Beaufort Community Primary School
Design Technology Policy

Rationale

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 thoughtful 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 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 Technology, its uses and its impacts.

Aims

At Beaufort Community Primary School we aim:

- to develop children' designing and making skills,
- to teach children the knowledge and understanding, within each child's ability, that will be required to complete the making of their product,
- to teach children the safe and effective use of a range of tools, materials and components,
- to develop children' understanding of the ways in which people have designed products in the past and present to meet their needs,
- to develop children' creativity and innovation through designing and making,
- to develop children's understanding of technological processes, their management and their contribution to society.

Teaching and Learning (inclusion)

The school uses a variety of teaching and learning styles in Design Technology lessons. The principal aim is to develop children's knowledge, skills and understanding in Design 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.

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.

Design Technology Curriculum Planning

Foundation Stage

We encourage the development of skills, knowledge and understanding that help children in Nursery and Reception make sense of their world as an integral part of the schools work. As the Nursery and Reception classes are part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. These underpin the curriculum planning for children aged three to five. This learning, forms the foundation for later work in Design 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;
- 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, both indoors and outdoors, attract the children's interest and curiosity.

Key Stage 1 and 2

Design technology is a foundation subject in the National Curriculum and whilst we adhere to the programmes of study, our planning is generally cross-curricular and linked to the specific circumstances of our school. We might use the local environment, a current theme or topic or the children's interests as the starting point for many aspects of our work.

Curriculum planning takes place in 2 phases; long term and medium/short term:

- Long term planning, maps out the visual elements, the range of media and chosen materials and the processes to be developed during each year group. The long term plan will ensure an appropriate balance and distribution of work across each term.
- Medium/short term planning, encompasses exploring and developing ideas; investigating and making; accessing and appreciating the work of craftspeople and evaluating and developing work and knowledge and understanding. In our school, medium term planning is detailed and highlights the specific learning objectives and expected outcomes of each lesson. It also gives details of how to teach the lessons and how success will be measured. These plans are shared with the head teacher and subject coordinators.

We plan the activities in Design Technology so that they build on the children's prior learning. Whilst we give children of all abilities the opportunity to develop their skills, knowledge and understanding, we also plan progression into the scheme of work, so that there is an increasing challenge for the children as they move up through the school.

Contribution of Design Technology to teaching across the curriculum

English

Design 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. Discussion, drama and role-play are important ways that we employ for the children to develop an

understanding of the fact that people have different views about Design Technology. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion, children learn to justify their own views and clarify their design ideas.

Mathematics

In Design Technology, there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. They learn how to check the results of calculations for reasonableness, and learn how to use an appropriate degree of accuracy for different contexts. Children learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. The children will carry out investigations, and in doing so, they will learn to read and interpret scales, collect and present data, and draw their own conclusions. They will learn about size and shape, and make practical use of their mathematical knowledge, in order to be creative and practical in their designs and modelling.

Science

There are also many opportunities to link Design Technology with Science. Children will be given opportunities to use their design skills when conducting investigations. There is also a strong link when using textiles, changing/mixing colours, choosing appropriate materials for a task when selecting insulators, or waterproofing a design etc.

PSHE

Design Technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines. They also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

Spiritual, moral, social and cultural development

The teaching of Design Technology offers opportunities to support the social development of our children through the way in which we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and cooperative work across a range of activities and experiences in Design Technology, 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 their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

ICT (Computing)

Information and Communication Technology (ICT) enhances the teaching of Design Technology wherever appropriate, in all key stages. Children use software to enhance their skills in designing and making things. Younger children are able to use simple desktop-publishing software to try out designs.

Assessment

Assessment in Design Technology is carried out through observation of the children working. It is also easily and naturally achieved, when it is linked to, and grows out of talk and appraisal by the children about their own work.

In the Early Years, a teacher may wish to ask a pupil to talk about his/her work, in order to understand what kind of thinking has gone into the work. The teacher will also be concerned with looking carefully at ways of using materials. As the child progresses through our school, more complex questions may be posed.

Other considerations might relate to whether the child has worked cooperatively, or how much determination was shown in overcoming difficulties. Assessment may also include, how much the child has been influenced by the work of other pupils or indeed other craft makers (architects, designers).

Children use sketchbooks to plan, draft, evaluate and improve their work. Older children are also expected to annotate their work to demonstrate how

improvements can be made and what they used as their inspiration. Work about Artists, Architects and Designers will also be found in children's sketchbooks.

A portfolio of work from YR-Y6 will show examples of Design Technology work.

Teachers report to parents annually within a child's written report.

The subject leaders keep written and photographic evidence of the children's work in a portfolio. This demonstrates the expected level of achievement in Design Technology in each year of the 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 Design Technology store. This room is accessible to children only under adult supervision.

Hygiene and Safety

It is important that children are taught essential life skills to enable them to participate confidently and safely in designing and making in society. Teachers have a duty to introduce children to a wide variety of production processes and the correct tools for the task. Children must design considering health and safety issues and consequences and operate in a safe and hygienic manner when designing. The subject leaders, if required, support teachers to teach the skills necessary ensuring that children can design and make safely.

Monitoring and Review

The monitoring of the standards of children's work and of the quality of teaching in Design Technology is the responsibility of the Design Technology subject leaders. The work of the subject leaders also involves supporting colleagues in the teaching of Design Technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The Design Technology subject leaders give the senior leadership team an annual report in which they evaluate the strengths and weaknesses in the subject and indicates areas for further improvement.

To be reviewed 2018