Design and Technology Overview 2025/26

		Autumn	*Spring*	*Summer*
Reception	***Skills***	**Physical development and expressive art and design**		**ELG Physical development and expressive arts and design**
	Physical development Creative Arts and Design Fine motor skills Creating with materials	Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Use a range of small tools, including scissors, paintbrushes and cutlery Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.		
1	***Additional Topic*** **Textiles-puppets**	**Structures- constructing a windmill**		**Mechanisms- Wheels and axles**
	Explore different ways of joining fabrics before creating hand puppets based on characters from a well-known fairy-tale. Develop technical skills of cutting, gluing, stapling and pinning.	Design and create their own structure and functioning windmill.		Experiment with mechanisms and troubleshoot why some wheels don't rotate, before designing and building a moving vehicle.

2	**Food- A balanced diet**	**Mechanisms- making a moving monster**	**Textiles- pouches**
	Explore and learn what forms a balanced diet, pupils will taste test ingredient combinations from different food groups that will inform a wrap design of their choice which will include a healthy mix of protein, vegetables and dairy.	After learning the terms: pivot, lever and linkage, pupils 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.	Introduction to sewing. Pupils make their own template, accurately cut their fabric and sew a basic running stitch.
3	***Additional Topic*** **Food- Eating Seasonally**	**Mechanical systems- Pneumatic toys**	**Structure- constructing a castle**
	Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They look at the relationship between the colour of fruits and vegetables and their health benefits by making three dishes.	Design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts. Pupil are introduced to thumbnail sketches and exploded diagrams.	Learning about the features of a castle, pupils design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base.
4	**Electrical Systems- Torches**	**Food- adapting a recipe**	**Textiles- fastenings**
	Pupils apply their scientific understanding of electrical circuits to create a torch made from recycled and reclaimed materials and objects. They design and evaluate their product against set design criteria.	Work in groups to adapt a simple biscuit recipe, to create the tastiest biscuit ensuring that their creation comes within the given budget of overheads and costs of ingredients.	Pupils design and create a book sleeve; exploring a variety of fastenings and selecting the most appropriate for their design based on strength and appropriate-use.
5	***Additional Topic*** **Electrical systems- electronic greetings cards**	**Structures- Bridges**	**Digital world- Monitoring devices**

	Explore how circuits can be adapted to suit different purposes, explore series circuits and recreate one using conductive adhesive copper tape. Apply this knowledge to design and create an electronic greeting card.	After learning about various types of bridges and exploring how the strength of structures can be affected by the shapes used, create their own bridge and test its durability - using woodworking tools and techniques.	Program a Micro: bit animal monitoring device that will alert the owner when the temperature is not optimal. Develop 3D CAD skills by learning how to navigate the Tinkercad interface and essential tools.
6	**Textiles- Year 5 unit** **Soft toys**	**Food- come dine with me**	**Mechanical systems- automata toys**
	This unit's theme is based on the children choosing an animal or simple shape to base their stuffed toys on.	Research and prepare a three-course meal and taste-test and score their food. Research the journey of their main ingredient from 'farm to fork' or write a favourite recipe.	Use 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.