St Thomas of Canterbury Catholic Primary School

Where every child is special

Design and Technology Policy

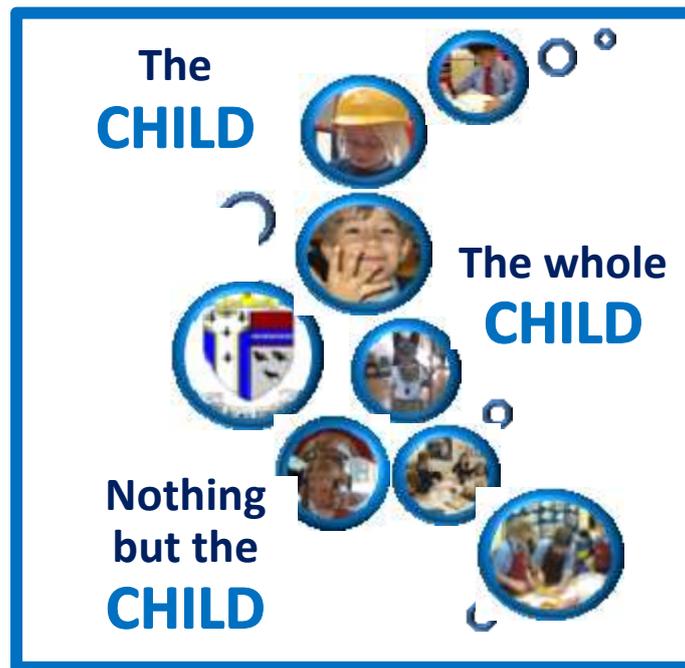|	
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Date of last review:	Spring 2017
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The **CHILD**

The whole **CHILD**

Nothing but the **CHILD**

OUR MISSION STATEMENT

God's love is at the heart of our Catholic School family. We show this in our respect, kindness and love for others and by treating other people as we wish to be treated ourselves. We will encourage everyone to be the best that we can be.

OUR AIMS

- To guide our children to grow in the love of God and build relationships that will enable them to make a positive contribution to the school and society.
- To develop an exciting, challenging and creative curriculum that produces confident and successful learners who are the best that they can be.
- To develop high quality learning that enables every child to flourish, to discover their talents and be lifelong learners.
- To establish a teaching and learning environment that encourages everyone to enjoy, to achieve, to be inclusive, to be healthy, and to stay safe.
- To nurture a strong partnership between home and school.
- To have respect and understanding for our school, our community and our world, helping our children to become responsible citizens and good role models.

OUR GOLDEN RULE

We treat others as we would like to be treated

What is Design and Technology?

Design and Technology (D&T) 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.

Aims

Our aims in teaching D&T at St. Thomas' are that all children will:

- 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 / products for a wide range of users
- evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Purpose of Study

Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils 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 acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they 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. *(NC 2013)*

Principles of the Teaching and Learning of Design and Technology

- the designing and making of products is a pleasurable activity which can provide fulfilment throughout life
- technological capability is essential to living and working in a technological society.

Design and Technology is a Foundation Subject in the National Curriculum. The fundamental skills, knowledge and concepts of the subject are set out in "Design and Technology "in the latest National Curriculum (Sept. 2013).

When planning tasks for Design and Technology, it is important to maintain the distinctive nature of the subject in the classroom. To help achieve this it is helpful to check against the six key features of D&T - that the task:

1. Has a user
2. Has a purpose
3. Provides opportunity for innovation
4. Has authenticity
5. Has functionality
6. Allows design decisions to be made.

Strategies for the Teaching of Design and Technology

At the EYFS Stage, D&T comes under the specific areas of learning "Understanding of the World" and 'Expressive Art and Design'. The Foundation Stage Profile is fully implemented for Assessment (ref. Assessment Policy). Class Teachers (CTs) make reference to 'Development Matters in EYFS'. Children

are always encouraged to make their own choices (e.g. choosing their own materials) through child initiated activities, and are led in the development of skills through adult directed tasks.

At Key Stages 1 & 2, the D&T curriculum is organised into units wherein children will be involved in investigative work and taught skills. Each unit is taught on a termly basis and each year group will cover at least three units per year; including or as well as Cooking and Nutrition. Selected units are "blocked" each term. The CT will set aside the required time to complete each unit, according to individual preference, e.g. 2 days, 5 afternoons, etc.

Most D&T work is taught in the classrooms, and most Cooking and Nutrition projects are taught in the Food Technology area and Savio Suite (although some can also be taught in classrooms).

In D&T, children are encouraged to work both individually and co-operatively: class teaching is used where appropriate. Within this structure, groups are usually of mixed ability. Children are encouraged to develop inter-personal skills through discussion, enquiry and negotiation with their Learning Partners or as part of a team.

Overall, there is no specialist teaching in D&T; it is taught by the CTs.

Where available, Teaching Assistants (TA) are used to assist in the classroom by preparing materials, supervising group activities, supporting children with special needs and in providing other help, such as the demonstration of specialist skills.

Pupils with special needs receive support from the CT and TA to undertake exercises or projects geared to their level of ability and to take an effective and valuable role in mixed ability, co-operative group work.

They include:
- pupils with learning difficulties who may need support with reading and writing but who may have well developed practical skills in designing and making
- pupils who have difficulties with practical tasks who may need more support, specialised equipment and extra opportunities for practice
- pupils with particular ability and flair for Design and Technology who are extended through the use of additional, more demanding, assignments.

Children on the English as an Additional Language (EAL) register have full access to the D&T curriculum (please refer to the EAL Policy).

Homework is used to support Design and Technology through tasks such as:
- conducting surveys
- research in areas such as the work of distinguished engineers and historical development of familiar products
- bringing artefacts from the home environment into school for display and discussion.

The emphasis in our teaching of D&T is on providing opportunities for pupils to combine their designing and making skills with knowledge and understanding in order to design and make functional products. The focus is on the assignments in which we encourage children increasingly to take control of their own learning; thus:
- work in D&T draws on knowledge from all other subjects of the curriculum especially Science, Mathematics, Art and English

- progression within the subject is developed through an increasing skills input matched to the children's development throughout the Foundation Stage and Key Stages 1 & 2.

Excellence in D&T is celebrated in display and presentation including:
- suitably mounted displays in classrooms and throughout the school
- competitions for published materials such as calendars and Christmas cards
- presentation and display of work in assemblies and other public occasions.

Strategies for Ensuring Progress and Continuity
Planning in D&T is a process in which all teachers are involved, wherein:
- schemes of work for Design and Technology are developed by the co-ordinator in collaboration with the whole staff
- lesson plans are drawn up by individual teachers for each term and are monitored by the Headteacher and subject leader.

The role of the D & T Subject Leader is to:
- take the lead in policy development and the production of schemes of work designed to ensure progression and continuity in Design and Technology throughout the school
- support colleagues in their implementation of the scheme of work and in assessment and record-keeping activities
- monitor progress in Design and Technology and advise the Headteacher on action needed
- take responsibility for the purchase and organisation of central resources for Design and Technology
- keep up-to-date with developments in Design and Technology education and disseminate information to colleagues as appropriate.

Assessment for Learning
This is the process of seeking and interpreting evidence for use by learners and their teachers to decide what stage learners have reached in their learning, where they need to go and how best to get there. It will also help with reporting to parents. Teachers will record pupils' achievement on O'track each end of term.
- The D&T Levelling Grids will aid with the levelling of children's work.
- On completion of a topic, each child fills in "My Record of Skills" table and sticks it into their D&T workbook, at the end of their work on the unit.
- In the EYFS, pictures can be used to fill in the table.
- Photographs can also be stuck into children's workbooks to act as a visual record of their work. *(Photos of work in progress, child at work or finished products can be included)*

Feedback to pupils about their own progress in Design and Technology is achieved mainly through dialogue between teacher and pupil and the marking of work. Effective marking aims to help children learn, not to find fault, and to be positive and constructive.

This can be done while a task is being carried out. The marking of written work and design drawings adheres to our marking policy. This may be carried out in the absence of pupils but is usually followed up by discussion between child and teacher and / or by pupils answering/ addressing any questions raised.

Formative assessment is used to guide the progress of individual pupils in Design and Technology. It involves identifying each child's progress in each aspect of the subject, determining what each child has learned and what therefore should be the next stage in his/her learning. Formative assessment

is mostly carried out informally by teachers in the course of their teaching. Suitable tasks for assessment include:

- small group discussions perhaps in the context of a practical task
- specific assignments for individual pupils
- individual discussions in which children are encouraged to appraise their own work and progress.
- children's self or peer evaluation in the form of 'Traffic Lights', 'Two Stars and a Wish', by checking their work against 'Success Criteria' for the task.

Strategies for Recording and Reporting

Reporting to parents is done annually through a written report. Reporting in Design and Technology will focus on each child's:

- designing and making skills
- knowledge and understanding.

Strategies for the Use of Resources

At present, the majority of D&T resources are stored in one central area - the Science and Design and Technology Resource Cupboard (by the Infant Library). Food Technology equipment is all stored in the Food Technology Area (off the Savio Suite). Some EYFS/KS1 resources are kept in the KS1 resource cupboard (by the main entrance to the Infant Hall).

Central resources in D&T are the responsibility of the Design and Technology Leader. They include:

- a range of less commonly used tools for cutting, shaping, joining, combining and finishing (e.g. craft knives, electrical equipment, woodwork tools)
- a range of stiff and flexible sheet materials (e.g. wood, plastics, card, polystyrene)
- posters, books and guidance for teachers.

Tool boxes are available for class teachers to assemble tools needed for particular projects. These can be taken to, and kept in, the classroom until completion of a project. They can then be returned to their central storage area.

Classroom resources in D&T include:

- a variety of regularly used tools and materials (e.g. scissors, glue) paper, card and junk modelling materials
- play dough
- large and small construction kits appropriate to the age of the pupils (e.g. Lego, K'nex)
- electrical kits

Teachers and children are encouraged to collect their own reclaimed materials e.g. cereal boxes, egg cartons, plastic bottles, fabric remnants, buttons etc. when necessary.

Information and Communication Technology (ICT) can be a valuable resource which is used in Design and Technology for:

- research
- planning and design
- desk top publishing of printed materials
- Control Technology

The school library is available for use in Design and Technology for reference purposes. Each class has an allocated weekly time slot in which to visit the library. (A selection of books and teaching aids is also available for teachers in the central D&T resource area).

Resources are continually under review and updated whenever possible.

At St. Thomas', we are fortunate to have close links with St. Peter's Catholic Comprehensive School who have excellent resources. They are happy for us to borrow tools and materials and are willing to provide help and advice with any aspects of D&T. The subject Leader will liaise with St. Peter's D&T co-ordinator when necessary.

Health and safety

Health and safety issues in D&T include:
- use of materials, tools and techniques in accordance with health and safety requirements
- appropriate storage of tools and materials, including food products
- teaching pupils to recognize hazards in a range of products, activities and environments and take action to control the risks to themselves and others and take appropriate action to minimise these
- hygiene in Food Technology.

Further guidance for staff can be found in "Make it Safe" book which is kept in the D&T central resource cupboard.

Monitoring and Evaluation

This policy and its implementation will be monitored and reviewed regularly by the D&T Subject Leader with the SLT.

This policy of St Thomas of Canterbury School upholds the school's ethos and Mission Statement. It must be read in conjunction with and implemented in accordance to the school's policies for Health & Safety Equal Opportunities, Inclusion and Safeguarding. Copies of these policies are available from the school website.