



MARSHBROOK FIRST SCHOOL

Design and Technology Policy

February 2016

1. Introduction

This policy outlines the teaching and management of Design and Technology taught and learnt at Marshbrook First School. The school's policy for Design and Technology is based on the National Curriculum for Key Stages 1 and 2 and the Early Years foundation stage for reception age children. The policy has been drawn up to reflect our whole school approach to Design and Technology and has been discussed with staff and has the agreement of the Governing Body.

2. Purpose of Study

Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, become resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

3. Aims

The national curriculum for design and technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world;
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users;
- Critique, evaluate and test their ideas and products and the work of others;
- Understand and apply the principles of nutrition and learn how to cook.

4. Teaching and Learning Style

We use a variety of teaching and learning styles in design and technology lessons. Our principal aim is to develop children's knowledge, understanding and skills. Primarily children will learn through creative and practical activities. The children work in a range of relevant contexts.

We recognise that in all classes children have a wide range of design and making abilities, and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (we do not expect all children to complete all tasks);
- grouping children by ability in the room, and setting different tasks for each ability group;
- grouping children by mixed ability to encourage peer support;

- providing resources of different complexity, matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.
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5. Design and Technology Curriculum Planning

The programmes of study for Design and Technology are set out for key stage 1 and key stage 2.

The long-term plan for each year group, maps the skills and technical knowledge studied in each term during the key stage, this information is available on line. The design and technology subject leader works this out in conjunction with teaching colleagues in each year group. In most cases we combine the context of learning in design and technology with work in other subject areas. When this is not possible, the children study design and technology as a discrete subject.

The class teacher is responsible for writing plans for each lesson, either formally or informally at their own discretion. These plans list the specific learning objectives and expected outcomes of each lesson. The class teacher keeps these individual plans, and s/he and the design and technology subject leader often discuss them on an informal basis.

Topics in design and technology are planned so that they build on prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit, and we also build progression into the design and technology scheme of work, so that the children are increasingly challenged as they move up through the school. The teacher highlights the national curriculum objectives covered throughout each unit of work to ensure that skills, technical knowledge and progression needs are met.

6. The Foundation Stage

We teach design and technology in Early Years as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the design and technology aspects of the children's work to the objectives set out in the Early Years Foundation stage, which underpin the curriculum planning for children aged three to five. Design and Technology makes a significant contribution to developing a child's knowledge and understanding of the world. 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.

7. The Contribution of Design and Technology to teaching in other curriculum areas

English

Design and Technology contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, and spoken language. Some of the texts that the children study in English are associated with their design and technology work.

Mathematics

In design and 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 to describe quantities and calculate proportions. 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.

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 how to cook and apply the principles of nutrition and healthy eating. 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.

Spiritual, moral, social and cultural development

The teaching of design and technology offers opportunities to support the social development of our children through the way 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 and 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.

Computing

Information and communication technology enhances the teaching of design and technology, wherever appropriate, in all key stages. Children use software to enhance their skills in designing and making things. Children are able to use simple desktop-publishing software to try out designs. The children also use ICT to collect information and to present their designs through a range of design and presentation software.

8. Science and Inclusion

At our school we teach design and technology to all children, whatever their ability and individual needs. Design and technology forms part of the school curriculum policy to provide 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 individual whole-school policies: Special Educational Needs; Disability Non-Discrimination; Gifted and Talented; English as an Additional Language (EAL).

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors - classroom organisation, teaching materials, teaching style, differentiation - so that we can take some additional or different action to enable the child to learn more effectively.

Intervention may lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to design and technology.

We enable all 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 we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

9. Assessment

Teachers will assess children's work in design and technology during lessons and use this knowledge to adapt future lessons. Written or verbal feedback, in line with the school's marking policy, is given to the child to help guide his/her progress. Children are encouraged to make judgements about how they can improve their own and each others' work. Teachers use the assessments made to make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes the annual assessment on to the next teacher at the end of each year.

10. Resources and Safety

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 and technology store. This room is accessible to children only under adult supervision. We teach children how to follow proper procedures for health, safety and hygiene.

11. Monitoring and Review

It is the responsibility of the subject leader to monitor the standards of children's work and the quality of teaching in design and technology. The subject leader is also responsible for supporting colleagues in their teaching, for being informed about current developments in the subject, and for providing a strategic lead and direction for design and technology in the school. The subject leader gives the headteacher an annual summary report in which s/he evaluates strengths and weaknesses in design and technology, and indicates areas for further improvement. The subject leader has specially-allocated time for fulfilling the vital tasks of reviewing samples of children's work, monitoring planning and assessment, and visiting classes to observe teaching.

This policy will be reviewed at least every three years.