



A place to shine ...

***Let light shine out of darkness and God's light shine in our hearts
2 Corinthians ch4, v6***

Design and Technology policy and Guidance

Consultation that has taken place	October 2019
Date formally approved by governors	October 2019
Date policy became effective	October 2019
Review date	October 2021
Person responsible for implementation and monitoring	Victoria Teasdale and Rachael Gibson
Other relevant policies	Art and Design Policy

'Let all that you do be done in love' (Corinthians 16 verse 14)

Rationale

At Central Walker, we aim to deliver an engaging, practical and problem solving based Design Technology curriculum. To offer children a chance to use creative thinking, where they follow a design, make and evaluate system. Technology of the modern world is rapidly changing and at Central Walker, we aim to prepare the children in advance for this. Design and technology allows scope for group learning, the development of social skills and cooperation.

Aims

To develop children's design and technology capability through combining their designing and making skills with knowledge and understanding in order to practically apply these areas in a meaningful context.

Objectives

Teaching of Art and Design Technology in Early Years Foundation Stage

Children are taught to represent their own ideas, thoughts and feelings through design and technology, art, music and dance.

Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. Children know about similarities and differences in relation to places, objects, materials and living things.

Teaching of Design Technology in 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 interactive 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.

Cooking and Nutrition

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

Teaching of Design Technology in 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 interactive 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 products.

Cooking and Nutrition

- Children need to 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.

Arrangements for Planning

Across school, phases use the Cornerstones curriculum to support the planning and delivery of DT. The phase leader will work with teachers to ensure coverage of the National Curriculum Programmes of Study each year and this will be recorded on the Long Term Topic Plan. A two year topic plan is in place to ensure all objectives are covered across each key stage.

Arrangements for Monitoring the Delivery of the Curriculum

It is the coordinator's responsibility to review planning, undertake book scrutinies and carry out learning walks or lesson observations.

Planning scrutinies can be done at any time, as the plans must be available on the 'Teacher drive' at all times.

This information and data should be reviewed with:

- the class teachers;
- the coordinator for Planning, Recording and Assessment.

It is the role of the Head Teachers and DT coordinator to monitor the quality of teaching and learning.

Quality of Teaching

All lessons must have clear learning objectives, which are shared and reviewed with the pupils effectively. Design processes and practical skills will be taught carefully. Opportunities will be provided for children to observe the use of resources and learn how to handle them independently. Teachers will instil the need for children to work safely at all times. Risk assessment for activities should be undertaken as appropriate. Activities are challenging, motivating and extend pupils' learning. Teachers should create opportunities for children to apply their technological knowledge, to discuss and analyse their work, justify ideas, materials and techniques they have used and to propose modifications and improvements.

Quality of Learning

Learning in design and technology means that pupils consistently use and extend their knowledge, understanding and skills as they design and make different products. They show curiosity in the investigation of the properties of diverse materials. They use an increasing range of techniques, processes and resources with confidence, demonstrating creativity in designing products to meet particular needs. They are prepared to persevere in the organising, planning and making of their products, evaluating them at each stage and testing them fairly against objective criteria. Children are able to work both independently and as part of a team.

Allocation of Resources

The subject coordinator will carry out an audit each year to identify the resources needed to support lesson delivery and those, which will assist to enhance objectives underlined within the national curriculum.

Teachers will ensure resources are available for their planning cycle and confirm availability prior to use.

Any orders for equipment or resources can be made through the subject coordinator.

School's Arrangements for Staff Development

It is the responsibility of the DT coordinator to identify the staff development needs that are required to deliver an effective DT curriculum.

Assessment, Recording and Reporting Arrangements

Assessment- Formative / Summative

Valuable assessment can be carried out by observing pupils while they are engaged in learning activities, by talking to them about what they are doing and about their design and technology understanding.

Our approach to assessment must ensure that it is design and technology skills and understanding that are being assessed and not the children's literacy skills.

A range of tasks and strategies will enable us to judge a child's achievement in the different areas of factual knowledge, concepts and skills. Teachers across the school should assess children using Learning Ladders. The children's attainment will be shared with the subject leader termly.

Recording

DT work is recorded in Topic books (KS1 and KS2) and in class floor books. When recording practical activities teachers should use photographs to evidence progression across school.

Reporting

Children's development within this subject area will be shared with parents / carers on a termly basis during their child's progress meeting. A written report will be issued in the summer term.

Special Educational Needs Provision

Differentiation can be planned in terms of learning objectives, tasks, teaching methods, grouping, teacher intervention and resources. There should be a balance of open ended and structured tasks for all children.

Health and Safety Issues

Children should be instructed in safe practices, procedures and the use of protective equipment. Safe work habits should be taught and assessed, e.g. safe handling of tools, calm movement around the room and a sense of responsibility towards self and others. See Health and Safety Policy for guidance on out of school visits. All teachers are expected to complete the appropriate documentation before taking a group of children on a school visit.

Community Links

The subject coordinator will promote community links and advise staff of suitable contacts, places to visit, visitors, local employers and agencies to support this area of the curriculum. The school promotes parental involvement.