

Design and Technology Policy

Intent

At Callowell, our curriculum is designed to developing **independence** and **resilience** in our learners whilst improving their **oracy** skills. We provide our learners with a wide range of experiences and activities to broaden their **cultural development** beyond their own community and promote **inclusion**.

In Design and Technology, our aims are to ensure all of our 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

Our programme of study uses a variety of teaching and learning styles in design and technology lessons to develop the children's knowledge, skills and understanding in DT. We ensure that the act of investigating and making something includes exploring and developing ideas, evaluating and developing work. Sometimes we employ whole-class teaching, while at other times we engage the children in research and design and make activities. We encourage the children to ask, as well as answer questions which will help them to investigate. They use ICT in DT lessons where it enhances their learning. They engage in a wide variety of problem-solving activities and wherever possible, we involve the pupils in practical activities involving problems and solutions, for example, researching a local environmental problem, researching it, designing a solution, making it and evaluating the product.

Teachers draw attention to good examples of individual performance as models for the other children. They encourage children to evaluate their own ideas and methods, and the work of others, and say what they think and feel about them. We give children the opportunity within lessons to work on their own and collaborate with others, on projects in two and three dimensions and on different scales. Children present their design process in a DT booklet that documents need, research, initial design ideas to development of final product and evaluation.

The natural environment is an effective stimulus at Callowell School. The children are often taken outside to explore a range of DT activities in the woods and under the trees in our wonderful grounds. We encourage them to ask questions about what they see and be explorers of the world around them.

We encourage creative work in pre-school and reception as this is part of the Early Years Foundation Stage of the National Curriculum. We relate the creative development of the children to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. The children's

learning includes art, music, dance, role-play and imaginative play. The range of experience encourages children to make connections between one area of learning and another and so extends their understanding.

We provide a rich environment in which we encourage and value creativity. Children experience a wide range of activities that they respond to, using the various senses. We give them the opportunity to work alongside other adults. The activities that they take part in are imaginative and enjoyable.

We are proud of our [inclusivity](#) at Callowell and recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in Design and Technology through a range of strategies including open ended tasks with a variety of responses, setting tasks of increasing difficulty with children reaching as far as they are able, the setting of differentiated tasks, group work and the deployment of adults to support and guide individuals or small groups.

We use cross-curricular settings to provide context and real-life settings for our Design projects

Impact

We expect the children to be able to meet the National Curriculum expectations.

By the end of the Early Years and Foundation Stage, the pupils should have had regular opportunities to engage, explore and play with a wide range of media and materials, using all their senses to investigate them. They should be able to manipulate and play with different materials and use their imagination as they consider what they can do with different materials, making simple models which express their ideas..

By the end of 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].

They should design purposeful, functional, appealing products for themselves and other users based on design criteria. They select from and use a range of tools and equipment to perform practical tasks, selecting from and using a wide range of materials and components according to their characteristics. They should be able to explore and evaluate a range of existing products and evaluate their own ideas and products against design criteria. They should apply technical knowledge to build structures, exploring how they can be made stronger and more stable as well as exploring and using mechanisms and technology.

They should also be able to understand the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

By the end of 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 in a range of relevant contexts. When designing and making, pupils should be taught to 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. They should also generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. They will select from and use a wider range of tools and equipment to perform practical tasks accurately and 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. They should investigate and analyse a range of existing products, evaluating their ideas and products against their own design criteria and consider the views of others to improve their work. To understand the importance of Design Technology, they should understand how key events and individuals in design and technology have helped shape the world.

They should apply their understanding of how to strengthen, stiffen and reinforce more complex structures, understanding and using mechanical and electrical systems in their products, applying their understanding of computing to program, monitor and control their products.

They should also be instilled with a love of cooking that will open a door to one of the great expressions of human creativity by using the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

They should also understand and apply the principles of a healthy and varied diet, preparing and cooking a variety of predominantly savoury dishes using a range of cooking techniques, understanding seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

We aim for all the children at Callowell Primary School to be inspired to use their creativity and imagination to design and make products to solve a range of real life and relevant problems. We also hope to instill a love of cooking in pupils which will open a door to one of the great expressions of human creativity and this crucial life skill will enable pupils to feed themselves and others affordably and well, now and in later life.