Design Technology Curriculum

Intent

At St Mary's we provide the children with a comprehensive Design and Technology curriculum that enables them to become innovators and prepares them for life beyond Primary Education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Design and Technology is an inspiring, rigorous and practical subject. It can be found in many of the objects children use each day and is a part of children's immediate experiences. At St Mary's we encourage children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. Through exploration, testing and evaluating the children will develop and build resilience, as they come to realise initial thoughts, plans and designs need to be adjusted. The children are encouraged to become innovators and risk-takers. The curriculum will improve analysis, problem solving, practical capability and evaluation skills. We aim to, wherever possible, link work to other disciplines such as mathematics, science, computing and art.

At St Mary's the curriculum for design and technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

Our curriculum allows the children to develop knowledge and skills in:

- Textiles
- Structures
- Mechanisms
- Food Technology
- Digital systems
- Electrical systems.
- CAD.
- Pneumatics.

Implementation

In Reception class the children learn through first hand experiences, exploring, observing, solving problems, thinking critically and talking about why they make particular decisions. They will use a range of media, tools and materials.

Through our progressive curriculum, each year group has a designed curriculum that ensures the children are able to learn, practice and build on their Design and Technology skills. St Mary's will ensure that a progression of these skills is maintained throughout the year groups.

A unit of work will be delivered through the stages of DT:

- Explore – To look at products (in detail) similar to that which they will be designing and making.
- Design – Consider end user and purpose of the product. Use diagrams and exploded diagrams to clearly label component parts.
- Make – Choose the correct materials and tools required to assemble their product.
- Evaluate – Critically evaluate what has worked and what can be improved. Ask the question, 'Is the product fit for purpose?' If not consider how it can be improved.
- Technical knowledge – Apply throughout the stages and use the language of design technology.

Children will record each stage of the Design and Technology process in project books. Knowledge organisers are used in each unit and are a vital resource for the children to refer back to throughout their learning. In conjunction with this, teachers have identified five non-negotiable facts that the children need to know by the end of a topic. These facts are the foundation of our planning and are recalled at the start of each lesson as well as being elaborated on in lessons. We hope to imbed these facts into the children's long term memory.

Children's finished work will be displayed in the classroom and around school.

Impact

Our Design Technology curriculum is high quality, well thought out and is planned to demonstrate progression. We measure the impact of our curriculum through the following methods:

- Children will be able to use technical language.
- Children will be able to consider effectively the right tools needed to complete a task.
- Children will reflect on standards achieved against the planned outcomes.
- There will be a celebration of learning for each term which demonstrates progression across the school.
- Children will be able to confidently discuss their learning; which includes discussion of their, ideas, processing and evaluations of work.
- Children will understand how and why products are produced.