'A unique family in faith, love and learning'

Design & Technology Policy

Contents:

Statement of intent

At St Bernard's, we understand 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.

1. Legal framework

1.1. This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2018) 'Keeping children safe in education'
- DfE (2013) 'Design and technology programmes of study: key stages 1 and 2'

2. Roles and responsibilities

2.1. Overall responsibility for monitoring the teaching of D&T throughout the school lies with the **Design & Technology Co-Ordinator.**

2.2. The **Design & Technology Co-Ordinator** will make decisions on:

- How D&T should support, enrich and extend the curriculum.
- The provision and allocation of resources.
- The ways in which D&T can benefit the aims and objectives of the school.

2.3. The **Design & Technology Co-Ordinator** will also be responsible for overseeing the review of this policy.

2.4. The **Design & Technology Co-Ordinator** will be responsible for monitoring the progression of teaching and learning. The **Design & Technology Co-Ordinator** will also be responsible for:

- Implementing this policy across the school.
- Maintaining resources and advising staff on the use of materials.
- Deciding on the allocation of resources.
- 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.
- Reviewing this policy.

2.5. Classroom teachers will be expected to:

- Plan and deliver interesting and engaging lessons that adhere to the national curriculum and in line with the Cornerstones Scheme.

- 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

3.1. 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, engineering, computing and art.

3.2. 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

4.1. 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.

4.2. 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

5.1. 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

6.1. 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.

6.2. 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.

6.3. 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

7.1. We are an inclusive school that ensures all pupils are provided with equal learning opportunities, regardless of their characteristics or backgrounds.

7.2. Teachers will adapt how they deliver the D&T curriculum based on the needs of pupils.

7.3. 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.

7.4. The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is at a disadvantage.

7.5. 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.

8. Links to other parts of the curriculum

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

8.2. **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.

8.3. **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.

8.4. **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.

8.5. **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.

8.6. **Computing**

- Computing enhances the teaching of D&T and provides pupils with additional equipment, extending the possibilities for developing, sharing and recording their work.
- Utilising Computing 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

9.1. In order to maximise their learning experience, pupils are allowed full access to a wide range of materials in D&T lessons; however, health and safety concerns are inherent with D&T, including storing materials and tools, and the use of equipment.

9.2. PPE; such as gloves, head protection, eye protection and hearing protection is made available to all pupils and teachers.

9.3. The risks of each task will be assessed by the **classroom teacher** and **Design & Technology Co-Ordinator** before lessons and relevant PPE will be compulsory based on their decisions.

9.4. Equipment will be tested before the start of every lesson by the **classroom teacher**.

9.5. Pupils will be supervised at all times during D&T lessons. In order to maintain safe supervision D&T classes will not exceed **30 pupils in KS1 and 35 pupils in KS2**.

9.6. All tools, such as glue guns, will be checked before use by the **Design & Technology Co-Ordinator.** It is also the duty of staff to recognise and assess the hazards and risks associated when working with food and other materials.

9.7. All pupils will be taught how to use all equipment properly by the classroom teacher before doing so; similarly, pupils will also be fully briefed on the importance of how to correctly use equipment and tools.

9.8. Pupils are only allowed to use a lower temperature glue gun under one-to-one supervision – an adult must use the glue gun at all other times. Glue guns will be considered alongside all viable alternatives such as adhesive tapes, blue tack and other fasteners, to ensure the most suitable materials are used for each project.

9.9. Perishable food will be stored sensibly and refrigerated if necessary. Care must be taken by teachers and teaching assistants to ensure food is not used after the given sell by date

9.10. If any cooking or food preparation is taking place in the classroom, all surfaces will be cleaned before and after use.

9.11. Teachers and TAs will oversee that all cupboards, table tops and cookers are clean and in working order.

10. Teaching

10.1. The school uses a variety of teaching and learning styles in D&T lessons, the main aim of these lessons is to develop pupils' knowledge, skills and understanding. Teachers will ensure pupils apply their knowledge and understanding when developing ideas, planning and making products, and then evaluating them.

10.2. The school aims to do this through a mixture of whole-class teaching, group work, and individual activities. Pupils are given the opportunity to work on their own and collaborate with others, listening to their classmates' ideas and treating these with respect.

10.3. Principles for effective teaching include:

- Setting tasks in the context of pupils' prior knowledge.
- Promoting active learning.
- Inspiring, exciting and motivating pupils to know more.

10.4. Strategies for effective teaching include:

- Ensuring the teaching methods used suit the purpose and needs of pupils.
- Providing a meaningful context and clear purpose when assigning tasks.
- Investigating, disassembly and evaluative activities.
- Using focussed practical tasks to help pupils make and evaluate products.
- Ensuring tasks are built on skills and understanding.

11. Assessment

11.1. Pupils' D&T work may be assessed throughout the design process and by teachers judging recorded work. Teachers will also assess pupils':

- Knowledge of tools, materials and equipment.
- Ability to record and communicate their design ideas in a clear manner.
- Personal qualities and attitudes towards their work.
- Ability to explain what they have created and how.
- Ability to use tools and materials safely and effectively.
- Ability to evaluate their work and the work of others.

11.2. The majority of assessments will be conducted through observations and discussion.

12. Resources and equipment

12.1. The school has a selection of centrally stored materials, tools and equipment to ensure that all pupils have access to the necessary resources. The D&T budget covers the cost of materials and replacement tools. Teachers will be required to maintain the tools and equipment in their room.

12.2. At the **start of every term**, the **Design & Technology Co-Ordinator** will assess the school's D&T tools and materials to ensure there is sufficient equipment for pupils, allowing funds to be allocated where necessary.

13. Monitoring and review

13.1. This policy will be reviewed every **year** by the **Design & Technology Co-Ordinator.**

13.2. Any changes made to this policy will be communicated to all members of staff.

13.3. 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 **April 2026**.