HIGHWOOD PRIMARY SCHOOL
Curriculum Statement - Design & Technology

Intent

Design and Technology is an inspiring 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. At Highwood Primary School, 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, wherever possible, to link work to other disciplines such as mathematics, science, computing and art.

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. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment).

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 D&T 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 also taught as a block so that children's learning is focused throughout each unit of work.

Impact

We ensure the children:

• develop the creative, technical and practical expertise needed to perform everyday tasks confi dently 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 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.

Children learn how to take risks, becoming resourceful, innovative people.

YEAR GROUP	DESIGN	MAKE	EVALUATE	TECHNICAL KNOWLEDGE	COOKING AND NUTRUTION
ONE	Design purposeful, functional, appealing products for themselves and other users based on design criteria	Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	Explore and evaluate a range of existing products	Build structures, exploring how they can be made stronger, stiffer and more stable.	Use the basic principles of a healthy and varied diet to prepare dishes
TWO	Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	Evaluate their ideas and products against design criteria	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products	Understand where food comes from

YEAR GROUP	DESIGN	MAKE	EVALUATE	TECHNICAL KNOWLEDGE	COOKING AND NUTRUTION
THREE	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose,	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, and joining], accurately	Investigate and analyse a range of existing products	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	Understand and apply the principles of a healthy and varied diet
FOUR	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are aimed at particular individuals or groups	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

YEAR GROUP	DESIGN	MAKE	EVALUATE	TECHNICAL KNOWLEDGE	COOKING AND NUTRUTION
FIVE	generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, and pattern pieces.	Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties.	understand how key events and individuals in design and technology have helped shape the world	understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed
SIX	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designsing them into smaller parts	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	Understand how key events and individuals in design and technology have helped shape the world	Apply their understanding of computing to program, monitor and control their products.	Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed