

Design Technology Curriculum Overview

Rationale	For all children to have: - understanding of the design process and how to refine quality of outcomes at each stage - a balance of skills in all the strands of DT: textiles, structures, mechanisms, electrical systems, computing - Cooking and nutrition build on knowledge and understanding in science, geography and history and develop cooking skills progressively		
Approach	- Start with a relevant and appropriate problem to solve - Use a clear design process for all units is followed with clear progression in skills of: planning, exploring, communicating, making, modelling, reviewing, evaluating - Links to wider curriculum are made where appropriate - Three planned DT units per year		
Nursery	Structures, Mechanisms and Textiles	Cooking and Nutrition	
	Structures, Mechanisms and Textiles is covered throughout the year through half termly themes taken from the interests of the children. Weekly enhanced provision is planned to ensure the children have the opportunity to explore these areas through holistic and discrete teaching of the EYFS curriculum. <ul style="list-style-type: none"> Build with a variety of materials e.g. wooden blocks, Duplo, stickle bricks Join materials Construct dens using A frames Weaving / lacing boards/ sticking/ cutting 	Seasonal exploration of ingredients Food for celebrations and festivals Stripy Salad pots	
Reception	Textiles	Mechanisms	Computing
Problem	Decorate a card for someone you care about	Make a puppet move	Share a memory
	<ul style="list-style-type: none"> Link: PSHE Mother's Day/ Birthday/ Easter/ Thank You/ Friendship cards Stitching on binka Understand that different media can be combined to create new effects 	<ul style="list-style-type: none"> Link: dinosaurs or characters from books e.g. Supertato Puppets with hinges Joining 	<ul style="list-style-type: none"> Link: Sharing learning they are proud of Children select appropriate applications How best to make a record of a special event in their lives, such as a trip to the zoo Use basic PowerPoint software or similar
	Cooking and Nutrition		
	Cooking and nutrition is covered throughout the year through half termly themes taken from the interests of the children. Weekly enhanced provision is planned to ensure the children have the opportunity to explore cooking and nutrition through holistic and discrete teaching of the EYFS curriculum.		
Y1	Structures	Mechanisms	Cooking and Nutrition
Problem	Make the tallest beanstalk to support the giant's castle	Nursery love a pop-up. Create a pop-up book they will love	Triple-Decker Sandwich
	<ul style="list-style-type: none"> Link: Jack and the Beanstalk Reinforcement: folding, tripod/triangles foundations and columns 	<ul style="list-style-type: none"> Link: Nursery favourites – research with them Children use lever and sliders 	<ul style="list-style-type: none"> Link: Tiger who came to tea 'party' Interview people and tally preferences English: Write down how to make a sandwich Computing: Make a film about how to make the sandwich
Y2	Mechanisms	Computing	Textiles
Problem	How can my character join "On Sudden Hill"? Create a go-cart	Create an interactive e-Book to compare schools	Design a puppet show for Reception : create a puppet and the show
	<ul style="list-style-type: none"> Link: On Sudden Hill book Create Go-Carts with wheels and axels suitable for chosen character. 	<ul style="list-style-type: none"> Link: Geography - What is life like in different school in Trust in London? School life here: create photos, videos and sounds that are embedded in e-book. School life contrasting school: links to websites, documents, film 	<ul style="list-style-type: none"> Link - Alternative traditional tales Design and create their own puppet for purpose. Use puppets to create own puppet show Design the show for an audience / create a stage etc.
Y3	Mechanisms	Structures	Cooking and Nutrition
Problem	How can you move heavy objects/water – Egyptians	Keep my plant alive! Create a mini greenhouse	Create a seasonal pizza range
	<ul style="list-style-type: none"> Link: History: Egyptians Moving - heavy weights - pulleys and levers Shaduf: A hand operated device for lifting water 	<ul style="list-style-type: none"> Link- Science plants unit Strengthen and reinforce Use of specific joins/ diagonals Hinges 	<ul style="list-style-type: none"> Link: Geography - Seasonality of food Growing/plants – Science Seasonal pizza for UK or Mediterranean Trip to pizza restaurant included

Y4	Textiles	Computing	Electrical
Problem	How can we recycle a garment	Designing and Coding a Prototype Toy	Stop the intruder! Create a burglar alarm
	<ul style="list-style-type: none"> Link: Geography - climate change and English - Shackleton's journey Re-use and repurpose an old garment using a given pattern or brief. Being given a pattern – create a bag for the journey Fraying/ using blanket stitch to stop fraying Using back stitch and turning inside out Pupils to add their own design element 	<ul style="list-style-type: none"> Link: Computing – scratch coding to select, use and combine software and content to accomplish given goals; using input devices such as sensors. Design and code an interactive toy (input and output) using Scratch. Use a Crumble controller to make working models of parts of your toy, including lights, sensors and alarms. 	<ul style="list-style-type: none"> Link: Sound topic in Science. Electrical system in a product Using switches or sensors to affect use. (Variable resistor to create volume control, infrared to create alarm, light sensor to create musical night light.
Y5	Mechanisms	Structures	Cooking and Nutrition
Problem	How do I show how the Earth revolves around the sun?	Building Bridges - design and structure competition	Cooking for an event – a meal for a function/person
	<ul style="list-style-type: none"> Link: Science- Sun, Earth and Moon Understanding of different types of cams and how they move (e.g. eccentric, round, snail cams). Create a model showing how Earth moves around the Sun 	<ul style="list-style-type: none"> Link: Geography - /building a bridge between NI and Scotland/bridge across the Thames. Strengthening - buttresses, arches, use of triangles, strongest materials, how to make a specific material stronger by manipulating its form e.g. paper by folding and rolling. Considering different forces that act on a bridge (tension and compression) Construction – cutting materials making good connections/reinforcing 	<ul style="list-style-type: none"> Select appropriate ingredients and use a wide range of techniques to combine them
Y6	Textiles	Cooking and Nutrition	Electrical
Problem	Make Do and Mend	Masterchef: Create a menu	Create an interactive game for the summer fair
	<ul style="list-style-type: none"> Link: History- WW2 	<ul style="list-style-type: none"> Link: Geography - Who are the British? Apply Cooking and Nutrition skills 	<ul style="list-style-type: none"> Link: Financial independence/ entrepreneur/ careers week

- Creating a new garment from old ones referring to the WW2 slogan – Make Do and Mend.
- Creating own pattern and design

- Design a healthy meal based on from different cultures who migrated to Britain.

- Children apply all knowledge of electrical DT to design their own game with sound/ buzzer for the summer fair