Design and Technology Policy

"If you have faith as small as a mustard seed, nothing will be impossible to you." (Matthew, 17:20)

GDPR

Data will be processed to be in line with the requirements and protections set out in the UK General Data Protection Regulation.

Policy to be reviewed every 3 years
Reviewed by L Nel and A Clark – August 2025
Next review date: Summer 2028

Introduction

The purpose of this document, is to give an overview of the provision and practice for 'Design and Technology' (DT) at St. Bartholomew's C of E Primary school. It covers the general principles and pedagogy involved. Teaching and learning is supported and monitored by the Design and Technology Co-ordinator, (Mrs) Lo-Ami Nel.

At St. Bartholomew's, we are committed to providing all children with learning opportunities to engage in design technology. Our planning and practice are based on the National Curriculum and taught through the D & T Association's - 'Projects on a Page' - scheme of work.

1. Values of Design and Technology

We believe that at its core, DT is about designing and making products for a specific user(s) and purpose. Our intent is that children therefore progress as informed users of products themselves and become innovators. DT involves children learning about the world we live in and developing a wide range of knowledge and skills through the processes of 'design and make'; It helps children to think though problems creatively, consider how to organise themselves, and how to use knowledge and skills to bring about change and shape their environment. Pupils are also given them the opportunity to work co-operatively: sharing skills, ideas and materials; listening to the advice of others; offering encouragement and praise as appropriate.

2. Aims for Design and Technology

We believe Design and Technology enables children to:

- develop their ability to create functional products, through combining their designing and making skills with growing knowledge and understanding of 'fit for purpose' and the 'made' environment;
- develop a sense of enjoyment and pride, working towards producing something to a brief (specification);
- develop an interest and understanding of the ways in which people from the past and present have used design to meet their needs;
- evaluate and analyse existing products as part of a project;
- Use a wide range of tools and materials;
- understand the importance of working safely and using protective measures;
- learn the principles of nutrition, healthy eating and how to cook.

In the Early Year Foundation Stage, we provide opportunities for children to:

- develop their curiosity and interest in product design and the 'made' world, talking about and asking questions, regarding products they are familiar with;
- develop the confidence, and their enthusiasm, for exploring and evaluating the usefulness of objects and undertaking activities to consider the joining, assembling and shaping of materials to make products;
- expand their vocabulary, through talking about and explaining their design ideas and subsequent 'making' activities.

3. Implementing Design and Technology - PROJECTS ON A PAGE

3.1 Planning

At St Bartholomew's school, planning at both Key Stages reflects the knowledge, skills and understanding detailed in the Programme of Study for Design and Technology in the revised National Curriculum for Key Stages 1 and 2, as well as the skills-based projection of work. We have adopted the 'Projects on a page' schematic approach to promote quality-first teaching and ensure progression of children's knowledge and skills.

- One unit of work is planned and undertaken each term in KS1 and 2.
- In the EYFS, daily design and technology activities may be planned: some initiated by children, and some led by adults.
- Children, in their designing and making, will apply pertinent knowledge, based upon: textiles, food, mechanisms, mechanical systems and structures - 'Electrical systems' being taught in KS2.

- All design, make and evaluate assignments provide learning opportunities for developing creativity through designing skills such as generating, exploring, modifying ideas through drawing, and modelling with materials.

3.2 Curriculum Content

In Foundation Stage, pupils:

- learn skills to support the direct teaching of Design and Technology as they progress into Key Stage One, for example: imaginative play, model making, problem solving, constructing and joining, scissor skills, fine motor skills and pencil grip.
- recognise that a range of technology is used in places such as at home and in schools;
- select and use technology for purposes;
- safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;
- represent their own ideas, thoughts and feelings through D&T.

In Key Stage One:

Design

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

Make

- Pupils will learn how to select from a range of tools and equipment to perform tasks, e.g. assemble, shape, cut and join.
- Pupils begin to use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluate

- Pupils will learn to evaluate their ideas against design criteria and suggest how their product could be improved.

Technical knowledge

- Pupils will explore simple mechanisms such as levels, sliders, wheels and axles.
- Pupils will explore how structures can be made stronger, stiffer and more stable.

Cooking and Nutrition

- Pupils should know that all food comes from plants or animals as well as consider how food has to be farmed, grown or caught.
- Pupils learn how to name and sort food into five groups of the Eat Well Plate.
- Pupils will learn how to prepare simple dishes safely and hygienically without a heat source.
- Pupils begin to explore techniques such as cutting, peeling and grating.

Key Stage Two:

Design

- Pupils will describe the purpose of their products as well as talk about it's features and how it works.
- Pupils will learn how to gather information (surveys, questionnaires, web-based sources) about the needs and wants of a group(s) of people, developing their design to meet these needs.
- Pupils use prototypes or annotated stetches to communicate ideas about their designs.

Make

- Pupils will use a wider range of tools, equipment and materials suitable to the task and know how to use these safely and hygienically.
- They will assemble, join and combine materials and components with some accuracy.

Evaluate

- Pupils will investigate and analyse a range of existing products.
- Pupils will evaluate their ideas and products against their own design criteria and consider ways to improve their work.

- They will learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.

Technical knowledge

- Pupils will explore how learning from science and maths help design and make products, for instance how simple electrical circuits and components, computer programs and mechanical systems (cams, pulleys, levers, gears, pneumatics) can be used to create functional products.
- Pupils apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

Cooking and nutrition

- Pupils will know that food is grown, reared and caught, as well as seasonal availability.
- Pupils will learn how to prepare and cook a variety of predominantly savoury dishes including those that require a heat source.
- Pupils will learn how to use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.

3.3 Links with other subjects and key competencies

DT lessons provide natural opportunities for children to practice and improve basic skills in English and mathematics. In the design, make and evaluate stages of assignments, key competencies - such as problem-solving, teamwork, negotiation, consumer awareness and organisation - will be developed. Through evaluating the process and their final products, children will also be encouraged to improve upon, their own learning and performance.

For planning and curriculum development, subjects at St Bartholomew's have been grouped. This enables a team of subject lead's to consider - from EYFS and across key stages - progression, how learning links and the best way to deliver and develop the skills and knowledge pupils need, from a cross-curricular perspective. Design and Technology forms part of the 'Innovation' team, with Computing and Science.

For example:

Computing

- Programming and control is used in electrical system projects in Year 5/6(are we including this in year 3 4 yet) to operate some of the children's products. This builds on work developed in computing.

Design and technology is used to raise children's appreciation of fundamental British Values.

3.4 Extending the curriculum

Whenever possible, children will be given opportunities to visit local museums, shops and restaurants and meet with designers, engineers, chefs, architects and students from college or secondary schools.

Participation in local DT competitions are encouraged to enable children to share their work with a wider audience.

4. Organisation

All class teachers will have responsibility for planning and teaching DT to their classes.

4.1 Inclusion

At St. Bartholomew's we ensure that all children have the opportunity to extend their knowledge, understanding and skill regardless of gender, race, physical or intellectual ability.

- A wide range of cultural images and contexts will be used in design and technology and we will use these opportunities to challenge stereotypes.
- For all children to produce their best, we support, scaffold and extend tasks through:
  - adapted worksheets;
  - changing the demands of a task;
  - more limited choice;
  - greater teacher intervention, small group work and teacher assistant support;

- ensuring the manipulative skills needed are manageable;
- selecting appropriate tools and equipment.

- Challenge is incorporated, having been assessed as appropriate, through tasks such as open-ended design briefs, rigorous testing of their products, carrying out independent research and/ or being given additional responsibilities such as leading a team.

4.2 The learning environment

We aim to provide a learning environment where children feel secure, and creative risk-taking and problem solving is encouraged. All design ideas and suggestions are valued.

4.3 Assessment, recording and reporting

- Pupils should have the opportunity to evaluate their work through 'self' and 'peer' review, to see what has worked well and demonstrate which knowledge/ skill(s) they are achieving or continuing to develop.
- Pupil's work should be presented with care and displayed well, to achieve the most aesthetically pleasing results. Pupils may write captions for their work, take photographs, entitle their creations, sign work and talk or write about their aims and vision.
- Evidence can be obtained through photographs of work in action and completed products.
- In EYFS, photographs of work are recorded and shared on Tapestry.
- Design projects in Key Stage 1 and 2, may be recorded in topic books where pupils can record their plans and designs as well as the different techniques employed.
- Subject Leads and governors, may collect anecdotal evidence by talking to practitioners, conducting pupil interviews and
- Teachers make 'notes' at the end of a unit/projects, recording those pupils achieving above or below expectations (in terms of demonstrating core skills and knowledge) to track progress half-termly and inform summative, end of year, assessment. This also aids subject evaluation and the development of planning and pedagogy.

5. Health, safety and hygiene

In order to maximise their learning experience, pupils are allowed full access to a wide range of materials in DT lessons. Health and safety considerations are inherent with this subject, including manual handling, correct storage of materials and tools and the practical use of equipment.

<u>The following guidelines outline our expectations</u>:

- ✓ the risks of each task will be assessed by the lead adult/ Class teacher before lessons, including Food products and processes;
- ✓ equipment (e.g. glue guns, saws) will be tested before the start of every lesson by the classroom teacher;
- ✓ pupils will be supervised at all times during DT lessons;
- ✓ all pupils will be taught how to use equipment safely by the lead adult before use and briefed on the importance of this guidance;
- ✓ 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;
- ✓ perishable food will be stored correctly and refrigerated where necessary - care will be taken by teachers and LSAs to ensure food is not used after the given sell-by date;
- ✓ if any cooking or food preparation is taking place in the classroom, all surfaces will be cleaned before and after use;
- ✓ parent helpers will be supervised when cooking with groups of pupils;
- ✓ teachers and LSAs will oversee that all cupboards, table tops and cookers are clean and in working order, before and after use

6. The Role of the Design and Technology co-ordinator

The subject leader will:

- explore ways to raise the profile of DT within school and inspire learning, bringing 'Design and Technology' to life for our children.
- monitor and evaluate the learning, pupil outcomes and teaching of DT within the school, collating evidence of good practice.
- devise an action plan to show future developments and review progress.
- in-line with the D&T Association, provide specialist support and guidance to colleagues on planning, up-to-date pedagogy and the most effective way to deliver projects.
- attend courses for CPD and report back to staff.
- monitor and review the policy and associated guidance.
- be aware of developments in DT, through: membership with the subject association; making links with subject specialists; school-school network opportunities; reading latest subject material.
- source and use outside agencies, where desirable, to stimulate and enrich school's DT provision.
- order and organise necessary resources, within the limits of the school budget.
- model best practice in the teaching of Design Technology.

7. Monitoring and Evaluation

At St Bartholomew's C of E, we value subject leader's undertaking monitoring activity, evaluative work and research, to promote quality-first teaching and ensure our provision and practice are in-line with developments in subject pedagogy and latest curriculum thinking. Co-ordinators will be allocated specific, termly time, to build a picture of what teaching and learning in Design Technology looks like, as part of continuous school improvement and the strategic planning process. The process will follow whole-school agreed procedures as detailed in the 'Monitoring and Evaluation' Policy.