Design & Technology Curriculum

Highfield Church of England Primary School

DT Curriculum

'When I consider your heavens, the work of your fingers, the moon and the stars, which you have set in place, what are...human beings that you care for them?'
(Psalms 8: 3-4)

Intent

Design and Technology (DT) plays a pivotal role in our curriculum at Highfield Church of England Primary School, fostering creativity, problem-solving skills, and innovation among our pupils. Our DT policy is rooted in the belief that hands-on learning experiences are essential for developing well-rounded individuals equipped for the challenges of the 21st century.

Purpose of Study

Our DT curriculum is guided by the Projects on a Page scheme developed by the DT Association. This scheme provides a structured framework for delivering engaging DT projects that align with national curriculum objectives while promoting exploration and experimentation.

At Highfield CE Primary, we recognise the importance of nurturing the curiosity and ingenuity of our pupils. Through DT projects, students are encouraged to identify real-world problems, design solutions, and bring their ideas to life through practical application. By engaging in the iterative design process, students develop resilience and critical thinking skills as they learn to evaluate and refine their creations.

Furthermore, our DT policy emphasises inclusivity and accessibility, ensuring that all pupils have the opportunity to participate and succeed in DT activities regardless of their background or ability. We strive to create a supportive and inclusive learning environment where every student feels empowered to express their creativity and contribute to collaborative projects.

In line with the Projects on a Page scheme, our DT curriculum encompasses a wide range of disciplines, including but not limited to product design, textiles, structures, mechanisms, and food technology. Through hands-on experiences in these areas, students develop a deep understanding of materials, processes, and technologies while honing their practical skills.

The teaching and learning of Design and Technology should reflect the ethos of the school's Christian foundation by nurturing the creativity of each individual child made in the image of the creator God.

Aims

In design and technology, children will:

- Learn to think and intervene creatively to improve quality of life.
- Become resilient and creative learners, working through problems and being independent in finding solutions.
- Show resourcefulness by responding to needs with their own ideas and plans for constructing systems or objects.
- Reflect on and evaluate present and past design and technology, its uses and effects.

Core Components

Each Design Technology unit will include the two core components:

1. Design: Children will engage in the creative process of planning and developing their projects. This includes researching, brainstorming, sketching, and creating detailed plans and prototypes. They will learn to consider functionality, aesthetics, materials, and user needs, applying critical thinking and problem-solving skills to bring their ideas to life.

2. Evaluation: Children will assess and reflect on their designs and final products. This involves testing, analysing, and reviewing their work to identify strengths and areas for improvement. They will learn to give and receive constructive feedback, use criteria to judge the success of their projects, and understand the importance of iterative improvement in the design process.

We hope that these aims will encourage the spiritual, moral, social and cultural development of the children.

Curriculum

Early Years Foundation Stage - In the area of Creative Development, EYFS children will be given opportunities (through teacher led, enhanced and child initiated activities) to explore colour, texture, shape, form and space in 2 and 3 dimensions. They will develop their imaginations in Art and Design, and learn to express their ideas, thoughts and feelings by using a widening range of materials and suitable tools. Children will be able to access these skills through the continuous provision.

Key Stage 1 - During Key Stage 1, children learn to think imaginatively and talk about what they like and dislike when designing and making. They build on early childhood experiences of investigating objects around them. Children explore how familiar things work and talk about, draw and model their ideas. They learn how to make and design safely and use I.C.T. as part of their designing and making.

Key Stage 2 - During Key Stage 2, children work on their own and as part of a team on a range of design and making activities. They think about what products are used for and the needs of the people who use them. Children plan what has to be done and identify what works well and what could be improved in their own and other people's designs. They draw on knowledge and understanding from other areas of the curriculum and use computers in a range of ways.

Planning

Long term planning shows the units to be covered, term allocation, time allocation and links to the curriculum ladders and core components.

Medium term plans are available on the ICT system and include NC requirements and subject-specific vocabulary. The Vocabulary Curriculum Driver serves as a pivotal framework for enhancing pupils' language proficiency and conceptual understanding across the subject. At its core, this approach prioritises the identification and integration of essential subject-specific vocabulary, ensuring that pupils develop a robust academic vocabulary essential for comprehension and communication within each concept.

Teachers write their short-term plans using both the long-term and medium term plans. Short -term plans provide a Big Question for the unit and then smaller enquiry questions for each lesson. These questions ensure our pupils foster a deeper engagement with learning and instils a lifelong love for acquiring knowledge as it cultivates critical thinking and problem-solving skills, as pupils learn to gather evidence, analyse information, and draw well-informed conclusions.

Assessment, Recording and Reporting

At the beginning of each unit, children complete a pre-assessment task. This provides the teachers with a starting point of what they need to teach, refresh or only lightly touch upon.

Teachers consistently use formative assessments to gauge how well pupils are learning and retaining information. Each lesson across the curriculum starts with a review of the previous lesson's content called a 'Prove it'; these activities, further show the knowledge pupils have gained. This method of low-stakes testing helps teachers decide when to revisit and reinforce knowledge to ensure it is thoroughly embedded.

At the end of each unit, children complete an assessment task. This task combines pupil self-assessment with teacher assessment to indicate how well pupils have progressed throughout the unit. Teachers use this to record who has achieved below and who has achieved above the expected standard. Teachers then use the assessment to help close any gaps.