DESIGN TECHNOLOGY

Intent

To develop, regardless of gender, ability or background, children who are resourceful, enterprising citizens who will have the skills to contribute to future design advancements. We aim to inspire pupils to become 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 and understand the impact of design and technology on our lives.

EYFS

In EYFS, Design and Technology is incorporated into the area of learning entitled Expressive Arts & Design. The children will complete a design and technology project half termly, following the Kapow scheme of learning for Reception. The children will be taught how to use a range of techniques and will explore joining techniques, materials, structure and shape, similarities and differences.

In Nursery, children are introduced to a variety of different tools and resources that they can use to mark, make and create with. Continuous provision offers a variety of materials with different textures and opportunities to connect, join, attach and manipulate to create a desired effect. In the Summer term, children are inspired through an 'Electrifying Engineers' theme to explore a range of STEM challenges both collaboratively and independently.

Curriculum (Y1-6)

Design and Technology is taught weekly, for 6-8 weeks each term, following the 'Kapow Primary' scheme of work. Design and Technology focuses on a structured learning process from research to designing to making then evaluating. The three main strands outlined in the National Curriculum (2014) Design Technology Programme of Study are: 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. During the 'cooking and nutrition' topics, the focus is on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The six key areas that pupils revisit through their time in primary school are:

- o Cooking and nutrition
- o Mechanisms/Mechanical systems
- o Structures
- o Textiles

- o Electrical systems (KS2 only)
- o Digital world (KS2 only)

Each Design and Technology project allows children to explore the topic learned, experiment with the materials and continually review the processes chosen. Each project will commence with an initial planning and design phase. Time is then given for exploration of ideas and the acquisition of technical knowledge required to make the planned design outcome. When completed the design project and the process involved should be evaluated by the children and their peers; reflecting on the success of the project whilst recognising anything they may do differently next time. The 'Kapow Primary' scheme is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning as they progress through the school.

Children develop a critical understanding of the impact of Design and Technology on daily life, the wider world and how it has progressed historically. Children learn to design and make products that solve genuine, relevant problems within different contexts whilst considering their own and others' needs, wants and values. Throughout the multistage curriculum, children are exposed to a variety of disciplines from mechanisms and woodwork to food and textiles.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. The 'Kapow Primary' scheme of work is designed to deliver effective, consistent teaching through demonstration videos for both the teacher and pupils engaging in the lesson. This allows teachers to develop their subject knowledge and supports ongoing CPD.

At its core, Design and Technology promotes creativity, allowing children to draw on other subjects to create innovative, purposeful solutions.

Impact

Throughout the duration of Design and Technology projects, pupil voice sessions are carried out to assess the pupil's learning of current and previous topics. The children share their views on Design and Technology lessons, what they've learnt and how Design and Technology is relevant in the wider world.

The impact of the 'Kapow Primary' scheme is monitored though both formative and summative assessments using the lesson objectives. At the end of each project, an end of unit quiz is completed to evaluate their learning.