

Sibsey Free Primary School



Design and Technology Policy

Approved by: Headteacher

Date: May 2023

Next review due by: May 2026



Document Purpose

This policy is designed to reflect the primary Design and Technology entitlement as defined in the National Curriculum 2014. It will form the basis for the development of Design and Technology at Sibsey Free School over the next year and is a working document, subject to review every year.

The Significance of Design and Technology

At Sibsey Free School we believe Design and Technology is essential to prepare pupils to participate in tomorrow's rapidly changing technologies. Teachers encourage children to develop their investigating, designing, making and evaluating skills by thinking and intervening creatively.

Aims

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. We provide a variety of opportunities for design and technology learning to take place inside and outside the classroom. Teachers make use of the grounds and outdoor learning area when planning for design and technology.

Regardless of gender, ethnic origin or ability, we specifically aim 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.

We wish:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes, products, and their manufacture and their contribution to our society;
- to foster enjoyment, satisfaction and purpose in designing and making.



Entitlement

In the Reception year we encourage the development of skills, knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. As the Reception class is part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the EYFS Framework Educational Programmes and the Early Learning Goals. These underpin the curriculum planning for children aged birth to five. This learning forms the foundations for later work in Design and Technology. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

In Key Stage 1 Pupils should be taught:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive 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]. At the end of Key Stage 1 most pupils will be able 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

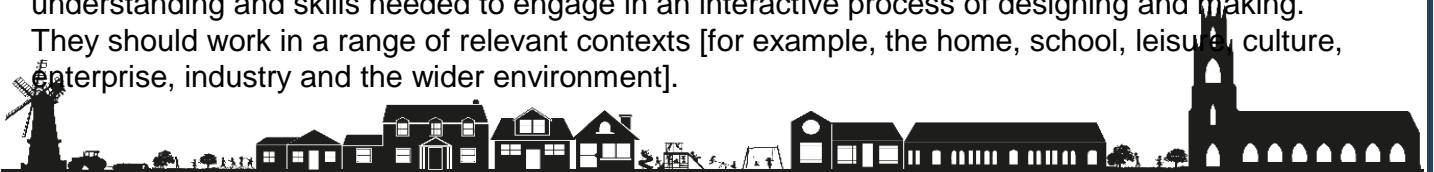
- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

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 Pupils should be taught:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive 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].



By the end of Key Stage 2, most children will be able 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.

Resources

We have limited resources for cooking, this is something that we are looking to invest in.

Inclusion

We ensure that all children irrespective of their ability have access to the Design and Technology curriculum. Through our teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. To reflect the diversity of our society, we ensure that children have access to the work of people, artefacts and resources from a range of gender, ethnic backgrounds and cultures.

Assessment

Teachers assess children's work in Design and Technology by making assessments as they observe them working during lessons. They monitor the progress that children make by assessing the children's work against the learning objectives for their lessons.

Health and Safety

The general teaching requirement for health and safety applies in this subject. Teachers will carry out a risk assessment before each activity, considering their tools, materials and equipment being used. Before undertaking practical tasks, children should be taught to use tools correctly in order to ensure safety.

Parents are an invaluable source of skills and information, and may be invited to demonstrate and teach their skills, or may indirectly share their skills through assisting with Design and Technology lessons. The school must be notified of any visitors. Please refer to the appropriate policies e.g. Health and Safety as appropriate.

Staff Responsibilities and Development

Each class teacher takes responsibility for planning the Design and Technology curriculum for their class. Assessment is carried out by the staff member who has delivered the lessons. Staff should indicate if they need help so the appropriate support can be either given or training can be arranged. All staff who attend CPD courses provide feedback to the staff team at staff meetings and disseminate the information.

Monitoring and Review

The head teacher is responsible for: The monitoring of the standards of children's work and the quality of the teaching in Design and Technology.

This is done by:

- Providing support for colleagues in the teaching of Design and Technology.
- Renewing, updating and complementing the resources needed to deliver the Design and Technology curriculum.
- Monitoring whole school planning, to ensure progression and continuity.
- Keeping staff informed of developments or changes in the Design and Technology curriculum.
- Providing a strategic lead and direction for the subject across the whole school.

