Implementation

The Design and Technology National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. The National curriculum organises the Design and technology attainment targets under five subheadings or strands: Design, Make, Evaluate, Technical knowledge and Cooking and nutrition.

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these five strands across each year group.

St. James C. of E. PRIMARY SCHOOL

Kapow Primary

Curriculum intent

The Design and technology scheme of work aims to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through our scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements. Our Design and technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. EYFS (Reception) units provide opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals.

Key Skills developed

Cooking and nutrition-where food comes from, balanced diet, preparation and cooking skills, kitchen hygiene and safety and following recipes.
Mechanisms/mechanical systems-mimic natural movements using mechanisms such as cams, followers, levers and sliders.
Structures-Material functional and aesthetic properties, strength and stability, stiffen and reinforce structures.
Textiles-fastening, sewing, decorative and functional fabric techniques including cross stitch, blanket stitch and appliqué.
Electrical systems -Operational series circuits, circuit components, circuit diagrams and symbols, combined to create various electrical products.
Digital world-Program products to monitor and control, develop designs and virtual models using 2D and 3D CAD software.

Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Kapow Primary scheme is a spiral curriculum, with key knowledge revisited regularly with increasing complexity, allowing pupils to build on their previous learning.

	Autumn Term	**Spring Term**	**Summer Term**
Early years	Cooking and nutrition Soup	Textiles Bookmarks	Structures Boats
	Junk modelling (taught throughout the year)		
Year 1	Cooking and nutrition Fruit and vegetables Mechanisms Making a moving storybook (DT day)	Textiles Puppets	Structures Constructing a windmill Mechanisms wheels and axles (DT day)
Year 2	Mechanisms Making a moving monster (DT day) Structures Baby bear's chair	Mechanisms Fairground wheel (DT day) Cooking and nutrition A balanced diet	Textiles Pouches
Year 3	Digital world Wearable technology (DT day) Cooking and nutrition Eating seasonally	Textiles Cushions (DT day) Mechanisms Pneumatic toys	Structures Constructing a castle
Year 4	Structures Pavillions (DT day) Textiles Fastenings	Electrical systems Torches Mechanisms Making a slingshot car (DT day)	Cooking and nutrition Adapting a recipe
Year 5	Structures Bridges (DT day) Electrical systems Doodlers 'Launch car' DT afternoon at Reed's in Autumn 1.	Digital world Monitoring devices (DT day) Cooking and nutrition Developing a recipe	Mechanisms Pop-up book
Year 6	Cooking and nutrition Come dine with me (DT day) Structures Playgrounds	Electrical systems Steady hand game (DT day) Mechanisms Automata toys	Digital world Navigating the world