

Our vision: **'Let your light shine'** based on Matthew 5.16

## **Egglescliffe CE VC Primary School**



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Primary School

Design Technology Policy

**Updated: June, 2022**  
**Review: June, 2024**

### **Design Technology Curriculum Intent**

Design Technology Curriculum Intent Design Technology is one of the few subjects in the curriculum where pupils confront and solve problems where there is no right answer. Through design technology pupils learn to deal with ambiguity; undertaking tasks without all the information necessary to complete them from the outset. This empowers learners and develops self-confidence. It is our aim at Eggescliffe CE Primary School to equip children to deal with tomorrow's rapidly changing world; to encourage children to become independent, creative problem solvers and thinkers as individuals and part of a team. Through our DT curriculum, children will identify their own and others needs and wants in order to design and make products that solve real and relevant problems within a variety of contexts. Through the study of Design Technology, children will combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry. This allows them to reflect on and evaluate past and present technology, its uses and impacts. Design Technology is often used in conjunction with other subjects drawing on disciplines such as mathematics, science, computing and art to develop more meaningful learning experiences. Design Technology projects are often cross- curricular, for greater cohesion, for example whilst studying 'toys' as part of their History work in Y2, pupils will design, make and evaluate their own hand puppet.

### **Definition**

Design and Technology is a subject where children's capability in designing and making is developed through combining their designing and making skills with knowledge and understanding. At Eggescliffe C.E. Primary School we view Design and Technology as a subject which allows children to apply their knowledge and understanding in a creative way to design and make products. "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" (National Curriculum Document 2014)

## **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.

## **National Curriculum Subject Content**

### **Foundation Stage**

Children in the Foundation Year will undertake investigative and skills based tasks during independent working time. The Design and Technology area will be available to them on a daily basis and they will be encouraged to undertake focused practical tasks through directed and self-initiated stimuli. Children in the Foundation Stage work on a range of creative themes and tasks, and their work in Expressive Art and Design links closely to other areas of the Foundation Stage Profile, especially Physical Development.

### **Key Stage 1**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative 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]. When designing and making, 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 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 1 children will undertake one unit of work per term. They will also have opportunities during Design and Technology lessons to develop their own ideas and generate designs independently. Progression of Design and Technology skills will be monitored by staff formally and informally with references to expectations from the National Curriculum. Planning will follow Medium term planning linked to National Curriculum guidelines.

## **Key Stage 2**

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

### 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.

## **Planning**

At Eggescliffe C.E. Primary School, we adapt the National Curriculum to meet the needs of our school and our class. Design Technology is taught as a subject in its own right, both as a discrete lesson and as part of cross-curricular themes when appropriate.

Our long-term plan maps out the units and focus taught in each term during the year. Activities in Design Technology build upon the prior learning of the pupils. Whilst we give pupils of all abilities opportunity to develop their skills, knowledge and understanding, we also ensure there is increasing challenge for the pupils as they move up the school.

Our medium-term plans give details of each unit of work for each term. These plans define what is taught and ensure an appropriate balance and distribution of work across each term. They include key vocabulary for the unit as well as suggested resources.

## **Teaching and Learning**

The school uses a variety of teaching and learning styles in Design Technology lessons. The main aim of these lessons is to develop pupils' knowledge, skills and understanding. Teaching and learning styles are adapted to support pupils with SEND to ensure these pupils continue to have their confidence and self-esteem raised. Teachers ensure pupils apply their knowledge and understanding when developing ideas, planning and producing work, and evaluating these.

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

## **Assessment and Reporting**

Effective teachers employ a range of assessment strategies in order to monitor pupils' progress and attainment. Questioning is used to probe and extend understanding. Supportive and constructive feedback is provided to all pupils. Assessment is used as a diagnostic tool, which informs future learning. Pupils should be supported in assessing their own work and in identifying targets for improvement.

Characteristics of effective assessment practice include:

- Questioning is used throughout the lesson in order to judge pupil understanding;
- Mistakes and misconceptions are used constructively to facilitate learning; and
- Pupils are encouraged, through verbal target setting, to improve progress and attainment.

As in all other areas of the curriculum, assessment is an integral part of the teaching process. DT workbooks are a valuable tool to assess progress and attainment. We assess the pupil's work in Design Technology whilst observing them work during lessons. Pupils constantly make judgements and evaluate their work as the need to make modifications arises. Pupils are encouraged to assess their own achievements and those of others in a positive way.

Formative assessment is used to guide the progress of individual pupils in Design Technology. It involves identifying each pupil's progress in each aspect of the DT curriculum, determining what has been learned and what should therefore be the next step. At the end of each unit, the teacher tracks progress against age related statements of attainment. This data is entered using the terms Emerging, Expected and Deeper Understanding for a particular year group.

The teacher and Subject Leader use this information to decide where a child's progress differs markedly from that of the rest of the class enabling future work to be planned for the child. The teacher also makes termly assessments to parents at Parent Consultation Evenings and an annual assessment of progress, as part of the annual report to parents.

## **Equal Opportunities**

Egglescliffe C.E. Primary School is an inclusive school that ensures all pupils are provided with equal learning opportunities, regardless of social class, gender, culture, race, disability or learning difficulties.

In order to ensure pupils with SEND achieve to the best of their ability, outcomes are adapted, and the delivery of the Design Technology curriculum is differentiated for these pupils, in line with the SEND Policy.

The planning and organising of teaching strategies for Design Technology will be reviewed on a termly basis by the subject leader to ensure that no pupil is at a disadvantage. The school aims to maximise the use and benefits of Design Technology as one of many resources to enable all pupils to achieve their full potential.

We recognise that we have pupils of differing abilities in our classes and provide suitable learning opportunities for all pupils by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- setting common tasks that are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty where not all pupils complete all tasks;
- grouping pupils by ability and setting different tasks for each group;
- providing a range of challenges with resources to support;
- using additional adults to support the work of individual pupils or small groups.

We enable pupils to have access to the full range of activities involved in learning about Design Technology. Where pupils are to participate in activities outside the classroom, for example a school trip, we carry out a risk assessment prior to the activity, to ensure the activity is safe and appropriate for all pupils.

Where progress falls significantly below the expected range, we look at a range of factors – classroom organisation, teaching materials, teaching style, differentiation, so that we can take some additional or different action to enable the child to fully access the Design Technology curriculum. Where a child's progress exceeds the expected range, appropriate extension work may be planned, where necessary, to allow pupils to learn more effectively.

### **The Role of the Design and Technology Co-ordinator is to:**

- lead the development of design and technology in school
- provide guidance to individual members of staff
- keep up to date with local and national developments in design and technology and disseminate relevant information
- review and monitor the success and progress of the planned units of work
- be responsible for the organisation and maintenance of design and technology resources
- co-ordinate any display of design and technology work



This policy is written with consideration to our school commitment to the Rights of the Child and our achievement of becoming a Rights Respecting School and it also complies with Article 28 of the UNCRC 'Every child has the right to an education'. Although direct reference to this is not continuously made, the policy has been written with full awareness of our responsibility and commitment to this purpose. Article 24 'Every child has the right to the best possible health'

The next scheduled review date for this policy is **June 2024**