King Ina Church of England Academy
Design & Technology Curriculum Overview Statement

Our curriculum approach to design and technology reflects our vision statement:
Within our secure Christian environment, our vision is to develop healthy, happy, motivated learners who aspire to achieve their full potential and who look to the future with confidence.

The name of the current curriculum lead is on the school website on the curriculum page.

Intent

Our design and technology curriculum at King Ina Church of England Academy intends to develop children's knowledge and practical skills by encouraging them to solve problems based on initial exploration of designs of products, leading to solving problems based on real life contexts, including those of a historical nature. At King Ina, design and technology gives all children the opportunity to reflect on what they have learned through their practical exploration and then to use this knowledge to design and make their own product. We want our children to have limitless ambitions and grow up wanting to be architects, graphic designers, chefs or carpenters. Design and technology is dynamic and multidimensional. It is our intention that our D&T curriculum will provide opportunities to solve real and relevant problems, allowing our pupils to develop essential everyday skills and unlock their potential to be the designers and innovators of tomorrow. Children are given time to test their own products and make adjustments which enable them to change their designs and improve their end product. We aim to instil qualities such as curiosity, enquiry and determination.

Implementation

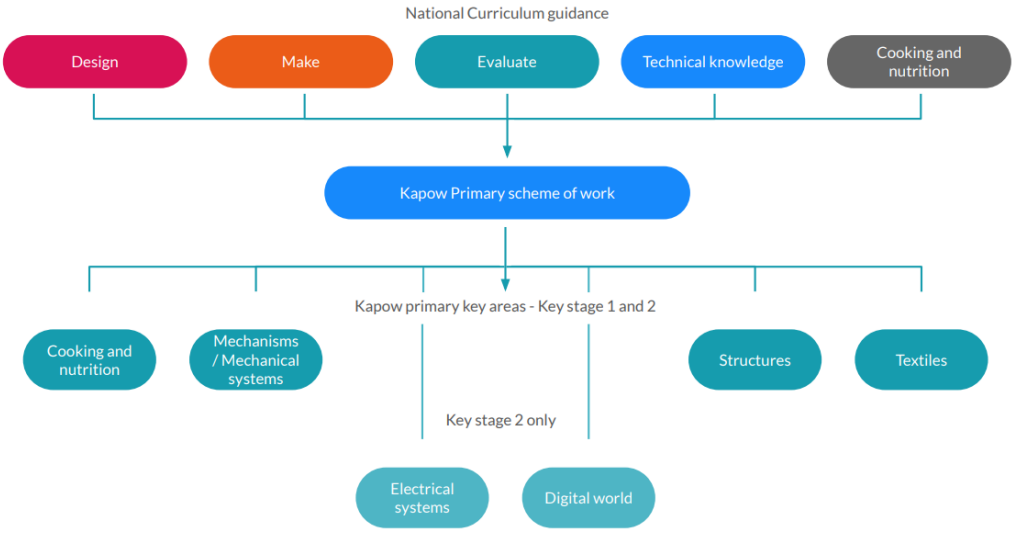
Throughout the year, each class will undertake 3 design and technology projects. The Kapow scheme units have been mapped against our whole school curriculum document to fit in with the topics. Teachers have the autonomy to choose from the units for their topic based on their understanding of the children in their class. The spread of the units within our curriculum plan ensures coverage. Early Years and KS1 have a class 'floor book' where their design and technology explorations are recorded and revisited. In KS2, children have an individual book, where they use research products, develop design ideas and initial sketches, showcase learned skills, technical knowledge and vocabulary, final designs, and evaluations.

Children will follow the 6 principles of design and technology:

- USER – to have a clear idea of who they are designing/making the product for.
- PURPOSE – to be able to communicate the purpose of the product they are designing/making
- FUNCTIONALITY – to design a product that works and functions effectively to fulfil the user's needs
- DESIGN DECISIONS – to make own design opportunities, explore their own decisions and choices
- INNOVATION – opportunities to be original with their thinking, develop and explore their own ideas incorporating the essential skills involved in the process
- AUTHENTICITY – to make products that are believable, real, and meaningful to themselves and others, not just replicating ideas.

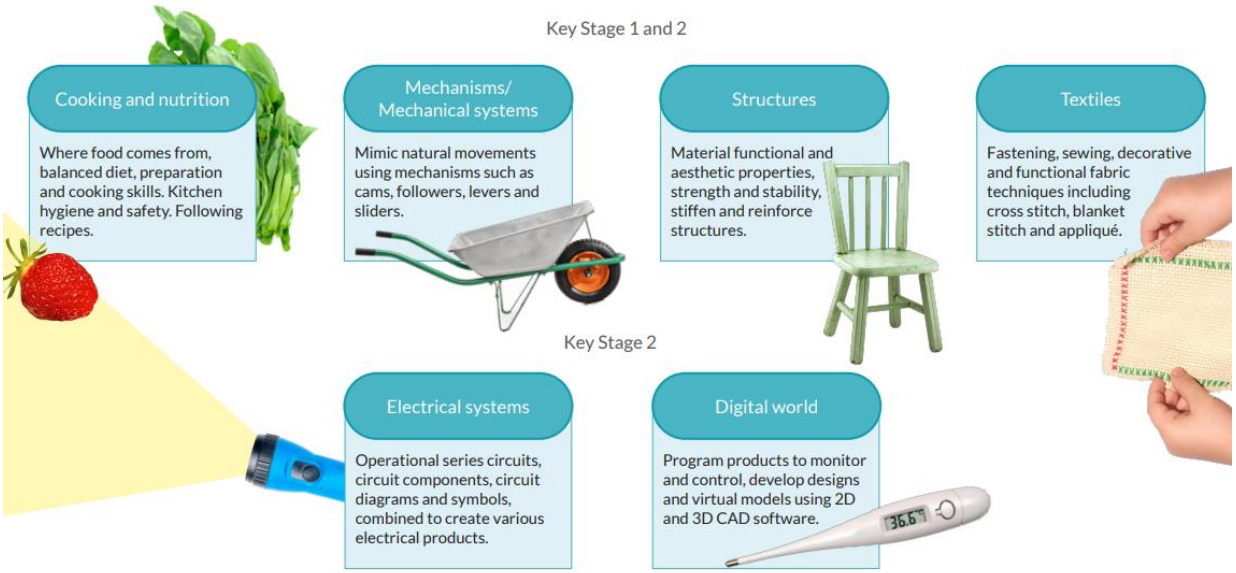
Teachers follow a clear progression of skills which ensure all pupils are challenged in -line with their year group expectations and given the opportunity to build on their prior knowledge.

How is the Design and technology scheme of work organised?



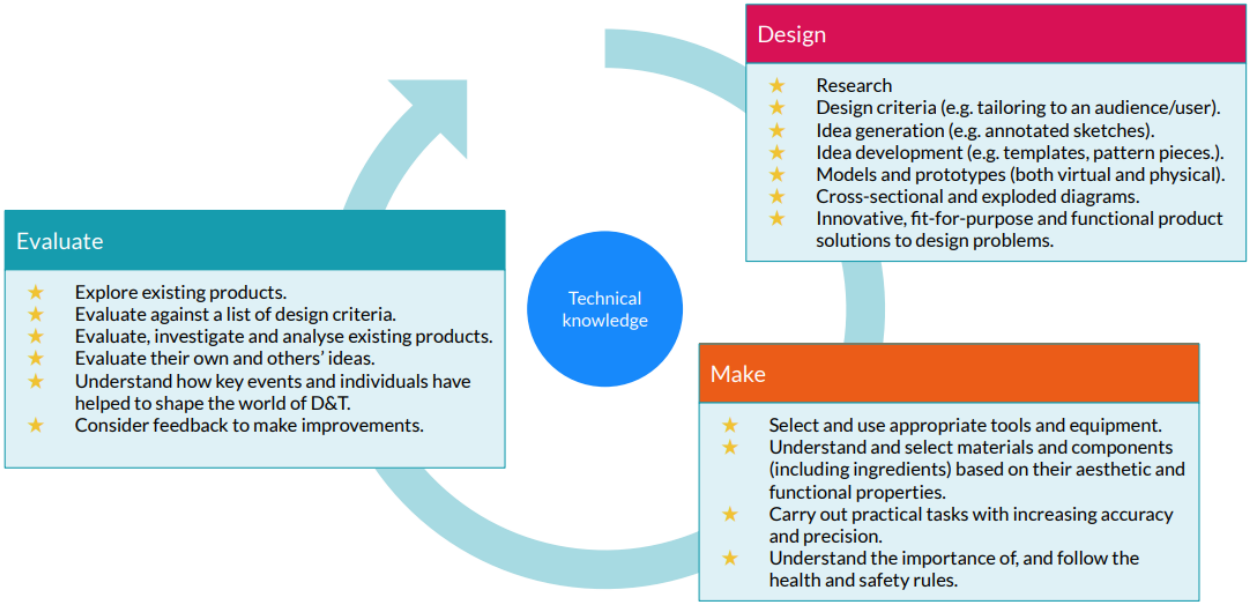
Key areas

The six key areas are revisited each year, with Electrical systems and Digital world beginning in KS2. The areas enable all subject leads, specialists or non-specialists, to understand and make it easy for teachers to see prior and future learning for your pupils. You can see, at a glance, how the unit you are teaching fits into their wider learning journey.



The design process

The Design and technology National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each Kapow Primary unit follows these stages, to form a full project. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical and technical understanding, required for each strand.



Cooking and nutrition* has a separate section in the D&T National Curriculum, with additional focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality. Food units still follow the design process summarised above, for example by tasking the pupils to develop recipes for a specific set of requirements (design criteria) and to suggest methods of packaging the food product including the nutritional information.

EYFS

Through exploration and play, children are encouraged to construct and create, purposefully selecting tools and techniques needed to shape, assemble and join materials they are using. Children learn through first-hand experiences which involve putting their ideas into practice to develop an awareness and understanding of the possibilities and limitations of different materials. Teachers encourage children to explore, observe, solve problems, think critically, make decisions and talk about why they have made their decisions as they design and create. Children's natural creativity is fostered and opportunities for investigation, designing and making are offered daily within our provision, which enables children to learn a great deal about their world.

Impact

Our design and technology curriculum enables and encourages our children to becomes critical thinkers. They look at existing designs to analyse and assess its effectiveness and then they consider ways of redesigning and reconstructing it to improve its overall success. Through DT, our children learn to take risks and become resourceful, innovative and enterprising individuals. Children learn to be passionate and excited by the designing and making of products including working with, preparing and tasting food. Learning is assessed through the analysis of the pupil's ability to evaluate, design, make and improve their own work.

The impact of our design and technology curriculum is in the development of our pupils being able to approach problems creatively and in a range of ways, applying their knowledge from across the curriculum areas independently. By providing a range of contexts and the necessary skills, we endeavour to support pupils in their future educational journey and in the understanding of the ever-developing world around them. The skills and attributes they develop will benefit them beyond school and into adulthood: the ability to use time efficiently; work with others productively; show initiative, independence, resilience and manage risks effectively will ensure well-rounded citizens who will make a difference in the wider world.