

Primary School



Design and Technology Policy

Reviewed June 2021

Introduction

This is a statement of the aims, principles and strategies for the teaching and learning of Design and Technology at Broad Heath Primary School.

The importance of Design Technology

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 makes an essential contribution to the creativity, culture, wealth, and well-being of the nation. (The National Curriculum, 2014)

Our Vision

Our vision is that every child at Broad Heath is entitled to become confident and competent user of design and technology. Every child can develop and practise their DT skills.

Intent

Design and Technology involves the application of knowledge and skills when designing and making products and helps to prepare children for the developing world. The activities undertaken will enable our children to consider the needs of individuals and of society. The subject encourages children to use a range of materials and processes and to become creative problem-solvers, both as individuals and as part of a team. We aim to ensure that the activities undertaken in Broad Heath Primary School will impact on the children's local environment and support them in the wider world to become selective and informed consumers and potential innovators. It should assist children in developing a greater awareness and understanding of how everyday products are designed and made.

The purpose of this policy is to ensure the effective delivery of the National Curriculum for Design and Technology and to promote the delivery of the subject within cross-curricular activities.

In the Early Years, pupils will experiment to create different textures and to manipulate materials to achieve a planned effect. They will construct with a purpose in mind, using a variety of resources and simple tools and techniques competently and appropriately.

During Key Stage 1, pupils learn how to think imaginatively and talk about what they like and dislike when designing and making. They build on their early childhood experiences of investigating objects around them. They explore how familiar things work and talk about, draw and model their ideas. They learn how to design and construct objects safely and may use ICT as part of this process.

During Key Stage 2, pupils work on their own and as part of a team at a range of designing and making activities. They think about what products are used for and the needs of the people who use them. They plan what has to be done and identify what works well and what could be improved in their own and other people's designs. They draw on knowledge and understanding from other areas of the curriculum and use computers, software and hardware in a range of ways in order to develop their ideas.

Teaching will ensure that the specific expectations of 'knowledge and understanding' are applied when 'developing ideas', 'planning', 'making products' and 'evaluating' them.

Aims:

Broad Heath Primary School endeavours.

To develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.

- To foster enjoyment, satisfaction, and purpose in designing and making.
- To use our state-of-the-art DT and engineering pod.
- To provide a range of structured and appropriately differentiated activities which develop a breadth of experience and progression in skills. Where possible, these will relate to the interests and everyday experiences of our pupils.
- To develop knowledge and to teach skills to assist in the design and making of products successfully.
- To develop the children's knowledge of tools and to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To help children become aware of and to investigate simple products through disassembly and evaluation.
- To provide adequate time frames, access to information, skills, and resources to develop an effective, useful and appropriate end-product.
- To enable children to talk about how things work, and to draw and model their ideas.
- To provide equal opportunities for access to tools and skills and to develop the qualities, aptitudes, skills, and intelligences of individual pupils.
- To use ICT software to assist our designing and learning.

Impact:

- Through learning the principles of design and technology in conjunction with other areas of the curriculum (Science/Maths/Computing etc.), pupils will develop their own capacity for individual excellence. Through individual and team endeavours, they will learn the necessity of clear planning, effective/efficient production, collaboration with others, self and peer-evaluation and flexibility. It will also provide them with opportunities to use computing skills in a range of practical applications.
- These skills will have a clear impact on their ability to function in the world of work at a later stage of their lives as well as in the classroom and local community.
- Additionally, they will learn to be resourceful and pro-active in everyday problem-solving situations through knowledge of the importance of flexibility of approach and through listening to the ideas of others. They will come to understand that they must take into consideration the function of the product and its users. Throughout the course of a project, they will be able to consider the implications of their choices of materials and, thereby, engage meaningfully with the Reduce, Re-use, Recycle agenda.
- This policy will work to equip our children with the key skills of project-management, team building and a sense of pride in their creativity. They will become more pro-active, more able to lead and more practical in their thinking and solving of problems that affect society.

Inclusion:

- All pupils, regardless of race, religion, gender, class, educational need or disability will be given the opportunity to develop their design and technology skills and understanding in a safe and supportive environment.
 - Teachers should be aware of the individual and differing needs of all pupils including those with physical, emotional and learning difficulties as well as those pupils identified (or being monitored) as able and talented.
 - Alternative or adapted activities will be provided to overcome specific difficulties with

tools, equipment and materials.

- Children with specific learning difficulties will be given more time, support or guidance as appropriate to complete the range of work. Additionally, opportunities to communicate their ideas through means other than writing and drawing will be provided for.
- Where pupils are to participate in activities in the DT and engineering pod, a full risk assessment will be carried out prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Assessment and Record Keeping:

Teachers assess work in design and technology by making observations of the children working during lessons and assessment is used to inform future planning and to review children's capability. Design and Technology assessment grids are used throughout the key stages to assist with formative and summative assessment. At the end of a unit of work, children undertake a review of their work that focuses upon an evaluation of the finished product and an overview of the various tasks undertaken. Where appropriate, children will use design sheets or booklets to plan, record, assess and evaluate their work.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

- The Early Years Foundation Stage (EYFS) Profiles and school tracking system (including Pupil Progress documents) are used to record assessments in Nursery and Reception.
- In KS1 and KS2 on-going formative assessment, both during and at the end of each unit to inform summative assessments. Children will be assessed at, working towards, expected and greater depth.
- Reference can be made to the level descriptors in the National Curriculum alongside the portfolio of examples produced by NES.

Use of Art and Design Books

Art and Design books are used in KS1/2 to regularly record, collect and explore ideas and images and other information relevant to current and ongoing work. The art and design book is an essential and a visual/personal diary of what they have achieved and should show clear progression through skills taught within each topic. Children will be taught when to use their books appropriately, reflective skills will be instilled, and students will be encouraged to review prior content frequently. Learning journeys clearly labelled as DT should be included for every topic. These must include key vocabulary and skills covered throughout the Topic. Art and Design Books will be used to evidence the children's work. Children will use these books to explore, develop and record their observations and ideas. Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end-product are also valuable evidence.

Teaching and Learning

Key Stage 1

DT in KS1 will be taught as part of the topic-based curriculum, with links to other subjects. KS1 children will be taught:

- **Design:** to design functional and attractive products to appeal not only to themselves, but also to other identified users.
- **Make:** to select and use a range of tools and materials.
- **Evaluate:** to evaluate their own designs against the design criteria and to evaluate existing products.
- **Technical Knowledge:** to build structures, exploring how they can be made stronger, stiffer, and more stable and explore and use mechanisms [for example, levers, sliders, wheels, and axles], in their products.
- **Cooking and nutrition:** to understand where food comes from and the basic principles of a healthy and varied diet. To design and prepare dishes based on this knowledge.

Key Stage 2

It is intended that work of Key Stage 2 will build on, and develop the skills learned in Key Stage 1. Children will be taught the skills and knowledge needed to successfully design and make and evaluate their work.

- **Design:** to carry out research of existing products.
To develop design criteria in order to produce a product which is fit for purpose and aimed at a specific group of people.
- **Make:** to select and use a range of tools and materials, considering their product's functional and aesthetic qualities.
- **Evaluate:** to evaluate existing products, their own work, and the work of others in order to improve their design. To understand how designers and their products have helped to shape the world.
- **Technical Knowledge:** to apply their understanding of how to strengthen, stiffen and reinforce more complex structures, understand, and use mechanical systems in their products, understand and use electrical systems in their products and apply their understanding of computing to program, monitor and control their products.
- **Cooking and nutrition:** to understand the seasonal nature of foods, and where and how it is produced. To understand what it means to have a healthy diet. To cook and prepare a range of predominantly savoury foods using a range of techniques.

Health and Safety

- Teachers always teach the safe use of tools and equipment and insist on good practice. Children should be strictly supervised in their use of equipment at all times.
- Direct safety instructions should be given to children each time they undertake a design and technology activity.
- The craft knives and rotary cutters will only be used by responsible Year 4, Year 5 and Year 6 children under direct supervision.
- The glue guns will be used by Key Stage 2 children only when supervised.
- Food will be brought and stored in a safe place.
- Food safety procedures will be followed when preparing for food activities.
- Staff will ensure that allergies and permissions are planned for before any food items are used (lactose-intolerant/vegan/allergens etc.)

Resources:

- Resources are stored safely in the Science cupboard (Science/DT Pod). Specialist resources need to be requested from the Design and Technology Co-ordinator in anticipation of teaching the unit.
- The Design and Technology Co-ordinator is available for support in areas of the curriculum where it is needed.

Monitoring and Reporting

The Design and Technology Subject Leader and Senior Management are responsible for observing practice and monitoring the quality and impact of DT teaching and learning. The Design and Technology Subject Leader will carry out termly monitoring which may include:

- interviewing children to discover their perceptions of the subject.
 - work/planning sampling and scrutiny to ensure coverage and progression throughout the school,
- The Design and Technology Subject Leader will feed back to staff findings from monitoring and advise them on good practice/areas for development.

The school DT policy is reviewed and approved by the governing body.

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