



NORTHSIDE Primary School

Design and Technology

Rationale

We aim to prepare children for participation in tomorrow's rapidly changing technologies. Design and technology at Northside Primary School will provide children with the tools to deal with problems they meet in everyday life.

Northside Primary School meets the requirements of the National Curriculum in Design and Technology by providing a balanced programme where children have experiences involving structures, mechanisms, food technology, materials /textiles, electronics and computing.

Key Principles

Aims/Objectives:

To develop creative thinking.

To provide a relevant & challenging enjoyable D&T curriculum

To ensure continuity and progression of skills and knowledge as children progress through the school.

To link other curriculum areas to and develop through D & T, particularly language, science, history, maths ICT and art and support our creative curriculum approach.

To provide opportunities for co-operative working. Children will develop skills of cooperation and communication by working in a team situation.

To encourage children to investigate and use a variety of materials with economy.

To use a practical, problem-solving approach to tasks, the children will develop a range of skills around the design process (investigate, design, model, refine, make, test and evaluate).

In Practice

DT at Northside will:

- be relevant to children's understanding and promote thinking around issues such as target audience, marketing and usefulness.

-Teach children how to use various tools appropriately.

-follow the National curriculum objectives to ensure full coverage and appropriate progression of skills.

Content of DT at Key Stages 1 and 2

Content will be planned by teachers within year groups and supported by the co-ordinator when needed. Teachers will use the Design and Technology Association to support with planning and projects on a page. The progression of skills is set out within the school to ensure children are developing the relevant skills associated with Design and Technology in the wider world.

Work will be recorded in all children's sketchbooks, including photos for each unit of work and evidence gathered.

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

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 iterative process of designing and making. 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

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:



Key stage 1

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

Key stage 2

- 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

Equal Opportunities/Differentiation:

All children, irrespective of gender, religion, ethnicity or ability, will have access to the curriculum with differentiated lessons, specialised equipment and language support where necessary. Provision will be made for all children to gain a progressively deeper understanding and competency as they move through the school.

Resources:

D&T equipment and materials are stored in the Art room, with a lockable door.

Food technology equipment is kept in the kitchen area of the Red Room.

Resources will be up-dated and re-stocked at the end of each school year to be ready for the new school year.

All tools, kits and unused materials must be issued from and returned to the DT resource room after use under staff supervision.

Health and Safety:

All staff will carry out a risk assessment before undertaking any activity.

When using the cutting or drilling equipment, children must be provided with protective goggles. When working with glues and/or paints, children must wear protective aprons or smocks. When using glue guns, the adults must supervise and ensure that children wear appropriate protective gloves.

Teachers must be familiar with the safe practice guidelines for using various tools and materials. Children will be encouraged to consider for themselves the risks or hazards of a specific situation. Staff will ensure that children know how to use tools correctly and are aware of the safety issues involved.

