

Woodthorpe J.I. School

Design and Technology Policy

Purpose (National curriculum Programmes 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. 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.

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.

Content of design and technology at key stages 1 and 2 (National Curriculum Programmes of Study)

Key stage 1

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils will be 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 [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 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils will be 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 [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 [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.

Cooking and nutrition

As part of their work with food, pupils will 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 will be 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.

How we teach D&T at Woodthorpe

Design and Technology is taught to fulfil the aims and the Programme of Study within the National Curriculum, set out above. D&T is delivered as an integral part of our Connected Curriculum, in which it is integrated with learning in Science, Geography, History and Art and Design. We also use the Connected Curriculum links to learning in English, Mathematics, Computing and PSHE.

Resources

The Connected Curriculum scheme is available on the school intranet. All digital resources needed to teach the scheme are accessed by links in the lesson plans provided.

D&T equipment including food preparation and cooking equipment is stored in cupboards in the Art room. We have a mobile cook station which includes an oven, grill and two hotplates, also a small portable oven and a bread making machine.

There are sinks that can be used for food preparation, in the Art room, and a spare fridge in the staffroom.

Each class has a raised bed in the vegetable garden to grow produce to eat and cook.

Special Educational Needs and Inclusion

All children with special needs have access to and involvement in technology. Teachers will support the three principles of inclusion:

1. Setting suitable learning challenges.
2. Responding to pupils diverse learning needs.

3. Overcoming potential barriers to learning and assessment for individuals and groups.

Equal Opportunities

Woodthorpe J.I School has equally high expectations of all pupils and is committed to encouraging and enabling all pupils to achieve the highest standards.

Assessment and Recording

Assessment for Learning is built into all lessons. Clear learning objectives and success criteria are shared with children and children use these to evaluate their own learning. The children's learning is recorded as statements of what they can do at the end of each unit. This assessment is given to SLT termly to allow monitoring and evaluation of provision in D&T.

The Rights of Every Child

Woodthorpe JI School uses the U.N. Convention of the Rights of the Child to ensure that every policy supports the improvement of life chances for children.

Articles: 1, 2, 3, 4, 28, 29.

Related policies: Teaching and Learning; Curriculum.

Signed:

Approved: 26th April 2018

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