St James' Lanehead Church of England Primary School

Design Technology Policy

Date of Policy:	January 2026
Person Responsible:	Miss J Doe
Review Date:	January 2029

Our Mission

Our church school seeks to inspire each individual to flourish, grow and learn with Jesus at the heart of all we do.

St James' Lanehead Primary School

DT Policy

Rationale:

At St James' Lanehead, we aim to teach our children to grow into positive, responsible role models who can work and co-operate with others whilst developing the knowledge, skills and understanding within subjects as well as a positive attitude to use throughout their lives.

In Design and Technology (DT) children are taught to develop their capability through designing and making a range of products and systems for specific purposes. Pupils solve problems creatively as individuals and members of a team. In doing so, they reflect on and evaluate present and past design and technology, its uses and effects.

Our school aims to:

- inspire pupils to become curious, creative and innovative thinkers with a broad understanding of how products are designed and made, encouraging pupils to think like designers and engineers
- support pupils to identify problems, generate ideas, plan and create products that are fit for purpose
- encourage pupils to evaluate their outcomes against the design criteria
- raise pupils' awareness of how design and technology shape the way they live, work and interact with the world
- encourage pupils to become resourceful, enterprising individuals who have the skills to contribute to and improve the world around them.

The Design Cycle

At St James' Lanehead, we follow a 5-part process within the design cycle. These stages will be completed within Design and Technology projects:

1) Evaluating existing products – Pupils will look at examples of existing products related to their unit of work. They will discuss the features that make the product functional, discuss key vocabulary and practise the skills needed to be able to complete the project successfully.
2) Focus on the task – Pupils will discuss the 6 principles of design, and create design criteria from their previous evaluations and investigations.
3) Designing a product – Pupils will explore a range of design methods, communicating their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, pattern pieces, prototypes or computer-aided design.
4) Making a product – Pupils will use the knowledge and skills previously explored to be able to create their own products. Pupils will be given the opportunity to make amendments to their designs, innovating their ideas throughout the making process.
5) Evaluating the product – Pupils will evaluate their ideas and the products made against the design criteria.

Key Principles of Design

In order to be able to produce innovative, functional and appealing products that are fit for purpose, pupils will consider the following 6 principles of design:

1) **Authenticity** – Pupils will be given a focus question or reason behind why they are creating the product.
2) **User** – Pupils will consider who the product is for, taking the users needs and interest into consideration.
3) **Purpose** – Pupils will discuss the purpose of the product, developing their knowledge on how the product will be used.
4) **Functionality** – Pupils will consider the design criteria that must be followed to ensure the product is fit for purpose.
5) **Design decisions** – Pupils will be offered a range of materials, tools, methods/techniques that they can choose from to create their product.
6) **Innovation** – Pupils will be given the opportunity to make changes to their design ideas in order to improve their products.

The Design and Technology Curriculum

Pupils will be taught the following key areas within each Key Stage:

- **Structures** – understanding how to reinforce, stabilise and assemble objects, from simple junk modelling to complex frameworks like bridges.
- **Mechanisms and mechanical systems –** exploring movement through simple mechanisms, such as sliders, levers, cams, gears and pulleys.
- **Textiles –** developing joining, stitching and decorative skills to create purposeful fabric-based products.
- **Cooking and nutrition –** understanding where food comes from and developing the skills to prepare, cook and evaluate healthy dishes
- **Electrical systems (KS2 only)** – designing and making products that use electrical circuits, switches, motors and sensors.
- **Digital world (KS2 only)** – applying computing knowledge to control and monitor products, and using CAD tools to design for specific needs.

Early Years

In the Foundation Stage, pupils will be introduced to the key concepts of planning, selecting materials, constructing and evaluating through child-led exploration, play and adult-guided tasks. Design and Technology makes a significant contribution to developing a child's understanding of the world through encouraging pupils to create designs, use their imagination, explore their creativity and develop their fine-motor skills. Pupils will complete projects within the areas of Cooking and Nutrition, Textiles and Structures.

Key Stage One

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. When designing and making, pupils will 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
- 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 in their products.

Cooking and Nutrition

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

Key Stage Two

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. When designing and making, pupils will 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 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
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

Cooking and Nutrition

- 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

Inclusion and Diversity

The curriculum features a diverse range of design traditions, food cultures, materials and technologies from around the world, encouraging pupils to design with empathy and respect to a variety of users. This approach helps challenge stereotypes, broaden perspectives and celebrate design as a practical, creative and culturally-rich human endeavour.

Activities will be modified to meet the needs of all learners through adaptive teaching. The following strategies will be used to support and challenge every pupil:

- **Scaffolding** – activities are designed with flexibility in mind, allowing for additional support or challenge where needed.
- **Multi-sensory approaches** – lessons incorporate different elements to engage all learners.
- **Clear instructions and structured tasks** – ensuring clarity and reducing cognitive load for pupils who benefit from additional support.
- **Opportunities for collaborative and independent learning** – allowing pupils to work at their own pace while building confidence and independence.

Health and Safety

- Children should be given suitable instruction on the operation of all equipment before being allowed to use it.
- Children should be strictly supervised in their use of equipment at all times.
- Children should be taught to respect the equipment they are using and to keep it stored safely while not in use.
- Children should be taught to recognise and consider hazards and risks and to take action to control these risks for the safety of everyone.

Food Hygiene

- Pupils and staff will take care to undertake appropriate hand washing and other hygiene related activities prior to preparing food.
- Pupils and staff working with food must wear aprons designated for cooking.
- Hair tied back.

Glue Guns

- Low temperature glue guns should only be used by an adult in Key Stage One and the Foundation Stage unless there is one-to-one supervision for a pupil.
- Key Stage two children should use low temperature glue guns under supervision in a designated work area.

Sawing

- Bench hooks and clamps must be used when sawing any material.
- Any loose items of clothing/hair must be tucked in.

Sewing

- When using pins to join fabrics they will be shown how to use them safely (pushing the point in an away direction)