DESIGN & TECHNOLOGY

'Design is a funny word. Some people think design means how it looks. But of course, if you dig deeper, it really means, how it works.''

Steve Jobs

Intent

At St Katharine's Design and Technology is a creative, inspiring and practical subject. It encourages children to think, analyse, problem solve, evaluate and allows children to apply the knowledge and skills learned in other subjects, as well as a range of subject specific content. Children are presented with real life problems in a design brief, are expected to explore a range of solutions and then develop one in detail before manufacturing this. Design technology incorporates a broad range of contexts including textiles, mechanicals, construction, electronics and food – each has its own specific skills and knowledge while also allowing children to develop their broader design and evaluation skills.

Implementation

Design and Technology is taught as part of our Blocked Curriculum *(Design and Technology, Design and Technology, Geography, Art and Design Technology)*. Each year group will have two blocks of Design and Technology learning (3 weeks per block) each year. Using our mapped overview plans, teachers plan a sequence of lessons across the block clearly setting out what is to be learnt and how each lesson builds on the one before it. Because we teach in mixed age classes, we operate a Year A/B plan to ensure that curriculum content is not repeated. Teachers are skilled at matching the learning to the children in their care. Using carefully written knowledge and skills maps (*Chris Quigley milestones*) we can plan to meet the needs of each year group albeit that their learning is organised under the same theme.

Knowledge Organisers, written to accompany the block of learning, are shared with parents and children at the start of a unit of teaching.

Employing strategies that are low stakes and low threat, such the use of quizzes and mini tests, teachers seek to ensure that knowledge is retained, returning also to previous knowledge to help children commit what they have learnt to long term memory.
Design and Technology teaching will always include practical hands-on opportunities to develop skills that will support children with the designing and making of real working objects. Design and Technology blocks of learning always build towards a finished product. Children develop ideas and plans within a unit of work, annotating ideas where appropriate to show how their ideas have progressed and how they have arrived at a finished piece. Children develop the ability evaluate their work as part of the learning journey, exploring what made designs successful and how they would change the design were they to make the product again. Teachers include reference to other designers and makers in their teaching and help children to see how both Design and Technology have shaped our world throughout history and the positive impact that this area of the curriculum has on our everyday lives and on the world around us.

Our blocked curriculum overview document sets out the blocks of learning across each year and across the school. This document shows, where relevant, how Design and Technology blocks may at times complement the learning in other areas. At other times Design and Technology sits as a discreet subject for its own sake. In addition to this we have written a Subject Journey which shows clearly how Design and Technology themes are returned to and built on across Key Stages 1 and 2. Our knowledge and concepts map sets out the explicit content of each block of Design and

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Technology learning, enabling staff to clearly see what came before and what comes next, building on previous learning, revisiting, and deepening skills as well as strengthening knowledge

Impact

Children enjoy working through the process of designing, making and evaluating their products in design technology. The children can talk in depth about the choices they make when designing a product and can adapt their design as needed, to overcome specific problems they encounter. When evaluating their products children can talk about what went well and what didn't work as they wanted. Across both key stages the children have created a range of final products which demonstrate their progress across the areas of design technology including food, textiles, construction, electronics, and mechanicals.

"all lesson sequences in design and technology to include a clear progression from the design brief, designing and making a prototype, through to making, testing and evaluating. All staff follow this structure. Teachers expect pupils to use subject-specific technical vocabulary. As a result, pupils in Years 5 and 6 know how to apply their knowledge of moving cogs and parallel circuits so they are successful in their current unit of work. Pupils produce high-quality work." OFSTED December 2021