Design and Technology Overview

Year 1,2,3

Term	Topic	DT Area	Knowledge and Skills
1	Moving Story Characters	Mechanisms	• Understand how sliders and levers can create movement in products. • Investigate existing moving books and identify how mechanisms work. • Generate and communicate design ideas through drawings and labels. • Select and use appropriate tools and materials safely. • Construct a moving story character using sliders and levers. • Evaluate the effectiveness of the mechanism against the design criteria.
2	Healthy Packed Lunch	Food & Nutrition	• Understand the principles of a healthy and balanced diet. • Identify the main food groups and their purpose within the body. • Learn how to prepare food hygienically and safely. • Use simple food preparation techniques such as cutting, grating and spreading. • Design and prepare a healthy packed lunch for a specific user.

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			• Evaluate the nutritional value, appearance and taste of products.
3	Mini Beast Homes	Structures	• Explore different natural habitats and the needs of living things. • Investigate what makes a structure stable and strong. • Measure, mark and cut materials accurately. • Select suitable materials based on their properties and purpose. • Design and construct a shelter for a mini beast. • Test and evaluate the effectiveness of the final structure.

Year 4,5,6

Term	**Topic**	**DT Area**	**Knowledge and Skills**
1	Fairground Ride	Electrical Systems & Mechanisms	• Understand how electrical circuits can be used within products. • Investigate the use of motors, gears and pulleys to create movement. • Develop design criteria based on the needs of a user. • Apply accurate measuring, cutting and assembly techniques. • Build and test a functioning fairground ride using mechanical and electrical systems.

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			• Evaluate and improve designs using testing outcomes and peer feedback.
2	Sustainable Shopping Bags	Textiles	• Understand the environmental impact of single-use plastics and sustainable alternatives. • Investigate existing textile products and evaluate their effectiveness. • Develop pattern-making skills and create templates. • Use sewing techniques including running stitch, back stitch and joining fabric. • Design and manufacture a sustainable shopping bag for a chosen purpose. • Evaluate the quality, strength and functionality of the finished product.
3	Cultural Food Project	Food & Nutrition	• Explore foods and recipes from a range of cultures and traditions. • Understand how ingredients can be combined to create balanced meals. • Develop a range of food preparation and cooking techniques safely. • Adapt recipes to suit dietary requirements, tastes or available ingredients. • Plan, prepare and present a culturally-inspired food product.

			• Evaluate products against design criteria, considering nutrition, taste, appearance and purpose.