



## **Helsby Hillside Primary School**

### **Design and Technology Policy**

**2023**

#### **Purpose of Study**

Design and technology is an inspiring, enjoyable and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

At Hillside, we aim to provide a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take sensible risks, becoming resourceful, innovative, enterprising and capable individuals. Through the evaluation of past and present design, they develop a critical understanding of its impact on daily life and the wider world. Design and technology at Hillside is taught through a combination of defined design and technology projects and the direct teaching of skills.

#### **Aims**

The national curriculum for design and technology aims to ensure that all pupils:

- 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.

#### **Objectives**

##### **Key Stage 1:**

When designing and making, pupils should be taught to:

- 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
- 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
- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria
- 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 2:**

When designing and making, pupils should be taught to:

- 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
  - 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
- 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
- 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
- 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.

### **Guidance**

It is essential that class teachers ensure the health and safety of the pupils at all times. When working in design and technology, careful selection of material and equipment, the organisation of work areas within the classroom and the clear demonstration of techniques form the basis of good health and safety practice.

### **Equal Opportunities**

Even very young children often adopt stereotypical attitudes in design and technology. Teachers will need to adopt a range of approaches to counter this. These may include single or mixed sex groupings, choice of subject, material or activity and the provision for adults other than teachers to work with the pupils.

### **Pupils with Special Education Needs and/ or Disabilities (SEND)**

In order to give pupils of all abilities access to design and technology at an appropriate level, teachers will need to ensure differentiated approach. This can be achieved by a combination of differentiated task, outcome or teacher intervention.

### **Assessment, Recording and Reporting**

At all times, the marking of work and feedback to pupils will be in line with the school marking and feedback policy and will respect pupils' achievements and give positive feedback both written and oral as appropriate. Effective feedback gives pupils guidance about how they might improve the quality of their products in design and technology.

### **Health and safety**

Pupils will be taught to use equipment safely during practical activities. Class teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. A simple risk assessment will be carried out for all practical activities. Any perceived hazards will be reported to the Headteacher who will carry out a further risk assessment with the subject leader and consider adapting the activity.

Reviewed by	Jane Boudier – DT lead	April 2023
Approved By:	Teaching & Learning Committee	26/04/23
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