



St. Nicholas C of E Primary School

Design & Technology Policy

Our Vision Statement

“To maximise the learning potential of every pupil within the love of God.”

Date reviewed: October 2020

Reviewed by: S. Miller

Approved by Headteacher: October 2020

Date of next review: Autumn 2023

“We believe that all children have gifts and abilities and that it is our role as educators, to help all children to achieve their full potential”

1. Statement of intent

St Nicholas Church of England Primary School understands that D&T allows pupils to solve problems, think creatively and develop ideas. D&T offers pupils a chance to use creative thinking and activity within a defined purpose and tangible outcome. The school is committed to nurturing pupils’ curiosity and creativity, as well as preparing them for living in a modern world where technology is rapidly changing and advancing.

In teaching D&T, we aim to help pupils:

- Develop their design and making skills.
- Develop their knowledge and understanding of design and technologies.
- Use a wide range of tools and materials.
- Learn about working safely and protective measures.
- Work individually and collaborate with other pupils in a variety of contexts.
- Develop the capability to create products of a high standard through skills and understanding.
- Evaluate products, made by themselves, their peer groups and companies.
- Explore the man-made world and encourage discussion of how we live and work within it.
- Develop an interest in and understanding of technological processes and the role of manufacturing in society.
- Learn the principles of nutrition, healthy eating and how to cook.

2. Roles and Responsibilities

The subject leader will be responsible for monitoring the progression of teaching and learning.

The D&T subject leader will also be responsible for:

- Implementing this policy across the school.
- Maintaining resources and advising staff on the use of materials.
- Supporting teaching staff, advising and offering to share their expertise and experience.
- Leading staff training on new initiatives.
- Helping staff to plan future lessons and assessments and advising teachers on teaching methods they may wish to explore.
- Encouraging staff and pupils to be creative.
- Assisting the Headteacher in reviewing this policy.

Classroom teachers will be expected to:

- Plan and deliver interesting and engaging lessons that adhere to the national curriculum.
- Provide equality of opportunity through their teaching approaches and methods.
- Keep up-to-date assessment records.

- Ensure pupils' development of skills and knowledge progresses through their learning and understanding of D&T.
- Set pupils suitable targets based on prior attainment.
- Maintain an enthusiastic approach to D&T.

3. National Curriculum

The school aims to assist pupils in achieving attainment targets set out in the national curriculum. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills, and processes specified in the national curriculum. Pupils will learn a broad range of subject knowledge and draw on disciplines such as maths, science, computing and art.

In accordance with the national curriculum, the school aims 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 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.

4. KS1

By the end of KS1, pupils will be able 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 and mock-ups and, where appropriate, ICT.

Make

- Select from and use a range of tools and equipment to perform practical tasks, e.g. 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, e.g. levers, sliders, wheels and axles, in their products.

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed through a variety of creative and

practical activities. They should work in a range of relevant contexts, e.g. the home, school, leisure, enterprise, industry and the wider environment.

5. KS2

By the end of KS2, pupils will be able to:

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 accurately, e.g. cutting, shaping, joining and finishing.
- 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 D&T 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, e.g. gears, pulleys, cams, levers, and linkages.
- Understand and use electrical systems in their products, e.g. series circuits incorporating switches, bulbs, buzzers and motors.
- Apply their understanding of computing to program, monitor and control their products.

6. Cooking and Nutrition

As part of their work with food, pupils will be taught how to cook and apply the principles of nutrition and healthy eating. 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.

By the end of KS1, pupils will be able to:

- Use the basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

By the end of KS2, pupils will be able to:

- 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.

7. Equal opportunities

- We are an inclusive school that ensures all pupils are provided with equal learning opportunities, regardless of their characteristics or backgrounds.
- Teachers will adapt how they deliver the D&T curriculum based on the needs of pupils.
- In order to ensure pupils with SEND achieve to the best of their ability, teachers will adapt targets and the delivery of the curriculum for these pupils.
- The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is at a disadvantage.
- The school aims to maximise the use and benefits of D&T as one of many resources to enable all pupils to achieve their full potential.
- The school aims to promote Cultural Distinctiveness through D&T lessons, by learning about a range of structures, designers and food from around the world.

8. Cross-Curricular Links

D&T contributes to the teaching of a number of other subjects in school.

English

- D&T offers the opportunity to reinforce what pupils have been learning during English lessons. Discussion, drama and role-play are important methods that the school employs to help pupils develop an understanding of people's different views and opinions of D&T and society.
- Evaluating products requires pupils to articulate and formulate their ideas to compare their views with other pupils'; through discussion, pupils will learn to justify their own views and clarify their design ideas.

Maths

- D&T will assist pupils in learning about shape and size and will make use of what they have already learned in maths lessons. Pupils will carry out investigations – by doing this, they will learn to read and interpret scales, collect and present data, as well as draw their own conclusions.

PSHE

- D&T lessons will be used to teach pupils how to discuss their own work and the work of others; in addition, pupils will be taught about health and hygiene, including diets, and how to prevent disease from spreading when working with food.

Spiritual, moral, social and cultural (SMSC) development

- Teaching D&T offers opportunities to support the social development of pupils through the way they are expected to work with each other in lessons. D&T helps pupils to develop a respect for other pupils' abilities. Working in groups encourages collaboration and gives pupils the opportunity to learn from each other and share ideas and feelings.

ICT

- ICT enhances the teaching of D&T and provides pupils with additional equipment, extending the possibilities for developing, sharing and recording their work.
- Utilising ICT also benefits pupils by helping them collect information and present their designs and ideas through a range of design and presentation software.

9. Health, safety and hygiene

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene. (See also Health and Safety Policy and D&T Risk Assessment)

10. Teaching and learning style

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/group activities where appropriate. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, sharing ideas, giving peer feedback and working in a team. Children are encouraged to critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

In all classes there are children of differing ability. We carefully plan and deliver a broad and balanced D&T curriculum to our pupils, providing suitable learning opportunities that build on our pupils next steps in D&T. Teachers use a long term plan with outlined year group skills/themes. This ensures each Key stage has a broad and balanced delivery of the D&T curriculum. Teachers use the national curriculum programme of study for D&T, alongside the Lancashire scheme adopted by school. This enables teachers to plan for the needs of their pupils and ensures coverage of the D&T curriculum across all classes.

11. Assessment for learning and recording

Teachers assess children's work in Design and Technology by making regular assessments using the Skills Progression, the termly Year Group Assessment Grid and National curriculum. They record the progress that children make by assessing the children's work against the learning objectives for their lessons, this evidence is either photographs and discussions, which are added to the Curriculum Scrapbook or individual work which is completed in their personal books. Children are expected to take part in the evaluation of their work through self and peer assessment.

The subject leader keeps evidence of the children's work in a portfolio. This demonstrates the expected level of achievement in Design and Technology in each year of the school. Teachers meet regularly to review individual evidence of children's work against the national exemplification material produced by the QCA

and the DfES. The subject leader observes lessons across the years, asks children questions, views children's skills and feeds back to the teachers their observations, support and advise.

12. Resources

Our school has a wide range of resources to support the teaching of Design and Technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in Design and Technology boxes (in a central resource area) and the Design and Technology cupboard (lockable). This room is accessible to children only under adult supervision.

13. Monitoring and Review

- This policy will be reviewed every two years by the D&T subject leader and the Headteacher.
- Any changes made to this policy will be communicated to all members of staff.
- All members of staff directly involved with the teaching of D&T are required to familiarise themselves with this policy.
- The scheduled review date for this policy is October 2022.