pi.*		**Structure – Wooden Structure** Cutting, joining & strengthening to create a wooden bug hotel. 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.*	