



Newtown C of E Primary School

Design and Technology (DT) Rationale

Our vision for DT

At Newtown C of E Primary we aim to provide high quality educational opportunities that give children an understanding of creative product designing, making and evaluating. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, DT, engineering, computing and art. Pupils learn how to take risks, become resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

The national 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 driven 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.

At Newtown C of E Primary school we deliver DT lessons through a range of hands on, practical learning tasks designed around contexts which are real and relevant to our children.

Intent

Develop a mastery of the following skills –

Design:

- Use research to develop designs.
- Develop innovative, functional and appealing products that are design for a particular purpose.
- Generate, develop and communicate ideas through discussion with others.
- Use annotated sketches, prototypes, pattern pieces and technology to generate, develop and communicate ideas.

Make:

- Cut slots.
- Cut internal shapes.
- Use lolly sticks/card to make levers and linkages.
- Use linkages and sliders to make movements larger or more varied.
- Use and explore complex pop ups.
- Create nets to support the design process.
- Explore and evaluate different ways of joining materials
- Explore different finishes for their product using a range of materials.



Evaluate:

- Investigate and evaluate a range of existing products
- Evaluate their ideas and products against design criteria and seek the views of others to improve their work
- Understand how key events and individuals in design technology have helped to shape the world

Implementation

How do we help children commit this knowledge and these skills into their long term memory?

What is our approach to the delivery of DT?

The learning sequence should begin with a link or hook to the overall learning project. Children are welcomed in to the learning through the sharing of the outcome for learning, along with the essential skills and knowledge that they will acquire.

Through investigative, hands on experiences, children find out about the product that they are going to create by evaluating what is already available on the market. It is at this point that they are able to begin to critique different versions of a product, picking out details and techniques that they might emulate in their own product.

Having experienced examples of the final product, children are then ready to make their own design choices. They plan carefully, following a design specification and make notes on why they have made specific decisions.

Following on from this, children are exposed to skills based learning where they will acquire the necessary skills needed to create their final product. It is important that children are given the skills before creating their final product, to reflect the real world. This might include cutting/joining techniques, experimenting with different mechanisms to achieve a particular outcome, or by combining different electrical components.

Having completed their own design and acquired the necessary skills, children are then able to create their own product, keeping in mind the intended purpose and user. The sequence is complete when children have evaluated their own product and given feedback to others.

Expectations

Within DT the expectations are:

- For children to be involved in the risk assessment elements of the learning so that they are aware of how to keep themselves safe in DT lessons.
- For children to be able to take positive risks in their learning, by using a range of tools and materials and through new experiences.
- For children to be able to make informed and independent choices in their design choices.
- For children to be provided with real and relevant contexts which build on their own prior knowledge and experiences.
- For children to have access to enrichment opportunities to bring their learning to life.
- For children to experience the full curriculum coverage for DT across each age phase.