



DESIGN & TECHNOLOGY



Curriculum Statement

At Drake's and Otterton C of E Primary Schools, we want our children to become resilient, positive, articulate young people who are able to make well informed life choices. We believe that teaching a broad and rich curriculum which has a focus on the Design & Technology taught curriculum, as well as the enrichment opportunities it offers, will support our children to reach this goal.

Intent

We aim for all children to be fully engaged in their Design and Technology lessons; to be challenged by them and to make good progress during them. We believe that D&T encourage children to think and intervene creatively to solve problems. Children benefit from a rich curriculum and are encouraged to talk, create, reflect and improve their pieces of work like professional designers might do. Children are given opportunities to explore, investigate and make mistakes which they can learn from. Their contributions are always valued and celebrated. Our aim is for children to develop 'a suitcase' of skills and vocabulary, which they are able to apply in other situations. A focus on QFT (Quality First Teaching) ensures that we have high expectations and that all children (including SEND, PP and the lowest 20%,) are supported, when appropriate, to access our full and rich curriculum.

The National Curriculum for Design and Technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Implementation

Children will develop their understanding of designing, making, evaluating and using technical knowledge by being set practical tasks such as building a vehicle, cooking with different vegetables and making catapults. These activities are usually linked to the class topic with skills being improved and developed through a whole school approach, a spiral curriculum and the use of our Progression of Skills document.

Work is recorded in topic books, literacy books and on websites – this depends on how the 'challenge' fits within the topic.

Around the schools and in the classrooms, children's D&T work can be seen on display, giving them ownership of their educational environment and celebrating their art achievements.

As set out by the National Curriculum, we encourage children to develop the following knowledge, skills and understanding:

Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical Knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products.

Key Stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Impact

D&T contributes to children's personal development in creativity, independence, judgement and self-reflection. It encourages children to develop a sense of ownership over their work and reflect on their experiences through evaluating their progress and development. We share their work on open days and Parent/Carer evenings. Children show willingness to participate in a range of D&T opportunities and respond well to this.

We ensure that D&T is included across each year group within every topic of learning, with a level of progression (illustrated in the Progression of Skills documents) that supports and challenges our children so that they develop lively, creative, enquiring minds. We aim to provide our children with the skills and knowledge that will prepare them for successful, healthy lives in the ever-changing world that we live in.

The Curriculum Leader for Design and Technology is: Peter Halford

Design & Technology in the Early Years:

Design and Technology sits very prominently within the areas of 'Understanding of the World' and expressive arts and design. From an early age, the children learn to develop and make sense of their physical world through opportunities to explore, observe and find out about technology. They will do this through designing, making and evaluating. Our learning opportunities often stem from the children's interests and to build upon these with exciting and enjoyable learning experiences.