



DESIGN AND TECHNOLOGY POLICY

This policy is informed by the Christian values that are the basis for all of CDAT's work and any actions taken under this policy will reflect this.

'Blessed are those who act justly, who always do what is right'

Psalm 106:3

St Matthew's CE Primary

Date agreed by LGB	Review date	Signed Chair of LGB

Intent

At St. Matthew's, we encourage our children to be problem-solvers and innovators. Our D&T curriculum provides our pupils with the opportunity to explore a range of real, relevant problems in a variety of contexts in a creative, imaginative and practical way. These skills are applied in a cross-curricular manner in maths, science, computing and art. Children are introduced to the work of great and notable inventors, designers and architects to help develop knowledge and vocabulary linked to skills. Children are encouraged to evaluate their work independently and collaboratively.

Implement

In order to deliver a high-quality D&T curriculum, we have high expectations of our pupils and deliver quality planning and monitoring of the subject through a range of methods such as demonstrations, pupil voice, staff voice and CPD opportunities. We have two projects a year, and cover all curriculum aims across their key stage (KS). Each project begins with a design brief to give the children purpose and context to their design process (see below).

Impact

Our children develop problem-solving skills, which they apply throughout their time at St. Matthew's and beyond. They are provided with the opportunity to celebrate their own success and that of their peers.

Brief	Research	Design	Make	Evaluate
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Aims

- 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 users;
- to critique, evaluate and test their ideas and products and the work of others;
- to understand and apply the principles of nutrition and learn how to cook (The National Curriculum in England (DfE), 2014);
- to promote the teaching of numeracy and literacy within all subjects;
- to share good practice within the school;
- to work with other schools to share good practice in order to improve this policy.

Provision

By careful planning we aim, from nursery onwards, to train the children to be independent and organised and to give them the confidence to select their own tools and materials for a given task. We are developing new, whole-school themes in accordance with the National Curriculum 2014 and underlying these developments, there is a structure of skills and techniques in D&T that will be taught in order to ensure continuity and progression throughout the school.

EYFS

In the foundation stage, children follow the EYFS curriculum. This focuses on three prime areas of learning and an additional four specific areas of learning. The children in our EYFS are exposed to elements of D&T on a daily basis throughout their on-going provision.

Examples of this are:

- table/floor construction kits;
- sand and water play;
- large construction equipment;
- Play-doh;
- workshop area.

In addition, the children are engaged in specific projects such as designing and making articles linked to a specific theme. These young children should also be exposed to 'disassembly' to explore how things work. Role play also plays an important part in developing a context for the appreciation of the designs and processes in the world around them.

KS1

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria;
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

- select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing);
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluate

- explore and evaluate a range of existing products;
- evaluate their ideas and products against design criteria.

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable;
- explore and use mechanisms (for example, levers, sliders, wheels and axles) in their products.

Cooking and nutrition

- use the basic principles of a healthy and varied diet to prepare dishes;
- understand where food comes from.

KS2

When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups;
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately;
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Evaluate

- investigate and analyse a range of existing products;
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work;
- understand how key events and individuals in design and technology have helped shape the world.

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures;
- understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages);
- understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors);
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

- 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.

SEND and subject leadership support statement

At St. Matthew's we believe that every subject leader is a leader of SEND. When designing the curriculum, we think about all pupils and how to enable access for all. At St. Matthew's, we have children with need in all four areas identified as: cognition and learning, social, emotional and mental health needs (SEMH), communication and interaction needs and sensory and/or physical needs. To help all our children to SHINE we ensure that lessons are planned and include all children through a range of approaches including: questioning, use of specially adapted equipment, increased scaffolding, mixed ability grouping and increased adult support, including 1:1 where applicable.

We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see also special educational needs policy.

Assessment

The children's D&T work is assessed using teacher judgement by reviewing the progression of work over a curriculum unit in sketchbooks (sketchbooks are shared with art and design) against the school progression of skills map for that year group/key stage. Evidence may include sketches, drawings, idea-recording, planning, comments written by students about their work or photographs of children during lessons, pictures the children themselves take as inspiration or photos of the final pieces of work. These sketchbooks will follow the children up through their years at St Matthew's as an ongoing record of their development and achievement in D&T.

At the end of the year, teachers are required to provide feedback to the subject leader on the number of children working towards, achieving or exceeding expectations.

Teachers are required to provide quality feedback and extension by the end of the topic / unit of work. This can be provided on the back of the piece of work where appropriate, or on a post-it note adhered to the page so as not to impinge upon the child's work.

Health and safety

(See separate risk assessment).

Monitoring and review of the subject

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the headteacher and the SLT.

Standards will be monitored by:

- looking at pupils' work;
- skills demonstrations – recorded video clips by class teachers and demonstrations for subject leader;
- subject observations;
- pupil discussions;
- audit of subjects;
- scrutiny of planning;
- general curriculum discussions;
- teacher discussions with support and professional development provided where applicable.

Contribution of the subject to other areas of the curriculum

D&T is a subject in its own right and has specific skills and knowledge, which need to be taught and learnt. Once learnt, these skills can be applied across the curriculum to support work in other subjects, such as science, maths and computing. The skills learnt in D&T also include problem-solving, teamwork and resilience, which are crucial life skills used across the curriculum and in wider life

Resources

The school has a full range of resources to support the teaching of this subject throughout all year groups. In D&T pre-bought packs from Steph O'Donnell – Primary DT, containing all that is needed for several projects, are often used across school. Where budget constraints allow, any additional materials teachers require for the delivery of their planned units will be ordered before the unit of work commences. Resources are upgraded and replenished when the need arises. A bi-annual stock take and audit is undertaken by the subject coordinator towards the end of the s in preparation for the next academic year.