Design and Technology Policy

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, making and evaluating;

To enable children to talk about how things work, and to draw and model their initial and final ideas;

To encourage children to select appropriate tools and techniques for making a product, whilst following safety procedures;

To explore attitudes towards the 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;

To foster enjoyment, satisfaction and purpose in designing and making.

To understand the principles of a healthy and varied diet and know where food comes from.

2. Teaching and learning style

2.1 Four Oaks Primary 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 technology.

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; where appropriate grouping children by ability; providing a range of challenges through the provision of adapted 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.

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 units covered in each term during the key stage. The design and technology subject leader works this out in conjunction with teaching colleagues in each year group.

3.3 Our medium-term plans 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.

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 Foundation Stage

4.1 We encourage the development of skills, knowledge and understanding that help our children across our early years provision children make sense of their world as an integral part of the school's work. We relate the development of the children's expressive arts and design and their understanding of the world to the objectives set out in the EYFS Framework. 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 problem solving skills, making skills and handling appropriate tools and construction material safely and with increasing control. In the early years foundation stage we introduce the idea of planning and designing through communicating ideas verbally and recording with pictures and early writing marks.

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. 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 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 their 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 and percentages to describe qualities and calculate proportions. The children 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 and practical in their designs and modelling.

5.3 Computing

We use computing 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. The children also use technology to collect information and to present their designs through draw-and-paint programs.

5.4 Personal, social, health and economic education (PSHE)

Design and technology contributes to the teaching of personal, social, health and economic education. 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.

5.5 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 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.

6 Teaching design and technology to children with special needs

6.1 We teach design and technology to all children, whatever their ability. Design and technology also forms part of our school curriculum policy to provide a broad and balanced education to all children. Teachers provide learning opportunities that are matched to the needs of children with learning difficulties. Work in design and technology takes into account the targets set for individual children in their Learning Plans.

6.2 Supporting Pupils with Additional Needs

Four Oaks Primary School recognises that all children have an entitlement to a broad, balanced and relevant curriculum, which is adapted to enable children to: understand the relevance and purpose of learning activities; experience levels of understanding and rates of progress that bring feelings of success and achievement.

Teachers use a range of strategies to meet children's special educational needs. Lessons have clear learning objectives; work is adapted appropriately and we use assessment to inform the next stage of learning. We support children in a manner that acknowledges their entitlement to share the same learning experiences that their peers enjoy.

6.3 Specific Learning Difficulties

All staff have regular training on approaches to consider when working with dyslexia learners and appropriate resources are available for pupils, teachers and LSAs.

Pupils with specific learning difficulties are taught and encouraged to present their work in a variety of ways, such as mind mapping, flow charts and labelled diagrams, both in class and for homework.

7 Assessment and recording

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. Some of this forms parts of displays and the process may be recorded in the pupil's DT floor books. 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 unit of work, teachers make a judgement against the new National Curriculum programs of study. Teachers then use their judgments so that they record to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents. Twice-yearly pupil voice sessions are conducted. Attainment, progress, accessibility and engagement are interrogated throughout the discussion with strengths, areas for development and matters arising identified.

8 Resources

Our school has a wide range of resources to support the teaching of design and technology across the school. Resources and specialised equipment are kept in the design and technology cupboard and is only accessible to adults.

9 Health and safety

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.

10 Monitoring and review

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. The subject leader gives the head teacher an annual action plan and report in which s/he evaluates the strengths and weaknesses in the subject, and indicates areas for further improvement.

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