Design and Technology

Intent

At Culcheth Primary School, Design and Technology is a hands-on, exciting and comprehensive subject. Design and Technology is concerned with inspiring the children to think creatively and solve problems pragmatically. The children work both independently and together to research, design, create and evaluate interesting products with real-world applications. With links to science, maths, computing and history topics, D and T is a cross-curricular subject that allows children to explore their creativity in a variety of contexts. The children have the opportunity to research existing products, developing their own tastes and opinions, design and create their own products based on this information and evaluate their work. All of which develops their ability to problem solve, think practically and innovate.

Implementation

Through creative and practical activities, at Culcheth Primary School, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing, making and evaluating.

When in Design and Technology, the children are taught to:

Design
• use research and develop design criteria to inform the design of a product that is fit for purpose, with a specific context and a target audience in mind.
• develop, model and express their ideas through discussion, annotated sketches, prototypes and computer-aided design where applicable.

Make
• select from a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) and do so accurately.
• select from a wide range of materials, including construction materials, textiles and ingredients, and select these appropriately.

Evaluate
• investigate and analyse a range of existing products.
• evaluate their own ideas and products against their own design criteria and consider the opinions of others to improve their work.

Technical knowledge
• apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
• understand and use mechanical systems in their products.
• understand and use electrical systems in their products.
• apply their understanding of computing to program, monitor and control their products.

Key skills and knowledge for D and T has been organised throughout the school to ensure progression as the children move from each year group. This allows for the development of skills and knowledge throughout the programme of study.

Impact

We ensure that the children will:

• develop the creative and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
• build and apply their growing knowledge, understanding and skills in order to design and make high-quality products for a wide range of users and finally evaluate and critique their products.

• understand and apply the principles of nutrition. Children will design and make a range of nutritious products which links contextually to a relevant unit of the teachers’ choosing.

A good quality finish will be expected in all D and T activities (made age and ability appropriate to the child).

Children will learn how to think creatively and solve problems as they arise. They will learn skills that will benefit them throughout their lives and prepare them for modern day society. Through the evaluation of past and present design and technology, they will develop an understanding of its impact on daily life and the wider world