



Montgomery Design and Technology Statement

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Aims

At Montgomery Primary School, we are committed to delivering a robust Design Technology curriculum that sparks curiosity and equips our pupils with the creative, practical, and technical skills needed to thrive in an increasingly technological world. Our students engage in purposeful product design, working towards a design brief tailored to a specific target audience. By critically analysing existing products and exploring the work of influential designers, pupils are empowered to create solutions that address real-world challenges. This approach helps them develop a deep understanding of how design impacts everyday life and fosters their ability to think critically about the role of technology in society.

The Curriculum

At Montgomery, we follow a tailored version of the Kapow curriculum to guide our Design and Technology (DT) lessons. Each topic is centred around a design brief, encouraging pupils to follow a Research – Design – Make process, with continuous evaluation throughout. As pupils progress through the school, they build on previously learned skills and knowledge, becoming more independent in their design decisions and further developing their problem-solving abilities. In the Early Years, children are encouraged to explore their environment through continuous provision, creative play, and structured learning activities. These experiences enhance their fine motor skills and introduce them to fundamental DT knowledge and practical skills. Children will begin to safely use and experiment with a range of materials, tools, and techniques, exploring colour, design, texture, form, and function. Through this exploration, they start to develop creative solutions to challenges they encounter, laying the foundations for early problem-solving. As children move into Key Stage 1, they build on these early experiences by engaging in a variety of creative and practical activities that further develop their DT skills. They explore how structures can be made stronger, stiffer, and more stable through the analysis of existing designs and ongoing evaluation against design criteria. Children are introduced to mechanisms such as levers, sliders, axles, and wheels, applying them purposefully in their designs. They are encouraged to consider the impact of their creations on their local community and environment. Communication of their ideas is developed through talking, drawing, creating prototypes, and making templates. Additionally, children learn where food comes from and begin to prepare simple dishes using the principles of a balanced and varied diet, drawing inspiration from their local community and influential chefs.

In Key Stage 2, design briefs become more sophisticated, requiring the use of more complex techniques and greater accuracy in construction to achieve success. Pupils begin to explore more advanced mechanisms, such as cams, levers, pneumatic systems, linkages, and pivots, incorporating them purposefully into their designs. They continue to apply their knowledge of a healthy, balanced diet to prepare and cook a variety of savoury dishes with increased independence, using a range of cooking techniques. Pupils also gain a deeper understanding of how ingredients are grown, reared, and processed, with a focus on sourcing local and seasonal foods. They are encouraged to consider the environmental impact of the food industry and integrate sustainable choices into their DT projects.

Impact

The impact of the Design and Technology (DT) curriculum at Montgomery is evident in the development of pupils' technical skills, creativity, and problem-solving abilities. Children will become confident in designing and constructing products, using a range of tools and materials, while gaining an understanding of sustainability and eco-friendly practices. As they progress, they will learn to think critically and creatively, taking ownership of their projects and working both independently and collaboratively. Through the repeated process of research, design, make, and evaluate, pupils will develop resilience and a growth mindset, learning to approach challenges as opportunities for innovation.

Furthermore, the curriculum equips pupils with real-world skills, encouraging them to see the relevance of their learning in everyday life. By working on design briefs tailored to real-world contexts, they will apply their knowledge to solve problems that matter to their community and beyond. The impact of their learning will be visible through digital documentation, pupil voice, and the tangible outcomes of their projects, such as prototypes, products, and prepared dishes. Overall, the DT curriculum fosters well-rounded, independent learners who are prepared to navigate a technologically advanced and sustainable future.

Links to Whole School Curriculum Vision

Design and Technology at Montgomery will provide children with a range of first hand experiences both in and out of the classroom. Children will explore structures within their locality; they will interview people within their community to inform and evaluate their designs. Throughout their time at Montgomery, children will learn about sustainability and how their designs can contribute to a greener, more sustainable future.