Design and Technology Policy

POLICY No. 4 Version 2007

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"Design technology prepares pupils to participate in tomorrow's rapidly changing technologies." National Curriculum 1999

"Tell me and I forget – let me do it and I learn." Learning through making works! Prue Leith.

Aims and Purpose

Design and technology offers opportunities for children to:

- Develop their designing and making skills.
- Develop knowledge and understanding.
- Develop their capability to create high quality products combining their designing and making skills with the knowledge and understanding.
- Nurture creativity and innovation through designing and making.
- Explore values about and attitudes to the made world and how we live and work within it.
- Develop an understanding of technological processes, products and their manufacture, and their contribution to our society.

Content

In design technology, children acquire and apply knowledge and understanding of:

- Materials and components.
- Mechanisms and control systems.
- Structures.
- Existing products.
- Quality
- Health and safety.

Children:

- Develop designing skills, including generating ideas, clarifying a task, creating design proposals, communicating ideas, planning and evaluating.
- Acquire and refine the practical skills associated with making, including working with materials and components, tools and processes, e.g. planning, measuring and marking out, cutting and shaping, joining and combining, finishing and evaluating.
- Apply scientific skills, e.g. predicting and fair testing.
- Apply mathematical skills, e.g. measuring to an appropriate number of decimal places, drawing and interpreting tables, graphs and bar charts.
- Apply IT skills, e.g. making things happen by the use of control, handling information through the use of a database or spreadsheet.
- Apply art skills, e.g. investigating texture and colour or recording visual information.

Values and attitudes

Children:

- Work both independently and with others, listening to others' ideas and treating these with respect.
- Can be creative, flexible and show perseverance.
- Critically evaluate existing products, their own work and that of others.
- Develop a respect for the environment and for their own health and safety and that of others.

- Develop an understanding that all people are equal regardless of age, race, gender or ability and that there needs to be alternative solutions to meet the needs of individuals and groups of people.
- Find enjoyment, satisfaction and purpose through designing and making.
- Apply value judgement of an aesthetic, economic, environmental, moral, scientific and technical nature.

Expectations

By the end of key stage 1 most children will be able to:

- Use a wide range of materials to design and make simple products.
- Select materials, tools and techniques and explain their choices.
- Understand simple mechanisms and structures.
- Measure, assemble, join and combine materials in a variety of ways using basic tools safely.
- Investigate and evaluate simple products, commenting on the main features.

By the end of key stage 2, most children will be able to:

- Use knowledge and understanding of a range of materials, components and techniques to design and make products.
- Evaluate work as it develops and if necessary, suggest alternatives.
- Produce designs and plans which list the stages involved in making a product and list tools and materials used.
- Accurately measure, mark, cut, loin and combine a variety of materials, working safely and recognising hazards to themselves and others.
- Understand the use of electrical and mechanical systems and more complex structures.
- Evaluate what is or is not working well in a product.

Links with other areas of the curriculum

English

Ability in reading and writing is essential for collecting information and source material, finding out about products, communicating ideas, making notes and drawings for later reference and following instructions in design technology. Evaluating existing products requires children to articulate their ideas and to compare and contrast their views with others. Good oral communications is vital in group work on a task, where children may be brainstorming ideas, giving instructions, justifying their own views or intentions, explaining how something might work and using technical vocabulary to describe what they are intending to do.

Mathematics

Opportunities occur for children to apply their mathematical skills through:

- Choosing and using appropriate ways of calculating measurements and distances.
- Checking the results of calculations for reasonableness
- Using an appropriate suitable degree of accuracy for the context
- Suggesting suitable units and measuring equipment for the task in hand
- Using fractions and percentages
- Reading and interpreting scales
- Collecting, representing and interpreting data
- Identifying and describing position, direction and movement

Other Subjects
Where there are opportunities for links with other subjects, notably IT, science, history, geography and art, these are made explicit in each of the units. There is a detailed plan showing the links with other curriculum areas and with other units within the scheme of work. (See co-ordinator)

Progression
Progression in design technology can be characterised by:
- An increase in knowledge, skills and understanding
- Moving from familiar to unfamiliar concepts
- Meeting needs which demand more complex or difficult solutions
- An increase in a child's own understanding of their learning

Health and Safety
Personal: Hair to be tied back, aprons to be used for paint, glue or food activities.
Spills: All spills to be wiped up
Tools: Children will be taught the right way to use equipment, how to carry it and store it safely. Only one Stanley knife should be used in a class and the child should be very carefully monitored during their use of it. The knife should be kept in a safe and secure place.

We are basing our scheme of work on the QCA Design Technology scheme of work. We have made modifications, adding and reducing material, to meet the needs of the children in the school and the school's curriculum priorities.

Design Technology Curriculum Plan (on separate sheet)
Tools and equipment
Remain the same as in previous policy
Specialist Technology Equipment
Delete tool boards in classrooms as equipment is now to be centrally stored in Science and technology room. The list of equipment is the list on page 4 of previous policy plus the list of items from the tool boards.
Equal opportunities. Same as before

Assessment
All children have a design technology exercise book in which their designs and ideas can be recorded and where teachers can make comments and suggestions for change.
Photographs are usually taken of finished results and sometimes during the making of a project.
Relevant details of assessment are kept by each class teacher.

AMENDMENT SHEET FOR ALL POLICY STATEMENTS

DESIGN & TECHNOLOGY POLICY
POLICY NUMBER 4

DATE POLICY RATIFIED: Summer 2007

DATE POLICY LAST REWRITTEN: 2007

Review Date	Amendment
1998	Written
2007	Rewritten