St. Mary's Church of England Primary School, Fownhope

The Teaching of Design and Technology

A rich education is more than simply learning reading, writing and maths. It is about helping a child grow into their full potential as inquisitive, well balanced and cheerful adults. As a Christian school we nurture children to display the 'fruit of the Spirit', which is "love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control" (Galatians 5:22-23). At St Mary's you will find children growing in mind, body and spirit as they form good relationships with each other, the staff and discover a faith which will sustain them in a rapidly changing world. As our motto has it: "what we nurture today flourishes tomorrow".

Our philosophy for teaching Design and Technology:
"In everything you do, take the best that exists and make it better. When it does not exist, design it. Accept nothing nearly right or good enough"
(Henry Royce)
At St. Mary's we believe that Design and Technology prepares pupils to participate in a rapidly changing technological world and helps them to become discriminating and informed users of products. Through the teaching of Design and Technology they will develop a critical awareness of designs and their influence on the manufactured and natural world, on the environment and on different cultures and times. Children are given opportunities to develop curiosity and independence, responding creatively, planning, designing, communicating and evaluating with confidence, in a safe and accessible environment.

Year Group	Intent – what we want to achieve (National Curriculum objective)	Implementation - what it looks like in the classroom	Impact – how we measure success and what we will see
Early Years	**Expressive Arts and Design** **Early Learning Goal 16 – Exploring and using media and materials** Children will learn to:- • explore, use and refine a variety of artistic effects to express their ideas and feelings. • return to and build on their previous learning, refining ideas and developing their ability to represent them. • create collaboratively, sharing ideas, resources and skills.	Design-based activities linked to half-termly topics, e.g. Our Planet. Children have access to a wide range of media and materials, e.g. paint, clay, chalk, glue, etc and are given opportunities to create their own objects, as well as following instructions to create specified items. Children are given opportunities to work both independently and collaboratively. Children are given a wide range of materials and opportunities to construct, both independently and collaboratively.	Observations during play linked to Tapestry. Confident and enthusiastic learners. An enjoyment of design-based activities. Children independently choosing to engage in design-based activities. Progress in design skills observed across the Reception year. Children achieving the Early Learning Goal in 'expressive arts

		Children are given a variety of tools and taught to use them appropriately and safely. Visiting artists and community-based projects (e.g. puppet-making workshops) and trips help to broaden children's experience and skills.	and design' is in line with the national average.
Key Stage 1	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should: **Knowledge** • 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 • understand where food comes from. **Skills** • 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 • 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 • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria • use the basic principles of a healthy and varied diet to prepare dishes.	This is how it works: • DT work is produced as a cross-curricular or as a discrete subject showing the progression of skills • work will be displayed in class or recorded in books • collaborative work as a whole school community will take place during the year and displayed We aim to ensure all staff will: • positively model ideas • instil a love of learning and discovery • create a learning environment that is supportive and well-resourced • take opportunities to develop links with outside agencies and local high schools, where possible	Children will: • be happy and engaged • be able to reflect positively upon and discuss their learning • Have learned and developed skills that they can use for future projects Teachers will be able to know the impact through: • photographic evidence • verbal discussion and feedback between staff and children • self and peer assessments of work • improved use of skill with tools

Key Stage 2	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]. When designing and making, pupils should have: **Knowledge** • 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 • 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 • 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 • 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] • understand and apply the principles of a healthy and varied diet • understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. **Skills** • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • apply their understanding of computing to program, monitor and control their products • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	We aim to ensure all learners will: • develop their skill and knowledge base • learn about great designers and designs • be able to record, evaluate and analyse creative work using the language of design This is how we will support: • ensure access for all learners • identify children who have special needs and provide 1:1 support, group or partnered work • challenge some children through differentiated activities. The subject leader will: • provide support and resource links for staff • monitor progression and observe lessons • discuss the impact of the teaching taking place.	Children will: • be happy and engaged • be able to reflect positively upon and discuss their learning • Have learned and developed skills that they can use for future projects Teachers will be able to know the impact through: • photographic evidence • verbal discussion and feedback between staff and children • self and peer assessments of work • improved use of skill with tools • the ability to use learned skills and techniques across the curriculum and for other projects
