

Castle Primary School

Design and Technology Policy

Review Date: March 2026

DEFINITION

“Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils 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.”

National Curriculum 2014

AIMS

The core curriculum for art and design aims to ensure that all pupils will:

- Know that designing and making will hold the solution to future world challenges
- Have developed technical skills and understanding
- Be able to apply their mathematical, computing and artistic skills to solve problems in Design and Technology
- Be able to test and evaluate ideas critically, and tackle challenges with creativity, skills and self-belief

TEACHING OBJECTIVES

National Curriculum Subject content:

Foundation stage

ELG: Creating with Materials

Pupils should be encouraged:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used

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.
- About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work

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.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:

Key stage 1

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

Key stage 2

- 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.

PLANNING

There is a programme of study for Design and Technology in place from Year 1 through to Year 6 that is taught through our Creative Curriculum Planning.

Skills in the Foundation Stage are planned through the objectives within the EYFS.

Teachers from Foundation Stage to Year 6 will plan to ensure full coverage of the skills relating to the Design and Technology curriculum for that year group throughout the year. Teachers use long term planning when starting each new theme, and highlight the skills that will be covered.

We aim to provide our pupils with a range of different experiences of design and technology and pupils will access at least one Design and Technology project (structures, mechanisms, textiles, materials, cooking or electrical systems) each term.

RECORD KEEPING, ASSESSMENT AND REPORTING

As in all other areas of the curriculum, assessment is an integral part of the teaching process. Class teachers keep records of work carried out by pupils and levels of achievement of the work. Photographs and DT folders are a useful tool to keep as a reminder of pupils' achievements.

Formative assessment is used to guide the progress of individual pupils in Art and Design. It involves identifying each child's progress in each aspect of the curriculum, determining what each child has learned and what should therefore be the next step in their learning. Formative assessment is mostly carried out informally by the teachers in the course of their teaching and should be based on the identified assessment opportunities.

Children's progress in Design and Technology is reported to parents through the pupil annual report.

EQUAL OPPORTUNITIES

All pupils including those with special educational needs undertake the full range of activities. Teacher assessment determines the depth to which individuals and groups go during each unit of work.

PARENTAL INVOLVEMENT

As with all other areas of children's learning, we need the support of parents and carers to help us to maximise the development of each child's potential. This would include helping the child with any research or homework which may be set.

CROSS REFERENCED

This policy should be read in conjunction with the following school policies:

Teaching and Learning

SEND

Marking