

Design and Technology at Holy Family RC Primary School

“For with God nothing shall be impossible.”

Luke 1:37

<p>Aim</p>	<p><i>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.</i> – Steve Jobs</p> <p>At Holy Family, our aim with DT is to provide children with knowledge, understanding and skills that prepare them for life beyond primary education and ultimately helps them to become resourceful, innovative, enterprising and capable citizens. Children will make real products or prototypes of real products designed to solve real problems in ways which are relevant to the children’s ages and stages of development.</p>
<p>Overview</p>	<p>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.</p>
<p>Implementation</p>	<p>Children are encouraged to use their imagination and creativity but also to consider the needs of the product user be it themselves or another individual or group. Children will learn that designing and making is an iterative process through which they will need to continually evaluate their product by testing their ideas and making improvements. They will also use these important critical thinking skills to critique existing products and the work of others.</p>
<p>EYFS</p>	<p>During the Early Years Foundation Stage, the essential building blocks of children’s design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS. Specifically, ‘Designing and Making’ is identified as a strand within Knowledge and Understanding of the World. By the end of the EYFS, most children should be able to: construct with a purpose in mind, using a variety of resources. Use simple tools and techniques competently and appropriately, build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary.</p>
<p>KS1</p>	<p>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. When designing and making, pupils will be taught to 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. 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. 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. Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from, cook and apply the principles of nutrition and healthy eating. 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.</p>
<p>KS2</p>	<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at 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. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. 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. 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. 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.</p>
<p>Impact</p>	<p>Pupils will be able to evaluate past and present design and technology and have a critical understanding of design’s impact on daily life and the wider world. Pupils will know how to make a range of structures stronger and more stable so that they are fit for purpose. They will know how mechanisms can be built and then turned into mechanical systems which can achieve a desired output. They will know how to build electrical systems including programmable components which can monitor the external environment and control the output of the electrical system. Children will know how to create products from textiles including using patterns. They will know how to make a range of appetising dishes and will understand that recipes can be adapted to taste. Children will also be able to use a range of cutting, joining, shaping and finishing techniques across all areas of design and technology. Children will understand that the design process follows an iterative cycle of thoughts and actions which solves problems encountered during the making process. Children will know that when designing a product, there</p>

should be a clear user in mind and that the product should be functional and appealing to that user. They will also know that products are designed to fulfil a purpose or solve a problem.