LONG TERM PLANNING: 2024/25 Cycle B

Design and Technology

Design and Technology gives pupils the opportunity to develop a range of creative and practical skills. It allows pupils to use their imagination, take risks and understand the impact of design and technology in their own daily life. At St Paul's Peel CE Primary School, we use the Kapow Primary Scheme of learning to support teaching and learning in Key Stage 2. The scheme provides a clear progression of learning through EYFS, Key Stage 1 and Key Stage 2, in-built subject specific CPD to support staff teaching of the content and a range of opportunities to truly embed and secure the knowledge, skills and understanding pupils acquire through their primary learning journey within this subject.

Age Phase	Autumn 1	Autumn 2	Spring 1	Summer 1	Summer 2
EYFS	**Structures:** Junk Modelling *Exploring and learning about various types of permanent and temporary join. Pupils are encouraged to tinker using a combination of materials and joining techniques in the junk modelling area.*		**Textiles:** Collage and Bookmarks *Developing and practising threading and weaving techniques using various materials and objects. Pupils look at the history of the bookmark from Victorian times versus modern-day styles. The pupils apply their knowledge and skills to design and sew their own bookmarks.*	**Structures:** Boats *Exploring what is meant by 'waterproof', 'floating' and 'sinking', pupils experiment and make predictions with various materials to carry out a series of tests. They learn about the different features of boats and ships before investigating their shape and structures to build their own.*	
Key Stage 1 *Condensed*	**Structures:** Baby bear's chair *Using the tale of Goldilocks and the Three Bears as inspiration, children help Baby Bear by making him a brand-new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is strong.*		**Mechanisms:** Fairground Wheel *Designing and creating their own Ferris wheels, considering how the different components fit together so that the wheels rotate and the structures stand freely. Pupils select appropriate materials and develop their cutting and joining skills.*	**Mechanisms:** Making a moving monster *After learning the terms; pivot, lever and linkage, children design a monster which will move using a linkage mechanism. Children practise making linkages of different types and varying the materials they use to bring their monsters to life.*	
Lower Key Stage 2	**Structures:** Pavilions *Exploring pavilion structures, children learn about what they are used for and investigate how to create strong and stable structures before designing and creating their own pavilions, complete with cladding.*		**Mechanical Systems:** Making a slingshot car *Transforming lollipop sticks, wheels, dowels and straws into a moving car. Using a glue gun to, making a launch mechanism, designing and making the body of the vehicle using nets and assembling these to the chassis.*	**Electrical Systems:** Torches *Applying their scientific understanding of electrical circuits, children create a torch, designing and evaluating their product against set design criteria*	
Upper Key Stage 2	**Structures:** Playgrounds *Designing and creating a model of a new playground featuring five apparatus, made from three different structures. Creating a footprint as the base, pupils visualise objects in plan view and get creative with their use of natural features.*		**Textiles:** Waistcoats *Selecting suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat for a person or purpose of their choice.*	**Digital World:** Navigating the world *Programming a navigation tool to produce a multifunctional device for trekkers. Combining 3D objects to form a complete product in CAD 3D modelling software and presenting a pitch to 'sell' their product.*	