

Everyone

Smiles

Here.

Esh Church of England Primary School.

Esh  
Church of England  
(Aided)  
Primary School.

# Design and Technology Policy

Updated – April 2020



### **Why is this area of learning important?**

Design and technology is an inspiring, rigorous and practical subject. Pupils use creativity and imagination; they design and make products that solve real and relevant problems within a variety of contexts, considering their own and other's needs, wants and values. They acquire a broad range of subject knowledge and use cross curricular skills from mathematics, science, 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 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 to cook.

### **Teaching and learning**

A variety of teaching techniques are used for design and technology to appeal to a range of learning styles. The principal aim is to develop children's knowledge, skills and understanding in design and technology.

Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole-class teaching and individual/group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT. Cross curricular approaches with Maths, English and Science is encouraged to support children's understanding of conceptual and procedural knowledge and ensure it is applied.

### **Curriculum planning**

Design and technology is a foundation subject in the National Curriculum. Our school uses this as a basis for our curriculum planning and design. We carry out the curriculum planning in design and technology in two phases (long-term and medium term).

Our long-term design and technology plan shows how teaching units are distributed across the year groups and how these fit together to ensure progression within the curriculum plan. These units are planned through our two year rolling program of work to ensure that every child has access to the same experiences. The design and technology subject leader is responsible for reviewing these plans.

Our medium-term plans given details of each unit of work for one half term every term. They identify the key learning objectives which will be covered in that particular unit of work. The class teachers are responsible for writing the medium-term plans with the design technology component of each lesson.

The topics studied in design and technology follow the same strands throughout the cycle and are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and

knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

### **Early Years and Foundation Stage**

During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS. Specifically, 'Designing and Making' is identified as a strand within Knowledge and Understanding of the World. By the end of the EYFS, most children should be able to:

- Construct with a purpose in mind, using a variety of resources
- Use simple tools and techniques competently and appropriately
- Build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary
- Select the tools and techniques they need to shape, assemble and join materials they are using

### **Key stage 1**

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 wide range of tools and equipment to perform practical tasks.
- 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 in their products.

### **Key stage 2**

Pupils should be taught to:

#### Design

- Use research to 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.

- Select 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.

#### Technical knowledge

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems in their products.
- Understand and use electrical systems in their products.
- 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.

In Key Stage 1 pupils should be taught to use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

In Key Stage 2 pupils should: 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.

### **Inclusion and SEN**

At Esh C.E. Primary School, we teach design technology to all children, whatever their ability and individual needs. This is in line with the school's curriculum policy of providing a broad and balanced education to all children. Through our design and technology teaching, we provide learning opportunities that enable all pupils to make good progress. We achieve this through a range of strategies:

- Setting common tasks that are open-ended and can have a variety of results;
- Setting tasks of increasing difficulty where not all children complete all tasks
- Grouping children by ability and setting different tasks for each group;
- Providing a range of challenges through the provision of different resources;
- Using additional adults to support the work of individual children or small groups.

We strive to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see the relevant SEN, Pupil Premium and More Able policies.

Opportunities for wider development are provided wherever possible, for example, extra-curricular clubs and links with local high schools.

### **Assessment, Recording and Reporting**

Our assessment procedures provide an all-round picture of individual children's attainment and achievement and a review of how the curriculum is implemented. The outcomes of our assessment procedures are

effectively recorded and determines future planning. Children are assessed on the 'I can...' statements which are organised into the different areas of the design and technology curriculum. The class teacher will make a note of who in the class is working at, above or below age related expectations. These assessments will be passed on to the design and technology Co-ordinator and the next class teacher at the end of the year.

In EYFS and Year 1, a range of evidence is seen in individual topic books. All children from Year 2 onwards have a design and technology book. This contains planning, research, designing, and evaluating work as well as photographs of children's practical work.

Information about each pupil's achievements and experiences in design and technology are reported to parents on the end of year report.

### **Health and Safety**

The safety of the children is the responsibility of the class teacher. The children are made aware of the safe use and correct procedure involved when using tools and equipment in a learning environment and how to follow proper procedures for food safety and hygiene. The children are made aware of the need to be careful and to understand that their actions can affect others.

The children build up a range of skills when using equipment to reduce unnecessary risk and children are supervised in their use of woodwork equipment. Glue guns are used (low temperature) under supervision. All staff, including helpers, are made aware of food safety procedures when working with food to minimise any risks. The children wear protective clothing if necessary. Electric cookers are regularly PAT tested and any problems are swiftly dealt with.

### **Subject Leader's role**

The subject leader has overall responsibility for the management of design and technology and for organising, monitoring and ordering resources. Staff meetings will be planned for and delivered to all staff to update them on changes to the curriculum or planning. They will also be used to model how to use new equipment. The subject leader will monitor teachers long term plans to ensure that all design and technology skills are being covered. Design and technology books will also be scrutinised to see evidence of design and technology that is practical and differentiated.

### **Staff Development**

To implement our school's vision effectively, all staff need to be confident in all areas of the design and technology curriculum. Staff who have identified areas of development will be identified and through communication between the Design and technology co-ordinator and the Head teacher, relevant course will be located or training brought into/held at school.

The Design and technology Co-ordinator keeps up to date with the latest advancements and curriculum developments by attending conferences, network and school cluster meetings. Information is then fed back to the rest of the school during staff meetings.

Design and technology co-ordinator: Miss G. Dismore

Policy review date: April 2022

Mr A Park

(Head teacher)