

DT at St Mary's

Intent:

Design & Technology (DT) plays an important role within the curriculum at St Mary's CEVA School and is one of many subjects that help to fulfil our mission of creating aspirational problem solvers. Pupils have planned opportunities to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. This gives the learning purpose and relevance to the pupils.

Essential characteristics of designers:

- Take risks to produce innovative ideas.
- Carry out research, asking questions to develop knowledge of a user's needs for a product.
- Problem solve and evaluate outcomes.
- Use a range of tools and material with purpose and safely.
- Apply mathematical, IT and/or scientific knowledge.
- Produces products, that are fit for purpose.
- Safely and hygienically, prepare food.
- Are inspired by designers in the wider world.

At the end of Foundation at St Marys CE

Children at the expected level of development will:

- Use a range of small tools, including scissors,
- Safely use and explore a variety of materials, tools and techniques, experimenting with design, texture, form and function.
- Share their creations, explaining the process they have used.

At the end of Key Stage 1 pupils at St Marys CE:

- Build structures, making them strong and stable.
- Use mechanisms (E.g. sliders, levers, wheels and axels) in their products.
- Join fabrics and attached adornments.
- Have a basic understanding of a healthy diet to prepare food
- Understand where food comes from

At the end of Key Stage 2 pupils at St Marys CE:

- Understand how to strengthen, stiffen and reinforce complex structures.
- Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages.
- Understand and use electrical systems in their products
- Apply their understanding of computing to programme, monitor and control their products.
- Understand the principles of a healthy diet
- Prepare and cook a variety of predominately 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.

Implementation:

Some units of DT in both key stage 1 and key stage 2 are linked to topic learning however, there are also some discreet units.

- Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an interactive process of designing and making.
- Design – use research and develop design criteria to design for a purpose and communicate their ideas through a range of mediums.
- Make – use a wider range of tools and equipment with accuracy and use a wider range of materials and components according to their qualities.
- Evaluate – evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Assessment

We use a multifaceted approach to assessment within DT with AFL used in each lesson through questioning and live feedback. . In addition, at the end of a unit, pupils reflect on the skills they have acquired and developed and evaluate how successful their design fits the brief.

Cultural Capital

Through the developing of knowledge of designers through the DT curriculum (including profession of the month) pupils understand the role designers have in the wider world. In key stage 1, in the unit, 'Who was Charles Wicksteed?' pupils learn about the significance of the engineer and his role in the leisure activities in Kettering in the past and his continued impact today. Through the unit, 'No Place Like Home' in Year A of key stage 2, pupils learn about the significance of shoe design in Northamptonshire.

Career Professional Development.

We develop strong subject knowledge amongst all staff which is achieved through a comprehensive progression of skills document and bought in units of work that are planned by DT specialists.

- Skill specific videos to support teachers

Spirituality

Will be developed through a sense of enjoyment and fascination in learning about themselves, others, the world around them and the incredible achievements of designers and the impact they have on our lives today. The use of imagination and creativity in their learning demonstrating a willingness to reflect on their experiences as designers will deepen their spiritual understanding. Through the exploration of designers now and through the ages, pupils seek to ask BIG questions about their journey and the world beyond themselves.

Impact:

- Pupils can confidently talk about the DT process: Design, Make, Evaluate.
- Pupils reflect and problem solve when making their products.
- Pupils ask questions. What if...? What would happen if...?
- Pupils can make products with thought given to the recipient.
- Pupils know where food comes from and how to safely and hygienically prepare it.