SCHOOL POLICY FOR DESIGN AND TECHNOLOGY

Co-ordinator: David Greenwood	**Buddy:** Hazel Coleman	**Date Adopted:** September 2015	**Review by:** September 2018

How the Policy developed

The 2011 policy was reviewed in June 2015 by co-ordinator.

How it relates to the School Development Plan

The policy was reviewed as part of SDP. June 2015

Key Targets for the Period to the Date of the Policy review

i.   Policy to be adopted by staff and Governors.
2.   Co- coaching and up-skilling with co-ordinator in KS1 AND KS2 .
3.   Implementation of D&T units of work with reference to QCA or other units and the new Creative Curriculum to ensure coverage of all aspects.
4.   Review Health& Safety practice.

Tasks	Action Group	Timescale	Cost
• Consult staff on any changes of units of work with new Creative Curriculum planning.	Co-ordinator and staff	Autumn 2015	
• Complete policy review.	Co-ordinator	Autumn 2015	
• Review and / adapt planning units for both key stages and Foundation if necessary.	Co-ordinator and staff	Summer Term 2016	
• Audit / update of resources across key stages	Co-ordinator	Spring 2016	
• Planning for excellence – ensuring we are teaching D&T understanding, knowledge, skills and progression. General update.	Co-ordinator- staff meeting?	Ongoing	
• Attend Health and Safety or other training	Co-ordinator / staff		

Intentions

Design and technology is the purposeful use of inventive and creative thinking leading to the creation of products that solve real and relevant problems within a variety of contexts. In addition to providing children with the knowledge and understanding to implement their solutions, pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

The NC Order states that:

"Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative processes of design 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]."

Children develop design and technology capability by engaging in and re-visiting the process of designing and making. During this process they will draw on their current repertoire of designing skills, making skills, knowledge and understanding.

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To engage effectively in the designing and making process children need to have well-developed designing skills, making skills, knowledge and understanding.

To develop children's design and technology capability teachers need to:

- initiate and support children's learning during the designing and making process.
- provide opportunities for the teaching and learning of designing and making skills, knowledge and understanding.
- nurture creativity and innovation through designing and making activities
- understand and promote design and technology as an activity which spans the curriculum, drawing on and linking a range of subjects

Aims and Objectives

This policy is to be implemented with reference to the generic policies in the staff policy boxes, and also working within the general aims of the school and National Curriculum.

1.   To develop children's capability to design and make products that meet people's needs within a real and purposeful context. We aim to use the three S's – ***Design and make Something for Somebody for Some purpose***
2. To study existing products and materials to develop technological abilities.

3.   To develop children's skills and knowledge, in using tools, materials and components - with due regard to safety.
4.   To develop an awareness of sustainability and environmental issues when using materials, e.g could re-cycled materials be used?

To ensure that pupils acquire:

1) The ability to work effectively as individuals and in groups.

2) The ability to record and evaluate their work in aesthetic and technological terms.

3) A sense of achievement and self worth, responding to challenges with enthusiasm and enjoyment.

The pupils will:

- Use tools correctly and safely to make products.

- Generate ideas through looking, talking, technical drawing and modelling.

- Recognise the need for choosing appropriate materials, accurate measuring and planning each step to create high quality products.

- Makes judgements about their work, identifying strengths and weaknesses, and suggesting improvements.

- Gain understanding about what past and present designers do; how they design products and their contribution to society.

- Develop understanding about technological processes, products and their manufacture.
- Generate ideas through innovative evaluation of existing products.

Principles of Teaching and Learning

The programmes of study specify the designing skills, making skills and knowledge and understanding.
1) Designing and making skills - the generic skills and techniques required to design and make products.
2) Knowledge and understanding applied during the designing and making process.

Children need to combine designing and making skills with knowledge and understanding when they design and make quality products.

The programmes of study set out three essential types of activity through which children develop Design and Technology capability.

Designing and making assignments (DMA's)
Where children engage in the process of designing and making products, drawing on their designing and making skills together with their knowledge and understanding in an overall context.

Focused practical tasks (FPT's)
Where children learn particular skills or develop their knowledge and understanding.

Investigating disassembling and evaluating activities (IDEA's)
Where children explore existing products and use what they find out to add to their own skills, knowledge and understanding.

The D&T Association with Dfes/QCA say that these do not always have to follow in order and may be dipped into during the course of a unit. (See Appendix 1 – Moving Forward)

Each unit of work will help develop the 5 types of thinking skills – information processing, reasoning skills, enquiry skills, creative-thinking skills and evaluation skills (see Appendix 2). Maths skills are often an important part of the designing and making stage and an overview of links to maths are provided by DATA Creative Curriculum Poster (see Appendix 3)

Equal Access and Outcome

Design and Technology should encompass activities which are of equal relevance to boys and girls from all cultural backgrounds. The design and make activities should also reflect the cultural diversity of modern society.
The making process demands a high degree of co-ordination. We must ensure all pupils have these skills, and that activities and instructions are adapted for children with special educational needs. (Tools for left handed pupils are available). All children must be set suitable learning challenges including Gifted and Talented. (See G&T policy)
Classroom assistants and voluntary helpers may be involved in supporting children's learning in D & T where class teachers feel it will benefit.

Health and Safety

We adhere to the school's Health and Safety Policy.

Children will be taught correct use of tools and any potential hazards with their use**. (This information is clearly stated in the 'Tools and Safe Usage' file and CD 'Working with Tool and Materials')** They will be taught food hygiene, and the dangers of some raw products. We are aware that some aspects of technology require space and supervision and will take that into consideration in our planning.

Implementation

Design and Technology is planned on a two year cycle (see Appendix 4) and wherever possible is linked to other areas of the curriculum. Science units are linked to most D&T units and are usually taught prior to the D&T to gain knowledge. We use QCA units of which there is some flexibility in the order of teaching and units can be adapted.

Pupil Groupings
An important consideration when grouping pupils for technological activities is providing equal opportunities. All pupils should be given the opportunity to take part in a wide range of activities experiencing all strands of technology and developing skills within a widening range of materials and tools. Teachers need to be aware of the personalities of the children within a group so that "passive" children are not put in a situation where they are inhibited by other children with more confident forceful characters.
Time Allocation
There is no statutory time allocation and this is left to the discretion of the school where we have found that the blocking of units into ½ day sessions over a period of weeks for instance works well.

Continuity and progression

Learning should focus on:

Generating Ideas: children's experience
needs of the user
research on existing products

Developing and Communicating Ideas: discussion, drawings, modelling
labelled drawings, diagrams

Evaluating Ideas: against design criteria.

Planning tools and materials needed
selection of materials

Working with Materials: developing simple practical skills
developing increasing accuracy
practical techniques

Evaluating Products: against the design criteria
testing and improving product

The 2 year planned activities developed from the QCA Scheme of Work will ensure progression through the Key Stages, it will enable pupils to learn skills, and use them at the varying levels of their development. Progression lies in the acquisition of new concepts and the deepening understanding of those already encountered by revisiting the following aspects:
Food
Textiles
Structures
2d mechanisms – e.g sliders and levers
3d mechanisms – e.g wheels and axles
Electrical control . (KS2)
Foundation Stage and Nursery will follow a 2 year cycle (see Appendix 5)

Resourcing

1. **The 'Tools and Safe Usage' file and CD , data help sheets and scheme of work (QCA) will be kept in the Resources Room. Pages may be photocopied to support teacher planning.**
2. KS1 equipment is kept in the Technology Bay, KS2 cooking equipment in the copy room/kitchen and other equipment and materials in Resources Room.
3. Resources for each unit are in boxes in Resources room (see Appendix 6)
4. Staff and pupils should consider environmental issues when thinking about materials -
5. Pupils may be given the opportunity to purchase their completed product at the end of the unit of work.
6. A list of useful websites are to found in Appendix 7.

Assessment, Recording and Reporting

- Assessment should be made with reference to end of unit expectations and using Level Descriptors at the end of the year.
- Written reports will be presented to parents at the end of each academic year.

Summary

"Design and Technology prepare children to participate in tomorrow's rapidly changing technologies fosters learning through doing and provides an excellent basis for enhancing and consolidating work in other areas of the curriculum." (Design and Technology Association 1999)

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