St Bernadette's Catholic Primary School
Policy for Design and Technology

The Mission for St Bernadette's Catholic Primary School is

"to ensure a happy and secure learning environment where we celebrate the dignity and worth of all in our school community.

As a Christian community we recognise that in loving others we love Jesus and so help each other to reach our full potential."

Therefore the full implementation of our Design and Technology Policy plays an important part in enabling us to strive towards achieving this mission for all the children in our care.

Rationale

We believe that Design and Technology prepares pupils to participate in tomorrow's rapidly changing technologies. It involves children in learning about the world we live in and developing a wide range of skills through designing and making. It helps children to learn vital skills such as how to think through problems creatively, how to organise themselves and how to work with knowledge and practical skills to bring about change and to shape the environment. As they do so, they reflect on and evaluate present and past design technology, its uses and effects.

"Through design and technology, all pupils can become discriminating and informed users of products, and become innovators."

In September 2014, a new National Curriculum was put in place. The Design Technology curriculum at St. Bernadette's has been reviewed and adapted in the light of the changes.

The main changes to Design Technology include:
- The focus of mouldable materials is now a major part of the curriculum in both key stages.
- There is now far more emphasis on computing in the D.T. curriculum.
- Textiles also play a major part throughout the school.
- In D.T. more time is given to developing ideas and prototypes.
- The design cycle has become more explicit and more emphasis is now placed on regular evaluations.
- Production of food for consumption.

Aims of Design and Technology

Design and Technology is an inspiring, rigorous and practical subject. Within the new curriculum, the children use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They will acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils will learn how to take risks, become resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present

technology, they will develop a critical understanding of its impact on daily life and the wider world. High quality design and technology education makes an essential contribution to the creativity, culture, wealth and well- being of the nation.

We specifically aim 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.

Content
In design and technology, children acquire and apply knowledge and understanding of:
- materials and components;
- mechanism and control systems;
- structures;
- food and horticulture;
- existing products;
- quality;
- health and safety.

Using the curriculum guidance for the Foundation Stage we provide opportunities for children to:
- develop a curiosity and interest in the world through investigating, talking and asking questions about familiar products;
- develop confidence and enthusiasm through frequent exploration of construction kits to build and construct objects, and activities for exploring joining, assembling and shaping materials to make products;
- extend their vocabulary through talking and explaining about their designing and making products.

Curriculum and School Organisation

In order to achieve these aims, Design and Technology is organised so that opportunities are provided for the development of skills and integration with other subjects. Class teachers will be responsible for teaching Design and Technology.

Learning activities are sequenced to ensure progression and taught through direct skills teaching providing pupils with real experiences through appropriate contexts, practical activities for pupils, the use of museum loans, educational visits and computing.

The use of the National Curriculum Programme of Study, Design and Technology scheme of work for Key Stages 1 and 2 and the curriculum guidance for the Foundation Stage, published resources for teacher planning, which provides the basic framework for learning and teaching in Design and Technology.

Time allocation

Subject teaching is planned so that annually 36 hours at Key Stage 1 and Key Stage 2 is recommended in order to address the Programmes of Study. Design and technology is taught through units, the amount of time devoted to it weekly may vary according to the topic and how it can be used in a cross curricular way.

Planning

Using the objectives from the National Curriculum, teachers identify the learning objectives for each unit of work, matching possible teaching activities with learning outcomes and ensuring essential key objectives are covered at least once throughout the year. Basic Skills and cross-curricular links should be made in planning where applicable.

Class Organisation and Teaching Style

Within classes pupils are taught individually, in groups or as a class when appropriate. It is recognised that through group work, co-operation, effective learning and understanding are promoted, but to ensure differentiation, matching and assessment children may work individually or as a class.

The subject requires the provision of a range of materials and equipment to enable children to work in a variety of material areas. The curriculum should be delivered in order to meet the needs of individual pupils, their age and ability.

Links with other subjects and key skills

- We believe that Design and Technology provides a natural opportunity for children to practise and improve basic skills such as speaking and listening, literacy and numeracy.
- In our design and making assignments we aim to provide learning opportunities for developing key skills such as creative problem solving, working with others and communication skills.
- Through evaluating their products children will be encouraged to improve their own learning and performance.
- Children apply knowledge and skills from Art and Design, Science, Mathematics, Computing and English in Design and Technology. Teachers will make links wherever possible.

Assessment

Assessment is used to inform future planning and to provide information about individuals throughout their time in St. Bernadette's school.

The learning outcomes in each unit show how children may demonstrate what they have learnt. Pupils should be involved in actively evaluating their own work and thinking of possible improvements. The actual work produced will serve as a record of the achievement; therefore it is not necessary to make detailed records of each child in relation to the outcome. However, teachers may wish to make notes about individual children's development.

When reviewing the children's progress in Design and Technology, teachers must consider each child's:

- knowledge and understanding of materials and components

- understanding of mechanisms and computing
- ability to use materials and equipment safely
- ability to develop, plan and communicate design ideas
- interest and motivation in designing and making
- ability to appreciate and produce items of quality that meet its intended purpose.

Each teacher submits to the Subject Leader an end of year assessment for each child against year group expectations, an evaluation of overall class performance and performance of sub groups such as boys and girls.
This enables the subject leader to have a full understanding of the standards of Design Technology in the school and information to support further subject development.

Subject Leader Role
The Design and Technology subject leader is responsible for monitoring the standards of children's work and the quality and breadth of teaching. Support is given to colleagues in the teaching of Design and Technology by informing them of current developments in the subject and by providing a strategic lead and direction for the subject in school.
The subject leader is also responsible for evaluating strengths and weaknesses in the subject and identifying areas for improvement and development. Subject Leader release time will enable the leader to fulfil the role, reviewing medium term plans, monitoring children's work and observing teaching in the subject.

Resources and Accommodation
An inventory of resources is available.
- resources available (book, non-book)
- location and security arrangements
- accessibility to staff and pupils
- responsibility for maintenance (teacher, subject leader)
- how resources will be replaced and purchased
- any specialist equipment for SEN pupils
- any specialist accommodation for SEN pupils

Inclusion
Providing effective learning opportunities for all pupils.
- For all pupils to produce their best we plan differentiated resources and tasks through;
- Adapted worksheets;
- Limited choices
- Greater teacher intervention/small group work/TA support
- Ensuring manipulative skills needed are manageable;
- Selecting appropriate tools and equipment;
- Talented and able are challenged through more challenging tasks such as open ended design briefs, carrying out independent research, giving additional responsibilities such as leading a team.

Equal Opportunities
It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ethnic origin or ability, have access to the curriculum and make the greatest progress possible.

Special Educational Needs

All pupils will have access to a broad, balanced curriculum, which includes design and technology, and have the opportunity to make the greatest progress possible. In particular design and technology offers the opportunity for children to achieve in a practical subject, as they are encouraged to communicate in different ways (not writing).

Health and Safety

- Teachers will always teach the safe use of tools and equipment and insist on good practice.

- Children will be taught how to take steps to control risks.

- Risk assessments will be noted on planning and evaluated.