

## Introduction

This policy outlines the purpose and management of the Design and Technology taught and learned at Beckstone Primary School. The policy has been drawn up to reflect our whole school approach to the subject and has been discussed with staff.

## The nature of Design and Technology

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.

## Aims:

The national curriculum for design and technology aims 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.

## Our Aims at Beckstone:

Our aim is to provide good quality learning experiences for all pupils. In design and technology this includes:

- The provision of appropriate resources
- The encouragement of pupils to be independent in their learning
- The teaching of a range of practical and intellectual skills
- Involvement in cross-curricular design and make projects
- Opportunities to take part in activities hosted by other educators, e.g. food technology with the school's cook.
- The celebration of achievement in DT

## Coverage

Pupils are provided with opportunities for single subject study, integration with other subjects and development of cross-curricular themes and dimensions.

- Pupils combine their designing and making skills with knowledge and understanding of materials and technological principles to enable them to design and make products
- Each class undertakes at least one significant design and technology activity per term, varying in duration depending on the nature of that activity
- Design and technology activities are linked to topic work, wherever possible
- Learning objectives are taught through direct skills teaching

## Inclusion

Class teachers provide differentiated learning opportunities to meet the needs for all pupils. Design and technology, in particular, offers the opportunity for pupils to achieve in a practical subject, as they are encouraged to communicate in different ways (not just writing).

## Teaching and learning

### EYFS

Important design technology skills are addressed through physical development, understanding the world and expressive arts and design. At Beckstone, children will:

- Explore activities based on first hand experiences that encourage critical thinking e.g. using pulleys to raise heavy objects or observing the effects of increasing the incline of a slope on how fast a vehicle travels
- Work in an environment with a wide range of activities indoors and outdoors that stimulate children's interest and curiosity and use a range of tools, e.g. magnifiers, gardening tools, hole punches etc.
- Work with a range of materials in their activities, e.g. wet and dry sand, coloured and clear liquids, compost, gravel and clay and use a variety of joining methods and materials to help understanding of design work

## Key Stage 1

At Beckstone, children will:

### Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria and generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups.

### Make

- Select from and use a range of tools and equipment to perform practical tasks and use a wide range of materials and components.

### Evaluate

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

### Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable and explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

## Key Stage 2

At Beckstone, pupils will learn to:

### Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.

### Make

- Select from and use a wider range of tools and use a wider range of materials and components, including construction materials, textiles and ingredients equipment to perform practical tasks accurately.

#### Evaluate

- Investigate, analyse and evaluate their 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 and electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.

#### Assessment and recording

Formative assessment techniques will ensure that teachers assess the on-going design process and not just the finished products or outcomes:

- Teachers' observation of pupils
- Teacher-pupil discussion and teacher questioning
- Pupils' drawings, notes, models, comments and written work
- Artefacts made by pupils
- Pupils' on-going analysis of their achievements
- Photographs of children engaged in the design process
- Use of ICT appropriate

#### Health and Safety

It is the teacher's responsibility to ensure a safe working environment and the safety of the teaching equipment should be reviewed regularly. Electrical equipment and knives should only be used under close supervision of the teacher or responsible adult. When working with tools, equipment, materials in practical activities pupils should be taught:

- About hazards and risks and about risk control

- To recognise hazards, assess subsequent risks and take steps to control risks
- To use information to assess the immediate and cumulative risk
- To manage their environment to ensure the health and safety of themselves and others

#### Extra-curricular opportunities

There are opportunities for children to visit places of scientific interest and for visitors to come into the school in order to support the learning objectives for units of work where relevant. The pupils have access to courses provided by STEM (Science, Technology, Engineering and Maths development). STEM Sellafield provides science/technological opportunities on request.

#### Leadership and management

The design technology subject coordinator is responsible for the leadership of design and technology throughout the school. This includes:

- Ensuring continuity and progression across the school
- Preparing a policy
- Developing a scheme of work and advising and supporting colleagues
- Specifying and ordering resources with staff.
- Monitoring and maintaining condition and availability of resources
- Monitoring teaching and learning in design and technology including, half termly monitoring, medium and short term planning, talking to pupils, scrutiny of work, collecting photographic evidence, etc



Beckstone  
Primary School



# Design and Technology