



St Monica's Catholic Primary

Design and Technology Policy

Status	School need
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Rationale

At St. Monica's our Mission Statement prompts us all to 'Never stop trying' and 'Aim to be the best we can be'. In planning how we teach DT, these statements imply a curriculum in which children are enabled to use creativity and imagination, to design and make products that solve real and relevant problems. They learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

1 Aims and objectives

1.1 Design and technology prepares children to take part in the development of tomorrow's rapidly changing world and to develop a curiosity and interest within it. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become independent 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 practices from science and industry. 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.

We encourage the children to use creativity and imagination, designing and making products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

1.2 The objectives of teaching design and technology are:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making things;
- to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world;
- to 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 uses;
- to critique, evaluate and test their ideas and products and the work of others
- to enable children to talk about how things work, and to draw and model their ideas including the use of ICT;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to explore attitudes towards the designed world and how we live and work within it;

- to develop an understanding of technological processes, enterprise and products, their manufacture and their contribution to our society;
- to foster enjoyment, satisfaction and purpose in designing and making things;
- to help children apply their knowledge, skills and experiences from other subjects, to their design and technology work;
- to develop children's technical language;
- to understand and apply the principles of nutrition and learn how to cook;
- to display children's design and finished products attractively, providing opportunities for evaluation and discussion

2 Teaching and learning style

2.1 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 their peers. They have the opportunity to use a wide range of materials and resources, including ICT. Preliminary designs can be produced through a whole class or group session. Most practical work is carried out in small groups/individually to ensure there are enough tools, materials and space available; and for safety when certain tools are used.

Work is recorded in a number of ways: Art and Design Workbooks, photographs and videos, Twitter and observations so that lessons can be adapted and TAs deployed to support.

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 and / or providing support to facilitate access and inclusion. 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;
- creating effective learning environments;
- securing their motivation and concentration;
- grouping children by ability, and setting different tasks for each group;
- providing a range of challenges through the provision of different resources;
- adapting activities and equipment;
- 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. Our school uses the programme of study as the basis for its curriculum planning in design and technology.

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. This is done by the Key Stage teams.

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 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 Early Years Foundation Stage - EYFS

4.1 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. As the reception class is part of the Early Years 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 the Early Learning Goals. 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, planning and recording any adaptations 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 and technology to teaching in other curriculum areas

Design and Technology is a subject which spans the curriculum particularly linking with art, maths and science.

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, evaluate 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 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 personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things and using tools. 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. As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

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, for example designing African Masks. 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.

5.5 Art

The links between art and DT are numerous, eg the use of sketches for designs/ recording finished products, photographs of completed projects.

5.6 Science

The cooking and nutrition part of the DT curriculum contributes to the teaching of science, especially when related to the biology strand relating to plants and animals. We also engage in STEM activities across school.

6 Design and Technology and ICT

6.1 Information and communication technology enhances the teaching of design and technology, wherever appropriate, in all key stages. Children use software to enhance their skills in designing and making things. Younger children are able to use simple desktop-publishing software to try out designs. Children may use an ICT control program to control mechanisms and to get them to move in different ways e.g. a roamer. The children also use ICT to collect information and to present their designs through a range of design and presentation software. iPads can be used to record projects undertaken.

7 Design and technology and inclusion

7.1 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. Our teachers provide learning opportunities that are matched to the needs of children with learning difficulties. We strive to meet the needs of all pupils - boys and girls, pupils with special educational needs, disabilities, special gifts and talents, from all social and cultural backgrounds and those of different ethnic groups. (See SEN and G&T policies).

7.2 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, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child’s attainment and progress and this helps ensure that our teaching is matched to the child’s needs.

7.3 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.

8 Assessment for Learning

8.1 We assess the children’s work in design and technology while observing them working during lessons. Marking and feedback of design technology is ongoing throughout the lesson and this is in line with the feedback and marking policy. This can be through verbal feedback, self-marking and /or teacher marking. Teachers are encouraged to give ongoing feedback throughout the lesson to individuals and groups of pupils so that pupils are progressing well and misconceptions are quickly picked up. Staff are not expected to write marking comments in individual books, but they will complete a feedback sheet where necessary so that they can pick up pupil misconceptions and plan for future learning. Teachers use these to record children’s achievements and then put the information on to Classroom Monitor. The attainment targets are split up into KS1, Lower KS2 and Upper KS2.

8.2 Children are encouraged to assess and evaluate both their own work, work of other pupils and the work of designers/ crafts people etc. This helps them to appreciate how they can improve their performance and thus to become more independent learners.

8.3 KS1 children have individual folders to keep their work and photographs of their work in, providing evidence of skills taught and how work is developed as well as the end product. KS2 children use sketchbooks to record their observations and use them to review and revisit ideas. These are valuable to teachers as part of the assessment process as they document the thinking and creative actions of the pupil. They are also a place where teachers can write feedback and engage in developmental language.

9 Resources

9.1 Our school has a range of resources to support the teaching of design and technology across the school. There is a central store for design and technology equipment: wood, wheels, glue guns, woodwork tools. Other construction materials are stored in individual classrooms. For a list of available resources see Appendix A.

10 Health and safety

10.1 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. Before tasks which require the use of specific tools e.g. junior hacksaws, drills, glue guns, etc. children will be taught how to use the equipment safely and in the correct way.

11 Monitoring and review

11.1 The monitoring and reviewing of the subject is carried out according to the M&R Cycle. Art & DT folders and sketchbooks are monitored during work scrutiny staff meetings. The DT Coordinator takes learning walks to monitor displays. Lesson observations are completed by the DT coordinator, in accordance with the SDP

11.2 The DT Coordinator undertakes a range of monitoring and subject development activities, the evidence for which is in the DT Subject Champion Evidence File.

11.3 This policy will be reviewed in accordance with the SDP review cycle.

Signed:

Chair of Education Committee

Date:

Appendix A: Resources

Construction Kits – Duplo, Lego, Lego Technic, Mobilo, Polydron, Multi-link and Brio
Different sized and shaped wooden building blocks.

Plasticine

Pipe cleaners

Card

Clay

Art Straws

Plastic Straws

Mod roc

Glue – PVA, pritt, glue guns

Masking tape

Polystyrene tiles / sheets / blocks

Wood – various lengths and widths

Wooden dowel – various length and widths

Match sticks

Lolly sticks

Cotton reels

Wheels – wooden, card, plastic

Corks

Material, thread, pins and needles

Sand paper

Tools – steel rulers, various craft knives, cutting mats, pliers, hammers, cutting boards, various saws, various drills and drill bits, bench vices and G clamps