ST PETER'S CHURCH OF ENGLAND PRIMARY SCHOOL

'In Jesus, we learn, live and grow together'

Be The Good Soil (Mark 4: 1-20)

Curriculum Intent, Implementation and Impact for Design and Technology

DT Curriculum Intent

At St Peter's Church of England Primary School, we have designed our DT curriculum with the intent that our children will become resilient, skilful, creative and inquisitive learners. Our DT curriculum allows children to study a range of topics, these include: food technology, textiles, mechanisms, electronics, technical knowledge and practical experiences, for a well-rounded gathering of skills and experience. We see the teaching of DT as vital for children to engage in an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. It is our role to ensure pupils are being self-reflective by testing and evaluating the efficacy of their creations.

Our DT lessons and STEM days are intended to offer an opportunity to solve real and relevant problems; develop their understanding and vocabulary to explain their methods and explain how their designs will work, trusting in their own capabilities to use equipment safely and effectively. The curriculum lessons have an intention of providing a high quality, coherent and progressive experience of the subject, with scope for cross-curricular learning. Through each unit, children will use a variety of skills from other subjects, such as Mathematics, ICT, Science and Literacy. The curriculum ensures opportunities for children to develop positive attitudes towards learning through trial and error and to reflect on and use this important transferrable skill to their own future life experiences. The intent is to make sure that children understand the relevance and importance of DT in today's modern world and how it constantly affects and changes our lives. Their learning in this invaluable engineering subject could not only bring advancements to their own future, but potentially to all of mankind.

We will deliver a curriculum that:

- Encourages confidence and self-reliance in their own capabilities.
- Inspires creative learning through excellent teaching practices that build on prior DT learning and allow for repetition and progression of skills that build upon young experiences.
- Embraces the community in which it is situated, recognising local 'hands on' places of learning, such as: Eureka!, The Science and Industry Museum, Lego Land etc.
- Is inclusive, develops resilience and identifies that all our children are unique.
- Encourages our children to constructively critique, raise questions and challenge themselves and their peers.

- Allows children to work as part of a team, allowing them to understand when it is important to ask for help from their peers and when it is necessary to stand in and aid others in their learning.
- Promotes equality and understanding of the British values and ensures they are prepared for life in modern Britain.

DT Curriculum Implementation

- The DT curriculum is led and overseen by Miss B Healey who will monitor, evaluate, review and celebrate good practice.
- The DT curriculum will follow the QCA scheme of work.
- DT follows a whole school approach, which will be taught discretely once a week every other half term, alternating with Art. We also have STEM days off timetable when the coordinators of Science, Computing, DT and Maths will liaise and create a whole school project or challenge for every year group to participate in.
- DT Lessons will build upon prior learning and develop skills year upon year.

In addition:

- The DT subject leader will be given training and the opportunity to keep developing their own subject knowledge, skills and understanding, so they can support curriculum development and their colleagues throughout the school.
- Assessment of DT will be in line with the whole school feedback policy and teachers will assess progress and attainment of DT.
- Opportunities to visit local educational trip venues to further their understanding and skills in DT.

In EYFS and KS1, children begin to look at the fun, experimental side of DT, building basic foundations of skills and knowledge to hone later in their education, evaluations will be verbalised and scaffolded by teachers to direct and guide the children in this complex life skill. In KS2, there will be higher levels of expectation for the children's skills, knowledge and self-reflection to develop and then establish clear next steps for their creations using these prior experiences and learning. Throughout each key stage the learning will always build upon what the children have learned previously and prepare them for their future learning. The learning will always use the children as a starting point and endeavour to make links to their own experiences and any potential future experiences. Each topic from the scheme has been broken down and activities advised for each step of learning. There is a clear Design, Create, Evaluate stage for the children to become familiar with throughout their time here at St Peter's.

Through these stages the children are taught to:
Design:

- Use a variety of working models to dissemble and identify working features of.
- Examine appealing features of existing products to identify the need of the consumer.
- Create detailed, labelled, sketched diagrams of their desired creation
- Communicate effectively their planning and reasons for specific design choices.
- Create design criteria to understand what is required of the finished product: what functions it should achieve; how it should look; what special features will need to be included.

Create:

- Develop the understanding to choose tools/equipment necessary to carry out the desired function.
- Consider the method of assembling a variety of materials that have been chosen for their specific reasons.
- Build resilience in the face of pressure and potential failure as well as the courage and maturity to consider new methods.
- To work as part of a group, listening to and allowing others to take control of a situation in order to support and further the learning of their peers.

Evaluate:

- Compare a range of existing products to their own, examining the differences and reasons behind these.
- Evaluate their own and peers' products against a pre-determined design criteria encouraging growth mindset and aiding others in the improvement of their work.
- Finding successes and celebrating these with their teachers and peers.
- Understanding constructive criticism, what's appropriate and inappropriate and how to receive this maturely.

Technical knowledge and skill:

- Use and understand mechanical/electrical systems.
- Understand hygienic food preparation methods, including cooking.
- Choose the correct tools for the job, handle these appropriately and with an increasing skill to complete desire effect safely and responsibly.
- Understand the theoretical knowledge behind a system and how this will affect their designs and creations. i.e. pneumatics.
- Develop and refine knowledge of how to strengthen and reinforce structures and joints within these.
- Use of key vocabulary and an ability to verbalise what is desired and how their methods will achieve this.

As well as lesson plans, there is a resource bank for each topic provided so teachers will know exactly which resources are required, there is also a section highlighting the key skills and knowledge gained from each topic the children will be studying. An example of key words has been included to show the progression skills around the specific language involved in the children's learning, so teachers can assess their understanding and progress through vocabulary as well.

DT Curriculum Impact

Here at St Peter's, we ensure the children will develop a practical understanding of the skill and techniques needed to creatively design functioning, useful, appealing products. This will aid them in becoming future potential contributors to an increasingly technological world. Children will develop their personal and social skills within their lessons to further advance their position in this world. They will improve in confidence, self-esteem, resilience and ability to ask and offer help when in need. DT will use team work and questioning to aid them in becoming inquisitive, resourceful, innovative, enterprising members of society.

Attention to detail will be essential for the children. Creating a good quality finish in all their final products in order to critically understand the needs of the consumer, will allow them to develop their ability to predict and achieve the outcome other people require of the products, a key skill needed in many walks of life.

DT Education at St Peter's develops pupils'…

- confidence and capability to solve real life problems independently and as part of a team;
- understanding of how commercially made products fit the needs of consumers;
- ability to test the function of their own product and create a justification for how it meets the design criteria;
- resilience in their own learning, creating solutions to problems they have encountered in their own product;
- ability to constructively critique their own and their peers' work in order to improve these in the future;

DT Education at St Peter's encourages pupils to…

- consider challenges with an open mind and good attitude for success;
- develop their vocabulary as they consider the needs of the consumer and how their product has met/not met these needs;
- use the tools and equipment needed to achieve their intended outcome safely and sensibly;
- develop respect for and sensitivity to others, and embrace a resilient 'can do' attitude.

DT at St Peter's enhances pupils'…

- critical thinking and reasoning skills;
- understanding of potential job roles in their future;
- ability to reflect on, consider, analyse, interpret and evaluate a variety of products.

DT Education at St Peter's offers…

- opportunities to work as part of a team, imagining creative solutions to problems through effective communication;
- opportunities for self-reflection and progression, building confidence in their own abilities.