Stanton St Quintin Primary School, Stanton St Quintin, Wiltshire. SN14 6DQ			
Name of Policy	Design and Technology		
Last Reviewed	April 2016	Reviewed by	Whole Staff
Approved by		Owned by	Performance and Standards
Next review	April 2019		

Introduction

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Early Years Foundation Stage

Expressive Arts and Design and Technology are two aspects of Understanding of the World in the Early Years Foundation Stage.

Designing and making is one of the aspects of knowledge and understanding of the world.

Children are encouraged to build with a wide range of objects, selecting appropriate resources and adapting their work where necessary.

Key Stage 1

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, for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment.

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. They should work in a range of relevant contexts, for example, 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, 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.

Aims of Design and Technology

The national Curriculum for Design and Technology aims to ensure that all pupils:

- 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.

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.

Marking and Assessment

Teachers of design and technology will use the school Marking Policy and Assessment Policy. We:

- Allow for different learning styles and ensure that pupils are given the chance and encouragement to demonstrate their competence and attainment through appropriate means
- Make sure our approach to marking and assessment is familiar to the pupils and the children have been adequately prepared for our assessment methods
- Use materials which are free from discrimination and stereotyping in any form
- Provide clear and unambiguous feedback to pupils to aid further learning
- At the end of a unit of work, teachers will input Teacher Assessment using the schools information management system (SIMs Programme Of Study)

Equal Opportunities

We strive to provide equality of opportunity, as defined in our Equal Opportunities Policy. To achieve this goal we always aim to:

- Ensure that boys and girls are able to participate in the same curriculum

- Take account of the interests and concerns of boys and girls by using a range of activities and contexts for work and allowing a variety of interpretations and outcomes
- Avoid gender stereotyping when organising pupils into groups, assigning them to activities, or arranging access to equipment
- Take account of pupils' specific religious or cultural beliefs relating to the representation of ideas or experiences or to the use of particular types of equipment
- Equality of opportunity is a fundamental right that must be allowed to all pupils regardless of race, culture, gender, or special educational needs.

Special Educational Needs

To overcome any potential barriers to learning in design and technology, some pupils may require:

- Alternative tasks to overcome any difficulties arising from specific religious beliefs they may hold in relation to the ideas or experiences they are expected to represent
- Alternative or adapted activities to overcome difficulties with manipulating tools, equipment or materials
- Specific support to enable them to engage in certain practical activities, opportunities to communicate through means other than writing or drawing, and help to record or translate their design ideas into a drawing
- Opportunities to work in ways that avoid contact with materials to which they may be allergic
- Time and opportunity to use non-visual means to gain understanding about and to evaluate different products and to use this information to generate ideas
- More time than others to complete the range of work

Resources

The responsibility for maintaining an adequate supply of resources rests with the Technologies Curriculum Team. Many of the resources will be stored centrally – outside Nile Class but basic and/or regularly used items may be available in each classroom.

It is important to ensure that any equipment kept in a classroom is stored securely. The effective management of these resources, whilst ultimately the responsibility of the Technologies Team, it is also the responsibility of each teacher using them.

Scheme of Work

The school uses the Dimensions Curriculum planning tool as a starting point to ensure continuity and progression of skills and support in making cross curricular links in learning. These initial plans are then developed/amended by teachers as new, more relevant and/or current opportunities arise. Teachers do however ensure that the skills identified in Dimensions are followed to avoid repetition.

Health and Safety

Our basic working practices in Design and Technology take into account the 1974 Health and Safety at Work Act and the Wiltshire Council Health and Safety Code of Practice.

It is the responsibility of the Technologies Team to pass on any relevant Health and Safety information to all staff who teach DT.

It is the individual member of staff's responsibility to ensure that they have read and understood the information passed on to them and act on this information accordingly.

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

- Recognise hazards, assess consequent risks and take steps to control the risks to themselves and others
- Use information to assess the immediate and cumulative risks
- Manage their environment to ensure the health and safety of themselves and others
- Explain the steps they take to control risks

Pupils should be encouraged to:

- Keep their working area clean and tidy
- Put equipment away tidily after use

Furthermore it is necessary to ensure that all tools and equipment are:

- Used with permission
- Used correctly
- Used safely
- Appropriate for the task in hand

For further Health and Safety information and Risk Assessments for use of DT equipment, please see the school's Health and Safety Policy and Risk Assessments on Staff Server and CLEAPS guidance
http://www.cleapss.org.uk/primary/primary-resources/primary-guides