



Design and 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 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 Aims

The aims of design and technology 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 develop their capability to create high quality products through combining their designing and making skills with knowledge and understanding.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- Use and explore a range of materials, resources and equipment, including ingredients.
- 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.
- Use the internet to explore ideas and already made products.
- To foster enjoyment, satisfaction and purpose in designing and making.
- To understand and apply the principles of a healthy and varied diet.
- Learn how to create nutritional meals in a variety of ways.

Teaching and learning style:

Barnston Primary 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
- Providing specialist support where individual children have particular gifts or talents.

Design and Technology curriculum planning

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

In our school, curriculum planning takes place through; 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 in design and technology; accessing and appreciating the work of artists/craftspeople and evaluating and developing work and knowledge and understanding. These plans are shared with the head teacher and subject co-ordinator.

Design and Technology for the Foundation Years

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. Design and Technology in the Foundation stage aims to develop independence and self-evaluation of their 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. These underpin the curriculum planning for children aged three to five. 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.

Cross-Curricular links

Literacy

Design and technology contributes to the teaching of Literacy in our school by providing valuable opportunities to reinforce what the children have been doing during their Literacy lessons. Discussion, drama and role-play are important ways that we now employ for the children to develop an understanding that people have different views about design and 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.

Maths

In Design and Technology we use Maths to help us create nets of shapes in order to create packaging. Numerical equipment is also used in Design and Technology lessons when weighing and measuring.

Science

Science helps us in Design and technology lessons to look at and drawing electrical circuits. It also helps us to think more about using materials to create structures which withstand a force.

Information and communication technology (ICT)

We use ICT to support design and technology teaching when appropriate. Children use software to enhance their skills in designing and making, and use draw-and-paint programs to model ideas and make repeating patterns. They use databases to provide a range of information sources and CD-ROMs to gain access to images of people and environments. Children use word processing package to plan and evaluate work through the design process and to collect information to help present their designs through draw-and-paint programs.

Personal, social and health education (PSHE) and citizenship

Design and 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, plus having the opportunity to prepare, make and cook a wide range of healthy meals throughout the year as part of the Design and technology curriculum. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

All other subject areas can be linked into the D & T scheme of work as it may be adapted to fit into every subject area.

Assessment

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. At the end of a lesson, teachers

make a judgement against the age related expectations. Older children are encouraged to make judgements on ways in which their work can be improved. The subject leader keeps written and photographic evidence of children's work in a portfolio.

Monitoring and Reviewing

The Design and Technology co-ordinator is responsible for monitoring the standards of children's work and the quality and breadth of teaching. The coordinator supports colleagues in the teaching of Design and Technology by informing them of current developments in the subject and by providing a strategic lead and direction for the subject in school.

The co-ordinator is also responsible for reviewing planning, monitoring children's work, observe teaching, evaluating strengths and weaknesses in the subject and identifying areas for improvement and development.

Resources

A resource audit is carried out annually. Before new stock is ordered, teachers fill out request lists based on specific needs for their future design and technology lessons. All resources, both consumable and non-consumable are located in the resource room. It is the responsibility of each class teacher to collect resources and then return them after use. If any resources become broken during use, the Design and Technology leader needs to be informed as soon as possible.

Health and Safety

In this subject, the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for handling tools, food safety and hygiene. Teachers will carry out a risk assessment before each activity, considering their tools, materials and equipment being used. Before undertaking practical tasks, children should be taught to use tools correctly in order to ensure safety.

Home School Links

Opportunities should be available for children at home to investigate and practise skills, research information and use computing where possible.

Equal Opportunities

Please refer to the appropriate policy.

Special Education Needs

Please refer to the Inclusion Policy.