

Design and Technology

Intent

It is our intent for D&T to offer children the chance to use creative thinking and design within a defined purpose and tangible outcome. Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in a process of designing and making. They work in a range of contexts which allows for cross curricular links to be made.

Through the study of D&T pupils acquire a broad range of subject knowledge and draw on other areas of knowledge and skills, such as mathematics, science, engineering, history, computing and art. Pupils learn how to take risks while becoming resourceful, innovative, enterprising and capable young citizens. Our school strives to teach D&T in ways that will help children make connections between real-world scenarios and the skills that they are learning. We aim to progressively develop their D&T knowledge over the seven years they spend at OLOV, with hopes that they continue to embrace their creative side far into the future.

Implementation

Through a variety of creative, thematic and practical activities, we teach the knowledge, understanding and skills needed to engage in the process of designing and making. We use **Kapow** as a main resource to ensure that children design and create products that consider function and purpose, while being relevant to a range of sectors in their lives (for example, the home, school, leisure, culture, enterprise, industry and the wider environment).

When designing and making, the children are taught to:

Design:

- 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 groups.
- generate, develop, model and communicate their ideas through

discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design.

Make:

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing, as well as chopping and slicing) accurately.
- select from and use a wider range of materials, ingredients and components, including construction materials, textiles and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.

Evaluate:

- investigate and analyse a range of existing products.
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- understand how key events and individuals in design and technology have helped shape the world.

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.
- Understand some of the ways that food can be processed.

Inclusivity

All pupils including those who have SEND or are disadvantaged have full access to the DT curriculum.

We support pupils by:

- Providing visual aid to enable learners to identify artists and their work, as well as identify equipment and media.

- Provide a word/or picture bank (knowledge organiser) for the learner to refer to during guided reading and independent activities.
- Use strategies such as modelling, demonstrating and imitating to support learners in understanding the step-by-step processes.
- Discuss and display any key vocabulary together with its meaning (knowledge organisers).
- Provide visual word banks that are accessible to the learners (knowledge organisers and within the lesson slides).
- Ensure that vocabulary becomes embedded by referring to it regularly during lessons and whilst modelling.
- Extra assistance from support staff and teacher during the work period session of the lesson.

Design and Technology is resourced with appropriate tools and materials across the school.

Impact

Pupil will have designed, made and evaluated a range of products. They will be able to talk confidently about their work, possibly even teach the skill to another pupil/adult in their life.

Pupils will feel encouraged to take these skills into other sectors of their lives, implementing them for their own satisfaction and enjoyment (e.g. taking a newfound skill home and creating products there).