

White Court School



Design Technology Policy

October 2015

White Court School aims to create an environment where all pupils will have opportunities to develop not only their intellectual, social, physical and moral qualities, but also their independence and their creative, practical and technological skills.

Design and technology is an inspiring, imaginative and practical subject. It is an integral part of today's ever increasing technological world, which children should fully explore, evaluating technology in both the past and the present. A fulfilling design and technology curriculum assists critical thinking and encourages the exploration of existing products, the work of others, and develops practical and perceptual skills. Children should acquire a range of subject knowledge, using aspects of mathematics, science, engineering, computing and art to enhance their learning and understanding of design and technology. High quality design and technology education should support British values by making a positive contribution to the creativity, culture, wealth and wellbeing of the British Nation.

Aims

- For children to analyse and investigate existing products, talking about how they work and how they are made.
- For children to develop creative and imaginative thinking and talk about what they like and dislike when designing and making
- For children to apply their understanding of designing and making to enable them to become discerning consumers
- For children to select appropriately from a range of tools and techniques for making prototypes and products, learning to use tools safely, independently and collaboratively.
- For children to make informed choices about products they use and to develop an understanding of the impact on world resources
- For children to develop an understanding of technological processes, products and their manufacture, and their contribution to our society
- For children to enjoy, gain satisfaction and an understanding of how their made products solve real and relevant problems.
- Children should understand the fundamentals of nutrition and begin the process of learning to cook. (See Food policy)
- For children to be provided with the opportunity to work collaboratively and co-operatively on activities, respecting others opinions and abilities.

Objectives

- To allow children to investigate, disassemble and evaluate manufactured products, and those which have been made by themselves.
- For children to carry out focused practical tasks used to develop particular skills, techniques and subject knowledge.
- For children to research, design, make and evaluate products which draw together their skills and knowledge.
- To think about who their products are aimed for e.g. individuals/groups.

- To fulfil the National Curriculum's progression of skills requirements – see Appendix B
- For children to work in a range of relevant contexts e.g. the home and school, gardens and playgrounds, the local community and the wider environment to gain a deeper understanding of the impact existing and their own products have on the world.
- Children gain the technical knowledge they should according to their year group, (reference National Curriculum progression framework)

Continuity and Progression

Continuity and progression follows revised National Curriculum guidelines. Where possible, attempts have been made to identify cross-curricular links. Some activities and skills will be taught as discrete units.

Equal Opportunities

The school will ensure that all children have equal opportunity to access the curriculum offered, regardless of gender, race, religion or disability, as far as is possible – in line with the school's policy.

Early Years and Foundation stage

Within Early Years and Foundation stage, design and technology is present everyday within the stimulating learning environment. Children are given a choice of a range of activities, including painting, cutting and sticking and play-dough, which allows children to choose appropriate tools and build on their creativity skills. Children also take part in a cooking session each week, where they design and make a range of food products.

Special Educational Needs

Teachers will assess individual pupils' needs and set differentiated work – refer to school's policy. Each year group will identify Gifted and Talented children and provide for their learning appropriately.

Health and Safety – refer to school's Health, Safety and Wellbeing Policy and relevant documents. See Appendix A.

Risk assessments must be completed before activities involving cookers, glue guns or tools. The correct and safe use of tools is vital. Children should be taught to handle and use tools correctly.

Food Technology - refer to Food Policy.

Assessment of Skills - For further information on Attainment Targets and Curriculum content see Appendix B.

Review

This policy will be reviewed as part of the policy review cycle. It will also be monitored for its effect on different racial groups with reference to our Racial Equality Statement.

Policy discussed at the Meeting of the Curriculum Committee - Autumn Term 2015
Policy ratified at the Full Governing Body Meeting in Autumn Term 2015

Health and Safety - Primary School Technology

This standard supercedes previous guidance included in the Codes of Practice 25 and 33

General Safety

- Pupils must be aware of the hazards associated with cooking and that there is a need for special care
- Pupils must not carry bowls or other containers of hot water
- Personal possessions other than those necessary for the activities should be kept clear of food preparation areas
- Dry oven gloves must be used when moving hot tins, dishes etc. Oven gloves in need of repair should not be used
- When lifting lids from boiling pans, kettles etc. care should be taken to avoid contact with the steam
- Saucepan handles should be positioned safely, so not to be knocked.
- Teachers/supervisors must know how to isolate the gas and electrical supplies.
- There must be a number of appropriate staff to ensure children are closely supervised at all times.

Use of Cookers

The cooker should be located in an area on its own away from other equipment, doors, passageways etc. The area around it should be uncluttered and the floor should be kept clean. The main hazard is fire. The area around the cooker must be free from flammable materials; there should be no wall displays, pin boards etc. in the vicinity. Pupils should be discouraged from wearing loose clothing. A fire blanket should be kept in the area and staff should be aware of how to use it. Portable cooker trolleys should have a fire blanket. Staff should be aware of means of exit from the cooker area.

Frying should not be carried out in a primary school.

Food Hygiene

- Warm water, soap and towels (preferably disposable) must be available
- Staff and pupils must wash hands before handling food
- All food must be stored in suitable containers in clean cupboards suitably protected against vermin, flies etc.
- Food waste should be disposed of in bins which must be emptied immediately after cookery sessions
- Food preparation surfaces must be cleaned before and after use. If possible, specific tables should be kept solely for food use
- Pupils should wear clean aprons and tie back hair.

National Curriculum of England and Wales

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. 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.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Schools are not required by law to teach the example content in [square brackets].

Subject content

Key stage 1

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 and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should 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 should 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 product.

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 should 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.