Design and Technology Curriculum Overview for Parents and Carers

Reception	Cooking and nutrition	Structures	Structures	Textiles
	Learning about vegetables and where they come from while preparing to make a soup. Children describe the taste of a range of vegetables and design a soup recipe as a class. They practise cutting skills and prepare the vegetables for their class soup before testing the final product.	Exploring materials through junk modelling, children develop their scissor skills and awareness of different materials and joining techniques. Children begin to make verbal plans and material choices before starting, and problem solve while making their model.	Considering the properties of materials through water play, children discover which materials are waterproof and whether they float or sink. Children evaluate a variety of boats and use their new-found knowledge to design and make a boat that is waterproof and floats.	Developing fine motor skills through a range of threading activities before moving on to use binka and a needle. Children design a bookmark, considering what to include and why and then follow their designs to complete their bookmarks.

Term	**Autumn**	**Spring**	**Summer**
Year 1	Structures: Constructing a windmill	Mechanisms: Making a moving story book	Cooking and nutrition: Smoothies
	Designing, decorating and building a windmill, developing an understanding of different types of windmill, how they work and their key features. Looking at examples of windmills and exploring the functions that they carry out.	Experimenting with sliders, pupils then plan and make three pages of a moving story book - drawing the page backgrounds, creating the moving parts and assembling it.	Handling and exploring fruits and vegetables and learning how to identify a fruit. Undertaking taste tests to identify ingredients for a smoothie they make, and designing and creating packaging for their smoothie.
Year 2	Mechanisms: Making a moving monster	Cooking and nutrition: Balanced diet	Textiles: Pouches
	Learning the terms: pivot, lever and linkage, pupils then design a monster that will move using a linkage mechanism. Pupils practise making linkages and experiment with various materials to bring their monsters to life.	Exploring and learning what forms a balanced diet, pupils taste test ingredient combinations from different food groups to inform a wrap design of their choice which will include a healthy mix of protein, vegetables and dairy.	An introduction to sewing, pupils learn to sew a basic running stitch and then use and create templates to then make their own pouches, designing, cutting, sewing and decorating them.
Year 3	Structure: Constructing a castle	Cooking and nutrition: Eating seasonally	Textiles: Cross-stitch and appliqué
	Learning about the features of a castle, pupils design and make one of their own. Using configurations of handmade nets and recycled materials to make towers and turrets and constructing a stable base.	Discovering when and where fruits and vegetables are grown and learning about seasonality in the UK. Pupils respond to a brief to design a seasonal food tart using ingredients harvested in the UK during spring.	Pupils learn two new sewing skills: cross stitch and appliqué and then apply these to the design, decoration and assembly of their own cushions.

Year 4	Electrical systems: Torches	Digital systems: Mindful moments timer	Mechanical systems: Sling shot car
	Applying their scientific understanding of electrical circuits, pupils design and create a torch made from recycled and reclaimed materials and objects. They then evaluate their products against a set design criteria.	Evaluating existing timer products, pupils then develop a design criteria for a mindfulness timer. They learn how to use coding to program and control a product before then designing and making their own timer.	Using lollipop sticks, wheels, dowels and straws to create a moving car. Pupils build a car chassis and design the body of the car, giving consideration to how the shape will affect the car's air resistance. They then construct and test their cars.
Year 5	Cooking and nutrition: Developing a recipe	Textiles: Stuffed toys	Structure: Bridges
	Researching and modifying a traditional bolognese sauce recipe to improve the nutritional value before then cooking an adapted version and creating packaging that fits a given design criteria. Learning where beef comes from.	Designing and making a stuffed toy. Pupils learn a new stitch - blanket stitch - which they use to join the fabric together for their toys, before creating and adding decoration.	Learning about different types of bridges and exploring how the strength of structures can be affected by the shapes used within them. Pupils then create their own bridge and test its durability - using woodworking tools and techniques.
Year 6	Electrical: steady hand game	Digital world: Navigating the world	Mechanical: Automata toys
	Designing and creating a steady hand game, using nets to make the bases and applying knowledge of electrical circuits to build an operational circuit with a buzzer.	Programing a navigation tool to produce a multifunctional device for trekkers. Combining 3D virtual objects to form a complete product concept in 3D computer-aided design modelling software.	Using woodworking skills, pupils construct an automata; measuring and cutting their materials, assembling the frame, choosing cams and designing the characters that sit on the followers to form an interactive shop display