Design and Technology

Intent, Implementation and Impact statement

Intent

At Mark First Academy our Design and Technology (D&T) curriculum is designed to inspire creativity, critical thinking, and problem-solving in our pupils. Our intent is rooted in our school vision, which aims to enable all children, regardless of background, ability, or additional needs, to flourish and become the very best version of themselves. Through the teaching of D&T, we aim to develop learners who are:

- **Courage,** cultivating a strong sense of determination and developing a mindset that embraces challenges, allowing children to iterate and improve their designs continually.
- **Respectful,** acknowledging the contributions of diverse cultures to the field of design, thus enriching our pupils' understanding of global perspectives.
- **Aspirational,** encouraging children to explore and express their ideas through imaginative design and construction processes and creating opportunities for pupils to connect their learning to real-life contexts.
- **Enthusiasm,** inspiring pupils to ask questions, explore materials, and engage in problem-solving activities that spark their interest in design and technology.
- **Trust:** encouraging pupils to think imaginatively and innovatively when designing and making, thereby embracing our commitment to an inquiry-based learning approach.
- **Empathy:** creating learning environments where pupils feel safe to experiment, take risks, and learn from failure, fostering personal growth and resilience.

Implementation

To achieve our intent, we implement a rich and varied Art curriculum that adheres to the National Curriculum and reflects the values of our school community. Our inquiry-based approach includes:

Curriculum Design: Our D&T curriculum is aligned with the National Curriculum, enhanced with tailored lesson plans that promote creativity and experimentation. We employ a spiral curriculum approach which allows science to increase complexity, allowing pupils to revisit and build upon key concepts each year. We adopt a knowledge base from twinkl to ensure the teaching of science is sequenced and accurate.

Integration across the Curriculum: We ensure cross-curricular links with subjects such as history and geography are made to ensure learning is relevant, cohesive and enriching for all pupils.

Progressive Skill Development: We have established clear progression pathways in our D&T Curriculum, allowing pupils to recognise their development from basic techniques in Early Years to complex concepts in Key Stage 2, ensuring that all pupils are challenged according to their capabilities. Each year group covers taught skills in 4 different areas: Textiles, Cooking and Nutrition, Mechanical/Electrical Systems, Structures.

Hands-On Learning: We provide access to a variety of materials, tools, and technology, enabling all pupils to engage meaningfully and practically with D&T. We provide a secure and supportive environment where pupils feel safe to express their ideas and take risks in their design processes. We encourage teamwork through group projects, allowing for the sharing of diverse perspectives and fostering communication skills in a supportive environment. Lessons provide opportunities to celebrate, analyse and feedback points raised by pupils.

CPD for Staff: We ensure staff receive comprehensive training and ongoing professional development to enhance their subject knowledge and pedagogical skills in D&T. Through subject monitoring feedback in weekly meetings, we ensure that the teaching of D&T in Mark is regularly revisited and collaboratively reviewed.

Our Design and Technology curriculum is implemented through a carefully structured scheme of work that aligns with the National Curriculum, shaped by our inclusive school vision and tailored to the interests and needs of our pupils.

Key components of our implementation strategy include:

- **Inclusive Curriculum Design:** Our D&T curriculum is designed to cater to the diverse needs of every pupil, using varied resources and approaches to engage all learners, including those with special educational needs. We utilise an inquiry-based approach, integrating D&T with other subjects to make learning more cohesive and relevant.
- **Stimulating Learning Environment**: Our classrooms are equipped with a range of high-quality tools and materials that encourage creativity and experimentation. We provide a secure and supportive environment where pupils feel safe to express their ideas and take risks in their design processes.
- **Sequential Learning:** Units are designed to build progressively on knowledge and skills, with a focus on ensuring all pupils, regardless of ability or background, can access and thrive in D&T experiences.
- **Collaborative Learning:** Encourage teamwork through group projects, allowing for the sharing of diverse perspectives and fostering communication skills in a supportive environment.
- Pupil Voice: lessons provide opportunities to celebrate, analyse and feedback points raised by the children.
- **Hands-On Experiences:** We provide access to a variety of materials, tools, and technology, enabling all pupils to engage meaningfully and practically with D&T.
- **Assessment for Learning:** Ongoing assessments guide pupil progress and inform instruction, allowing for adaptations that meet individual needs and promote all children's growth.

Impact

The impact of our Design and Technology curriculum is evident in the exceptional outcomes observed in our pupils. We measure this impact through various means:

- **Pupil Engagement and Enthusiasm:** High levels of enjoyment and enthusiasm are noted as pupils engage in D&T lessons, contributing to increased attendance and participation for all learners.
- **Skill Development:** Pupils demonstrate a strong understanding and practical application of D&T skills. Regular assessments indicate that pupils across various backgrounds and abilities are meeting and exceeding age-related expectations.
- **Creative Problem-Solving:** Students showcase innovation in their projects, often leading to original design solutions that highlight their critical thinking and application of knowledge.

- **Awareness of Sustainability:** Increased understanding of sustainable practices is evident in project choices, including the thoughtful selection of materials and design for life cycles.
- **Preparation for Future Learning:** Pupils leave school equipped with a solid foundation in design principles and technical skills that support their ongoing education.

In summary, at Mark First Academy our Design and Technology curriculum is integral to our educational ethos, ensuring that all learners are empowered to be creative, innovative, and responsible individuals ready to tackle future challenges.