Eversley Primary School Design and Technology Policy

Aims and Objectives

Design and technology is an intricate part of our day to day lives and it is therefore important that our children are taught how this subject is of great importance in our rapidly changing world. Children are encouraged to think creatively in order to solve problems and/or make improvements to existing ideas and products. It is through these methods that they can make positive changes to their own and others' lives. The teaching of Design and technology enables children 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 of functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and impacts. Design and technology gives the children the opportunity to work and think both as individuals and as part of a team, which helps them develop and learn while demonstrating our key values of the school.

Our objectives in the teaching of design and technology are:

- to give children the opportunity to take part in creative and practical activities
- to understand the importance of design and technology in the wider world
- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making things
- to enable children to talk about how things work, and to draw and model their ideas
- to explore computing as a means of design
- to encourage children to be analytical and critical when they are considering and analysing products
- to encourage children to select appropriate materials, tools and techniques for making a product
- to follow safe procedures when using equipment
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes and products, their manufacture and their contribution to society;
- to foster enjoyment, satisfaction and purpose in designing and making things.

Teaching and Learning

The teachers at Eversley Primary School use 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 evaluating them. We do this through a mixture of whole class teaching and individual or group activities. Within lessons we give the children the opportunity 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 computing.

In all classes there are children of differing ability. We recognise this fact and provide suitable learning opportunities for all children 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 results;
- setting tasks of increasing difficulty where not all children complete 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.

Design and technology curriculum planning

Our school uses a scheme of work based upon the Chris Quigley Skills as a foundation for planning in design and technology. Where possible we plan to the local circumstances of our school such as when we use the local environment as the starting point for aspects of our work. We also look into how children can work in a range of other relevant contexts, such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.

This scheme sets out six different areas which are taught across the key stages:

- ~ Food
- ~ Textiles
- ~ Materials
- ~ Construction
- ~ Electricals and Electronics
- ~ Mechanics

We carry out the planning in three phases; long-term, medium-term and short-term. The long-term plan is based on the Chris Quigley Skills for each stage.

The medium-term plans identify the skills which will be taught each term within a theme of the school's creative curriculum and show the distribution of work across a term.
The Chis Quigley skills focus on three main essential learning objectives:

- ✓ to master practical skills
- ✓ to design, make, evaluate and improve
- ✓ to take inspiration from design throughout history

The short term plans are completed for each design and technology lesson and show the skills, learning objectives and expected outcomes, they detail how the lessons are to be taught.

Activities in design and technology are planned to build on the prior learning of the children. We give all children the opportunity to develop their skills, knowledge and understanding. Progression is built into the scheme of work so that the children are increasingly challenged as they move through the school.

The Foundation Stage

We encourage the development of skills; knowledge and understanding that help reception children make sense of their world as an integral part of their school experience. We relate this development to the objectives set out in the Early Learning Goals. This learning forms the foundations for later work in design and technology. These 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 materials safely and with increasing control.

We plan according to the children's interests and provide an enabling environment offering a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion.

Contribution of design and technology to teaching in other curriculum areas

English
Design and technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. Through discussion the children develop an understanding that people have different views about design and learn to justify their own views and clarify ideas they have for their designs. The evaluation of products requires children to articulate their ideas and to compare their views with those of other people.

Maths
In design and technology, the children are given the opportunity to use and apply their mathematical skills. They learn how to measure accurately and how to check their results for reasonableness. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. They learn to read and interpret scales, collect and present data and draw conclusions. In designing and modelling they learn about size and shape.

Science
Cross curricular links can be made with science within certain aspects of the design and technology curriculum. Teachers use these links to combine their teaching in areas such as, electricity and healthy foods.

Computing
Computing enhances the teaching of design and technology, wherever appropriate, in all key stages. The children use computing to research and collect information and look at ways that they can design. In Key Stage two they have opportunities to use computer control. There is a focus on all children using computer aided design (CAD) as part of each design unit they cover which may be integrated in the designing or packaging processes.

Art
Children are encouraged to use their skills and methods developed in Art for applying aesthetic enhancements to their designs and products.

P.S.H.E.
We encourage a sense of responsibility in following safe procedures when making things. They also learn about personal hygiene, the prevention of disease spreading, health and healthy diets when working with food. Their work encourages them to be responsible and to set targets to meet deadlines.

Spiritual, moral, social and cultural development
We give children the opportunity to work together and give them the chance to discuss their ideas and feelings about their work and the work of others. Through collaborative and cooperative working the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety, and for that of others. They develop a cultural awareness and learn to appreciate the value of differences and similarities.

Design and technology and inclusion

At Eversley Primary school we teach design and technology to all children, whatever their ability and individual needs. Through our design and technology teaching we provide opportunities for all pupils to make good progress. We work to meet the needs of pupils with special educational needs, those with disabilities, those with special gifts and talents and those learning English as an additional language. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This helps to ensure that our teaching is matched to the child's needs, allowing them to make progress across the various areas of the subject over the years.

Identification of these needs will lead to the creation of an Individual Support Plan (ISP) for children with special educational needs. This may include specific targets relating to design and technology.

Assessment for learning

Teachers assess children's work in design and technology as they observe them during lessons. At the end of a unit of work teachers make a judgment using the school's assessment materials which are linked to the National Curriculum levels of attainment and Chris Quigley skills. Children will be assessed on if they are developing, secure or exceeding these key objective and skills so their skills can be developed the next time they revisit the area of the subject.

Children are also encouraged to make judgements on how their work can be improved. Teachers then use this to plan future work and to make an annual assessment of progress for each child, as part of the annual report to parents. This information is passed on to the next teachers at the end of the year.

Resources

Our school has a range of resources to support the teaching of design and technology across the school. Materials and equipment suitable for teaching all of the DT skills in KS1 and KS2 are kept in labelled boxed in the training room as well as tools and resources. Design and technology equipment specifically for the foundation stage is kept in the foundation stage store room. Throughout the school we use recycled materials whenever possible in design and technology and use the local scheme 'The Source' to source such materials.

Health and safety

Risk assessments are put in place for practical lessons and safety procedures and ratios of children per adult are followed with particular equipment to ensure complete safety. Where children are to participate in activities outside the classroom e.g. on a visit to a museum or restaurant, we carry out a risk assessment prior to the activity to ensure that the activity is safe and appropriate for the pupils.

Monitoring and review

The co-ordination and planning of the design and technology curriculum are the responsibility of the subject leader, who also:

- Supports colleagues in their teaching by keeping informed about current developments in design and technology;
- Gives the head teacher an annual summary report in which strengths and weaknesses in design and technology are evaluated, and indicates areas for further development;
- Uses specially allocated management time to review evidence of the children's work and coverage of areas and skills within design and technology across the school.

Date: December 2017 Review date: December 2019