

Design Technology Policy 2024

Design Technology (DT) is a crucial part of the primary curriculum, enabling children to use their creativity and imagination to solve real-world problems. This policy aims to outline the comprehensive approach to delivering high-quality Design Technology education at our school, in accordance with the 2014 National Curriculum in England.

Aims and Objectives

The aims and objectives of learning DT in primary school are:

- To develop pupils' knowledge and understanding of the world around them.
- To promote creative thinking and problem-solving skills.
- To foster an appreciation for design and technology in everyday life.
- To equip pupils with the skills necessary to design, make, and evaluate products.

DT at Buckshaw Primary aims to teach our children the skills, knowledge and understanding they need to design, make, and evaluate products, while also fostering an understanding of how DT impacts the world around us.

Organisation

Design Technology will be taught across all year groups, ensuring progression in skills and knowledge. Each year group will access four DT projects throughout the year, including one food technology unit. EYFS children access DT skills through ongoing continuous provision. Lessons will be planned to provide opportunities for practical, hands-on activities as well as opportunities for designing and evaluating products.

The Curriculum

Science is taught through the Learning Challenge Curriculum and we follow the National Curriculum Programmes of Study for KS1 and KS2.

These include the following units:

- Food technology
- Textiles
- Structures
- Mechanisms
- Electronics

Key Stage 1

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.

Cooking and nutrition

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

Key Stage 2

In line with the National Curriculum, pupils KS2 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.

Cooking and nutrition

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

During DT lessons, children are given the opportunity to work as a class, as individuals and as part of a group. The choice of class organisation is determined by the learning. Teachers will use a variety of teaching methods to engage pupils, including demonstrations, group work, and independent tasks. Practical skills will be taught through a combination of teacher-led instruction and pupil experimentation. Cross-curricular links will be made where relevant to enhance pupils' understanding of different subjects.

Resources

The school will provide a range of tools, equipment, and materials to support the teaching of Design Technology. Additional resources are stored in the designated DT cupboard. These include books, tools and materials. Teachers will ensure that resources are used safely and appropriately, following health and safety guidelines.

Inclusion

All pupils shall have the opportunity to access to the DT programme of study that satisfies the National Curriculum 2014 requirements. It is important for all children to experience a range of DT activities in ways that are appropriate to their needs and abilities. Special provision is made in exceptional cases. The school promotes equal opportunities and fairness of distribution of language resources. In school we aim to meet the needs of all our children by differentiation in our DT planning and in providing a variety of approaches and tasks appropriate to ability levels. This involves providing opportunities for SEND children to complete their own projects, with support, to develop speech and language skills, as well as scientific skills and knowledge. This will enable children with learning and/or physical difficulties to take an active part in DT learning and practical activities to achieve the goals they have been set. Some children will require closer supervision and more adult support to allow them to progress whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.

Assessment, Recording and Reporting

Pupils' progress in Design Technology will be assessed through a combination of teacher observation, questioning, and evaluation of finished products. Assessment criteria will be clear and linked to the National Curriculum objectives for DT.

When written work is produced, it is marked in line with the school policy. Knowledge organisers have been introduced and these can be found in DT books at the beginning of units of work. Children also have access to knowledge organisers for every topic which not only support their learning, but can also be used to assess against as they include key vocabulary and questions for the topic.

Monitoring

Monitoring is carried out by the subject leader in the following ways:

- Informal discussion with staff and pupils

- Work sampling
- Classroom observation

It is the responsibility of the DT Subject Leader, the Headteacher and Governors to monitor the standards of children's work and the quality of teaching in DT. The Subject Lead is also responsible for supporting colleagues in the teaching of DT, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. Regular reviews of the curriculum and resources will be conducted to ensure they meet the needs of all pupils.

Legislation and guidance

This policy reflects the requirements of the National Curriculum programmes of study for DT, which all maintained schools in England must teach.

It also reflects requirements for inclusion and equality as set out in the Special Educational Needs and Disability Code of Practice 2014 and Equality Act 2010 and refers to curriculum related expectations of governing boards set out in the Department for Education's Governance Handbook.

In addition, this policy acknowledges the requirements for promoting the learning and development of children set out in the Early Years Foundation Stage (EYFS) statutory framework.