Securing an Excellent Design and Technology Curriculum for the Children of Botley C of E Primary School

Intent of the Design and Technology Curriculum

Design and Technology is an inspiring, rigorous and practical subject. At Botley, we believe a high-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Botley, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Design and Technology gives children the opportunity to express themselves as individuals, and consider and respect the views and opinions of others. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers in design.

Implementation of the Design and Technology Curriculum

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in a process of designing and making. The children work in a range of relevant contexts to design and make.

As part of this process, children are taught 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
- complete cross-sectional diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately
- 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 design and technology 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
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

Key skills and key knowledge for Design and Technology have been mapped across the school to ensure progression between year groups. This also ensures that there is a context for the children's work in Design and Technology; that they learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study. Design and Technology lessons are also taught as a block so that children's learning is focused throughout each unit of work. Staff model explicitly the subject-specific vocabulary, understanding and skills relevant to the learning and enable children to develop and retain new knowledge and understanding. Assessment is ongoing throughout each unit to inform teachers of progress and to support them with responsive teaching approaches that ensure that they appropriately meet the needs of all.

<u>Impact of the Design and Technology Curriculum</u>
The impact of the Design and Technology curriculum is to equip children 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.

We ensure the children;

• 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 and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child.