



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].

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.