

Design & Technology

Intent

In teaching Design Technology at North Marston C of E School we aim to prepare our pupils for a rapidly changing society. We believe D/T education stimulates creativity and imagination through problem solving both as individuals and as members of a team, and the production of quality products. Therefore, we believe that it should be taught as an individual subject as well as incorporated into other curriculum lessons where appropriate. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment).

In **Key Stage 1** the children will learn to design purposeful, functional and appealing products that are based on design criteria. They will learn how to join materials. They will make products by using a wide range of materials and develop the use of tools to cut, shape, join and finish. They will learn to evaluate products and suggest how it could be improved to be stronger, stiffer and more stable. They will learn to cook simple food with an emphasis on savoury dishes.

In **Key Stage 2** the children will learn to design purposeful products that are aimed at particular individuals or groups. They will develop their ideas through detailed planning, evaluating product design, observational drawings and making prototypes. They will learn how to use different joining techniques. They will make products and learn how to use a wide variety of tools, equipment, materials and components. They will learn how to include mechanical, electrical and computer control into products. They will learn to design and cook food with an emphasis on savoury dishes.

When designing and making, the children are 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 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
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

Progression in D/T will be assessed through work completed in pupils sketch books, displays, written work and photographic evidence.

Impact

We ensure the children:

- 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 and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child

Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.