

# Backworth Park Primary School



## Design Technology Policy

September 2024

## **Contents:**

### Statement of intent

1. Legal framework
2. Roles and responsibilities
3. National Curriculum
4. KS1
5. KS2
6. Cooking and nutrition
7. Roles and responsibilities
8. Equal opportunities
9. Health, safety and hygiene
10. Teaching
11. Assessment
12. Resources and equipment
13. Monitoring and review

## Statement of intent

At Backworth Park Primary school, we understand that Design Technology allows pupils to solve problems, think creatively and develop ideas. Our school is committed to encouraging pupils' curiosity and preparing them for living in a modern world where technology is rapidly advancing.

Design Technology offers pupils a chance to use creative thinking and activity within a defined purpose. Backworth Park recognises the importance of our pupils developing a positive mindset towards the world of work and becoming a well-rounded member of our community.

In teaching DT, we aim to help pupils:

- Develop their design and making skills.
- Develop their knowledge and understanding of design and technologies.
- Use a wide range of tools and materials.
- Learn about working safely and protective measures.
- Work individually and collaborate with other pupils in a variety of contexts.
- Develop the capability to create products of a high standard through skills and understanding.
- Evaluate products, made by themselves, their peer groups and companies.
- Explore the man-made world and encourage discussion of how we live and work within it.
- Develop an interest in and understanding of technological processes and the role of manufacturing in society.
- Learn the principles of nutrition, healthy eating and how to cook.

## 1. Legal framework

This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2023) 'Keeping children safe in education 2024'
- DfE (2014) 'National curriculum in England: framework for key stages 1 to 4'

This policy operates in conjunction with the following school policies:

- Health and Safety Policy
- First Aid Policy
- Curriculum Policy
- Special Educational Needs and Disabilities (SEND) Policy

## 2. Roles and responsibilities

The headteacher will be responsible for:

- Monitoring the teaching of DT throughout the school.
- How DT should support, enrich and extend the curriculum.
- The provision and allocation of resources.
- The ways in which DT can benefit the aims and objectives of the school.
- Overseeing the review of this policy in conjunction with the DT subject leader.

The DT subject lead will be responsible for:

- Implementing this policy across the school.
- Maintaining resources and advising staff on the use of materials.
- Assisting the headteacher in deciding on the allocation of resources.
- Supporting teaching staff, advising and offering to share their expertise and experience.
- Leading staff training on new initiatives.
- Helping staff to plan future lessons and assessments and advising teachers on teaching methods they may wish to explore.
- Encouraging staff and pupils to be creative.
- Assisting the headteacher in reviewing this policy.
- Monitoring the progression of teaching and learning.

Class teachers will:

- Plan and deliver interesting and engaging lessons that adhere to the national curriculum.
- Provide equality of opportunity through their teaching approaches and methods.
- Keep up-to-date assessment records.
- Ensure pupils' development of skills and knowledge progresses through their learning and understanding of DT.
- Set pupils suitable targets based on prior attainment.
- Maintain an enthusiastic approach to DT.

### 3. National curriculum

The school aims to assist pupils in achieving attainment targets set out in the national curriculum. By the end of each key stage, pupils will be expected to know, apply and understand the matters, skills, and processes specified in the national curriculum. Pupils will learn a broad range of subject knowledge and draw on disciplines such as maths, science, engineering, computing and art.

In accordance with the national curriculum, the school will 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 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.

### 4. KSI

By the end of KSI, 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 and prototypes and, where appropriate, computing.

#### Make

- Select from and use a range of tools and equipment to perform practical tasks, e.g. 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, e.g. levers, sliders, wheels and axles, in their products.

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed through a variety of creative and practical activities. They should work in a range of relevant contexts, e.g. the home, school, leisure, enterprise, industry and the wider environment.

### 5. KS2

By the end of KS2, pupils 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 accurately, e.g. cutting, shaping, joining and finishing.
- 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 DT 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, e.g. gears, pulleys, cams, levers, and linkages.
- Understand and use electrical systems in their products, e.g. series circuits incorporating switches, bulbs, buzzers and motors.
- Apply their understanding of computing to program, monitor and control their products.

## 6. Cooking and Nutrition

As part of their work with food, pupils will be taught how to cook and apply the principles of nutrition and healthy eating. 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.

By the end of KS1, pupils will be able to:

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

By the end of KS2, pupils will be able to:

- 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.

## 7. Equal opportunities

Backworth Park will remain an inclusive school that ensures all pupils are provided with equal learning opportunities, regardless of their characteristics or backgrounds and that reasonable adjustments are made where necessary to enable all pupils to participate in the DT curriculum.

Teachers will adapt how they deliver the DT curriculum based on the needs of pupils.

In order to ensure pupils with SEND achieve to the best of their ability, teachers will adapt targets and the delivery of the curriculum for these pupils.

The DT curriculum will be delivered in liaison with the SENCO to ensure that the specific needs of pupils with SEND are met, and reasonable adjustments are made as required.

The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is at a disadvantage.

The school will maximise the use and benefits of DT as one of many resources to enable all pupils to achieve their full potential.

## 8. Links to other parts of the curriculum

### English

DT offers the opportunity to reinforce what pupils have been learning during English lessons. Discussion, drama and role-play are important methods that the school employs to help pupils develop an understanding of people's different views and opinions of DT and society.

Evaluating products requires pupils to articulate and formulate their ideas to compare their views with other pupils'; through discussion, pupils will learn to justify their own views and clarify their design ideas.

### Maths

DT will assist pupils in learning about shape and size and will make use of what they have already learned in maths lessons. Pupils will carry out investigations – by doing this, they will learn to read and interpret scales, collect and present data, as well as draw their own conclusions.

### PSHE

DT lessons will be used to teach pupils how to discuss their own work and the work of others; in addition, pupils will be taught about health and hygiene, including diets, and how to prevent disease from spreading when working with food.

### Computing

Computing enhances the teaching of DT and provides pupils with additional equipment, extending the possibilities for developing, sharing and recording their work.

Utilising computing also benefits pupils by helping them collect information and present their designs and ideas through a range of design and presentation software.

## 9. Health, safety and hygiene

In order to maximise their learning experience, pupils will be allowed full access to a wide range of materials in DT lessons; however, health and safety concerns are inherent with DT, including storing materials and tools, and the use of equipment.

PPE such as gloves, head protection, eye protection and hearing protection will be made available to all pupils and teachers where necessary.

The risks of each task will be assessed by the class teacher and DT subject leader before lessons and relevant PPE will be compulsory based on their decisions.

All tools and equipment, such as glue guns, will be visually inspected before use by the class teacher and subject to regular testing by the DT subject leader. It is also the duty of staff to recognise and assess the hazards and risks associated when working with food and other materials.

Pupils will be supervised at all times during DT lessons.

All pupils will be taught how to use all equipment properly by the class teacher before doing so; similarly, pupils will also be fully briefed on the importance of how to correctly use equipment and tools.

Pupils will only be allowed to use a lower temperature glue gun under one-to-one supervision – an adult must use the glue gun at all other times. Glue guns will be considered alongside all viable alternatives such as adhesive tapes, blue tack and other fasteners, to ensure the most suitable materials are used for each project.

Perishable food will be stored sensibly and refrigerated if necessary. Care must be taken by teachers and teaching assistants to ensure food is not used after the given sell by date

A fire safety blanket will be kept next to the cooking equipment at all times.

If any cooking or food preparation is taking place in the classroom, all surfaces will be cleaned before and after use.

Teachers and TAs will oversee that all cupboards, table tops and cookers are clean and in working order.

Correspondence will be sent to parents one week before cooking lessons to ensure pupils' allergies are taken into account.

## 10. Teaching

The school will use a variety of teaching and learning styles in DT lessons, the main aim of these lessons will be to develop pupils' knowledge, skills and understanding. Teachers will ensure pupils apply their knowledge and understanding when developing ideas, planning and making products, and then evaluating them.

The school will utilise a mixture of whole-class teaching, group work, and individual activities. Pupils will be given the opportunity to work on their own and collaborate with others, listening to their classmates' ideas and treating these with respect.

Principles for effective teaching will include:

- Setting tasks in the context of pupils' prior knowledge.
- Promoting active learning.
- Inspiring, exciting and motivating pupils to know more.



Strategies for effective teaching will include:

- Ensuring the teaching methods used suit the purpose and needs of pupils.
- Providing a meaningful context and clear purpose when assigning tasks.
- Investigating, disassembly and evaluative activities.
- Using focussed practical tasks to help pupils make and evaluate products.
- Ensuring tasks are built on skills and understanding.

## **II. Assessment**

Pupils' DT work may be assessed throughout the design process and by teachers judging recorded work. Teachers will also assess pupils':

- Knowledge of tools, materials and equipment.
- Ability to record and communicate their design ideas in a clear manner.
- Personal qualities and attitudes towards their work.
- Ability to explain what they have created and how.
- Ability to use tools and materials safely and effectively.
- Ability to evaluate their work and the work of others.

The majority of assessments will be conducted through observations and discussion.

Assessments will be recorded in either books or by Seesaw.

## **12. Resources and equipment**

The school has a selection of centrally stored materials, tools and equipment to ensure that all pupils have access to the necessary resources. The DT budget will cover the cost of materials and replacement tools. Teachers will be required to maintain the tools and equipment in their room.

Pupils may occasionally be asked to bring materials from home if they can; however, to allow all pupils the same opportunities, pupils that are unable to do this will be provided for.

Food technology resources will be kept in the school kitchen.

Additional learning resources, such as books and videos, will be kept in the DT cupboard.

At the start of every school year, the DT subject leader and headteacher will assess the school's DT tools and materials to ensure there is sufficient equipment for pupils, allowing funds to be allocated where necessary.

## **13. Monitoring and review**

This policy will be reviewed on an annual basis by the DT subject lead and the headteacher. Any changes made to this policy will be communicated to all members of staff. All members of staff directly involved with the teaching of DT will be required to familiarise themselves with this policy.

The next scheduled review date for this policy is September 2025.