

Design and Technology Curriculum Statement

National Curriculum - Design and technology key - Gov.uk

“Design is a funny word. Some people think design is how it looks but of course, if you dig deeper, it’s really how it works.” - Steve Jobs.

Overview

Today's children are living in a highly developed technological society and they are constantly using and controlling a wide range of technology. This is all part of their experience of life and we aim to prepare them with the skills they will need in the future. Design and Technology is about practical problem solving and using materials available to them to solve problems in a man-made environment.

At primary level, we can instil attitudes towards Design and Technology in which the children can realise that there is never just one correct solution. The process of identifying a need, designing a solution, building an artefact, testing and evaluating it can be most satisfying to the child, particularly if it works and has some relevant function or application. Therefore, at Thomas Gray Primary School we aim to inspire our future creators to take risks, become resourceful and innovative.

Intent

Our intention when teaching Design and Technology at Thomas Gray Primary School is 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 changing technological world.
- Can 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.
- Encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- Develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.
- Develop an understanding of technological processes, products and their manufacture and their contribution to our society.
- Enable pupils to 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 where children work independently or as part of a team.
- Develop confidence and self-esteem and so increase children’s resilience and perseverance.
-

Implementation

EYFS

We encourage the development of skills; knowledge and understanding that help children make sense of their world as an integral part of their school work. We relate the development of the children’s knowledge and understanding of the world to the objectives set out in the EYFS Framework. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, simple tools and products, developing their making skills and handling appropriate tools and construction material safely and with increasing control.

These activities, indoors and outdoors, attract children’s interest and curiosity.

Key Stages 1 / 2

KS1 & KS2 Overview

KS1 and 2 National Curriculum in England: design and technology

Our school focusses on developing Design and Technology key skills as set out in the Lancashire scheme of work.

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. The children work in a range of relevant contexts. When designing and making, the children are taught to:

Design

- To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or group.
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design

Make

- To select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately whilst following safety procedures.
- To select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- To build resilience, perseverance and respect for others.

Evaluate

- To be given time to explore and evaluate a range of existing products and to evaluate their ideas and products against design criteria, including their own design criteria and consider the views of others to improve their work.
- To understand how key events and individuals in design and technology have helped shape the world.

Technical knowledge

- To build structures, exploring how they can be made stronger, stiffer and more stable.
- To understand and use mechanical systems in their products e.g. levers, sliders, wheels and axles in their products.
- To understand and use electrical systems in their products.
- To apply their understanding of computing to program, monitor and control their product.