



St Michael's C E Primary

Curriculum Policy:

Design Technology

"We are the seeds. Our school is the good ground which provides everyone with all they need to grow and achieve." (Our children)

St Michael's is a Church of England Primary School built on distinctive Christian Values at the very heart of its community.

We will provide:

- a welcoming, inclusive school with strong relationships across our community, that celebrates diversity;
- excellent teaching with a nurturing approach, guiding first steps to next steps;
- an inspirational and challenging curriculum which ignites curiosity, encourages resilience and grows confidence so children become lifelong learners;
- a happy, safe and stimulating environment in which children can achieve their full potential;

So that our children will flourish in all they do and become good citizens

"And some seed fell on good ground. This seed grew and made 100 times more grain." (Luke 8:8)

Respect, Persevere, Achieve

Design Technology

To be read alongside school's Curriculum Aims, Teaching and Learning Policy and Assessment and Feedback Policy

Rationale

At St Michael's CE Primary School we believe that Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems.

Aims/Intent

At St Michael's CE Primary School through the study of Design and Technology children combine practical skills with an understanding of aesthetic, social and environmental issues. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and Technology helps all children to become discriminating and informed consumers and potential innovators. At St Michael's CE Primary School children learn to produce practical solutions to real problems. Children develop technical understanding and making skills, learn about design methods and investigate their environment and the materials around them.

We use a variety of teaching and learning styles in Design and Technology lessons. The principal aim is to develop children's knowledge, skills and understanding in Design and Technology, and teachers encourage children to use their knowledge and understanding when developing ideas, planning and making products and evaluating them.

At St Michael's CE Primary School we use a balance of whole-class teaching and individual/group activities, giving children the opportunity to both work on their own and to collaborate with others. Children are encouraged to listen to the ideas of others, and treat them with respect, to critically evaluate existing products, both their own work and those of others. They have the opportunity to use a wide range of materials and resources, including Information and Communications Technology (ICT).

Implementation of the Policy

Design and Technology education helps develop children's skills and knowledge in design, materials, structures, mechanisms and electrical control. They are encouraged to be creative and innovative, and are actively encouraged to think about important issues such as sustainability and enterprise. Considering the context of our school, our curriculum is designed to maximise the opportunities to access food and nutrition as we believe pupils need this understanding in order to secure healthy life choices. Pupils cover one design technology strand per term.

At St Michael's CE Primary School planning is the responsibility of the class teacher. All teachers plan sequences of learning in Design Technology so that they build on prior learning. Children of all abilities have the opportunities to develop their skills and knowledge in each unit and through planned progression we offer them increasing challenge as they move up through school. Teachers should access the band of objectives relevant to their year group. Teachers may select a context in which the objectives are taught. In planning, the delivery of the curriculum will be differentiated to allow for children of all abilities.

3 main sections are:

1. Activities which involve investigating and evaluating existing products
2. Focused tasks in which children develop particular aspects of knowledge and skills
3. Designing and making activities in which the children design and make 'something' for 'somebody' for 'some purpose'.

Big Ideas in Design Technology:

Design

Make

Evaluate

Technical Knowledge

Cooking and Nutrition

Personal Development

Design and Technology is an inspiring, rigorous and practical subject through which pupils encounter many opportunities to develop socially, morally, spiritually and their cultural understanding. Using creativity and imagination, children 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.

Children 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. Pupils have the opportunity to work independently and as a team to build resilience and self-esteem through tasks, sharing ideas and resources, peer-assessment and encouraging students to support each other.

Assessment

At St Michael's CE Primary School we assess the children's work in Design Technology by making informal judgements as we observe the children during lessons. Using the age appropriate curriculum statements teachers ensure pupils have the opportunity to make progress in Design Technology through high quality planning which responds to pupils' needs. Evidence of pupil achievement is located in the Topic books and in class record books. Staff will store digital evidence including photos and videos on a secure iPad or on the school network. Gathering qualitative evidence by speaking to pupils, scrutinising pupil's work and observing lessons gives the subject leader a clear overview of standards across school.

Health and safety

At St Michael's CE Primary School children will be given suitable instruction on the operation of all equipment before being allowed to work with 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, having followed simple instructions.

Food Hygiene

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

Glue Guns

At St Michael's CE Primary School 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 child. Key Stage Two children should use low temperature glue guns under supervision in a designated work area, wearing safety goggles.

Craft Knives

At St Michael's CE Primary School craft knives, quick cutters and rotary cutters should only be used by an adult/teacher in Key Stage One and the Foundation Stage. Key Stage Two children may use cutting equipment under supervision, using a cutting mat and wearing safety goggles.

Sawing

At St Michael's CE Primary School bench hooks and clamps must be used when sawing any material. Safety goggles must be worn and any loose items of clothing/hair must be tucked in.

Allergies

All staff are aware of pupils with allergies. Any activity which would potential bring a child into contact with an allergen is risk assessed and measures are put in place to ensure no child is put at any risk.

Differentiation - scaffolding

At St Michael's Primary School we aim to encourage all children to reach their full potential through the provision of varied opportunities. We recognise that our curriculum planning must allow children to gain a progressively deeper understanding and competency as they move through our school.

More Able Learners

More able learners will be identified as part of our formative and summative assessment procedures. We will provide for their needs through a framework of high quality first teaching which focuses on ensuring the children are challenged appropriately. In addition, we will focus on developing their learning behaviours, including, greater reflection, problem solving and enquiry, making connections, higher order thinking skills and independent learning. The progress of more able learners will be rigorously tracked to ensure more able children reach their full potential.

SEND/Inclusion

Children who are identified as being on the SEND register will be given support as identified on their Individual Provision Map. A variety of support materials and advice are available from SENDCo, Mrs C Mackay. Children are supported in the first instance through quality first teaching. Lessons will be differentiated in line with the individual needs of the children. All provision for pupils with SEND is in line with the school's SEND policy.

Equal Opportunities

At St Michael's Primary School the curriculum for Design Technology will develop enjoyment of and commitment to stimulating the best possible progress and the highest attainment for all our pupils irrespective of social background, culture, race, gender, differences in ability and disabilities. All of our pupils have a secured entitlement to participate in music curriculum and our teaching approaches ensure the avoidance of stereotyping when planning work or organising groups. All the teaching staff agree that when using reference materials, they should reflect social and cultural diversity and provide positive images of race, gender and disability.

Careers

At St Michael's all the areas of our curriculum support children's interest and understanding in careers and help to raise aspiration. Reference will be made to why Design Technology skills are important for analysis and interpretation in many jobs and also which careers rely on the need to use these specific skills.

Monitoring and Evaluation

At St Michael's Primary School the Design Technology Coordinator monitors planning and assessments – evaluating medium term plans and taking note of annotations, amendments and suggestions made by class teachers. They ensure that the curriculum has been covered and that there are no gaps.

Sample photographs and videos of completed work and displays may be kept digitally by the Coordinator as a portfolio, in order to monitor and support the raising of standards in music within the school. The coordinator takes responsibility for addressing any needs or concerns that arise as a result of this monitoring.

To monitor and evaluate Design Technology, the Design Technology subject co-ordinator does the following:

- Purchases and organises the appropriate resources.
- Supports colleagues in the teaching of Design Technology.
- Keeps up-to-date on the use of Design Technology in the curriculum and regularly attend training for subject leaders held by the LA and feedback new information and ideas to staff.
- Conducts Topic Book/ Sketch book scrutiny to assess the standards of Teaching and Learning through the children's work.
- Regularly reviews and updates the Design Technology Policy and contribute to the school's self-evaluation programme and School Development Plan.

DT Overview

September 2020 and then September 2022

	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
EYFS	Make Explore how things work and develop ideas and manipulate materials Homes for the three little pigs		Tools Develop use of tools for a variety of tasks (Stanley's Stick)		Food Making healthy choices An Italian meal	
KS1	Mechanisms Sliders and levers Pneumatic mini-beasts		Structures Freestanding structures (Sci/Computing)		Food Preparing fruit and vegetables (including cooking and nutrition requirements for KS1) Healthy pirate sandwiches (DT)	
LKS2	Structures Shell structures (including computer-aided design)		Food Healthy and varied diet (including cooking and nutrition requirements for KS2) Design a brand of tea		Textiles 2-D shape to 3-D product Anglo-Saxon purses (Hist/Art)	
UKS2	Structures Frame structures Historical houses (Hist/Art)		Mechanical Systems Pulleys or gears Mountain cable cars (Geog)		Electrical Systems More complex switches and circuits (including programming, monitoring and control) (Science)	

September 2021 and then 2023

	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
EYFS	Tools Develop use of tools for a variety of tasks		Make Explore how things work and develop ideas and manipulate materials Sea creature textile collage		Food Making healthy choices	
KS1	Mechanisms Wheels and axles Great fire of London Fire engines (Hist)		Food Preparing fruit and vegetables (including cooking and nutrition requirements for KS1) Balanced Scottish shortbread		Textiles Templates and joining techniques Chinese dragon puppets	
LKS2	Mechanical Systems Levers and linkages Steam boats (Hist)		Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2) American Food		Electrical Systems Simple circuits and switches (including programming and control) (Sci)	
UKS2	Textiles Combining different fabric shapes (including computer-aided design) Historical Hats (Hist)		Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2) Chocolate (Hist/Computing)		Food Healthy and varied diet (including cooking and nutrition requirements for KS2) Cooking a savoury meal (rationing) (Hist)	

