



Stokes Wood
Primary School

Design and Technology **Policy Statement**

Through Design and Technology children build upon earlier experiences, acquire and apply knowledge and understanding of:

- Materials and components
- Mechanisms and control systems (Wheels and axels, Sliders and levers, levers and linkages, pulleys, gears and CAMS)
- Structures
- Existing products
- Quality
- Health and safety
- Nutrition
- Ingredients and cooking skills.

In addition to this, pupils must 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.

Aims

Design Technology gives children the opportunity to:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

Expectations

By the end of Key Stage 1.

Be aware and confident in the design process and what is involved at each stage.

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 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

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.

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

By the end of Key Stage 2

Be aware and confident in the design process and what is involved at each stage. Children should be encouraged to use an iterative design process.

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

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.

- 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.

Progression, Continuity and Differentiation

The school uses a variety of teaching and learning styles in design and technology lessons. The principal aim is to develop children's knowledge, skills and understanding in design and technology. Teachers ensure children are given clear opportunities to follow the design process, encouraging an iterative process. Throughout a DT project, children will be given opportunities to up level and develop new skills through focussed activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

In all classes there are children of differing ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- Setting common tasks that are open-ended and can have a variety of results.
- Setting tasks of increasing difficulty where not all children complete all tasks.
- Grouping children by ability and setting different tasks for each group.
- Providing a range of challenges through the provision of different resources.

- Using additional adults to support the work of individual children or small groups.

Assessment, Recording and Reporting

Teachers plan for Design Technology using the 'Projects on a Page' scheme of work. Teachers should assess children's work in Design Technology both by making formal judgements as they observe them during lessons and by doing formal assessments of their work on Target Tracker and formal written reports are provided each year and this information is shared with parents. Additionally parental/carer meetings are held each term with parents to discuss progress informally.

The Design and Technology Leader will:

- Monitor Design and Technology within the school
- Keep up to date with new developments and inform staff
- Encourage other members of staff in their Design and Technology teaching and give support where appropriate (lessons studies, use of Projects on a Page)
- Ensure that Design and Technology resources are available and appropriate to the needs of the staff
- Ensure that Design and Technology keeps an appropriate profile within the school, through displays
- Keep a portfolio for Design and Technology that will include photographs / evidence of pupils at work, curriculum walk reports, examples of planning and examples of pupils' work
- Audit resources regularly and take overall responsibility for equipment and resources

The Class Teacher will:

- Be responsible for the planning and teaching of Design and Technology as set out in this policy
- To fulfil the Stokes Wood outstanding lessons non-negotiables within each lesson

The Teaching Assistant (TA), when available during Design and Technology lessons, will:

- Support the class teacher in delivering Design and Technology, and in particular support those children with Special Educational Needs where timetabled to do so, using the outstanding lessons non-negotiables prompts.
- Collect resources, if requested to do so by the class teacher.

Appendix (from Health and Safety Policy)

Safety in the Curriculum

Since September 2000 National Curriculum guidelines provide clear statements about common safety requirements for Design & Technology, Science, Physical Education, Art & Design and Information & Communication Technology.

When working with tools, equipment and materials in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:

1. About hazards, risks and risk control
2. To recognise hazards, assess related risks and to take steps to control the risks to themselves, and others
3. To use information to assess the immediate and cumulative risks.
4. To manage their environment to ensure the health and safety of others.
5. To explain the steps they take to control risks.

Craft/Design/Technology

Members of staff should ensure that:

1. Children are well supervised at all times.
2. Protective clothing is worn when appropriate.
3. Sharp edged tools are stored so that cutting edges cannot be accidentally touched, including kitchen knives.
4. All tools are stored appropriately.
5. Files and similar objects should have properly fitted handles.
6. Hammer heads must be checked regularly,
7. Tools must only be used for their intended purpose.
8. Sewing needles are counted in and out.

Glue Guns

1. Hot melt glue guns should be trigger operated. If used by pupils, protective clothing and eye protection are required. **Glue guns are not used by pupils.**
2. Only low temperature glue guns must be used.
3. Glue guns should be located on stands ready for use.
4. Use guns over a piece of hardwood or mat to avoid damage to property.
5. Electrical checks must be carried out one per year and any faults reported in the interim.

Cooking/food preparation

1. Area should be uncluttered, passageway free for safe movement. Coats and bags must be kept outside area.
2. The floor should be kept clean.
3. All furniture and working surfaces should be of the same height. Specific tables should be kept solely for food use.
4. Windows and ventilation should be properly controlled.
5. A properly stocked first aid box should be kept in the area, with clearly visible notice.
6. A fire blanket/extinguisher to be kept near the oven/cooker area.
7. Staff should note various means of exit from cookery area.
8. Kitchen knives are stored out of reach of children and are signed in and out from the Assistant Head Teacher.
9. There must be no displays of cards/pictures/pin board etc. near the cooker.
10. Teaching Assistants and relevant lead teachers have achieved a certificate in Food Hygiene and oversee all food preparation.

Safety

1. Suitable containers are used to carry hot drinks from the staff room.

2. Any faults must be reported immediately to the Premises Officer and/or Head teacher, either directly or through book held in office.
3. Safe and adequate working space is required around cookers.
4. No two or three-way adapters should be used.
5. Trailing leads must not be stapled.

Hygiene

1. Staff and pupils must wash their hands with warm, soapy water and use disposable towels before handling food.
2. All foodstuffs should be stored in suitable airtight containers in clean cupboards out of the reach of vermin, flies etc.
3. Food waste disposal bins must be emptied daily or immediately after cookery sessions.

Pupil Protection

1. All pupils should:
 - wear clean aprons
 - tie back long hair
 - be discouraged from wearing loose clothing
2. Pupils must walk in the area.
3. No pupils may carry bowls of hot water.
4. Frying is not allowed.
5. Children should be closely supervised at all times.
6. Plastic graters should be used.
7. Pupils **MUST** be closely supervised when using knives when preparing food (see risk assessment).

This policy will be reviewed every 3 years or earlier if required.

November 2018

