

Design and technology is an inspiring, rigorous and practical subject. Children at Glebe are encouraged to use their creativity and imagination to design and make products. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. 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.

Design and technology teaches pupils to:

- 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

## **Key stage 1**

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in a variety of Design and Technology tasks.

When designing and making, pupils are taught to:

### **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 e.g. 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 in their products e.g. levers, sliders, wheels and axles

# **Key stage 2**

Through a variety of creative and practical activities, pupils at Glebe are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. Wherever possible they work in a range of relevant contexts e.g home, school, outdoors and the wider environment from school trips.

When designing and making, pupils 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 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 accurately e.g. cutting, shaping, joining and finishing
- 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 e.g. gears, pulleys, cams, levers and linkages
- understand and use electrical systems in their products e.g. series circuits incorporating switches, bulbs, buzzers and motors
- apply their understanding of computing to program, monitor and control their products

# **Cooking and nutrition**

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils at Glebe are taught to:

## **Key stage 1**

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

## **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