Askwith Primary School

Design and Technology rationale

The fundamental role of design and technology at Askwith Primary School lies in allowing children the opportunities to apply their creativity and their imagination to create products to solve real and relevant problems. Design and technology allows all children (this includes SEND, EAL, PP and vulnerable children) opportunities to create products for their own needs and wants along with the needs, wants and values of others, including British Values and natural links to our global themes. Purposeful and natural links to **Fundamental British Values, SMSC and global themes** are an integral part of our curriculum and are threaded through the design and technology curriculum.

At Askwith Primary School, we believe that all children's education begins in Early Years. Our curriculum is aligned to the Early Years Framework and shows the sequential steps of essential knowledge acquired from Reception to Year 6.

"Our curriculum offer for design and technology begins in Early Years. 'Children develop quickly in the early years and a child's experiences between birth and age five have a major impact on their future life chances." (*EYFS Statutory Framework, 2021)*

Design and technology is an evaluative subject and children are given the chance to draw on the disciplines of other subjects, including mathematics and science.

"High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation."

National curriculum, 2014

Our planning, teaching and assessment of the curriculum is informed by the nine principles of cognitive science (Daniel Willingham). This includes the 'must haves' or the end states in the child's mind and the 'could dos' or the teacher behaviours that alter the states in the child's mind. In design and technology, we recognise the 'must haves' as the alteration to long-term memory that allows children to retrieve substantive and disciplinary knowledge fluently, and to have a positive self-image as a learner. We recognise the 'could dos' as sequenced lessons in design and technology of the essential knowledge, the explicit teaching of vocabulary and abstract concepts, retrieval practice for knowledge and interleaving.

Why this? Why now?

The whole school long term plan is designed in year groups, but can equally be used for mixed age classes. Design and technology is taught in a block at least once per term. Cross-curricular links are very carefully planned to ensure links to other subjects are pertinent and provide opportunities for children to consolidate learning across the curriculum. For example,

the year 5 and 6 unit on structures is planned to provide an opportunity for all children to apply their learning from the science unit on electricity. These links are clearly evidenced in the whole school long term plan.

Knowledge in design and technology

Every year group will cover the 4 areas of the Design and technology curriculum:

- Cooking and nutrition
- Structures
- Mechanisms
- Textiles.

Each area is broken down to ensure all groups of learners will plan, make and evaluate throughout every unit.

Substantive knowledge in design and technology is based on the knowledge of four key elements of the process of design (design, make, evaluate and technical knowledge). Children are taught what they need to know, the declarative knowledge, and how to use what they know, the procedural knowledge. All of these elements will be taught from Reception to Year 6 and vocabulary is taught explicitly and will be deliberately practised and applied through the 4 key elements. These are:

Design	Know how to design a product that is purposeful, functional and appealing to a specific group.
Make	Know how to cut, join and finish a range of increasingly complex materials, ranging from paper to wood.
Evaluate	Know how to investigate, evaluate and analyse a range of existing products and their own designs based on a specific design criteria. In addition to this, children will know key individuals have helped to shape the world in which we live in.
Technical knowledge	Know how to apply their knowledge of specific materials to meet the criteria listed above in the design, make and evaluate stages.

Disciplinary knowledge in design and technology is the process of enabling children to use their substantive knowledge of products and materials around them to make links between and across different areas of the curriculum. Knowledge in design and technology will equip the children with the opportunity to explain how and why products have changed over time and how they might be further improved in the future. They can use their knowledge and understanding to suggest how existing products may be improved with the advances in modern technology. Children will demonstrate that they have the cultural capital to become

global citizens, following global themes and fundamental British Values, in an ever changing and technologically advancing world.

Reading opportunities in design and technology

Reading underpins our entire curriculum. Key texts and pieces of information are carefully selected ensuring that the content and reading age are appropriate. Key texts are on display and made available for the children to access during daily 'reading for pleasure' time.

SMSC in design and technology

Spiritual education in design and technology is the process of creative thinking and innovation inspires children to bring out undiscovered talents, which in turn leads to self-confidence and belief in their abilities.

Moral education in design and technology develops a sense of 'moral conscience' in our children, through focusing upon the dilemmas raised in designing and making new products. We teach children to understand the wider impacts on the environment when designing and making new products and to consider carefully the materials they will use when designing and making. We encourage sustainable thinking.

Social education is a key feature of the design and technology curriculum. Children learn why it is important to design and make products that are safe for the end user. There is an emphasis on developing the ability to work collaboratively and resolve any problems. All children have a voice and provide feedback to one another and children are taught to accept this feedback and respond accordingly.

Cultural education in design and technology builds children's knowledge of how products and inventions have been developed around the world.

Enhancements in Design and technology

At Askwith School we have a carefully planned rolling programme of enhancements to ensure that all year groups are exposed to a wide range of opportunities that enhance children's knowledge and cultural capital in all subjects. For example, visitors are invited in to talk to children so that children can have future aspirations. As a school, we have a conscious effort to break down the gender stereotypes in the STEM subjects and ensure there is a balance of male and female visitors to promote gender equality in design and technology.

Design and technology improvement priorities

Intent	Implementation
To ensure that the design and technology curriculum equips children to navigate the changing technological world	• Research the most up to date pedagogy in design and technology • Analyse the design and technology curriculum to ensure all curriculum

	content is up to date and teacher knowledge is current • Plan visits/visitors to enhance the STEM offer • CPD for teachers to ensure teacher knowledge is current • Update design and technology rationale • Gather pupil voice on visits and visitors and assess effectiveness • Update progression documents and essential knowledge overviews to reflect evidenced based practice from 2024-25

Reviewed: September 2025