DESIGN TECHNOLOGY POLICY

BUTTSBURY PRIMARY SCHOOL

AN ACADEMY SCHOOL

Approved by:	Full Trust Board
Last reviewed on:	Spring 2024
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1. Introduction

This document is a statement of the aims, principles and strategies for the teaching and learning of Design Technology.

2. Rationale

We believe the school can play an important role in helping children develop creative thinking and encourage them to make positive changes to their quality of life. Design Technology prepares children to take part in the development of tomorrow's rapidly changing world and plays an important part in each child's development including SMSC issues surrounding sustainability and responsible resourcing.

We believe Design Technology encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems that are constantly evaluated for their effectiveness.

3. Aims

The aim of this policy is to communicate clearly to staff, parents, governors, visitors and pupils how Design Technology is approached at the school.

We aim to develop in children an understanding of how to design and make things that work for a purpose. This will include looking at how everyday products have been designed, developed and manufactured to perform a given task or developed for a specific audience. Children are encouraged to develop their own confidence, independence and ability to work through the processes of designing and making and evaluating products. Each year group also has one food technology unit.

Intent

At Buttsbury Primary School we intend to provide an ambitious Design Technology curriculum that is broad and well-balanced, which follows the national curriculum. High quality Design technology lessons enable children to understand the design process involved in product development. Children will conduct research and experimentation to make informed decisions on materials and inspire creative and innovative design choices that best suit a range of purposes. The children will be taught to evaluate and adapt to the needs of the project and restraints of the materials used, becoming increasingly more confident in using a range of tools to make their products. Children will develop an understanding of technical vocabulary and our role within responsible resourcing. Our mastery approach provides pupils with opportunities to apply new and existing skills to a range of engineering challenges.

Pupils will be introduced to a range of progressive engineering challenges, which are suitable to their understanding and experiences of materials and building processes, and develop their knowledge and understanding of technological processes, products and manufacturing. We include SMSC issues related to materials and sustainability in order to ensure that pupils have the cultural capital to be successful and responsible citizens.

In Design Technology, pupils are expected to be reflective and evaluate their work, thinking about how they can make changes and keep improving. This should be meaningful and continuous throughout the process, with evidence of age-related verbal and written refection in Design Technology folders. Pupils are encouraged to take risks, experiment and then reflect on why some ideas and techniques are successful or not for a particular project.

Implementation

Design Technology units are planned half-termly and follow a sequence of product research, material selection, planning, prototyping, manufacturing and evaluation of the final product. In EYFS, children

begin to develop their Design and Technology skills through the participation of “creation stations” in their classrooms and outdoor areas. Further strands in include Cooking and Nutrition, Textiles, Construction, Mechanical systems and Electrical systems.

As part of this planning process, teachers will consider the following

- Use of design and engineering vocabulary;
- Use of project folders to record the sequence of lesson;
- A cycle of lessons for each subject, which carefully plans for the needs of all pupils, progression and depth;
- Challenge questions for pupils to apply their learning in a philosophical and open manner;
- Opportunity for imaginative thinking in children, which includes experimenting with materials and methods;
- Opportunities to enable children to identify limitations and make adaptations before the final build and evaluation;
- Use of questioning, using the platform of Bloom’s Taxonomy, to challenge pupils’ responses.
- A means to display and celebrate the pupils’ prototypes and final builds.
- Enriching the curriculum by inviting visitors into the school and also arranging external visits.

In addition, teachers with have access to high quality CPD to ensure that they have strong subject knowledge.

Impact

Our Design Technology Curriculum is high quality, age and experience appropriate and is planned to demonstrate progression. Pupils enjoy their learning and are enthused by the knowledge they gain. If pupils are keeping up with the curriculum, they are deemed to be making good or better progress. Creative design choices are encouraged and linked with individual rationale based on experiences and experimentation. Project folders will evidence the progression of their work and they will be able to recall and discuss the processes and choices made at different points of the construction project.

4. Definition of the Design Technology Curriculum and content of that curriculum.

The national curriculum defines Design Technology as a foundation subject.

In the Early Years Foundation Stage (EYFS), Design and Technology (DT) activities support children’s development across several areas of the EYFS framework, particularly *Expressive Arts and Design* and *Physical Development*. Through practical activities such as cutting, construction, building, and creating with a variety of materials, children develop fine motor skills and coordination, meeting the Early Learning Goal of "Using a range of small tools, including scissors, paint brushes and cutlery." DT also encourages creativity and imagination, as children design and make their own models or constructions, linking to the goal of "Safely using and exploring a variety of materials, tools and techniques." These activities promote problem-solving and critical thinking, supporting the *Understanding the World* area by helping children explore how things work and make purposeful creations. DT in EYFS provides a rich context for developing communication skills, collaboration, and confidence, laying strong foundations for future learning.

At Key Stage 1 and 2, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making through a variety of creative and practical activities. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

The skills taught include investigation and evaluation of manufactured objects and mechanisms, including their fitness for purpose; designing and making, including choice of appropriate materials and processes; use of appropriate tools; quality control and evaluation of their achieved objective.

5. Role of the Subject Leader

To develop the Design Technology policy throughout the school.
To monitor and evaluate progress in Design Technology.
To take responsibility for resources.
To keep up to date with developments in Design Technology and STEM Education.

6. Equal Opportunities

The school is committed to working towards equality of opportunity to all aspects of school life. Our aim is to offer all our pupils a Design Technology curriculum that is relevant and adapted so that all our pupils may reach their full potential and grow in self-esteem. More able pupils are identified and extended, SEND pupils are supported and EAL pupils benefit from relating learning to prior knowledge and experience.

7. Assessment, recording and reporting

Assessment will be undertaken twice per year and are formed using National Curriculum bands.

Use of Subject Specific books and questioning.

DT books are used throughout the school to regularly record, collect and explore ideas. The books create a personal record that helps the children to collate and present findings in relation to product research, materials experimentation, initial plans and evaluations. As a result of the manufacturing process and material research, children are encouraged to make creative design choices with informed reasoning and questioning (peer, teacher and self).

The manufacturing process also allows for prototyping of aspects of the final build and children are able to make essential evaluations before their final build and evaluation of the design process. There are two methods of topic evaluation for the children. The first is an evaluation of the construction, given as a stand-alone questionnaire reflecting on the process and final build. The second is the completion of the KWL grid to reflect on the child's learning and understanding of the concepts. Children are also encouraged to make annotations to designs during the building process.

DT books are an essential record of an individual child's experiences and ideas throughout a year and are evidence for assessment and reporting purposes.

Marking

Marking is a combination of teacher, peer and self-marking. In line with school policy, teachers mark with a smiley face in purple.

Parents will receive an annual summative report of their child's achievement in Design Technology.

8. Organisation

The Design Technology curriculum is organised as part of an integrated approach to learning wherein:

- Design Technology is taught as a mainly separate programme of study with clear links to other areas of study where appropriate.
- Work in Design Technology is done through co-operative group work or individual work. Class teaching is used where appropriate.
- There is no specialist teaching in DT, it is taught by class teachers.

- Pupils with special needs and EAL are able to develop confidence and express their feelings in Design Technology as it is a subject in which success does not depend on academic ability.

- The emphasis in our teaching of Design Technology is on practical experience and we encourage children increasingly to take control of their own learning.

- Excellence in Design Technology is celebrated in display and performance including:

- suitably mounted displays in classrooms and throughout the school

- entry into competitions

- presented at the annual Open Evening in the summer term

- Classrooms have a range of basic resources, with the more specialised equipment being kept in the DT Room. This equipment is accessible to children only under adult supervision.

9. Health and Safety

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. Details of the school's broader approach to health and safety can be found in the Health and Safety Policy.

There are, however, practices that are specific to Design Technology that ensure the safety of pupils and staff:

- Suitable clothing such as aprons or old shirts needs to be worn to protect clothing (where necessary) during Design Technology activities.

- Long hair should be tied back to keep it out of glue, tools, etc.

- Children must be taught to use sharp tools and equipment with care. They should be taught to consider their safety and the safety of those around them.

- Appropriate tools to be selected and used where appropriate. Teachers and the subject lead are responsible for checking the safety and condition of equipment.

- All pupils and staff know what to do in the case of an accident and have access to First Aid boxes.

Mastery in Design Technology at Buttsbury Junior School

Effective mastery in Design Technology encourages all pupils to be resourceful and to explore and evaluate properties of materials to create a product. They are aware of SMSC issues relating to the sustainability and recycling of materials and their collection.

Pupils are provided with ample opportunities to create effective links across the integrated Design Technology process which includes: research, design, creating a prototype, evaluate, creating a final product and evaluation. The children are able to relate their teaching into wider facets of manufacturing.

They are able to reflect on their designs and prototypes to identify problems and seek appropriate solutions. Children are able to evaluate their choice of materials and the making process, as well as work from their peers.

Pupils are able to select tools to create their products independently based on their knowledge and reasoning of the design specification.

“Experts” are used in lessons to share specific skills to promote greater learning and understanding and develop methods for key manufacturing issues. As a result, children can apply facts and skills learnt to solve problems in the real world. Children are able to apply a range of practical skills from other subjects, including: accurate measurements, understanding of material properties and resourcing of materials.

10. Working with parents

The school is committed to working with parents and believes they play an important role in helping children develop in Design Technology. We welcome support during complex build and food technology units to allow greater opportunities to participate in more complex tasks and share in the knowledge and skills within our community.

11. Staff Training

Staff will be encouraged to attend courses, review resources, liaise with the infant school and local secondary schools and update themselves on information and approaches to Design Technology in order to help improve and monitor the teaching of Design Technology.
Staff INSET will be organised as appropriate.

12. Dissemination

The policy is available on the school’s website.

13. Monitoring the Design Technology Policy

The effectiveness of the school's approach to Design Technology is assessed throughout the year through lesson observations, planning and work scrutiny including ongoing records in Project Folders, as well as pupil interviews and questionnaires.

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