Design and Technology: The Harris Way

At Harris Primary School, we inspire our pupils to use their creativity and imagination to design and make products that solve real-world problems. We challenge our pupils to link their learning across maths, science, computing and art to create high-quality products for specific users and meaningful purposes.

We want our pupils to take risks and become resourceful, innovative and enterprising. By exploring designs from the past and present, they develop a clear understanding of how design technology shapes our daily lives and the wider world.

What can you expect?

EYFS

- Uses various construction materials e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces.
- Uses tools for a purpose
- Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking.
- Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding.

KS1

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and nutrition

- use the basic principles of healthy and varied diet to prepare dishes.
- Understand where food comes from.

KS2

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 and exploded 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 [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Assessment and Feedback

- Teachers assess through the research, design, plan, make and evaluate phases through questioning, discussions and verbal feedback.
- Peer and self-assessment throughout the DT units.
- Units of study allow pupils to create prototypes, make mistakes, solve problems and address misconceptions.
- Exit questions, quizzes and retrieval tasks strengthen long-term recall.
- Teachers track progress using school systems to identify gaps and provide rapid support.

Skills development across Design Technology
- 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
- 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.

We love to talk about our Design and Technology journey – please come and ask if you have any questions!