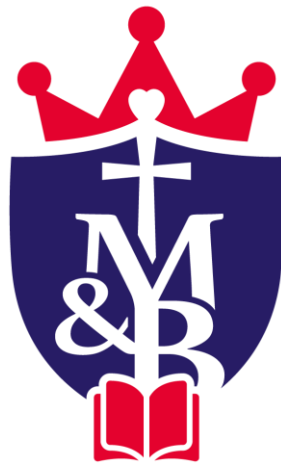# DESIGN AND TECHNOLOGY POLICY

St Mary's & St Benedict's

RC Primary School

Together in God's family, we grow in faith, knowledge & love to reach our full potential, and to become the people that we are created to be.

Policy Agreed: **March 2025**
Review Date: **March 2027**

St Mary's & St Benedict's Catholic Primary School
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Our School Ethos

At St. Mary's and St. Benedict's we aim for our curriculum to inspire pupils to be life-long learners with a sense of service to the world that they live in and the people that live in it with them.

We believe our pupils will be life-long learners if they are able to be:

- ✓ confident,

- ✓ independent,

- ✓ curious,

- ✓ open-minded,

- ✓ enthusiastic,

- ✓ observant,

- ✓ co-operative and

- ✓ resilient individuals.

In order to develop these qualities within our pupils we intend for our curriculum to provide opportunities for children to:

- Be curious and ask questions

- Evaluate and reflect

- Work collaboratively

- Apply their learning

- Solve problems whilst developing resilience

- Communicate their learning

- Challenge ideas

Vision for Design and Technology

Design and Technology is a key part of our day to day lives and it is therefore important that our children are taught how this subject is a vital feature in our world. At St Mary's and St Benedict's Primary School, children are encouraged to think creatively in order to solve problems in real world contexts. The teaching of Design and Technology in our school supports children to identify needs and opportunities, giving them the chance to develop

their own ideas and make their own products and systems with a clear purpose. Design and Technology encourages children to combine practical skills with an understanding of aesthetic, social and environmental issues, as well as of functions and practicalities. Work is recorded in a personal sketch book, which progresses through the school with each child, and we explore cross curricular links wherever possible.

Cultural Capital

At St Mary's and St Benedict's we understand that it is our duty as educators to give the children a rich educational diet that supports the notion of Cultural Capital. In order to do this in Design Technology, the curriculum and teaching embraces children's cultural identities, personal experience and prior knowledge. We plan lessons that include real life scenarios celebrating children's interests, we look to aspirational people that have shaped the world of Technology globally and we draw on the knowledge of our local community to share their experiences of working within a Technology role.

During each topic, Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2 each have an 'Aspirational Person' or 'Key Event' to focus on which links directly to the current learning. This includes historical figures or people from modern day society. It embraces role models of all gender, faith and ethnicity to provide purpose for the learning and inspiration for possible future careers.

Design and Technology Intent

At St. Mary's and St. Benedict's Primary School we aim to develop pupils' abilities within a well-sequenced programme of tasks, challenging critical thinking and problem solving at every stage of development. Lessons challenge children to plan and review technological processes through the design, make and evaluate principles of our planning and teaching.

To achieve our aims, we ensure that our children undertake challenging, motivating, relevant and enjoyable tasks in Design and Technology. We plan our lessons within the subject to challenge the children to use imagination, care and critique in their thinking, completing their work with skill.

Design and Technology gives the children the opportunity to work and think both as individuals and as part of a team, developing communication and social skills. High expectations are set throughout the subject, and regular school reviews have allowed us to ensure that we provide a detailed and broad curriculum for Design and Technology.

Design and Technology Implementation

Planning is informed by the Lancashire Planning documents and has detailed links with National Curriculum objectives, highlighting age related expectations for each class setting. All Design and Technology units follow a 'design, make and evaluate' principle, allowing children to fully experience every aspect of learning within the subject and putting them

and their ideas at the very heart of their learning. In all key stages, children are given opportunities to think creatively and critically about their work, and develop ideas in a variety of topics and genres.

Plans are further underpinned by our school Knowledge Organisers which consolidate age appropriate objectives into one document. Effective objective organisation allows for clarity within each year group and supports definitive progression of skills through the school. Design and Technology planning is done with the needs of all children in mind and appropriate support and differentiation feature in our lessons.

To further underpin our plans, we have collated all objectives for each year group into a 'Record of Skills' document. This provides planning clarity and allows gaps in learning to be identified and addressed as required. Additionally, it contributes to the smooth transition of skills between age ranges and ensures all topics are covered appropriately.

Design and Technology teaching takes place as part of our two-year rolling programme. When featured in the Lancashire documents, our medium-term plans identify the skills which will be taught within a theme of the school's curriculum. The principle of 'design, make and evaluate' is followed within each unit, and children are challenged to think creatively and critically about their product as well as the needs of the user.

Work is recorded in individual Design and Technology sketch books, which move through the school with each child. This allows us to fully incorporate _progression_ into the topic, with the continual encouragement for children to build on what they have already learnt.

St Mary's and St Benedict's Primary School are supported in the implementation of Design and Technology by our local cluster of schools (WRIST). As part of this, our school has use of key technology resources and staff contacts to support effective planning and teaching within Design and Technology. 'Crumbles' programming devices are shared between schools in the cluster and support the achievement of Key Stage 2 objectives _(to apply their understanding of computing to program, monitor and control their products)_ and to give children an exciting opportunity to use technology within a meaningful and practical context.

Design and Technology Impact

Our Design & Technology curriculum ensures that children leave St Mary's and St Benedict's Primary School:

- With the knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users

- Able to demonstrate creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Able to critique, evaluate and test their ideas and products and the work of others.
- Able to understand and apply the principles of nutrition and learn how to cook.

Training, planning and teaching our Design & Technology curriculum should ensure knowledgeable and skilful teachers are able to assess pupils' learning against our skill progression objectives.

Specific Nature of Design and Technology

The Department for Education (DfE) describe Design and Technology as 'an inspiring, rigorous and practical subject'. They go on to explain Design and Technology as 'using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and other's needs, wants and values'.

At St Mary's and St Benedict's, we recognise this definition and strive to underpin it throughout our curriculum. We offer varied learning opportunities, allowing children to make design decisions and develop their imagination in a purposeful and real world context. Learning is evaluated in a rigorous and meaningful way, which develops as they move through the school.

Sequencing with Design and Technology

Design and Technology is sequenced to ensure the effective development of skill, vocabulary and understanding as children move through our school. As St Mary's and St Benedict's, we strive to build on prior learning in a well-sequenced and rigorous Design and Technology curriculum.

Individual components of Design and Technology have been sequenced to upskill and consolidate as children move through the school, and differentiation is supported throughout.

To ensure maximum impact of progression, skills are grouped by year groups and cross curricular links are maximised whenever possible. This also supports the children to develop their technological vocabulary, provides opportunities for additional challenge and highlights areas for further development.

Health and Safety within Design and Technology

Safety is of paramount importance in Design and Technology. It is the teacher's responsibility to be aware of safety issues in all Design and Technology activities by:
* Providing a safe working area (furniture, materials storage, tool maintenance)
* Teaching and implementing safety rules and good practice, including hygiene

* Ensuring the safe and correct usage of tools and materials

* Ensuring working areas are kept clean and tidy

* Considering storage of partially completed work

* Ensuring the correct disposal of waste. The teacher is responsible for ensuring that children are adequately supervised when using tools and that other adults working in the classroom understand safety rules and maintain rigorous safety standards. Safety rules and safety issues should be taught to all children within each Design and Technology unit of work

Impactful learning

Design and technology knowledge is taught explicitly in D&T lessons so that children know more, remember more and can do more.

Substantive knowledge is organised into four interrelated disciplines designing, making, evaluating and technical knowledge to ensure that pupils' knowledge, skills and understanding are built upon through successive years towards clearly identified year group learning outcomes. This is clearly mapped for the children in our school by our skill progression documents.

To ensure our curriculum is taught to support maximum knowledge and skill development, we follow the stages outlined below:

1. Key knowledge for each subject is mapped from EYFS to Year 6 to ensure our children learn cumulatively sufficient knowledge by the end of each Key Stage.

2. Key skills are mapped from EYFS to Year 6 to enable children to apply their knowledge as skills. These are outlined on our skill progression documents.

3. Explicit teaching of vocabulary is central to children's ability to connect new knowledge with prior learning, and is key to supporting the progression of 'sticky learning' within our curriculum.

4. Spaced retrieval practice, achieved through questioning, group discussions and peer-explanations, further consolidates the transfer of information from working memory to long-term memory.

5. The use of knowledge organisers keeps essential information together and supports the principle that children are taught to forge connections between their current learning and the 'big picture' of subject content, leading to 'sticky learning'.

Children design products with a purpose in mind and an intended user, and new content is linked to prior learning. Children develop their ideas through analysis of existing products using discussion, drawings, plans and models. They plan the sequence of making and use their knowledge of materials, tools, marking out, scoring, cutting, shaping, and joining in

increasingly complex and accurate ways. Children are taught finishing techniques and are supported to apply these in increasingly more complex and successful ways.

Food technology is taught across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this. As a school, we are aware of the cultural capital links available to nurture here, and are mindful in supporting this responsibly and respectfully. It is important we provide opportunity to explore cultural variation, local and global availability as well as dietary needs for individuals.

Assessment within Design and Technology

Within Design and Technology, all children at St Mary's and St Benedict's should experience achievement, success and progression. The teacher needs to be aware of the progress made, difficulties experienced, misconceptions addressed and expectations met. Children should be supported at each stage of the Design and Technology curriculum in areas of: designing, making, evaluating and developing technical knowledge.

Assessment is varied, and can take the form of: monitoring children's discussions; question and answer with individuals or groups; peer assessment by children in pairs, marking designs, idea development, finding evidence of creativity and problem-solving skills; and marking the aesthetic quality and functionality of the end product. All elements of this will then form an end of year assessment picture, which will see the children assessed as 'working towards', 'working at' or 'working at greater depth' in relation to the national expectation for their age.

Marking and 'observation of practice' form a huge part of assessment within Design and Technology. All marking in sketch books follows our school marking policy and is regularly reviewed as part of whole school 'Book Looks'. Progress is also measured against Knowledge Organisers, with achieved targets highlighted yearly. Assessment is additionally supported by Assessment for Learning, as set out in our school Feedback Policy. This also informs lesson evaluations and next steps within teaching and learning.

As part of our whole school review process, subject strengths, weaknesses and areas for improvement are highlighted and brought to the attention of the subject lead (JV). This information is then reviewed with key stage leaders and amended to suit the particular year group and their surrounding curriculum.

Inclusion within Design and Technology

Provision is made for children with a range of SEND that can be grouped into four broad categories of need, as detailed below:

1. Communication and Interaction

Children and young people in this category have speech, language and communication needs (SLCN) which make it difficult to communicate with others. This may be because they have difficulty saying what they want to, understanding what is being said to them or they do not understand or use social rules of communication.

Children and young people with ASD, including Asperger's Syndrome and Autism, who are likely to have particular difficulties with social interaction may belong to this category.

2. Cognition and learning

Support for learning difficulties may be required when children and young people learn at a slower pace than their peers, even with appropriate differentiation.

Specific learning difficulties (SpLD), affect one or more specific aspects of learning. This encompasses a range of conditions such as dyslexia, dyscalculia and dyspraxia.

3. Social, emotional and mental health difficulties

Children and young people may experience a wide range of social and emotional difficulties which manifest themselves in many ways. These may include becoming withdrawn or isolated, as well as displaying challenging, disruptive or disturbing behaviour.

Other children and young people may have disorders such as attention deficit disorder, attention deficit hyperactive disorder or attachment disorder.

4. Sensory and/or physical needs

Some children and young people require special educational provision because they have a disability which prevents or hinders them from making use of the educational facilities generally provided. These difficulties can be age related and may fluctuate over time.

As a school, St Mary's & St Benedict's RC Primary School is committed to ensuring that all children get access to the full curriculum and we will provide suitable amendments to provision to allow this to happen.

At the bottom of this webpage: https://www.smsb.lancs.sch.uk/send/ there is a comprehensive list of subjects and the SEND adaptations that are suggested for each area. Class staff are required to consider these documents to best meet the needs of pupils with identified needs.

English as an Additional Language (EAL)

At St Mary's & St Benedict's, we believe that:

• EAL children learn to speak, read and write in English through immersion in a broad, rich curriculum

• EAL learners make the best progress within a whole school context, where children are educated with their peers.

• Bilingualism is viewed as a positive and life-enriching asset.

We work with the EAL team at Lancashire County Council, when deemed appropriate, to access specialist teacher support for pupils. This additional input is co-ordinated between pupil's class teacher and the SLT lead for EAL provision.

Able, Gifted and Talented (AGT) pupils

At St Mary's & St Benedict's, we understand that all children require support and challenge in their learning in order to make progress and reach their potential. Subject leaders work with teachers to identify and support these children through our teaching and learning activities, our more able (MA) pupils are given a wide variety of challenges and experiences which develops their resilience, inspires them and deepens their understanding of the tasks.

They are encouraged to develop their abilities to ask questions, explain and reason, persevere, communicate their thoughts and take risks in their learning. We strive to provide creative means to increase their independence and curiosity, leading to an ever-increasing love of learning.