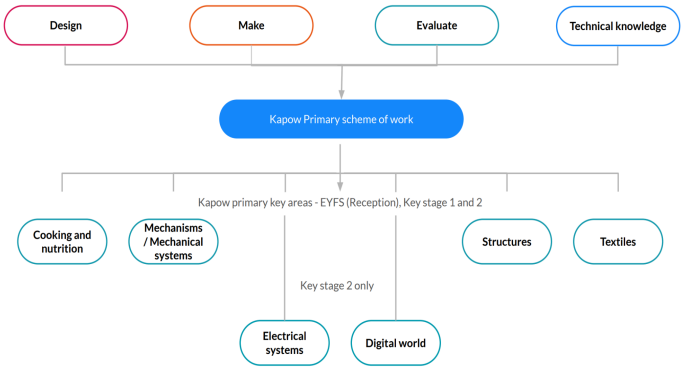
Design and Technology

Our Design and technology scheme of work aims to inspire pupils to become curious, creative and innovative thinkers with a broad understanding of how products are designed and made, in other words, to think like designers and engineers. The intention is for pupils to develop the confidence to identify problems, generate ideas, plan and create products and evaluate their outcomes.

The scheme aims to raise pupils' awareness of how design and technology shape the way they live, work and interact with the world. It encourages pupils to become resourceful, enterprising individuals who have the skills to contribute to and improve the world around them.

We use the Kapow D&T scheme of work which is designed with four strands that run throughout the year.



- We follow a spiral curriculum, with essential knowledge and skills revisited with increasing complexity, allowing pupils to revise and build on their previous learning.

- Critical thinking: Pupils analyse design briefs, explore different user needs and perspectives and evaluate materials and production methods. This helps them to question assumptions and make informed decisions when developing creative, functional and sustainable solutions.

Teaching:

- Children complete a D&T unit every half-term, alternating with Art & Design. The essential knowledge and skills are taught using and adapting the Kapow primary scheme of work.



- Lessons incorporate our Chesterfield pedagogies: retrieval practice, scaffolds and support, questioning, pupil talk and check and adapt.

- It is important that pupils begin to 'think like designers and engineers' by considering how designers identify problems, generate ideas and create solutions to meet real-world needs. Accordingly, Kapow D&T scheme uses the design cycle to support planning and making. This encourages pupils to ask design questions and learn how designers and engineers develop and refine their ideas through research, testing and evaluation.

- Pupils demonstrate their learning and provide tangible evidence of progress through a variety of activities, including structured written work, annotated diagrams and creative responses. All work is recorded in the children's sketch book.

- Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Progression:

- The D&T: Progression of skills and knowledge document provides an overview of the skills and knowledge covered in each phase and strand. It explains how D&T skills and knowledge are developed to support pupils in reaching key stage outcomes as outlined in the National curriculum.
- Kapow's progression of vocabulary for D&T focuses on the essential words and terms for understanding the subject. These words are carefully selected to help pupils grasp concepts and ideas outlined in the Kapow Primary D&T curriculum.

Assessment:

- Formative assessment (questioning, observation, retrieval practice, discussion and peer interaction) is embedded throughout Kapow Primary D&T lessons to ensure that teachers can gauge pupils' understanding in real time and adapt their teaching accordingly.
- End of unit quizzes are used to assess learning and provide the opportunity for children to show what they know.
- Summative assessment judgements are recorded at the end of the year (B, WTS, EXS, GDS).

Sustainability:

- Kapow Primary's D&T curriculum embeds sustainability within the design process, encouraging pupils to consider the environmental impact of the products they design, make and evaluate.
- Units across the curriculum explore material choices, food miles and digital solutions that reduce waste or energy use.
- The curriculum develops practical problem-solving skills and a deeper understanding of sustainable thinking by engaging pupils with real-world challenges, such as designing for reuse or responsible sourcing.
- Pupils learn that thoughtful design can lead to positive change, promoting a sense of agency and responsibility for the world they are helping to shape