

High Ercall Primary School



Design and Technology Policy

Date of Policy Creation	Sept 2020	Named Responsibility	Kate Caton
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Date of Policy Adoption by Governing Body		Delegated to HT	

Introduction and subject definition

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and technology helps all children to become discriminating and informed consumers and potential innovators.

The aims of Design Technology teaching are:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes, products, and their manufacture, and their contribution to our society;
- to foster enjoyment, satisfaction and purpose in designing and making.

How is DT taught at High Ercall?

EYFS

We encourage the development of skills, knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. We relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals in the Early Years Foundation Stage. The specific areas of the curriculum which relate to DT are creating with materials, being imaginative and expressive and physical development (fine and gross motor skills). This learning forms the foundations for later work in design and technology. Early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. We provide a range of experiences

in continuous provision that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

KS1

We teach the children through practical and creative tasks the knowledge and skills to be able to engage in the design and making process. We use starting points that are meaningful to the children so they become aware of the purpose and use of objects. The DT skills listed below are incorporated into the projects planned for the pupils;

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.

KS2

Pupils should continue to develop their skills and knowledge to create more complex designs and build on prior knowledge. We continue to use meaningful tasks, sometimes linked to topics the children are studying, to incorporate the following skills and knowledge;

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
- 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 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. The following skills and knowledge are incorporated into our planned lessons;

KS1

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

KS2

- 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 and teaching

The school uses a variety of teaching and learning styles in design and technology lessons. 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. Staff use the DT long term planning which has been devised to meet our school's needs, in that we have a 2 year rolling programme to ensure coverage and avoid repetition. The long term plan ensures children build on their skills and knowledge as they move through school.

Resources

Our school has a wide range of resources to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the DT cupboard accessible to all classes.

Health and safety

In this subject the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for using tools safely, food safety and hygiene. Risk assessments have been completed for all DT activities.

Equal Opportunities and Inclusion

It is the aim of the school to ensure that opportunities and facilities are available to everyone in DT.

- We will ensure that the educational needs of all pupils are properly assessed.
- We will identify those barriers (physical, environmental and curricular) which could prevent individuals from accessing the learning opportunities the school provides, and seek to remove them, making reasonable adjustment through our best endeavours to promote inclusion.
- We will seek to provide a supportive and welcoming atmosphere.
- We will employ a range of teaching styles to ensure no pupil is excluded from learning and to enable pupils to achieve success.
- We will challenge inappropriate attitudes and practices directly. This might involve quiet conversations with individuals, speaking with groups of children, broader messages through Meeting for Worship.
- We will model positive behaviours to demonstrate our commitment to equality of opportunity.

Monitoring and review

The monitoring of the standards of children's work and of the quality of teaching in Design and Technology is the responsibility of the subject leader. The work of the subject leader also involves supporting colleagues in their teaching, being informed about current developments in Design and Technology, and providing a strategic lead and direction for this subject in the school. The subject leader reviews and evaluates the action plan, resources and planning annually.

Role of Subject Leader

The subject leader has responsibility for Design and Technology throughout the school, assisting colleagues who are planning Design and Technology activities and giving practical advice if needed, attending Design and Technology courses and disseminating information to colleagues.

Assessment

Assessment of D&T is carried out during projects and observations and reference to the progression document is used as an aid for teacher assessment and future planning and reported to the parents in the annual report. Seesaw is used to record outcomes that are practical or more difficult to record in books.

Professional Development

Any courses or CPD, which the subject leader attends, will be disseminated to staff by the subject leader, if appropriate.

Policy Review

The policy will be reviewed by the subject leader in 3 years or earlier if appropriate.