Design Technology (D&T) Policy

Evidence of intentions and practice - for the information of staff, governors, parents, LA, OFSTED and DfE

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PARKSTONE PRIMARY SCHOOL

Design Technology Policy

Philosophy

Parkstone Primary School will endeavour to provide the highest possible quality of design and technological education. The school aims to provide a safe, happy and secure environment where every child achieves their full potential. We aim for enthusiastic learners through providing a stimulating and challenging curriculum. All pupils will be encouraged to develop their technological skills commensurate with their age, level and ability. The emphasis will be on practical tasks where the children combine their designing and making skills with knowledge and understanding in order to design and make products.

Team work between all stakeholders – children, staff, parents, governors – is at the heart of the school and we celebrate both achievements and successes.

1 Aims and objectives

1.1 Design 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 the children 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. Children learn how to take risks, becoming 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. (taken from the NC 2014)

1.2 The aims of Design 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;

- 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. – Taken from the NC2014

2 Teaching and learning style

2.1 Our 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. Our 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. S&L strategies are widely used to engage all children in their learning to support problem-solving activities. The 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 our 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 in order for the children to reach their potential'
- 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 technology curriculum planning

3.1 Design technology is a foundation subject in the National Curriculum. Our school uses the Essentials Curriculum as the basis for its curriculum planning in design technology. We use the experiences and familiar environments of the children as the starting point for our work and build upon these as they progress through school.

3.2 In our school we carry out the curriculum planning for design technology in three phases: long-term, medium-term and short-term. The two year long-term plans map out the units to be covered. The design technology subject leader is responsible for ensuring that coverage demands are met.

3.3 Our medium-term plans, together with the Essentials Curriculum document, give details of each unit 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. The design technology subject leader is responsible for reviewing these plans on a regular basis.

3.4 Class teachers complete a plan for each design technology lesson. These list the specific learning objectives for each lesson and detail how the lessons are to be taught. After each lesson the teacher writes an evaluation of the lesson. The class teacher keeps these individual plans and the class teacher and subject leader can discuss them on an informal basis.

3.5 In our school we plan the activities in design 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.

3.6 Where possible, we link the work carried out in design and technology to the real world and the world of work.

4 The Foundation Stage

4.1 In our school 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. The reception class follows the Early Years Foundation Stage Framework and plan in the moment. The children have access to real tools, real materials (including wood) and real building resources. They have constant access to junk modelling which enables children to develop within the strand 'Exploring, Using Media and Materials. This learning forms the foundations 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 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 technology to teaching in other curriculum areas

5.1 Literacy
Design technology contributes to the teaching of literacy in our school by providing valuable opportunities to reinforce what the children have been learning during their literacy lessons. Through discussion, children learn to justify their own views and clarify their design ideas. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Written work reinforces knowledge of particular text types such as instructions and explanation.

5.2 Mathematics
There are many opportunities for mathematics in design technology. The application of mathematical approaches to work in this curriculum area can improve the quality of the technological outcome. Design technology contributes to the teaching of mathematics encouraging measuring, calculation and problem-solving skills.

5.3 Science
Design technology can often rely on scientific knowledge such as knowing and understanding the physical processes of materials, electricity and natural forces. Design technology contributes to the teaching of science in our school by providing valuable opportunities to reinforce what the children have been doing during their science lessons.

5.4 Computing
We use computing to support design 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. The children also use ICT to collect information and to present their designs through draw-and-paint programs.

5.5 Personal, social and health education (PSHE) and citizenship
Design technology contributes to the teaching of personal, social and health education. In our school we encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about good 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.

5.6 Spiritual, moral, social and cultural development
The teaching of design 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 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.

5.7 Thematic Approach
The whole school has a thematic learning challenge approach to teaching and learning. Design Technology has been integrated into this approach to learning with specific learning challenges set within a theme, as appropriate.

6 Teaching design and technology to children with special educational needs

6.1 In our school we teach design technology to all children, whatever their ability. Design technology forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our design 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, and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This may involve fine / gross motor skills support. This ensures that our teaching is matched to the child's needs.

6.3 In our school 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 Developing the global dimension

7.1 Key Stage 1

Children recognise the different needs of people from a range of cultures and begin to identify ways in which needs have been and could be met. By doing this they can develop an empathy for other people's needs.

7.2 Key Stage 2

Children learn to design and make products and evaluate how a range of different products work. By doing this they can learn to consider the needs of people from diverse cultures and places who use the products they design. They can also learn how technology can be used to improve the world and contribute to the development of society.

8 Assessment and recording

Teachers assess work in design and technology by making observations of the children working during lessons. They record progress made against the learning objectives for that lesson using FLiC. At the end of a unit of work, children undertake a review of their work that focuses upon an evaluation of the finished product and an overview of the various tasks undertaken. Teachers make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

8.1 Photographic evidence of children's work is recorded in theme books. This demonstrates what the expected level of achievement is in design technology in each year of the school. The subject leader collates the termly record keeping from each class and uses this to inform their overview of attainment in the subject across the school.

8.2 All teachers pass up their assessment of children, including strengths and areas to develop, to the new class teacher at the end of the year.

9 Resources

9.1 Our school has a wide range of resources to support the teaching of design technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept centralised in the D&T storeroom. These are accessible to children only under adult supervision.

10 Health and safety

10.1 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 how to use equipment safely.

11 Monitoring and review

11.1 The responsibility of the design technology subject leader includes:

- monitoring of the standards of children's work
- monitoring the quality of teaching in design technology
- supporting colleagues in the teaching of design technology
- being informed about current developments in the subject,
- providing a strategic lead and direction for the subject in the school.

11.2 The design technology subject leader produces an annual action plan, linking to the key priorities on the School Improvement Plan when appropriate, and provides the head teacher with an annual summary report in which they evaluate the strengths and weaknesses in the subject and indicate areas for further improvement.

11.3 As part of their role, the design technology subject leader spends time reviewing evidence of the children's work, monitoring resources and equipment, completing work/planning scrutinies and undertaking, where possible, lesson observations of design technology teaching across the school.

This policy will be reviewed every two years.