Scraptoft Valley Primary School

Design & Technology Policy

Mission Statement

Working together to give every child an excellent education in a caring environment

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Aims and Objectives

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 of 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.

"The nature of design and technology is such that it should provide opportunities for pupils to engage in activities that are challenging, relevant and motivating. This should give pupils enjoyment, satisfaction and a sense of purpose." (DATA Primary Guidance)"

_ 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 think and talk about how things work, and to draw and model their ideas;
_ To encourage children to select appropriate tools and techniques to make quality products, whilst following safe procedures;
_ To use and explore a range of materials, resources and equipment;
_ To explore attitudes towards the made world and how we live and work within it;
_ To develop an understanding of technological processes, products, their manufacture and their contribution to our society;
_ To use the internet to explore ideas and already made products;
_ To foster enjoyment, satisfaction and purpose in designing and making things;

Teaching and learning

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:

- 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;
- sometimes 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;
- Providing specialist support where individual children have particular gifts or talents.

Design and Technology is taught as a DT day within our school, with the exception of the cooking module. This is taught as a 6 week lesson block so that our children are provided with more repeated opportunities to cook and prepare food, not only giving them the knowledge of a healthy diet but also allowing them to practise the crucial skills needed for cooking in later life.

Cross-Curricular Links

Literacy - Design and Technology contributes to the teaching of Literacy by providing valuable opportunities to reinforce prior learning. Discussion, drama and role-play are important ways 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.

Numeracy – In design and technology, children learn to measure and use equipment correctly, generate nets of shapes in order to create packaging and weigh and measure accurately. They will also learn about size and shape and make "real" use of their mathematical knowledge in order to be creative and practical in their designs and modelling.

Science – Science helps in design and technology, looking at and drawing electrical circuits. It also helps children to think about using materials to create structures which can withstand a force.

ICT

Information and Communication Technology (ICT) 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. Younger children are able to use simple software to enhance their learning. Older children use an ICT control program to control mechanisms and to get them to move in different ways, either in a virtual world or via an infrared connection to working models. The children also use ICT to collect information and to present their designs through a range of design and presentation software – CAD.

Personal, Social and Emotional Education (PSHE)

Design and technology contributes to the teaching of PSHE , encouraging 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 set targets and meet deadlines. They will also learn how to prevent disease from spreading and about personal hygiene when working with food.

Cooking and Nutrition

As part of their work with food, children will be taught how to cook and apply the principles of nutrition and healthy eating, opening the door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables children to feed themselves and others affordably and well, now and in later life.

In Key Stage 1, children will be taught to:

_ Use the basic principles of a healthy and varied diet to prepare dishes;

_ Understand where food comes from.

In Key Stage 2, children will be taught to:

_ Understand and apply the principles of a healthy and varied diet;

_ Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques;

_ Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Early Years

We encourage the development of skills, knowledge and understanding that help Nursery and Reception children to make sense of their world as an integral part of the school's work. As the Nursery and Reception class' are part of the 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 EYFS. D&T also forms part of their EAD development through learning about joining techniques, choosing from a range of materials and building constructions with a purpose. These underpin the curriculum planning for children 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. Children have daily opportunities to access activities that relate to the learning of D&T in the EYFS.

Design and technology curriculum planning

Design and technology is a non-core subject in the National Curriculum. Our school uses the national programmes of study as the basis for its curriculum planning in design and technology. We have adapted the national scheme to the local circumstances of our school in that we use the local environment as the starting point for aspects of our work. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit of work so that there is increasing challenge for each child as they move through the school.

The D&T's association's 'Projects on a Page' scheme of work provides the framework for the teaching and learning in Design and Technology.

- From Years 1 – 6, 3 modules of D&T are planned and completed each year – 1 module is the cooking and nutrition element.
- Teachers use the project planners in the scheme imaginatively and adapt to suit the needs of our children whilst ensuring the learning objectives and key skills and knowledge remain.
- Children complete their D&T work on planning sheets that allow for the inclusion of pictures, diagrams and photographs.

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 subject leader works this out in conjunction with teaching colleagues in each year group.

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. Outlined within the medium term plan is each design and technology lesson for that module. These list the specific learning objectives and expected outcomes for each lesson, and detail how the lessons are to be taught and how success will be measured. The Projects on a page planners support the medium term planning.

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.

Differentiation

Teachers will use a range of teaching and learning approaches and a variety of activities to engage and motivate pupils of all abilities. This process includes differentiation by:

- Adjusting tasks
- Use of a wide range of resources/materials which are selected to meet pupils' needs
- Support offered to pupils / scaffolding where appropriate
- The response to work and learning given by the teacher
- Appropriate grouping of children

Inclusion

Every child at Scraptoft Valley Primary School has the right to be included in all learning opportunities. Although this may be explicit in Special Educational Needs (SEN) and Equal Opportunities Policies, our approach in any curriculum area is to prepare every child with the necessary skills, knowledge and attitudes to equip them for a positive role within society. Inclusion should create in every learner, self-confidence and self-esteem so they can facilitate their own development.

Special Educational Needs (SEN)

Design and Technology is a non-core subject within the national Curriculum, and each child at Scraptoft Valley primary School regardless of age, race or gender has an entitlement to be taught at an appropriate level to fulfil their potential in this area. Children are taught Design and Technology from Nursery onwards. Children with S.E.N. are identified as early as possible and their needs addressed in accordance with the school's S.E.N. Policy.

Gifted and Talented

Children who are gifted and talented will be identified as early as possible in their school life. The ability of these children will then be considered in teachers' planning by including differentiated activities. These children will also be encouraged to take part in Out of School Hours Learning to enable them to achieve to the best of their ability.

Assessment for Learning

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons, allowing for different learning styles. They record the progress that children make by assessing the children's work against the learning objectives for the lessons. Children are encouraged to make judgments on ways in which their work can be improved.
Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence. Teacher's complete a whole class feedback sheet following each D&T lesson that outlines significant areas that is used to inform future planning and lessons.

Resources

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 the more

specialised equipment being kept in store rooms and certain tools being kept in a locked cupboard. This is accessible to children only under adult supervision.

Health and Safety

In this subject the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for food safety and hygiene. Teachers will always teach the safe handling and use of tools and equipment and insist on good practice. It is the responsibility of the subject leader to pass on any relevant Health and Safety information to staff. It is the individual member of staff's responsibility to ensure that they have read, understood and act on this information and that children who are not permitted to taste or handle food products or ingredients will be identified.

Monitoring

The DT Subject Leader monitors the quality of teaching/learning in DT across the school. The subject leader keeps a portfolio of sample evidence and reviews design and technology when there is a priority highlighted on the DT Rap.

The Role of the Design & Technology Co-ordinator

- Take a lead in policy development.
- Monitor and review the effectiveness of DT across the school.
- Support colleagues within the school in the delivery of DT.
- Ensure resources are available.
- Liaise with other teaching staff (beyond the school environment) regarding opportunities to develop DT

EQUALITY AND DIVERSITY STATEMENT

(Please refer to our Single Equality Policy and equality objectives)

As a school we welcome our duties under the Equality Act 2010. The general duties are to:

- eliminate discrimination,
- advance equality of opportunity
- foster good relations

We understand the principal of the act and the work needed to ensure that those with protected characteristics are not discriminated against and are given equality of opportunity.

A protected characteristic under the act covers the groups listed below:

- age (for employees only),
- disability
- race (includes ethnic or national origins, colour or nationality)
- gender (including issues of transgender)
- gender reassignment
- maternity and pregnancy
- religion and belief (includes lack of belief)
- sexual identity
- Marriage and Civil Partnership (for employees)

We also welcome our duty under the Education and Inspections Act 2006 to promote community cohesion.

We recognise that these duties reflect international human rights standards as expressed in the UN Convention on the Rights of the Child, the UN Convention on the Rights of People with Disabilities, and the Human Rights Act 1998.
In fulfilling our legal obligations we will:

- Recognise and respect diversity
- Foster positive attitudes and relationships, and a shared sense of belonging
- Observe good equalities practice, including staff recruitment, retention and development.
- Aim to reduce and remove existing inequalities and barriers.
- Consult and involve widely
- Strive to ensure that society will benefit

Review

This policy will be reviewed every three years or revised in the light of any new legislation.