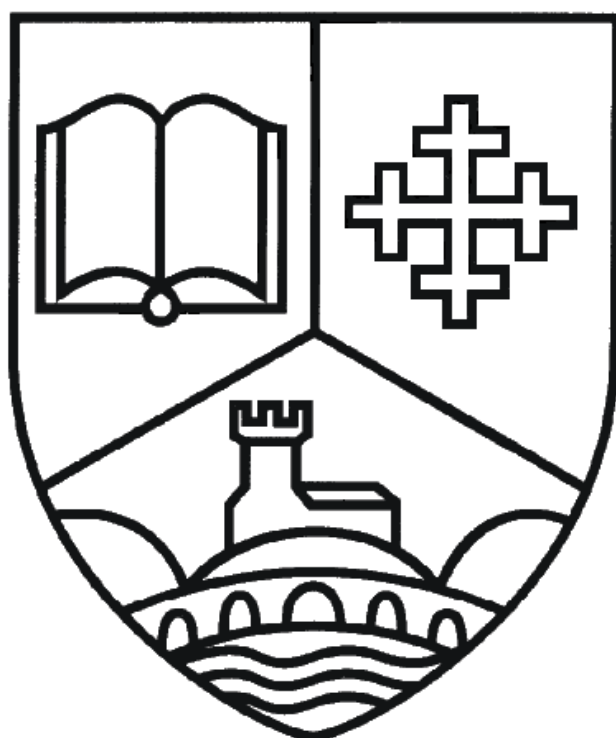


Bidford-on-Avon C.E. Primary School



Policy for Design & Technology

1. Introduction

This policy outlines the teaching, learning and management of the Design and Technology Curriculum at Bidford-on-Avon Church of England Primary School. The policy has been drawn up to reflect our whole school approach to Design and Technology and has been discussed with staff and has the agreement of the Governing Body. The implementation of this policy is the responsibility of the Head Teacher and teaching staff.

2. Purpose of study, intent and aims

Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education make an essential contribution to the creativity, culture, wealth and well-being of the nation.

The national curriculum for design and technology 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 and products 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.

3. Teaching and Learning

At Bidford-on-Avon Primary School our aim is to deliver a Design and Technology curriculum which can be accessed by all pupils. The curriculum should engage and inspire learners whilst conforming to, but not being limited to, the National Curriculum.

National curriculum objectives are taught discretely, with thematic links to the wider curriculum. Opportunities for learning are also drawn from outside agencies, visitors and visits to places of interest.

Art & Design objectives are taught discretely with relevant links made to topic work and the wider curriculum. Opportunities for learning are also drawn from outside agencies and visits to places of interest. We believe that pupils are best served being taught the best possible content, within discreet curriculum areas. Our curriculum is knowledge-rich and disciplinary/subject-based focussing on the key knowledge, vocabulary and skills. As appropriate contextual links are also made across other curriculum subjects to provide meaning and context for learning e.g. D&T linked to mask making in art; making structures linked to mathematics or fabric designed to create a historical item of clothing.

The use of rich questioning, well -pitched exposition, discussion, research, collaboration and the development of listening, communication, thinking and problem solving skills encourages pupils' curiosity and self-directed learning. Targeted feedback and formative assessment supports the enrichment, broadening and deepening of pupils learning.

At Bidford we believe that Design and Technology should be meaningful and embedded in the children's daily experiences. The curriculum should involve practical experiences, creativity and personalised learning, and is complemented by National Science and Technology Week.

Design Technology teaching is split into three types of activity. When designing and making, pupils are taught to:

- Investigate and evaluate a range of products and find out about Design Technology in the wider world.
- Next, the children complete a series of focussed tasks where they are taught specific technical knowledge, design skills and making skills.
- Then, they design, make, test and then evaluate their own product. This is where children create functional products with uses and purposes in mind. Where relevant this is linked to the wider curriculum or the school timetable to provide a clear purpose and meaning to their designs e.g. history – saxon structures, science – nutritious menu item; Christmas – design an electric santa sleigh.

The National curriculum provides details of how this process is differentiated from KS1 to KS2 for a range of design and make tasks including cooking and nutrition.

We recognise the fact that in all classes there are children of different abilities in Design and Technology and we aim to provide suitable and challenging learning opportunities by differentiating tasks, giving additional support to individuals or groups and allowing extensions to product outlines through independent research, creativity and problem solving.

4. Design and Technology Curriculum Planning

Key Stages 1 and 2

Design and Technology is a discrete subject within the National Curriculum for Key stages 1 and 2. In Key stage 1 and 2, when designing and making, pupils will be taught to design purposeful products, make using a range of tools and evaluate against a design criteria, using technical knowledge.

Cooking is an important part of the curriculum and as part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. 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.

Design and Technology curriculum planning is organised in three ways, long term schemes of work, medium term and short term planning. (See curriculum policy). Curriculum maps also outline the whole curriculum studied each year at each phase.

Long term schemes map out the elements of the Design and Technology programme of study studied each year for KS1, LKS2 and UKS2. Schemes identify the relevant design focus, key objectives, key vocabulary and products or designers studied in each unit of work. Supporting Progression maps also outline the key learning to be attained at the end of KS1; lower KS2 and Upper KS2.

Medium and short term planning details the aim and content of the lessons taught over each unit of work, relevant to the Key Stage and class, building upon their prior learning. Medium-term planning gives guidance on the key objectives, key vocabulary, key knowledge and skills, relevant designers, assessment milestones, cross-curricular links and cultural capital supporting the teaching of D.T and summarises the series of differentiated lessons over time.

The timing allocated to Design and Technology each term is outlined in the curriculum policy.

All planning is completed on standardised planning proformas to ensure consistency in content and expectation.

Over KS1 and KS2 through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making in a range of contexts. They learn to evaluate their ideas and products and recognise how Design and Technology has shaped the modern world. Over time they develop their technical knowledge: KS1 exploring how to build simple structures, use mechanisms and the principles of a nutritious diet to prepare dishes; KS2 developing more complex structures, using mechanical and electrical systems in their products; applying their understanding of how computing can program, monitor and control products; use cooking techniques to prepare mainly savoury dishes and understand the seasonality and the background to the ingredients they use.

As we have a combination of single and mixed year group classes, planning is done as part of a 2 year rolling programme. This ensures children have complete coverage of the national curriculum and do not have to repeat topics.

Design and Technology is delivered as individual and blocked lessons. Blocked lessons provide consistent time for pupils to design, make and evaluate their products within a creative process, whilst individual lessons might focus on developing a key skill or knowledge about a product or designer.

There are also planned cooking activities which are additional to the D&T curriculum related to special occasions, ceremonies, RE, history and science.

Early Years Foundation Stage

In Reception D&T is explored through the umbrella of 'Expressive Art and Design' and 'Physical Development' where children develop their motor skills by exploring and using simple tools and techniques safely and competently. They learn to select, shape, construct and join materials independently and cooperatively. Children are also encouraged to begin the process of evaluating their work by talking about what they could add next time or why they chose to do something the way they did. Children are exposed to key D&T vocab including naming the resources, tools and techniques they are using. They begin to generate inspiration and conversation about the designs and designers they study.

Cross-Curricular links

At Bidford, we believe it is important that meaningful links are made with other curriculum subjects, such as Mathematics, Science, Computing, History and Art & Design. Where appropriate, the evaluation and design of products is given context, meaning and purpose through links to other subject themes e.g. building historically themed structure or mechanism. D&T has close links to maths through the use of data and measuring; to science through the study of materials and electricity; skills developed in art support the design process. History provides a focus on how key inventions, inventors and designers have shaped our world over time and its impact on society.

Well-being and SMSC

We provide an education that gives pupils opportunities to explore and develop their values and beliefs, spiritual awareness, high standards of personal behaviour, a positive caring attitude towards other people, an understanding of social and cultural traditions and an appreciation of the diversity and richness of other cultures, including British Values of democracy and equality.

All curriculum areas have a contribution to make to the child's spiritual, moral, social and cultural development and opportunities for this are planned in each area of the curriculum. D&T introduces pupils to the moral and social issues that new technology, inventions and designs have brought to society, along with the benefits and the human endeavour involved in their creation. Questioning and reflection supports pupils' spiritual development as they consider how design and technology brings meaning into our lives and reflects human development and endeavour.

Community cohesion and British Values

Through our D&T planning, links are made to Community Cohesion by looking at the importance of D&T in our local area and other cultures and how this has impacted the local community's development and the wider British nation. Developments in D&T reflect the cooperation between different groups or individuals and how decision making related to changes in rules and laws are done through the democratic process supporting British values.

5. Impact

The following outcomes are a result of our Design and Technology curriculum and wider provision:

- Pupils develop the creative, technical and practical expertise needed to perform age-related Design Technology tasks confidently
- Pupils develop a confident level of knowledge, understanding and skills in order to design and make high-quality products for a wide range of contexts and purposes
- Pupils evaluate and test their ideas and products and the work of others
- Pupils design and make a range of products that are completed to a standard of expectation appropriate to age and ability
- Pupils understand and apply the principles of nutrition linked to a healthy lifestyle
- Develop the curiosity, creativity, compassion, faith, hope and courage they need to flourish as valued members of the world community, as educated citizens and as part of God's creation
- Meet the end of Key Stage expectations outlined in the National Curriculum for Design and Technology.
- Leave primary school equipped with the confidence, creativity and range of techniques to form a strong foundation for their work in KS3 and beyond.

6. Management of Design and Technology within the school.

The Design and Technology subject manager is responsible for:

- Compiling, carrying out and evaluating the school Design and Technology action plan.
- Maintaining and updating the subject leader folder.
- Coordinating subject assessment and monitoring.
- The organisation of Design and Technology resources within the school.
- Keeping informed of changes and updates in Design and Technology teaching, for example by attending Leading Learning Network meetings and feeding back information to the rest of the staff.
- Supporting the Senior Leadership Team in the monitoring of standards in children's work and of the quality of teaching Design and Technology.

7. Health and Safety

In planning activities, including visits or the use of tools, materials and food teachers will risk assess potential safety issues, referring to the relevant policy and documentation. They will also explain the reason for safety measures and discuss any implications with the children. Children will always be encouraged to consider safety for themselves, others and the environment and the resources they use, when undertaking D&T activities.

The following considerations are carried out to prevent children from being put to unnecessary risk:

- All tools and practical equipment are kept in good condition, stored safely and well-organised
- Children are provided with appropriate training in the use of cutting tools and are supervised at all times
- Work areas are appropriately arranged i.e table covers/ aprons to prevent spillage or damage to resources or clothes
- Allergies are considered when ordering malleable materials or the use of food items.

Staff follow CLEAPSS documentation and advice on managing the safety of science and technology activities.

All trips/visits must be risk assessed and an EVOLVE risk assessment form completed and signed by the Educational Visits Coordinator (EVC). Follow guidance in the Educational visit policy regarding arrangements for all trips.

8. Safeguarding

All activities in Design and Technology will be managed within the guidelines stated in the school safeguarding policy. All additional adults/volunteers supporting Design and Technology activities must be informed of their safeguarding duties and checked with the office/safeguarding leads for their suitability before being asked.

The use of digital devices and the internet by staff and pupils will be managed within the guidelines stated in the online safety policy.

9. Assessment and Recording

Teachers assess children's work in Design and Technology by making formative assessments as they observe them or engage them in discussion during each Design and Technology lesson. On completion of a piece of work, the teacher marks the work and comments as necessary, identifying where appropriate, good examples of work and areas to improve or questions. Children are asked to self-assess their work, commenting on their successes and suggesting where improvements could be made. Opportunities are provided for children to discuss and evaluate work with their peers.

At the end of each unit of work, the teacher makes a summative judgement about the skills and performance of each pupil if they have yet to attain, met or exceeded the unit objectives linked to the national curriculum (recorded on unit plan) – a conglomeration of this data, along with subject milestones are used to assess/ record pupil's attainment at the end of the year (recorded on subject attainment tracker). Staff use a subject milestones progression map to check their progress against key stage benchmarks. Key Stage teams complete a termly subject review, which supports improvement in planning and resourcing of subjects. The subject leader completes a periodic monitoring of planning, pupil work and attitudes and completes an annual subject action plan/review and end of year subject report to support the monitoring of standards in the subject.

Photographs are taken as a record of children's practical work. The Design and Technology subject manager keeps levelled samples of children's work in a portfolio to support staff's understanding of the expected standards across the year groups.

10. Resources

D&T Association's 'Projects in a page' scheme of work, based on universal principles of effective teaching and learning in D&T is the main resource used for planning at KS1 and KS2, providing a progression of imaginative, purposeful ways to implement the curriculum. Design and Technology resources are kept in the Key Stage 1 corridor. A list of these resources can be obtained from the Design and Technology subject manager. Completed models may be taken home, but small charge to children may be required, in order to replace resources used at the discretion of the class teacher or head teacher.

11. Monitoring and review

Monitoring of the standards of the children's work and of the quality of teaching Design and Technology is undertaken to ensure that pupils make the best possible progress. The annual Design and Technology action plan outlines yearly subject improvement tasks and reviews the previous year's actions. Subject leaders conduct termly/ yearly monitoring activities looking at standards, planning and pupil experience. Governors meet periodically with subject leads to review the intent, implementation and impact of their work.