Elmwood Infant and Nursery School

Design and Technology Policy 2019

Article 29 – Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for their parents, their own and other cultures, and the environment.

Date Policy Agreed: Summer 2019
Review Date: Summer 2022

Introduction

Design and Technology is an inspiring and practical subject. Using creativity and imagination, pupils design and make products that solve real problems within a variety of contexts, considering their own and others' needs, wants and values. Design and Technology encourages children to use maths, science, computing and art. Children learn how to take risks, become resourceful, innovative, enterprising and reflective. Design and Technology education makes an essential contribution to the creativity, culture, wealth and well-being of our school.

Aims:

- To provide a range of structured and differentiated activities which develop breadth and progression. Where possible these relate to the interest and everyday experiences of our children.
- To develop knowledge and teach skills in order to design and make products successfully.
- To help children become aware of and investigate simple products by disassembly and evaluation.
- Develop the capability to create products of a high standard through skills and understanding.
- To provide equal opportunities and develop the qualities of individual children.
- To enable children to use Design and Technology to solve a range of problems.
- Learn about working safely and protective measures.
- Evaluate products, made by themselves and their peers.
- Learn the principles of nutrition and healthy eating.

Objectives:

Children should have opportunities to:

- Develop realistic outcomes to assignments.
- Take increasing responsibility for their own work.
- Critically evaluate their work and the work of others and suggest improvements.
- Work individually and in teams, groups, partners.
- Work with a range of materials and to use them appropriately.
- Use a variety of tools safely and correctly.
- Communicate ideas in a variety of ways.
- Develop skills and apply knowledge and experience when working on a challenge.

- Develop the ability to solve problems.
- Research and record relevant information where appropriate.
- Examine and evaluate design features in simple products including their historical development.
- To understand and apply the principles of nutrition and learn how to cook.

Progression

Curriculum Requirements at Foundation Stage

Design and Technology for children in early years is taught through 'Exploring using Media and Materials' and 'Being Imaginative', which involves plenty of explorative and informal play through practical, first hand experiences. Children are taught to use a range of tools and equipment and are encouraged to make choices about what they will need and use.

Explore- a range of construction kits and a wide variety of materials e.g. play dough, clay, wire, wood, plastic, reclaimed materials, fabric and food, paints.

Investigate- uses of different materials e.g. appropriateness of adhesives and chosen materials, cloth, cardboard, paper, bricks, soil, sand etc.

Communicate- using the correct language for and use of a range of tools and equipment. To discuss how they made their model and the changes they made to improve it. To talk about the features of their own and others work.

Design- using imagination and creating what they have imagined, experimenting with colour, design, texture, form and function.

Food- identify healthy food and make healthy choices in relation to food.

National Curriculum Requirements at Key Stage 1

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

Design and Technology mornings are allocated to the teaching of DT and all planning is in line with the National Curriculum guidelines.

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:

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

Teaching

At Elmwood Infant School Design and Technology is taught in KS1 as an integral part of topic work, where appropriate. Focused practical tasks are also planned by the class teacher to develop and practise particular skills and acquire knowledge.

Meaningful challenges set within familiar contexts are used by class teachers and where appropriate cross curricular links are made to other subjects.

It is important that the tasks presented to pupils help them make progress in Design and Technology. The sequence of tasks and challenges should be planned so that there is progression in what is taught, as identified in the DT programme of study. The school, through discussion and prior experience, has arranged DT skills, concepts and techniques will form an integral part of the planning and be incorporated into the lessons enabling progression to take place over the key stage.

Planning

It is our aim that children work through culturally diverse activities that are based on our programme of themes and or focused activities as described in our long term plan. This plan will ensure all aspects of the DT curriculum are covered during KS1.

Health and Safety

There are significant health and safety issues relating to both the use of tools within the classroom and to health and hygiene when preparing food. We will ensure that all planning takes into consideration the risks associated with DT lessons and that any relevant risks identified are minimised. All children are made aware of the rules that apply whilst working within DT lessons and safe use of tools and hygiene will be clearly discussed with child/group of children or class before the lesson begins.

To minimise the risks we will ensure:

- Pupils will be taught to use the correct tools for the task.
- Tools must be under supervision of an adult.
- Pupils must consider health and safety issues and consequences and operate in a safe and hygienic manner.
- Risk Assessments will be included in the planning and reviewed annually.
- The DT leader will keep staff informed about the latest up to date Health and Safety updates and regulations.
- Pupils will be taught the dangers of using tools inappropriately.

Assessment

Teacher assessment is used to inform future planning and to review children's capability. In the Foundation Stage learning journeys will include observations and photographs in the children's work to support termly assignments. Design and Technology challenges are used throughout Key Stage 1 to assist with formative and summative assessment. Children are encouraged to make an oral or written evaluation of their work in technology throughout the key stage. Where appropriate children will use design sheets or booklets to plan, record, assess and evaluate their work. Achievements by children will be celebrated through display and will be shared with parents as part of the end of year report.

Equal Opportunities

We are an inclusive school that ensures all children are provided with equal learning opportunities, regardless of their characteristics or backgrounds.
The full range of activities in technology will be made available to every child so that all can succeed. All pupils should have equal rights to access the DT curriculum. When planning DT lessons, teachers should create opportunities for differentiation and consider the needs of children with special education needs, children with disabilities, children who have English as an additional language as well as children who are more able or less able.

Links to other parts of the curriculum

Design and Technology contributes to the teaching of a number of other subjects in school.

English

Design and Technology offers the opportunity to reinforce what pupils have been learning during lessons. Discussion, drama and role-play are important methods that the school employs to help pupils develop an understanding of people's different views and opinions of Design and Technology and society. Evaluating products requires children to articulate and formulate their ideas to compare their views with other pupils, through discussion pupils will learn to justify their own views and clarify their designs.

Maths

Design and Technology will assist children in learning about shape and size and will make use of what they have already learnt in lessons. Children will carry out investigations – by doing this, they will learn to read and interpret scales, collect and present data, as well as draw their own conclusions.

PHSE

Design and Technology lessons will be used to teach pupils how to discuss their own work and work of others, in addition, pupils will be taught about health and hygiene, including diets, and how to prevent disease from spreading when working with food.

Spiritual, Moral, Social and Cultural Development
Teaching Design and Technology offers opportunities to support the social development of children through the way they are expected to work with each other in lessons. DT helps pupils to develop respect for other pupils' abilities. Working in groups encourages collaboration and gives pupils the opportunity to learn from each other and share ideas and feelings.

Roles and responsibilities

The Design and Technology Co-ordinator works with the whole staff to develop a cohesive DT experience throughout the school.

The co-ordinator will also:

- Maintain resources and advising staff on the use of materials.
- Support teaching staff, advising and offering to share their expertise and experience.
- Lead staff training on new initiatives.
- Help staff to plan future lessons and assessments.
- To encourage staff and pupils to be creative.
- Keep up to date with developments in Design and Technology.
- Monitor delivery throughout the school.

Classroom teachers will be expected to:

- Plan and deliver interesting and engaging lessons that adhere to the national curriculum.
- Provide equal opportunities through their teaching approaches and methods.
- Keep up-to-date assessment records.
- Ensure children's development skills and knowledge progresses through their learning and understanding of Design and Technology.
- Set children suitable targets based on prior attainment.
- Maintain an enthusiastic approach to Design and Technology.

Resources

The school has a range of resources and each class teacher is responsible for these. We have materials in school and a range of teacher and children's reference books. The technology cupboard is replenished by the co-ordinator. All staff have a responsibility to ensure it is maintained in good order.