



Pinchbeck East Church of England Primary School

Design and Technology Policy

January 2019

Introduction

At our school, Design and Technology (DT) prepares pupils to participate in tomorrow's rapidly changing technologies. It is the purposeful use of inventive thinking and creative activity leading to the production of a product which best satisfies a perceived need. It involves investigating, designing, making and evaluating products fit for a purpose of improving, refining and extending the use of existing products. Pupils combine practical skills with an understanding of aesthetics, social and environmental issues, scientific and industrial practices. The subject calls for pupils to become autonomous and creative problem solvers, as individuals and as members of a team. Through design and technology, all pupils can become discriminating, informed users of products and become innovators themselves.

Aims

The school should ensure that all children:

- Access a broad and balanced, enriching curriculum where they can show progression in the development of skills.
- Enjoy an active involvement in all processes of the design process.
- Have opportunities to learn about art from different times and cultures.
- Become visually literate and able to identify and apply the key elements of planning, making and evaluating.
- Develop the ability to analyse and make informed critical judgements about their work and the work of others using appropriate language.
- All pupils will be given equal access to the experience of the art regardless of the gender, race or disability
- Pupils should have the chance to make various design proposals, suggest ways forward and evaluate their own work.

Objectives

In their own DT skills children should be able to:

- Provide opportunities for children to observe, ask questions to identify and understand elements of design and technology in the natural and manmade world
- To understand how to use tools and equipment safely
- Co-operative and organizational skills
- Allow children the learning opportunities to direct their own learning
- To relate DT projects into other areas of learning
- Develop knowledge and understanding of: materials and components; mechanisms and control systems; structures; existing products, and health and safety.
- Develop skills of designing, planning and making products fit for a purpose.
- Evaluate their own products and those of others.
- Acquire and refine the practical skills and techniques, to safely work with a wide range of materials and components.
- Create a high quality finish through combining their designing and making skills, with knowledge and understanding.
- Nurture creativity and innovation through designing and making.
- Explore values about attitudes to the manmade 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.
- Develop clear links between ICT and DT.

D.T Programme of study

EYFS:

EYFS team to incorporate opportunities to explore DT skills within these areas:

Physical Development - Moving and Handling

Communication, Language and Literacy

Mathematics - Shape, space and measure

Understanding of the World - Technology

Expressive Art and Design

KS1:

Through a variety of creative and practical activities, children will be taught the knowledge, understanding and skills needed to engage in the process of designing and making.

Design:

During design and making tasks, of increasing complexity and challenge, as children progress through KS1, they will learn to:

- 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 such as 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, such as 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.

KS2:

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, such as 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, such as 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, such as gears, pulleys, cams, levers and linkages

- understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors
- apply their understanding of computing to programme, monitor and control their products.

Cooking and Nutrition:

- 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.

Role of the Co-ordinator

The co-ordinator will:

- liaise with staff and provide support or advice with resources and planning when required.
- disseminate ideas and knowledge and remain updated with educational developments in design and technology.
- take overall responsibility for maintenance of stocks and equipment and the quality of resources.
- produce the Design and Technology Policy and the Key Stage plans that meet the statutory requirements.
- Monitor Teaching and Learning.

Equal Opportunities

All children have equal access and opportunity to the art curriculum due to support given by all staff, to ensure each child achieves their full potential. Mutual respect and understanding for all cultures will be promoted through the study of art. Planning must encourage the children's development of personal and social skills, be fully inclusive and give equal access for pupils to access learning.

Differentiation

All children have a range of opportunities and experiences. They work at their own level and differentiation is by outcome and support, except when different

tasks may be required for certain children at appropriate times. Children with special educational needs, need to be catered for in the planning of the programme, raising confidence and self-esteem.

School environment for design/ display

All staff take responsibility for the visual quality of their classroom and work together on creating an interesting, aesthetic school environment. Photographs are often used within a display and provide a visual record of achievement. Final projects must be displayed either in the classroom or in shared areas around school.

Health and Safety

This is an essential part of teaching Design and Technology, at all times children must be taught and understand how to use and handle equipment and media safely, what to do in case of an emergency and how to be safe. Any potential dangers of working with certain medias and tools must be discussed with the children first, and should not prohibit their use by children. Teachers will ensure that issues of Health and Safety are addressed in the planning and delivery of the curriculum. Any risks are assessed by staff (refer to school risk assessments). In case of an emergency, each classroom has their own first aid kit and there are additional first aid kits in shared areas.

Food will be bought and used on the day if it is needed. Before undertaking a food technology activity a letter will be sent to parents outlining the activity if it involves tasting the food. The class teacher/ teacher assistant will ensure that equipment, table tops, cooker etc. are clean and in working order. Cleaning routines, including washing hands, will always be followed.

Assessment and Record Keeping

Class teachers will report annually to parents on the progress made. The children are encouraged to assess their own work through discussion with their teacher and peers. Study unit books show the progression and breadth of study through the school and assessments are carried out termly.

As a RRS (Rights Respecting School - UNICEF) this upholds the following articles from the UNCRC (United Nations Convention on the Rights of the Child): Article 29: Every child has the right to be the best they can.

Updated by: Miss Hill

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