St James' Church of England Primary School
Design & Technology

Our Christian Values and Pupils' Personal Development

Our curriculum is an important means by which we develop the values of our school in our pupils during their time at St James' Church of England Primary School. When planning and delivering lessons, teachers give attention to our Christian values of **Endurance, Forgiveness, Koinonia, Peace, Thankfulness** and **Trust** which are relevant to the unit of work. Our aim is to encourage positive attitudes to learning, to ourselves as individuals and to other members of our community.

Cultural Capital

Through our curriculum we aim to provide our children with the skills and knowledge they require to be educated citizens with an appreciation of human creativity and achievement throughout human history. With these insights our pupils will have the capacity to be happy, independent, confident individuals able to benefit from and contribute to their local communities and wider society.

Reading

The effective teaching of reading is of paramount importance. Becoming efficient readers enables our children to achieve our other curricular aims much more easily. It is a skill for life. We give the highest priority to the improvement of children's reading

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

- 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.

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.

Key Stage 1

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

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.

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:

- 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.

Intent

Our Design and Technology curriculum at St James' Haslingden encourages our children to solve problems independently, based on initial explorations of designers and their products. Through the evaluation of past and present design and technology, our children develop a critical understanding of its impact on daily life and the wider world. They acquire a broad range of knowledge and draw on disciplines such as science, engineering, mathematics, art and computing. At St James' Haslingden, we ensure that we deliver a curriculum that is both challenging and enjoyable. High-quality design and technology education makes an essential contribution to the culture, wealth and well-being of the nation. We want our children to know that design and technology skills are essential to everyday life and that our children are confident and not afraid to take risks.

Implementation

Our Design and Technology curriculum is designed to meet the key skills, knowledge and understanding required by the National Curriculum, which is then planned to ensure that the skills are taught sequentially across the key stages and that new skills build on and develop the skills taught in previous year groups.

At St James' Haslingden, teaching staff create a positive attitude to learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in design and technology.

Children have time to evaluate their design and end product against the design specification. Evaluation simply confirms that the product will work or it is fit for its purpose and responds to the wants and needs of the user. Children are encouraged to ask their own questions and consider constructive feedback from others, to improve their work.

Impact

Our approach to the teaching of design and technology at St James' Haslingden results in a fun, exciting and engaging programme. We encourage ur children to become critical thinkers, take risks, evaluate existing designs and provide feedback to make improvements to designs. Our children learn to be passionate not just about design but also about preparing and tasting food which is linked to their topic. They gain skills in evaluation, collaboration, construction, designing and investigation.
At St James' Haslingden, we liaise with parents regularly so that they are aware of what the children are learning. Children are prepared with skills that are transferable into future work life. Pupil's voice is used to further develop the design and technology curriculum and ensure pupils remain motivated. This is achieved through questioning, measuring attitudes towards D.T, and assessing the children's enjoyment of the lessons.