Design and Technology
Intent, Implementation and Impact

Intent
Design and Technology is an inspiring, rigorous and practical subject. 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 Holmwood, 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. 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. Children learn to take risks, be reflective, innovative, enterprising and resilient.

Implementation
Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

When designing and making, the 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, 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 taught as a block so that children's learning is focused throughout each unit of work.

At Holmwood, children are able to experience 'Forest School' as part of Design Technology lessons.

Forest School offers children opportunities to achieve and develop confidence and self-esteem through hands-on learning experiences in a natural, woodland environment. Children learn new skills and then apply these as they navigate their own learning journeys, developing a deeper

connection with nature as they progress. It requires a holistic approach to learning and the benefits are intellectual, physical, cognitive and emotional

Children develop skills through working together as a team, learning to take risks and becoming more resilient as a result. During Forest School, children will take part in activities such as; den building, safety around a fire, cooking on a campfire, how to use a saw and peeler, knot tying and designing and making your own kite.

In KS2, children are given the opportunity to engage in woodwork activities, which are taught alongside Design and Technology lesson. By engaging in these activities, children are able to use their hands, build confidence, strength of character, and problem solving capabilities.

Impact

We ensure 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.

Children 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.