

## **Design and Technology Policy**

### **Duke Street Primary School**

#### **Rationale**

At Duke Street Primary School, we believe that Design and Technology is an inspiring, practical and valuable subject that prepares children to participate successfully in an increasingly technological world. Design and Technology encourages children to become creative problem solvers, enabling them to identify needs, develop ideas and create innovative solutions.

Through Design and Technology, children draw upon knowledge and skills from other curriculum areas, including mathematics, science, computing, engineering and art. The subject provides meaningful opportunities for pupils to apply learning in real-life contexts and develop resilience, independence and teamwork.

In keeping with the ethos of Duke Street Primary School, every child has full access to a broad and balanced Design and Technology curriculum regardless of age, gender, background or ability. We encourage pupils to take risks, learn from mistakes and develop the confidence and practical skills that will support them both within and beyond school life.

#### **Curriculum Intent**

At Duke Street Primary School, we aim to provide a Design and Technology curriculum that:

- inspires pupils to be creative, innovative and reflective thinkers;
- develops children's practical skills and technological understanding;
- encourages pupils to identify problems and design purposeful solutions;
- enables children to design and make products for a range of users and purposes;
- develops resilience, independence and the confidence to evaluate and improve their ideas;
- provides opportunities for children to apply knowledge and skills from other curriculum areas;
- develops an understanding of the impact of design and technology on everyday life and the wider world;
- teaches children about nutrition, healthy lifestyles and food preparation;
- develops children's understanding and use of technical vocabulary;
- prepares pupils for future learning and the opportunities and responsibilities of modern life.

#### **Curriculum Implementation**

Design and Technology is taught through carefully planned units that ensure progression in knowledge, understanding and technical skills across the school. Learning is organised through a cyclical process of: Investigating → Designing → Making → Evaluating

Children are given opportunities to revisit and build upon previous learning, allowing them to develop increasing confidence and competence as designers and makers.

Lessons are practical, engaging and purposeful, enabling pupils to work both independently and collaboratively. Teachers explicitly teach subject-specific vocabulary and model the design process, encouraging children to reflect upon and refine their ideas.

Where appropriate, meaningful cross-curricular links are made with subjects such as science, mathematics, computing, history and geography whilst maintaining the integrity of Design and Technology as a distinct subject.

#### **Early Years Foundation Stage (EYFS)**

Within the Early Years Foundation Stage, Design and Technology forms part of the Expressive Arts and Design area of learning and contributes to Physical Development and Understanding the World.

Children are provided with opportunities to:

- design, construct and evaluate models and products through continuous provision;
- explore materials and investigate how things work;
- develop fine motor skills and manipulative techniques;
- use simple tools safely and appropriately;
- solve practical problems and work collaboratively;
- express their own ideas creatively through open-ended experiences.

Children are encouraged to understand that designs are unique and that there are many possible solutions to a problem.

### **Key Stage One and Key Stage Two**

Duke Street Primary School follows the National Curriculum for Design and Technology.

Units are carefully sequenced to ensure progression in the following key areas:

- Investigating and evaluating existing products;
- Developing, planning and communicating ideas;
- Working with tools, equipment, materials and components;
- Evaluating processes and products;
- Cooking and nutrition.

Children are taught through the main disciplines of:

- Structures
- Mechanisms
- Textiles
- Electrical systems (KS2)
- Cooking and Nutrition

Through these areas, pupils develop key life skills including communication, teamwork, resilience, problem solving and self-evaluation.

### **Key Areas of Learning**

#### **1. Investigating and Researching**

Children are provided with opportunities to:

- investigate existing products and designs;
- identify the needs and preferences of users;
- explore how products work and how they have been designed;
- analyse strengths and weaknesses of products;
- develop critical thinking and analytical skills;
- undertake research and communicate findings effectively.

#### **2. Designing**

Children are taught to:

- generate, develop and communicate design ideas;
- use drawings, diagrams, models and annotations to communicate ideas;
- consider purpose, functionality and user needs;
- select suitable materials and components;
- develop imaginative and innovative solutions;
- understand links between design, enterprise and real-world applications.

### **3. Making**

Children are encouraged to:

- select and use appropriate tools and equipment safely;
- measure, mark, cut, shape and assemble materials accurately;
- apply an increasing range of practical skills and techniques;
- refine and improve products during the making process;
- use finishing techniques to strengthen and enhance products;
- follow safe procedures when handling food and cooking equipment.

### **4. Evaluating**

Children are taught to:

- evaluate their own products and those of others;
- reflect upon the effectiveness of their designs;
- identify strengths and areas for improvement;
- understand that successful products are fit for purpose and meet the needs of users;
- adapt and improve designs through testing and feedback.

Evaluation is viewed as an ongoing process throughout each unit rather than solely at the end of a project.

### **Cooking and Nutrition**

We believe that cooking and nutrition are essential life skills that enable children to make informed choices and develop healthy lifestyles.

Children are taught to:

- understand the principles of a healthy and varied diet;
- know where food comes from and how ingredients are grown, reared, caught and processed;
- prepare and cook a variety of predominantly savoury dishes;
- use a range of cooking techniques safely;
- understand seasonality and sustainability in food production;
- develop confidence and independence in food preparation.

### **Vocabulary and Oracy**

Technical vocabulary is explicitly taught and revisited throughout all units of work. Children are encouraged to discuss, explain and justify their ideas using appropriate subject-specific language.

Developing pupils' oracy skills enables them to communicate design ideas effectively, evaluate products critically and articulate their learning with confidence.

### **Inclusion and SEND**

At Duke Street Primary School, we are committed to ensuring that all pupils can access and succeed in Design and Technology.

Teachers adapt learning appropriately through:

- additional modelling and scaffolding;
- adapted tools and resources;
- visual prompts and step-by-step instructions;
- adult support where necessary;
- opportunities for repetition and overlearning;
- alternative methods of recording and presenting ideas.

We recognise that some pupils may experience difficulties relating to fine motor skills, sensory processing or communication. Appropriate adjustments are made to enable all children to participate fully whilst maintaining high expectations.

Children with SEND are also supported in developing essential cooking and nutrition skills so that they can make informed and safe choices in later life.

### **Cultural Capital and Real-World Learning**

Design and Technology provides opportunities for pupils to develop an understanding of the wider world and the role that technology, engineering and design play in society.

Where possible, pupils are provided with opportunities to:

- investigate real-life designers, engineers and inventors;
- participate in STEM activities and enrichment events;
- engage with enterprise opportunities;
- explore careers linked to design and technology;
- understand how technological developments influence everyday life.

These experiences broaden pupils' aspirations and prepare them for future learning and employment.

### **Health and Safety**

Health and safety is an integral part of Design and Technology teaching.

Children are taught how to:

- use tools and equipment safely and correctly;
- recognise hazards and assess risks;
- handle materials responsibly;
- follow food hygiene and safety procedures.

Appropriate risk assessments are carried out by teachers where necessary, particularly when using equipment such as glue guns, saws, hammers, needles and cooking utensils.

### **Assessment**

Assessment is ongoing and informs future planning and teaching.

Teachers assess pupils through:

- observation during practical activities;
- discussions with pupils;
- review of design sheets, evaluations and recorded work;
- photographs and videos of practical outcomes;
- self, peer and group assessment activities.

Assessment focuses on pupils' development of knowledge, skills and understanding over time, rather than solely on the quality of the final product.

End-of-year judgements are made in accordance with the school's assessment procedures and are supported by evidence gathered throughout the year.

### **Monitoring and Evaluation**

The Design and Technology Subject Leader is responsible for monitoring the quality of provision across the school through:

- reviewing planning and curriculum coverage;
- monitoring pupils' work and evidence of progression;
- pupil voice activities;
- learning walks and discussions with staff;
- analysing assessment information where appropriate;
- auditing and organising resources;
- identifying training needs and providing professional development opportunities.

Monitoring ensures that the curriculum is implemented consistently, progression is evident and that all pupils receive a high-quality Design and Technology education.

### **Curriculum Impact**

By the time pupils leave Duke Street Primary School, they will:

- understand and apply the design process confidently;
- demonstrate increasing technical knowledge and practical skills;
- be resilient and reflective learners who can evaluate and improve their work;
- use technical vocabulary accurately and confidently;
- understand the importance of healthy eating and food preparation;
- appreciate the role of design and technology in everyday life and the wider world;
- be equipped with the creativity, problem-solving skills and practical understanding needed for future learning and life beyond primary school.