



## William Gilpin Church of England VA Primary School Design and Technology Policy

### **Aims**

At William Gilpin CE VA Primary School, our aims reflect those within the National Curriculum as outlined below.

### ***Purpose of study***

*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.*

### **Aims**

*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.*

### ***National Curriculum 2014***

At William Gilpin all children develop skills and knowledge designing, producing and evaluating products that are purposeful and for an identified user. Where possible, design and technology is contextualised within topics. Children are encouraged to be creative and take risks in design and production. We aim to enhance our provision by taking opportunities to work with local craftspeople, schools and museums where relevant.

### **Teaching and Learning**

The subject specific pedagogy delivered throughout design and technology at William Gilpin is consistent with the expectations of the National Curriculum. Design and technology is delivered as a clear journey, with the process of designing and making something for someone, for a purpose, at the heart of each task. Children are expected to explore products prior to design and take risks with their designs.

The use of the published scheme, 'Projects on a Page', ensures that design and technology skills, knowledge and understanding are developed systematically. Opportunities to apply skills are planned as part of our thematic curriculum. Our design and technology curriculum map ensures that all the requirements of the National Curriculum for design and technology are met across each Key Stage and develops children's skills and knowledge in design, structures,



mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues.

The school uses a variety of teaching and learning styles in design and technology lessons. Our aim is to develop the children's knowledge, skills and understanding in design and technology.

**This should be achieved by:**

- A mixture of whole-class teaching and individual/group activities.
- Staff ensuring that the act of investigating and making something includes exploring and developing ideas, and evaluating and developing work.

**Effective teaching will:**

- Follow a planned approach to extend the learning activity as an integrated part of the curriculum.
- Give pupils a clear objective.
- Ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them.
- Encourage children to critically evaluate existing products, their own work and that of others.
- Provide opportunities for children to work both on their own and collaboratively with others, listening to other children's ideas and treating these with respect.
- Provide children with the opportunity to use a wide range of materials and resources, including those based around computing technology.

**Children will:**

- Develop designing skills, including generating and developing ideas, clarifying a task, creating design proposals, communicating ideas, planning and evaluating.
- Acquire and refine the practical skills associated with making, including working with materials and components, tools and processes, e.g. planning, measuring and marking out, cutting and shaping, joining and combining, finishing, and evaluating.
- Apply scientific skills, e.g. predicting and fair testing.
- Apply mathematical skills, e.g. measuring to an appropriate number of decimal places, drawing and interpreting tables, graphs and bar charts.
- Apply computing skills, e.g. making things happen by the use of control, handling information through the use of a database or spreadsheet.
- Apply art skills, e.g. investigating texture and colour or recording visual information.

**Progression**

Our design and technology curriculum is recursive and children revisit each key aspect multiple times throughout their school experience. This ensures learning is retained in children's long-term memory.



Through use of the 'Projects on Page' scheme of work children are taught units that reflect their stage of development. As we are a mixed age school, this will mean that this is sometimes reflective of their key stage as opposed to exact year group. Food is taught every year from Reception to Year 6. Textiles and structures are taught once in Key Stage 1 and twice in Key Stage 2. Mechanisms is taught twice in Key Stage 1 and mechanical systems are taught twice in Key Stage 2. Electrical systems are taught twice in Key Stage 2.

### **Foundation Stage**

In the Reception Class, design and technology is an integral part of the Early Years Foundation Stage. Design and technology is named in the 'Expressive Arts and Design' area of learning alongside art, music, movement, dance and role-play. Children learn to 'safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function' and 'use what they have learnt about media and materials in original ways, thinking about uses and purposes'.

### **Inclusion**

Everything reasonable will be done to ensure that children with disabilities and SEN have as full an access to the design and technology curriculum as possible.

### **Health & Safety**

At William Gilpin, we want all children to learn design and technology in a safe manner. We recognise that there are risks to be considered in the teaching of design and technology. Teachers are expected to risk assess where appropriate and are all aware of how to access CLEAPSS (Consortium of Local Education Authorities for the Provision of Science Equipment) recourses and hazard cards. There are specific risk assessments for some activities, for example the use of batteries and tools and equipment.

### **Impact**

In order to monitor the impact of the quality of education within design and technology we use a number of approaches. Learning walks, work scrutinies and pupil conferencing are used to assess how children are progressing towards the National Curriculum attainment targets in addition to assessing the quality of teaching in the subject.

We aim to collect a broad range of evidence to monitor the impact of design and technology at William Gilpin CE VA Primary School. Below is a list of forms that evidence may be collected.

- Learning walk/work scrutiny summaries
- Photographic evidence
- Samples of children's work
- Interviews or focus groups with children or staff

In addition to the above, we also assess children's progress against the National Curriculum at several points throughout the year. Teachers assess children's understanding through formative assessment in the classroom and foundation subject conferences with children. Children are



actively involved in evaluating their work and that of others' and thinking about possible improvements. Reporting statements are used to ensure we assess children against key areas within the design and technology curriculum, these are reflective of both knowledge and skills. Parents receive this information in an annual written report in the summer term.

### **Monitoring and Review**

Monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader and the Headteacher.

**This policy will be reviewed in the Autumn Term of 2024 or in the light of any significant developments.**

**Signed:**

**Chair of Governors**

**Date: December 2019**