



Design and Technology Policy

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	Date of Next Review	Signed
Head teacher/SLT	June 2018	
Governors	Curriculum and Standards	

DESIGN AND TECHNOLOGY POLICY

Aims and objectives

Design and Technology prepares pupils to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages pupils to make positive changes to their quality of life. The subject encourages pupils to become autonomous and creative problem-solvers, both as individuals and as part of a team. 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 its impact in regards to past and present design and technology. Design and technology helps all pupils to become informed consumers and potential innovators.

The objectives of teaching design and technology are to:

- develop imaginative thinking in pupils and to enable them to talk about what they like and dislike when designing and making things
- enable pupils to talk about how things work and to draw and model their ideas
- encourage pupils to select appropriate tools and techniques for making a product whilst following safe procedures
- explore attitudes towards the man-made world and how we live and work within it
- develop an understanding of technological processes and products, their manufacture and their contribution to our society
- foster enjoyment, satisfaction and purpose in designing and making things

Teaching and Learning style

The school uses a variety of teaching and learning styles in Design and Technology lessons. The principal aim is to develop pupils' knowledge, skills and understanding in Design and Technology. Teachers ensure that the pupils 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, individual or group activities. Within lessons, we give pupils the opportunity both to work on their own and to collaborate with others, listening to other pupils' ideas and treating these with respect. Pupils 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 pupils of differing ability. We recognise this fact and provide suitable learning opportunities for all pupils 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 pupils complete all tasks
- Providing a range of challenges through the provision of different resources
- Using additional adults to support the work of individual pupils or small groups
- Using mixed ability groupings so they can support each other's learning

Design and Technology curriculum planning

Design and Technology is a foundation subject in the National Curriculum. Our school uses the National Curriculum as the basis for its curriculum planning in design and technology.

Class teachers use the daily lesson plans produced by the Design and Technology Association as a guide when planning design and technology lessons. These list the specific learning objectives and expected outcomes for each lesson, and details how the lessons are to be taught. The class teacher keeps these plans and copies are held by the subject leader.

We plan the activities in design and technology so that they build on the prior learning of the pupils. We give pupils 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 pupils are increasingly challenged as they move through the school.

The Foundation Stage

We encourage the development of skills, based on the knowledge and understanding that help nursery/reception pupils make sense of their world, this is an integral part of the school's curriculum. Foundation Stage pupils follow the development document using understanding of the world objectives set out in the Early Learning Goals. These underpin the curriculum planning for pupils aged three 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 pupils' interest and curiosity.

The contribution of Design and Technology to teaching in other curriculum areas

We encourage Design and Technology to include Cross Curricular Links (CCL) across a range of subjects.

English

Design and Technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the pupils have been doing during their English lessons. Discussion, drama and role-play are important ways that we employ for the pupils to develop an understanding of the fact that people have different views about design and technology. The evaluation of products requires pupils to articulate their ideas and to compare and contrast their views with those of other people. Through discussion, pupils learn to justify their own views and clarify their design ideas.

Mathematics and Science

In Design and Technology there are many opportunities for pupils 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. Pupils learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. The pupils 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, economical and practical in their designs their use of resources and modelling. Teachers use the science lessons to teach basic scientific skills that form the basis for Design and Technology.

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 pupils 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.

Spiritual, Moral, Social and Cultural Development

The teaching of Design and Technology offers opportunities to support the social development of our pupils through the way we expect them to work with each other in lessons. Our groupings allow pupils 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 pupils develop respect for the abilities of other pupils 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 teach them to appreciate that all people are equally important and that the needs of individuals are not the same as the needs of groups.

Design and Technology and ICT

Information and Communication Technology enhances the teaching of design and technology, wherever appropriate, in all Key Stages. Pupils use software to enhance their skills in designing and making things. Pupils are able to use desktop-publishing software to try out designs. The pupils also use ICT to collect information to inform their designs.

Design and Technology and Inclusion

At our school we teach Design and Technology to pupils of all abilities. It is important to recognise that the most able pupils in Design and Technology are not necessarily those who are high achievers in other curriculum areas. The subject encourages creativity and thinking outside the box. The problem solving nature of the subject is often more challenging for those pupils who are high achievers in other areas. Design and Technology implements the school curriculum policy and helps provide a broad and balanced education to all pupils. 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 who are gifted and talented, those learning English as an additional language and we take all reasonable steps to achieve this.

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 and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This helps ensure that our teaching is matched to the child's needs.

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

We enable pupils to have access to the full range of activities involved in learning Design and Technology. Where pupils are to participate in activities outside the classroom, for example 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.

Assessment for learning

Teachers assess pupils' work in Design and Technology by making assessments as they observe them working during lessons. They record the progress that pupils make by assessing the pupils' work against the learning objectives for their lessons. At the end of a unit of work, teachers make a judgement against the attainment targets set out in the relevant programme of study. Older pupils are encouraged to make judgements on ways in which their work can be improved. Teachers then use the levels that they record to make an annual assessment of progress for each child as part of the annual report to parents.

The subject leader is developing evidence of the pupils work as part of the curriculum page on the server. This will demonstrate the expected level of achievement in Design and 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. The majority are stored in the resources room whilst some are stored in the co-ordinator's cupboard.

Health and Safety

In this subject the general teaching requirement for health and safety applies. We teach pupils how to follow proper procedures for food safety and hygiene.

- Teachers will always teach the safe use of tools and equipment and insist on good practice.
- Children will be taught how to take steps to control risks.
- Glue guns will only be used by KS2 children under direct adult supervision and only where there is no other appropriate joining technique.
- Adults who use cookery equipment in their lesson will ensure that the area and utensils are cleaned after use.

Monitoring and Review

The monitoring of the standards of pupils work, and of the quality of teaching, is the responsibility of the Design and Technology subject leader when given allocated time. The work of the subject leader also involves supporting colleagues in their teaching, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. They will also continue to build and develop resources on the staff workgroup on the server to aid teachers in the monitoring and review of each lesson. The subject leader needs specially allocated, regular management time in order to review evidence of the pupils' work and undertake lesson observations of Design and Technology teaching across the school.

This policy will be reviewed at least every three years.