



Design Technology

1 Aims and objectives

1.1 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 helps all children to become discriminating and informed consumers and potential innovators.

1.2 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 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, products, and their manufacture, and their contribution to our society

2 Teaching and learning style

2.1 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/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.

2.2 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

3 Design and technology curriculum planning

3.1 Design and technology is a foundation subject in the National Curriculum. Planning for tasks will be based on the New National Curriculum Framework and where appropriate will be linked in to the current topic being studied.

3.2 We carry out the curriculum planning in design and technology in three phases: long-term, medium-term and short-term. The long-term plan maps out the topics to be covered in each term.

3.3 Our medium-term plans give details of each topic of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term.

3.4 We plan the activities in design and technology so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

4 The Early Years Foundation Stage

4.1 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 Early Years 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 up to five years. 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.

4.2 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.

5 Contribution of design and technology to teaching in other curriculum areas

5.1 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. 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.

5.2 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 ICT to collect information.

5.3 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. 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.

5.4 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 co-operative 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.

6 Teaching design and technology to children with special educational needs

6.1 At our school we teach design and technology to all children, whatever their ability. 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 progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

6.2 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. This ensures that our teaching is matched to the child's needs.

6.3 Intervention through School Action and School Action Plus will 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.

6.4 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, for example, a museum or factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

7 Assessment and recording

7.1 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. During the year, teachers are required to assess knowledge and skills and to record it on the assessment sheet shown in Appendix A. This should be done through identifying those pupils who are working towards, working at or working beyond expectations. Each teacher passes this information on to the next teacher at the end of each year.

7.2 The design and technology subject leader keeps evidence of the children's work in a portfolio. This demonstrates what the expected level of achievement is in design and technology in each year of the school.

8 Resources

8.1 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 teachers sharing equipment between classes as appropriate.

9 Health and safety

9.1 The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene and working safely with a range of equipment.

10 Monitoring and review

10.1 The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader. The work of the subject leader also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. A curriculum review is made through the School Improvement Plan when appropriate which reports on achievements and indicates areas for further improvement.

