# Design & Technology Policy 2020

Rationale

The staff at Burradon Community Primary School believe that Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. The subject encourages children to become self-directed and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products or systems that serve a purpose. We aspire for our children to ***be curious*** about the world around them, ask questions and investigate. Also, to be the best they can by ***persevering*** and being ***resilient***.

Through the study of Design and Technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices at a basic level. This allows them to reflect on and evaluate present and past Design and Technology created by others, as well as the items they create themselves. Design and Technology helps all children to become discriminating and informed consumers and potential innovators.

Aims and Objectives

The aims and objectives of Design and Technology at Burradon Community Primary School are:

- To develop children's skills in identifying a need, generating ideas, designing, making and evaluating.
- To develop imaginative thinking in children and to enable them to talk about what they like and dislike when evaluating products and when designing and making.
- To enable children to talk about how things work and to draw and model their ideas.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To explore attitudes towards the 'made' world and how we live and work within it.
- To develop an understanding of technological processes, products, and their manufacture, and their contribution to our society.
- To foster enjoyment, satisfaction and purpose in designing and making.
- To develop children's curiosity, originality, co-operation and perseverance.
- To encourage children's technical vocabulary.
- To provide opportunities for children to work both individually and as part of a team.

## The Curriculum and Planning

At Burradon Community Primary School it is a requirement that each class takes part in at least one Design and Technology project each term. It is also important that children take part in projects involving food, textiles, structures and mechanisms in each Key Stage. These are stated in the curriculum overview document.

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.

The teaching of Design and Technology in the Foundation Stage at Burradon Community Primary

School initially follows the Expressive Arts and Design- Exploring and Using Media and Materials strand of the Early Years Curriculum for the Foundation Stage. Topics are decided on a termly basis using analysis of children's data. This allows staff to target specific areas of learning. (See Foundation Stage Planning File for more detail).

In Key Stages 1 and 2 Design and Technology is taught as part of the topic, this means the project links to the topic being studied by each class, each term or half term. Planning is based on the National Curriculum objectives and the recently adopted Projects on a Page planners.

## Teaching and Learning

At Burradon Community Primary School Design and Technology is taught in all classes from Foundation Stage to Year 6. We use 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 that the children apply their knowledge and understanding when investigating products, developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole-class teaching and individual/group 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.

Three main elements are planned into each Design and Technology topic:

1- Investigation and Evaluation Activities

2- Focus Practical Tasks to develop skills

3- Design and Make Activities and Evaluate

The investigational activities are the exploratory part of a topic to raise awareness of materials, methods, items and objects presently used. The Focussed Practical Tasks are the skill-based activities where the children's work is directed to practise or develop particular skills. The Design and Make Activities are the more open activities where the children can use their skills to design and make their best design solutions. The children's written work should show evidence of the different aspects of a topic and will be presented in a Design and Technology topic booklet where the teacher feels it is suitable.

As stated in the National Curriculum 2014

In Key Stage 1 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 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.

This policy will be reviewed every three years.

Review Date: January 2021