



Hockliffe Lower School

Design Technology Curriculum Statement

Intent

We believe design and technology should be an inspiring, rigorous and practical subject which encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. We believe our children should be encouraged 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 and values. We believe children should evaluate past and present technology and develop a critical understanding of its impact on our daily lives and the wider world.

Implementation

Children work in a range of context (e.g. home, school, gardens and the wider environment) to complete and evaluate design and make projects; these link to our cross curricular learning themes.

Early Years Foundation Stage

Expressive Art and Design

The children are supported in achieving the Early Learning Goals through adult lead and child initiated activities, using a wide range of materials and resources, building on prior learning and experiences. These activities are often linked to curriculum topics and observations of nature but can also be led by the children's interests. Resources are available within the continuous provision for children to access independently.

Fine Motor Skills

- Children use a range of small tools
- Begin to show accuracy and care when drawing

Creating with Materials

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories.

Key Stage 1

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

Key Stage 1 Design Projects

• Year A		
Seaside	Fairy Tales	Explorers

Year B		
Homes and Fire	Transport	Animals

Key Stage 2

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.

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

Key Stage 2 Design Projects

Year A		
Anglo Saxon Settlers	Ancient Egyptians	World War 2

Year B		
Stone Age	Ancient Romans	The Rainforest

Cooking and Nutrition

At Hockliffe School we provide opportunities for the children to develop the important life skill of cooking and develop their understanding of what constitutes a healthy nutritious meal. We work with local restaurants to support this learning and help children develop a love of cooking and eating nourishing food.

Key Stage 1

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from
- Understand how key events and individuals in design and technology have helped shape the world

Key Stage 2

- 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

Impact

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- To 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 evaluate and test their ideas and products and the work of others
- To understand and apply the principles of nutrition and learn how to cook.
- To link work to other disciplines such as mathematics, science, engineering, computing and art

Assessment

On- going assessment of children's attainment of specific objectives are made during lessons through observation of children's participation and response to questioning. Children share each other's ideas during planning and making explaining their intentions and discussing how they can solve difficulties they encounter. Children are involved in self and peer assessment activities to evaluate their finished products. Photographic evidence is used to support the progress the children have made and are used as part of their on-going assessments.