

Design and Technology Policy

Intent



Excellence

Design and technology is an inspiring, rigorous and practical subject, which unlocks the creativity and imagination from within all of our pupils. All children engage in designing and making products that solve real and relevant problems within a variety of contexts, whilst acquiring a broad range of subject knowledge taught progressively through the year groups.

Experiences and Life Skills

Our D&T curriculum has been designed to ensure that the pupils of St Thomas' experience a range of exciting, engaging and sometimes risk-taking experiences that draw upon other subject skills such as mathematics, science, engineering, computing and art.

Pupils are taught the skills needed to participate in an engaging process of planning/designing, making and evaluating. We want to ensure that our pupils have all the skills required to achieve high standards in their D&T creations, therefore basic skills such as cutting out, measuring and drawing accurately are taught and reinforced right through the school.

Celebrate Diversity

In D&T we encourage the children to reflect on inspired products, exploring the diversity of materials and techniques, while looking at ways in which design technology can be used in a wider world context. Lessons promote equality of opportunity for all abilities and genders allowing pupils to eliminate stereotypes, for example encouraging girls to use equipment that are more traditionally male dominated. In food technology, children learn to prepare a range of dishes from different cultures and explore the different climates required to harvest different produce.

Christian Values

During D&T lessons, the children are given key safety instructions to ensure that they are able to show a mature responsibility when using different tools. Sometimes pupils will be encouraged to support others in their work or show the value of respect when equipment is needing to be shared. Once they have completed a project the children will evaluate their work and feedback on a project completed by their peers. It is important that children uphold our Christian values of friendship and respect, whilst giving honest and constructive feedback, ensuring that all pupils can let their light shine!

Reading and Vocabulary

As with areas of the curriculum, vocabulary is an intrinsic part of the sessions, with staff modelling and developing pupils' use of the correct D&T terminology throughout the lesson. The teacher will share a subject knowledge organiser with the pupils for the pupils to use as a visual stimulus during the lesson to ensure correct use of D&T terminology. Where appropriate, texts may be used to enhance teaching of D and T, for example looking at features of recipes in cookery books.

Knowledge Rich and Academic

The children experience a rich D&T programme, imparted by both class teachers and a D&T specialist teacher. The curriculum has been tailored to teach a variety of creative and practical activities progressively throughout the different year groups, with links made to previous projects made explicit to the children.



'Let your light shine' Matthew 5:16



Implementation

Structure of a D&T day

All D&T days will use following structure: research/plan/design, make and evaluate. During the planning and designing stages, pupils may have the opportunity to evaluate products already designed, suggesting improvements or aspects that they would like to implement themselves. Pupils will have the opportunity to make their product using a range of different materials and tools, we encourage pupils to be as independent as possible during the making process. Finally pupils will have the opportunity to evaluate their project and the projects of others. Children will be encouraged to provide honest and constructive feedback, suggesting what went well and what would make it even better.

Expectations

- **Timetabling D&T** - St Thomas' staff recognised that the teaching of D&T was sometimes compromised due to time, therefore we decided to teach D&T through discrete teaching days through the year, with classes off timetable for these days. Classes have 3 D&T units per year group, including a food technology unit. There are pre/post teaching sessions led by the class teacher for each unit. The 'make' aspect of the unit is taught by a specialist D&T teacher over one full day.
- **Use of resources** – D&T lead and class teachers are to ensure that they have all of the required resources and software to teach lessons. The specialist D&T teacher provides all resources required for her teaching. Children have knowledge organisers to support them and develop their use of vocabulary and D&T terminology.
- **Health and Safety** – When using any specialist materials or equipment, the lead teacher will ensure that all children are given a safety talk and that appropriate pupil-teacher ratios are in place.
- **Evidencing** – Children's work will be evidenced through their final D&T pieces, photographs and evidence in their D&T folders. Each child has a personal file that is used to store their product planning and evaluation sheets. These files go up through the school with the pupil, so progression of skills will be evident.
- **Assessment** – Formative assessment of computing will be carried out by class teachers during their D&T days. The class teacher will know the skills that they expect pupils to achieve by the end of the session, they will keep a record of pupils' progress, highlighting any children who have not met or who have exceeded these expectations. Use of retrieval tasks to secure knowledge taught is implemented across the school.
- **Display** – We want children to take pride in their high-quality D&T creations, therefore we have made the displaying of D&T a priority across the school. Each class has a D&T display table in the corridor that is regularly updated with the most recent projects produced.

Impact

By the end of KS1, our pupils will be skilled in the following areas:

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, (or example, cutting, shaping, joining and finishing)



'Let your light shine' Matthew 5:16



- 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.

Food Technology

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.
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By the end of KS2, our pupils will be skilled in the following areas:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, 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, such as 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 as gears, pulleys, cams, levers and linkages)
- understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors).

Food Technology

- 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.