

WHITCHURCH PRIMARY SCHOOL

DESIGN TECHNOLOGY POLICY

1. Aims

- To prepare children to participate in a fast moving technological world
- To teach children to use creativity and imagination and apply their ideas to solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values
- To enable pupils to work as individuals and as a team
- To equip pupils with the subject knowledge and skills needed to make a range of products and systems
- To be able to respond to the above by making products and systems.
- To teach children to draw on disciplines such as mathematics, science, engineering, computing and art within their design and technology work
- To help children understand how key events and individuals in design and technology have helped shape the world.
- To teach children how to take risks in order to become resourceful, innovative and enterprising

2. Objectives

2.1 In the reception class, as part of the Foundation Stage of the National Curriculum, children's work is related to the objectives set out in the Early Learning Goals.

2.2 At **KeyStage 1**, children learn how to think imaginatively and talk about their likes and dislikes and those of people they know when designing and making. They build on their experiences in Foundation. They explore how familiar things work and draw and model their ideas. They learn how to design models and to make mock-ups.

They are taught:-

- to understand and make simple moving mechanisms including levers and sliders
- to explore structures and make models
- to use a range of basic tools (including woodworking tools) safely
- about wheels and axles and to make wheeled machines

- about textiles and how to use them to make products
- the basic principles of cookery and nutrition, including the five food groups and how these are used in a healthy diet
- where food comes from
- to prepare a range of simple dishes without a heat source.

2.3 In **KeyStage 2**, the children work as a team or individually on a range of designs. They are taught to think about the purpose of products and who uses them. They plan and scrutinise any changes needed and evaluate their own and the work of others. They draw on knowledge from other areas of the curriculum, including Science, Maths, History and Computing.

They are taught:-

- about strengthening sheet material to make a strong shell structure
- to make and control simple pneumatic systems
- to stiffen materials and make stable free-standing structures
- about textiles and their use for different purposes, including basic sewing techniques
- to use a greater range of tools
- about a range of simple machines, mechanisms, and joining techniques
- about electrical circuits and their use in making things move, such as belts and pulleys and motors.
- to use working drawings with plan/front/side views
- to use cross-sectional and exploded diagrams
- to plan, prepare and cook a range of food dishes, predominantly savoury, including those which require the use of heat sources.
- to use a range of cooking techniques
- about nutrition the principles of a healthy and varied diet
- more about where food comes from, and how it may be processed
- to understand how key events and individuals in design and technology have helped shape the world

2.4 In both key stages, pupils develop their knowledge, understanding and skills through;

- Evaluating existing products and processes
- Developing, planning and communicating ideas
- Working with tools, equipment, materials and components to make quality products
- Developing an understanding and knowledge of materials and components.

3. Agreed approach to teaching and learning

3.1 The organisation of the classes dictates the long and medium term planning cycles on a two yearly rotational basis to ensure that pupils have

complete coverage of the National Curriculum in England 2014 Programme of Study. Cookery and Nutrition is addressed in both years. D&T projects are undertaken in blocks of 4 days per term.

3.2 Opportunities to assess pupil's progress are identified within the medium term planning. A range of evidence is gathered through photographs, planning books or folders and children's own assessment and evaluation of their work. Photographic evidence is added to the online portfolio.

3.3 Units of work are chosen and planned taking account of the 'Six Essentials of D&T' as defined by the Design and Technology Association (DATA):-

- Have the needs of user(s) been identified and met?
- Does it have a clear **purpose**?
- Have **design decisions** been made (as opposed to a prescribed formula)?
- Would it work/function (or is it purely aesthetic/ornamental)?
- Is the product **innovative**, offering something new, original or better?
 - Is it an **authentic** product, rather than a model or gimmick?

Each unit is planned with the iterative process inherent in it.

3.4 Much of the work is practical and investigative. Many projects will be cross curricular, overlapping particularly with Maths, Science, Art, Computing and History.

3.5 Teachers use the DATA Projects on Page information sheets to plan each unit.

4 Attitudes

Within Design and Technology, we aim to foster the following attitudes:-

- to enjoy creativity and experience a sense of fulfilment.
- to show an appreciation of the achievement of others
- to reflect upon ingenious products and inventions, the diversity of materials and ways in which technology can improve the quality of life
- to begin to develop awareness of the moral dilemmas created by technological advances.
- to recognise how different cultures have contributed to technology
- to recognise others' strengths and synergies when working as a team.

5. Visits and Field work

5.1 Where possible, children will take part in fieldwork and visits, which includes Forest School for Foundation.

5.2 Visiting practitioners, for example STEM Ambassadors, will visit, wherever opportunities can be found.

6. Inclusion

6.1 In consideration of pupil's varied life experiences and needs, we will ensure that the Design and Technology curriculum is available to all pupils, with equal and appropriate access regardless of gender, faith, race or ability.
6.2 We will ensure that the Health and Safety guidelines [ASE 'Be Safe'] are applied such that all children have access to tools and materials. Where appropriate, additional adult supervision will be provided to enable this to be possible.

7. Role of the Subject Leader

The Subject leader is responsible for the monitoring and development of the subject as set out in the job description.

8. Records and Assessment

8.1 Assessment of children's development is made through ongoing teacher assessment.

8.2 A record is kept of children's achievements in Design and Technology through teachers' own notes, quality marking, photographs of children's products and using our online system. Achievements are recorded on the child's Annual Report.

9. Monitoring

9.1 The Design and Technology curriculum is monitored by the subject leader through observing teaching in each class; looking at plans, looking at children's work and products, talking to children and reviewing 'Insights' records annually. The record of coverage of the programmes of study and the 'Incerts' records are used to monitor provision and progression of skills and to set cohort targets.

10. Safety

10.1 It is important that children are taught the rules of safety and hygiene when undertaking practical work. Materials and equipment need to be handled with care. We involve children in identifying hazards and assessing risks and in planning how to minimise risk in carrying out their activities.

10.2 Health and Safety guidelines [ASE 'Be Safe'] and risk assessments are applied to all Design and Technology projects.

11. Review

School staff will review this policy when there is a significant change in regulation or guidance or when governors identify an area for school improvement that is covered by the policy. This will be reported to the Curriculum Committee.

Status of this Policy:

Staff contributions from: Frances Nutt & Dawn Chesters

Lead Governor: Phil Davies

Date approved by Governing Body: