

ST MARY'S CATHOLIC PRIMARY SCHOOL

Design and Technology Policy

Reviewed September 2016



Mission Statement

St Mary's school community follows the teachings of Jesus Christ, working together to develop the whole child, in a spiritual, moral, academic, physical, social and emotional way, within a caring and supportive environment.

What is Design and Technology (D&T)?

Design and Technology is the process of designing, making and evaluating products fit for a purpose or improving, refining and extending the use of existing products. It involves the creative application of the principles of science to solve practical problems and is subject to the constraints of economics and social acceptability.

There are four main purposes to this policy:

- To establish an entitlement for all pupils;
- To establish expectations for teachers of this subject;
- To promote continuity and coherence across the school;
- To state the school's approaches to this subject.

Introduction

The importance of design and technology to the curriculum

Design and technology prepares pupils to participate in tomorrow's rapidly changing technologies. They learn to think and intervene creatively to improve the quality of life. The subject calls for pupils to become autonomous and creative problem solvers both as individuals and as members of a team. They must look for needs, wants and opportunities, responding to them by developing a range of design ideas for making products and systems. In their designing and making, pupils combine practical skills with an understanding of aesthetics, social and environmental issues. As they do so they reflect on, learn from and evaluate present and past design technology, its uses and effects. Through D&T all pupils can develop innovation and become discriminating and informed users of products.

Expectations

By the end of Key Stage 1, the performance of the great majority of the pupils should be within the range of levels 1 to 3. Most pupils are expected to achieve level 2.

By the end of Year 4, the performance of the great majority of pupils should be in the range of levels 1 to 4. Most pupils are expected to achieve level 3.

By the end of Key Stage 2, the performance of the great majority of the pupils should be within the range of levels 3 to 5. Most pupils are expected to achieve level 4.

The aims of design and technology and how these contribute to the school's aims

The school aims to:

- provide a relevant, challenging and enjoyable curriculum for D&T for all pupils;
- develop all pupils' designing and making skills and technical knowledge and understanding, using a range of tools equipment and components safely;
- enable pupils to work with a range of products and in creative problem solving both as individuals and with others;
- encourage pupils to become understanding and discriminating consumers.

Strategy for implementation

Teaching and learning

The school has three designated Design and Technology weeks over the academic year, one for each term. Appropriate units of work have been planned using the QCA scheme of work. Units of work may be amended to meet the needs of pupils.

Assessment and recording

Assessment is based on a combination of teacher assessment and pupil self-assessment. Records are updated and this should be used to inform the annual report to parents and the end-of-key-stage assessments.

Continuity and progression

The scheme of work ensures that tasks provide both continuity and progression. Consolidation of the skills, knowledge and understanding in D&T is carried out by its use to support learning in other subjects, such as literacy, numeracy, science and art.

Inclusion

Teachers provide differentiated resources for each task, with extension activities for the more able. Appropriate tools and equipment are provided to ensure that all pupils have sufficient access to the D&T curriculum.

Organisation

D&T is taught as a discrete subject. During the making phase of some activities and some aspects of food technology, pupils should work in well-supervised groups.

The curriculum

Planned activities are designed to enable pupils to develop their skills, knowledge and understanding, being taught through:

- investigating and evaluating a range of familiar products, including how they work and how well they work;
- focused practical tasks that develop a range of techniques, skills, processes and knowledge;
- design and make assignments where the pupils use a range of materials.

Learning resources

In line with recommendations in the subject order, teachers provide a range of good quality materials, tools and equipment. At Key Stage 1 pupils use a range of materials, including textiles, food and items that can be assembled to make products. At Key Stage 2 pupils use a range of

materials, textiles, mouldable materials, food, electrical and mechanical components.

Most of the materials and equipment are organised in the central D&T cupboard. Tools, equipment and consumables required in order to teach the units of work in the scheme are checked each year and replaced as necessary.

Resources

All resources, both consumable and non-consumable are located in the Numeracy cupboard, It is the responsibility of each class teacher to collect resources and then return them after use. If any resources become broken during use, the Design and Technology leader needs to be informed as soon as possible.

Strategies for the Use of Resources:

Central resources in D&T are the responsibility of the Design and Technology co-ordinator who has a small budget available. They include:

- A variety of tools and materials for cutting, shaping, joining and combining materials
- Paper, card and junk modelling materials
- Plasticine
- Construction kits appropriate to the age of the pupils.
- Electrical kits
- A range of stiff and flexible sheet materials (e.g. wood, plastics)
- Mouldable materials
- Textiles
- Electrical and mechanical components.

Health and Safety

- Children should be given suitable instruction on the operation of all equipment before being allowed to work with it.
- Children should be strictly supervised in their use of equipment at all times.
- Children should be taught to respect the equipment they are using and to keep it stored safely while not in use.
- Children should be taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

Food Hygiene

- Pupils and staff will take care to undertake appropriate hand washing and other hygiene related activities prior to preparing food.
- Pupils and staff working with food must wear aprons designated for cooking.
- Painting equipment must not be washed up or used in the sink in the medical room.
- All jewellery should be removed and hair tied back.
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Glue Guns

- Low temperature glue guns should only be used by an adult in Key Stage One and The Foundation Stage unless there is one-to-one supervision for a pupil.
- Key Stage two children should use low temperature glue guns under supervision in a designated work area, wearing safety goggles.

Craft Knives

- Craft knives, quick cutters and rotary cutters should only be used by an adult/teacher in Key Stage One and the Foundation Stage.
- Key Stage Two children may use cutting equipment under supervision, using a cutting mat and wearing safety goggles.

Staffing

Teachers are responsible for ensuring that all tasks in the scheme are taught.

Safe Practice

When working with tools, equipment and materials, pupils are taught the appropriate health and safety procedures and understand the steps they should take to control risks.

Contribution of design and technology to other subjects in the curriculum

Literacy

D&T is a useful vehicle for teaching aspects of the Literacy Strategy. Teachers are expected to use the organisational structure of language, features of recounted texts, use of instructions and non-chronological reports to enhance pupils' literacy skills. Pupils should consolidate their skills in reading by following instructions, seeking information, scanning and skimming text and reading captions and labels in design work. Pupils are taught the meaning, the use and spelling of technical and specialist vocabulary.

Numeracy

D&T provides ample opportunities for the practical application of mathematics. Pupils are encouraged to choose and use appropriate ways of calculating measurement and distances and to check the results of their calculations. They may be required to use fractions and percentages to describe quantities and proportions, read and interpret scales, identify position and direction.

ICT

There are opportunities for pupils to use ICT in the scheme, they also have access to a range of activities including those where they:

- use, draw and paint programs to model ideas.
- use database and other information sources for research;
- develop their understanding of sequencing and control systems;
- use CD-ROMs to find out about other times and cultures;
- develop their awareness of how ICT is used in the wider world.

Spiritual development

Where possible D&T activities are used to encourage pupils to recognise and value their own and other people's creativity and understand the tensions between material and non-material needs that may occur when designing.

Personal, social and health education

D&T activities help pupils to reflect on how technology affects the environment and how design decisions are influenced by value systems. They are encouraged to recognise the need to consider the views of others when discussing design ideas and explore the contribution of products to the quality of life within different cultures. Pupils are encouraged to manage their environment to ensure the health and safety of themselves and others, to develop their sense of responsibility in following safe procedures and understand both the importance of personal hygiene and how to work hygienically.

The subject leader is responsible for monitoring, reviewing and changing the policy and development plan for D&T.

Review

This policy will be reviewed annually in line with the school's policy review programme.