DESIGN AND TECHNOLOGY CURRICULUM OVERVIEW

	TERM ONE		TERM TWO		TERM THREE	
NURSERY	**All About Me**	**Our Community**	**We love stories**	**Spring (planting)**	**Dinosaurs**	**Moving on**
RECEPTION	**Super Me**	**Special days**	**Where ever our imagination takes us.**	**Fairy tales**	**Lifecycles**	**Look at me now**

DT in the early years is taught through continuous and enhanced provision which can be accessed during the children's explorative play. The children are encouraged to explore their own ideas and staff will model and support where needed; demonstrating techniques and resources. Some activities relating to a theme or skill may be introduced during a small group session, led by an adult, where by later the children are encouraged to further explore independently during child initiated time whilst demonstrating the characteristics.

Within the Early Years we take part in special creative days such as 'Day to Create' where the children plan, design and practically create and demonstrate their ideas from challenged provided or from their own imagination or their own initiative.

The characteristics of effective teaching and learning of DT in the early years will involve:

- Playing and exploring - children investigate and experience things, and 'have a go'
- Active learning - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements.
- Creating and thinking critically - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

NB Topics in EYFS may change depending on Child Initiated interests of children

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Year Group	Unit Title & Summary	DT strand(s) developed within unit content.				
		FOOD PREP/ HEALTH & HYGIENE	MECHANICAL SYSTEMS	ELECTRICAL SYSTEMS	CONSTRUCTI -ON IDEAS	JOINING/ FINISHING SKILLS
YR1	**Making a storybook come alive. (Sliders and levers)** Create a page for a story book which contains a vertical or horizontal push/pull movement using a slider.		✓		✓	✓
	Baby Bear needs a new chair! (Structures) Design and make a replacement stool for baby bear. Children develop their understanding of structural stability.				✓	✓
	Healthy Breakfasts - Make a Fruit Salad (Food) Children buy, prepare and taste a breakfast pot that contains fruit salad and yoghurt. Ch. begin to learn about different food groups and develop their knowledge of healthy food choices and where foods come from.	✓				
YR2	**Snapping snake /litter picker (Linkages)** Children experiment with making the linkages that will enable their snapper to move, varying the width, length and thicknesses of the card they use to maximise the success of these mechanism.		✓		✓	
	Performance Puppets (Textiles) Children design and make puppets developing joining and fastening skills including emerging sewing skills. The shared brief for the puppets could relate to a class storybook, a religious or cultural celebration.				✓	✓
	Formula One Friction (Axles) Children explore the axle mechanisms. They look at how the axle can be fixed securely to the chassis while still allowing rotational movement. They experiment with different designs for axle holders and use a ramp experiment to judge which designs are most effective at reducing friction and allowing free movement of the dowel.		✓		✓	

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YR3	**Bridges – re-enforcing and strengthening materials.** Children learn about simple beam bridge designs and test a range of re-enforcement techniques (inc. lamination, ribbing and corrugation). They explore the basic principles of building girders (using open cuboid and tri prism nets) and use their own combination of ideas from this learning to construct a bridge to span a fixed distance.				✓	✓
	Amazing air-powered lifting. (Pneumatics) Children explore how push and pull forces can be transferred to different areas of a mechanism via pneumatics. The children also explore how mechanisms such as hinged arms can be controlled using pneumatics.		✓		✓	✓
	Dips and Dippers (Food) Children research, design and make a variety of dips and dippers. They explore different combinations or tastes and textures and try to increase the healthiness of their snack. Whilst preparing their dippers the children will use a range of food preparation skills.	✓				
YR4	**Careful cargo. (Structures)** Children design and explore different net structures to create packaging with added insulation or re-enforcements suitable for a care package parachute drop. Children make paper templates for their design and evaluate and make improvements before constructing in card.		✓		✓	✓
	Propeller Power (Electrical systems) Children use a simple circuit with a motor output and a basic switch to power a vehicle and attach this to a tech card chassis. Possible enquiry - which shape and size of propeller blade will move their motorised dragster car most effectively.			✓	✓	✓
	A terrific toasted sandwich (Food) Children design, make and evaluate their own toasted sandwich. Exploring design questions such as, Which fillings stay inside the toasted sandwich best? What type of bread is best at holding the filling? How can I make my toasted sandwich healthier?	✓				

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YR5	**A Moving Window Display (Crumble)** Children develop an understanding of crumble hardware and how it can control a variety of outputs. They begin by building and programming these outputs in a series of mini projects and then use their knowledge of these devices to add a range of outputs to scene. (This could be any themed occasion such as a Halloween Spooky House or a Nativity Scene for Christmas etc)		✓	✓	✓	✓
	Fabric Phone Cases (Textiles) Children design and make phone cases which are required to be durable, to keep contents safe and also be aesthetically pleasing to the user. During the project the children will learn about a range of stiches and then choose appropriate stitches to construct/ join their product. They will also explore how stitching or applique and be used as a decorative finish. Children explore different types of fastener, their functional and visual appeal.				✓	✓
YR6	**'Rescue Rover' VEX Go – Challenge (control devices).** *Children build and code a robot to complete a series of challenges using VEX go. In the build-up to the challenge task the children will explore:* - *Gear ratios* - *How the rotational movement of the motor can be turned into a vertical or horizontal movement within a mechanism.* - *Ways to move objects inc. grabbers, lifters and the use of electro-magnets*		✓	✓		
	Crank It Up Challenge (Crane structure and mechanisms) Children will design and build a working crane using k'nex. Within the construction elements of the project they will explore principles of stability and triangulation and will develop different truss girder designs. The crane requires a mechanism to allow for rotational (horizontal movement) of part or all of their crane and also uses pulleys and gear ratios to create an effective vertical lifting mechanism.		✓		✓	✓
	How healthy was a Viking meal? (Food) Children make and evaluate a traditional Viking meal of Skause and bread. They explore the impact of a range of preparation techniques eg dicing, grating, blending and evaluate the meal using multiple criteria including; taste, nutrition, sustainability, texture and hygiene.	✓				

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