

Upton Westlea Primary School

Design and Technology Policy



Approved by staff: March 2020

Signed: K Carruthers

Approved by Governors: March 2020

Signed: N Buckley

Review Date: March 2022

Policy on Design and Technology

"Design and technology should be the subject where the mathematical brainboxes and science whizzkids turn their bright ideas into useful products" -James Dyson

Introduction:

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. 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 of 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.

Intent:

Our intentions in the teaching of design and technology at Upton Westlea are:

- To develop children's knowledge, skills and understanding
- 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 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 and products, their manufacture and their contribution to our society
- to foster enjoyment, satisfaction and purpose in designing and making things
- to develop the cross-curricular use of design and technology in other subjects
- to develop the children's evaluation skills when reflecting on their products, enabling them to see the strengths and areas for developments of what they have created.

Implementation:

During the academic year 2019-2020 the design and technology coordinator will be implementing changes to the way the subject is taught following training events.

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 or 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.

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 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

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 the school's work. As the reception class is part of the EYFS, we relate the development of the children's knowledge and understanding of the world to the objectives set out in Development Matters. These underpin the curriculum planning for children aged birth to five. 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 material safely and with increasing control. We provide a range of experiences that encourage exploration, observation, problem-solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Key Stage 1

The children in Key Stage 1 begin to explore the skills, use a variety of materials and resources suitable for their age group and begin to develop their understanding of the iterative process of designing and making. They develop their understanding and knowledge of the language used in design and technology, begin to use the correct vocabulary and learn through exploration and then practical focused activities. They work in a range of relevant and purposeful contexts e.g. linked to the text in English or solving a problem. When designing and making, children will be taught to generate, develop and model their ideas through a range of activities, select the correct tools, equipment and materials, explore a range of existing products and evaluate their own products against the agreed design criteria and develop their technical knowledge. Cooking and nutrition is another element of design and technology where the children use the basic principles of a healthy and varied diet to prepare dishes and understand where the food comes from.

Key Stage 2

The children in Key Stage 2 will be taught how to develop and refine their techniques, including the control and use of materials, decision making on what to use, further experimentation of a wider range of materials and resources suitable for their age group. They will continue to develop their knowledge and understanding of vocabulary, correct terminology for practises and materials used and continue to develop their knowledge of what materials they could use and how to use them productively. In Key Stage 2, iterative process of designing and making will be developed through the use of research and more in depth designing, selecting from a wide range

of materials, tools and equipment, understand how key events and individuals in design and technology have shaped the world and further develop their technical knowledge by exploring mechanical and electrical systems. Cooking and nutrition is another element of design and technology where the children understand and apply the principles of healthy and varied diet, prepare and cook a range of dishes using different techniques and understand where and how a variety of ingredients are grown and processed.

Impact:

- We assess the children's work in design and technology while observing them working during lessons. Teachers record the progress made by children against the learning objectives for their lessons.
- At the end of a unit of work, the acquisition of knowledge, skills and understanding in design and technology will be measured using formative and summative teacher assessment. Attainment and progress will be measured and recorded against assessment objectives for each year group which has been developed with a whole-school progression. This method of recording also enables the teacher to make an annual assessment of progress for each child, as part of the child's annual report to parents and carers. We pass this information on to the next teacher at the end of each year.
- Children are encouraged to assess and evaluate both their own work and that of other pupils. This helps them to appreciate how they can improve their performance, and what their targets should be for the future.
- The design and technology subject leader keeps evidence of the children's work in a portfolio of photographs. This demonstrates the expected level of achievement in design and technology in each year of the school.
- Lesson observations, planning and sketchbook reviews will take place.
- Any developments will be identified and results will be incorporated into the design and technology action plan shared with staff and school governors.

Design & technology and inclusion and equality

At our school, we teach design and technology to all children, whatever their ability and individual needs. Design and technology implements the school 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 strive hard 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 separate policies: Special Educational Needs; Disability Discrimination; Gifted and Talented Children; English as an Additional Language (EAL).

We enable pupils to have access to the full range of activities involved in learning design and technology. Where children are to participate in activities outside the classroom, e.g. in a museum or on a factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils..

This policy will be reviewed every two years.

Reviewed March 2020

Date of next review March 2022

Signed

L Dalton - DT Co-Ordinator