



## **The Federation of Antrobus St Mark's and Great Budworth CE (A) Primary Schools**

### **Design and Technology Policy**

"Design is a funny word. Some people think design means how it looks. But of course, if you look deeper, it's really how it works."

**Steve Jobs**

#### **Overview**

We aim to provide children with a DT education that is relevant in our rapidly changing world. We want to encourage our children to become problem solvers who can work creatively on a shared project. We believe that high-quality DT lessons will inspire children to think independently, innovatively and develop creative, procedural and technical understanding. Our DT curriculum provides children with opportunities to research, represent their ideas, explore and investigate, develop their ideas, make a product and evaluate their work. Children will be exposed to a wide range of media including textiles, food and woodwork; through this, children will develop their skills, vocabulary and resilience.

#### **Intent**

We intend to build a Design Technology curriculum which develops learning and results in the acquisition of knowledge and skills. Children will know more, remember more and understand more.

We intend to design a curriculum with appropriate subject knowledge, skills and understanding as set out in the National Curriculum Design Technology Programmes of study. It is the intent for Design Technology to be taught in all year groups through at least one topic per term, which includes one topic relating to food. Design Technology projects are often made cross curricular - linking to other subjects taught.

Key objectives of intent within the Design Technology Curriculum based on the National Curriculum 2014 guidance:

- Products are to be made for a purpose.
- Individuality should be ensured in children's design and construction of products.
- Delivery of the two strands: Designing and Making and Cooking and Nutrition.
- More emphasis to be given on creating 'innovative' products in KS2.
- Teaching the importance of making on-going changes and improvements during making stages.
- Researching key events and individual designers in the History of Technology in KS2.

## **Implementation**

At Antrobus St Marks and Great Budworth, the Design Technology National Curriculum and EYFS is planned for and covered in full within the EYFS, KS1 and KS2 school curriculum. Whilst the EYFS and National Curriculum forms the foundation of our curriculum, we make sure that children learn additional skills, knowledge and understanding and enhance our curriculum as and when necessary.

Teachers follow the design process where each project includes: research, design, make and evaluation.

A range of skills will be taught ensuring that children are aware of health and safety issues related to the tasks undertaken.

Children will undertake design tasks and use skills from across the curriculum to fully explore the design process, evaluating work ensuring that it is of the highest possible quality. Their work will be marked and assessed against the curriculum objective and updated on our assessment platform INSIGHT. Children are also asked to self-evaluate their work.

Independent learning: Children will be asked to solve problems and develop their learning independently. This allows the children to have ownership over their curriculum and lead their own learning.

Collaborative learning: Children will also be asked to work as part of a team; learning to support and help one another towards a challenging, yet rewarding goal.

## **Early Years Foundation Stage**

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

## **National Curriculum requirements at 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 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, (or 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.

## **National Curriculum requirements for food and Nutrition at KS1**

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:

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

## **National Curriculum requirements at 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 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, 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, (for example as gears, pulleys, cams, levers and linkages)
- understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors)
- to apply their understanding of computing to programme, monitor and control their products.

## **National Curriculum requirements for food and nutrition at KS2**

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:

- 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
- to understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

## **Impact**

Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum.

Children will ultimately know more, remember more and understand more, demonstrating this knowledge when using tools or skills in other areas of the curriculum and in opportunities out of school.

As designers children will develop skills and attributes they can use beyond school and into adulthood.

## **Equal Opportunities and Inclusion**

Equality of opportunity at Antrobus St. Mark's and Great Budworth Primary Schools means that all children, taking account of gender, age, ability, disability, ethnic origin, faith, culture, social circumstances and sexual orientation have full access to all the curricular, pastoral and social opportunities offered by the school.

### **Health and Safety**

The general and legal requirements for Health and Safety are covered in the school's Health and Safety policy document.

### **Review**

Signed:..... Chairman of Curriculum Committee

Signed:..... Headteacher

Date:.....

Review Date: Every 2 years

Reviewed by: Gemma Phoenix

Date: November 2019

Reviewed: Summer 2021