

2022-23 LTP Design and Technology



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Polar Express Develop their own ideas and then decide which materials to use to express them.	My Heroes Explore, use and refine a variety of artistic effects to express their ideas and feelings	Cooking & nutrition Designing and making with food Understanding Health and nutrition Combining tastes and textures to make a product Using basic cutting tools Fruit kebabs	Textiles: Marking out and joining fabric Making a textile product by marking out, cutting and joining fabric Finger puppet(animals)	Free Standing Structures Understanding ways in which structures can be made stable Understand how to stiffen materials Photo frame (as a present)	Mechanisms: Linkages Understand how a range of linkage type mechanisms work Assemble a range of mechanisms Apply to the design of a pop up book Pop Up Book with moving parts (Guide To The Rainforest)	Structures: Musical instruments Investigate instruments from different times and cultures Understand how shape and materials used can alter sound Investigate a range of finishing techniques Rainmaker	Structures Understand why structures sometimes fail Investigate and use techniques to reinforce and strengthen structures Design and make a structure for a specific tasks Design and build an aqueduct
Spring		Explore, use and refine a variety of artistic effects. Return to previous learning, refining ideas	Static Structures Creating models from sheet and reclaimed materials Understand about basic structures and how they can be made stronger/more stable Use range of fixing techniques Castles	Mechanisms: Wheels, axels, pulleys and levers Joining materials with moving joints Understand how wheels and axels work Understand winding mechanisms Moving vehicle (fire engine)	Mechanisms and control: Pneumatics Consider different types of pneumatic structures Know about the movement of simple mechanisms, such as levers and linkages Moving Monster	Textiles: Reinforcing fabric Investigate ways of reinforcing fabric, e.g. over stitching, running stitch Create and use a pattern Develop decorative techniques and fastenings e.g. applique Purse for the Rio carnival	Mechanisms: Moving toys using cams, wheels and axels Understand how mechanisms can be used to produce movement Cut, shape and join components, selecting tools for a specific purpose Roman siege machines	Mechanisms: electrical and computer control Understand how products can be driven by electricity Use motors to control speed and direction of movement Develop structures with cladding and finishing techniques
Summer	Once Upon a Time Join different materials and explore different textures.	Choose from a variety of resources, what resources to use to create their own skeleton.	Mechanisms: Pushes, pulls and levers Understand simple mechanisms that create movement e.g. simple levers and sliders A book with moving parts (transport)	Textiles: Using a paper pattern, joining fabric Use a graphics programme Use a simple paper pattern to draw around and cut out fabric Use simple joining techniques Space suit	Cooking & nutrition Food preparation techniques Combining appearance, flavour and texture Understand the balanced plate model for healthy eating A Greek Salad	Electrical Control Draw on understanding of simple electrical circuits and switches Join components, cut and shape material with precision An alarm system for a precious artefact	Cooking and Nutrition Understand the function and properties of materials Identify, select and use food tools and techniques safely Understand food hygiene Making bread	Textiles Design for a range of needs – appearance, safety, size, warmth Use patterns, templates and detailed working drawings Develop finishing techniques T Shirts





