Design Technology

Intent

At Holland Moor Primary School, we have built a Design Technology curriculum which is inspiring, rigorous, and practical. We want our children to use 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 intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, and experiences they need to be successful in later life.

Implementation

Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum.

This is implemented through:

- Blocked units to allow children to focus on developing their knowledge, skills and understanding, studying each topic in depth.
- Use of The Design and Technology Association scheme of work has to underpin a thorough and succinct, whole school overview of the DT curriculum which allows for progression across year groups in all areas of DT (textiles, mechanisms, structures, food and electrical systems).
- Well planned and resourced projects providing children with a hands-on and enriching experience.
- Teaching a range of skills to ensure that children are aware of health and safety issues related to the tasks undertaken.
- Addressing the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts in each project from Year 1 to Year 6.
- Pupils being introduced to specific designers, chefs, nutritionists, etc. helping to engender an appreciation of human creativity and achievement and increase the cultural capital from which they can draw in the future.

As a school, we promote Design and Technology in the wider school through a STEM (Science, Technology, Engineering and Mathematics) after school club, allowing children to explore new and existing skills and to make links to future career opportunities.

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Early Years Foundation Stage

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

Impact

Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through carefully planned and implemented learning activities, the pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world leaving Key Stage 2 at or above the expected standard.

Pupil's skills and knowledge are assessed in an ongoing way by the class teacher throughout lessons, and a summative assessment is completed termly. This informs the Design and Technology coordinator of any further areas for curriculum development, pupil support and/or training requirements for staff.

Vertical Concepts in Design Technology

At Holland Moor, we use *vertical concepts* from Nursery to Year 6. These are big ideas or themes that grow in depth and complexity as our children move up through the school. Vertical concepts provide a structured approach to learning, helping children connect ideas across different subjects and understand how topics develop as they progress through each year. Our Vertical concepts in Design Technology are as follows:

User-Centered Design

Design products that meet different users' needs, combining functionality and style to ensure they're both useful and attractive.

Design Technology

Design Process

Solve real-world problems by designing solutions, creating and testing prototypes, and refining designs based on feedback.

Systems and Mechanics

Explore how movement works with levers, wheels, and gears, then build basic circuits and advance to simple programmable systems that control movement.

Materials and Construction

Learn about different materials and select the right ones based on their properties, while understanding recycling and designing products with minimal environmental impact.