Design and Technology Policy

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Contents

1 Aims and Objectives

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

2 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 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 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. 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.

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.

3 Design and Technology Curriculum Planning

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. Medium and short term planning is done by teachers in key stage teams and individually.

We plan the activities in Design and Technology so that they build on 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

We encourage the development of skills, knowledge and understanding that help Foundation children make sense of their world as an integral part of the school's work. 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 children's interest and curiosity.

5 Links to 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 employ for the children to develop an understanding of the fact 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 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

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fractions and percentages to describe quantities 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 Personal, Social and Health Education (PSHE) and Citizenship

Design and Technology contributes to the teaching of PSHE 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 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.

6 Design and Technology and Computing

Computing enhances the teaching of Design and Technology, wherever appropriate, in all key stages. Children may use software to enhance their skills in designing and making things. The children also use computing to collect information and to present their designs through a range of design and presentation software. Children use apps on iPads to help with

STEM, e.g. Swift and Scratch, along with creative apps such as PuppetPals.

7 Assessment and Recording

Work in Design and Technology may be assessed through judgements of recorded work but a large proportion of assessment is involved with practical application and language development involving discussion, description and explanation skills. Evidence may be seen in books, on 2-D displays and most commonly through 3-D models and photographs of children's work.

Information on a child's progress in Design and Technology will be communicated to parents in a written report at the end of each academic year.

8 Resources

There is a selection of class-based and centrally-stored materials and tools to ensure that all children have the necessary resources to access the subject and to make informed choices. The DT budget covers the costs of materials and the replacement of tools, although we do occasionally ask children to bring some materials from home if they can. The school will provide resources to any children who are unable to do this so as to allow all children to have the same opportunities.

9 Food Hygiene and Safety Issues

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 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.

At least one member of staff in school has an up-to-date food hygiene certificate.

Teachers teach the safe use of tools and equipment and insist on good practice prior to starting the making part of a task.   However, safety issues do arise when teaching this subject. These include:

- The use of electrical equipment such as glue guns
- The handling of food stuffs

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- The use of cooking appliances, including ovens and hobs
- Contact with sharp objects including wood, nails, needles, saws etc.
- Awareness of personal safety (jewellery, hair, eye protection)

It is the duty of all staff to:
- Recognise and assess the hazards and risks to themselves and others when working with food and other materials
- Take action to control these risks and hazards

Teachers should be aware of the following:
- Children must not use cooking appliances unless under direct supervision from a responsible adult. The portable oven may be used in an area away from the children or with a barrier between at the teacher's discretion
- Saws and other sharp objects (nails, needles, craft knives, etc) must be used under direct supervision. The teacher will make a judgement on the undertaking of activities involving sharp and / or potentially dangerous equipment depending on the age / ability of the children in his / her class. Some activities may be undertaken by an adult or in a small group or one to one situation as appropriate
- Perishable foodstuff must be stored sensibly and refrigerated if necessary. Care must be taken to ensure food is not used after the given sell by / use by date
- Teachers and adult support staff must oversee that cupboards, table tops, cooker etc, are clean and in working order
- Children must wash their hands before and after any contact with food and other potentially harmful substances
- Teachers must take into account possible food allergies to food such as nuts and should be aware of the location of any medication for the allergy

10 Equality, Diversity and Inclusion

At Brookside School, we aim to ensure that no pupil experiences harassment, less favourable treatment or discrimination within the learning

environment because of their age; any disability they may have; their ethnicity, colour or national origin; their gender; their religion or beliefs.

We value the diversity of individuals within our school and do not discriminate against children because of 'differences'. We believe that all our children matter and we value their families too. We give our children every opportunity to achieve their best by taking account of our children's range of life experiences when planning for their learning.

The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is disadvantaged. This is in line with our Equality, Diversity and Inclusion Policy.

11 Special Needs Provision / Enrichment and Challenge

As an inclusive school we recognise the need to tailor our approach to support children with special educational needs as well as those who are identified as benefitting from further enrichment and challenge.

At our school we teach Design and Technology to all children, whatever their ability and individual needs. Design and Technology implements the school curriculum policy of providing 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.

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.

12 Policy Review

This policy will be reviewed in keeping with the Policy Review Cycle. This planned programme of review puts subjects together that have common strands of learning, and is included in the annual School Improvement Plan, published in the Spring Term of each year.