Riverside Primary School

Design and Technology Policy

September 2024

Reviewed

Riverside Primary School Design and Technology Policy

Purpose of Study

Design and technology is an inspiring, rigorous 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 Riverside, they acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, and art. 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. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.

Design and technology education begins well before children begin their formal schooling. Children constantly explore their world through a variety of activities, and it is vital for us to continue to extend this. The child's increasing understanding of the process of design and technology should match their intellectual and physical development throughout their primary education. Design and technology at Riverside should be taught through a combination of defined design and technology projects, the direct teaching of skills and through activities integrated within the learning of other National Curriculum subjects or 'Themed' work.

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.

At Riverside, we strive to provide a program of learning opportunities for all pupils to gain the basic knowledge and understanding, which underpin design and technology. In addition, we endeavor to provide continuity and progression for all pupils throughout the curriculum as they move through the school. We aim to ensure health and safety of all pupils during design and technology activities.

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

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 always ensure the healthy and safety of the pupils. 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. The school will agree a range of materials, equipment, and techniques to be used.

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.

Special Education Needs

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

Assessment, Recording and Reporting

At all times, the marking of work be in line with the school marking policy and will respect pupil's achievements, give positive feedback and avoid defacing or spoiling the products of their work. Effective feedback gives pupils guidance about how they might improve the quality of their products in design and technology.

At the end of each theme/topic, National Curriculum skills and objectives will be used to assess children in relation to expected standards.

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