Windmill Hill Primary School

Windmill Hill is committed to lifelong learning within a caring environment. Together we make a difference."

Subject Information

Design Technology

Skills of a great design and technology student:

- Use imaginative and creative thinking.
- Able to identify a need and provide a solution for it.
- Skilful and resourceful in selecting the appropriate tools and techniques to make a product.
- Able to test and evaluate a product and say what they like and dislike about it.
- Resilient and confident enough to take risks and learn from any mistakes.
- Able to make links and apply their learning from other subjects, e.g. science, maths, art and computing.

Our vision for design and technology:

At Windmill Hill we encourage our children to explore their creativity and use their imagination through this inspiring, hands-on and practical subject. Pupils are given the opportunity to design and make prototypes and products that solve real and relevant problems, within a variety of contexts and while considering the needs, wants and values of a range of users. Our vision is for them to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Understanding and applying the principles of nutrition and learning how to cook is also a very important element of future wellbeing.

In line with the iterative process, the key strands for design and technology are:

- **Design** - researching need and existing products, planning, communicating, innovating, developing, use of technology to aid the design process.
- **Make** - selecting and working with a range of tools, equipment, materials and components to make a quality product/food for an intended purpose.
- **Evaluate -** compare against designs and plans. Understand how key events and individuals in design and technology have helped shape the world.
- **Technical knowledge** - applying their understanding of computing, mechanical systems (e.g. levers, linkages, gears) and electrical systems (e.g. switches, bulbs, motors etc.) to their products.

Overview

Design and Technology at Windmill Hill will develop pupils' creativity and imagination, as they design and make products that solve real and relevant problems within a variety of contexts. 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.

Intent

- To help pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- To enable pupils build and apply their knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- To teach pupils how to critique, evaluate and test their ideas and products and the work of others.
- To enable pupils to understand and apply the principles of nutrition and learn how to cook.

Implementation

- Teachers will use a variety of creative and practical activities, to teach pupils the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
- In both key stages, D&T will be taught through the units of study of the other foundation subjects and in the EYFS opportunities for teaching and learning in D&T will be provided through creative and structured play.
- Pupils will 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.
- Pupils will work in a range of relevant contexts for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment.
- They will be provided with opportunities to generate, develop, model and communicate their ideas through talking, drawing, templates, and, where appropriate, information and communication technology.
- Pupils will select from and use a range of appropriate safe tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing.
- They will have opportunities to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics, functional properties and aesthetic qualities.

- Pupils will be given time to explore and evaluate a range of existing products and evaluate their ideas and products against design criteria including their own design criteria and consider the views of others to improve their work.

- They will be given the opportunity to build structures, exploring how they can be made stronger, stiffer and more stable; and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Impact

Through a variety of creative and practical activities, pupils will be confident in the knowledge, understanding and skills needed to enable them to engage in the creative process of designing and making. They will use other subjects such as mathematics, science, computing and art as starting points for designing and making. Pupils will become confident to take risks, as they develop and become resourceful, innovative, enterprising and capable citizens. They will understand how key events and individuals in design and technology have helped shape the world.

Helping your child with design and technology at home:

- Cook, bake and be creative with a range of simple, healthy and nutritious recipes and dishes at home.
- Teach your child simple health and safety rules when using equipment.
- Let your child explore and experiment. Allow the opportunity to make and learn from mistakes – safely.
- Design, make and create at home with a wide range of materials, construction toys and suitable pieces from your recycling - let their imaginations run wild!
- Children may also enjoy using their digital/computing skills to design and create.

Useful links:

Ten Free Design Technology Activities and Ideas for Parents

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239041/PRIMARY_national_curriculum_-_Design_and_technology.pdf

https://www.twinkl.co.uk/blog/back-to-school-ten-free-design-technology-activities-and-ideas-for-parents