Design Technology at Ham Dingle

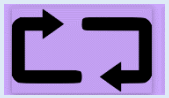
Our D&T curriculum aims to:

- Ensure that all pupils enjoy and are exposed to an inspiring, rigorous and practical subject
- Allow pupils to use creativity and imagination
- Design and make products that solve real and relevant problems within a variety of contexts
- Encourage pupils to consider their own and others' needs, wants and values
- Build character and encourage pupils to learn to takes risks, become resourceful, innovative and enterprising individuals

Big Ideas

We use school created units (booklets) and the KAPOW scheme of learning to support the delivery of D&T across the whole school. There are five core disciplines: mechanism, structures, electrical systems, textiles and food and nutrition. The Big ideas are:

- **Explore**
- **Design**
- **Make**
- **Test**
- **Evaluate**



Content and Sequencing

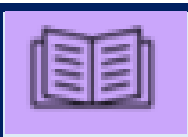
A clear curriculum is porvided for each year group. These units are built on in consequent years where skills are further developed and appied.

EYFS focus on using and exploring a variety of tools and techniques, experimenting with colour, design, texture, form and function.
Construction skills are developed in each year group from basic constructions to moving mechanisms and use of electricity.
Basic fixing techniques using fabric glue, stapling etc are used in key stage one and then progress to use sewing joins in key stage two such as running, blanket cross and back stitches.
Basic hygiene skills and the importance of healthy eating are built up throughout each year group.
Design progresses from a basic criteria to creating prototypes in order to evaluate and refine work.

Deepening Concepts

To enable our pupils to think creatively and imaginatively, our deepening concepts in D&T are:

- To take inspiration from design.
- To master practical skills
- To design, make, evaluate and improve.



Links with other subjects

Children can link D&T to mathematical skills by understanding shape and space of different materials, measuring using different metric weights, analysing statistics and problem solving.

Children will use subject specific vocabulary throughout D&T lessons and use these in sentences and in written work. They will also compare and contrast their views with those of other people and give feedback.

Lesson Design

Each lesson has:

- A clear structure of – explore, design, make, test and evaluate
- The teacher will begin with retrieval practice, where children will recall their learning from previous lesson or unit.
- The lesson will be introduced to the children with background knowledge given. Opportunities to explore products, materials, tools and equipment will be provided.
- Teacher will clearly model any skills that the children will be practising during the lesson especially when using tools and equipment (safety and risks discussed).
- The children will then use the skills independently or as part of a team.
- The children will then use a design brief to design an outcome for the end of the unit.
- Children will then apply their skills and knowledge and use their design to make an end of unit outcome.
- Children will have the opportunity to test their final unit outcome and make any changes.
- Children will then evaluate their own final outcome (individual or group) and give verbal and written feedback in some units.

Design Technology continued…

Vocabulary

Each learning module includes and teaches subject/unit specific vocabulary. This is linked to the skills that the children will be practising and applying in each unit and will be consistently referred to throughout the lesson and the unit.

Making Progress

Children make progress when there is a change in long term memory and when content is taught in small, manageable steps. This will reduce cognitive load. Units are sequenced, so prior knowledge, skills and concepts are built upon from previous year groups and units lead to improved skills and increased knowledge.

Progress is assessed through, observations, photographs, quizzes, end of unit final outcomes and making connections between science, technology, engineering, computing, art and maths. These are recorded and monitored through records kept in individual D&T folders.

Retrieval Practice

Retrieval practice is used as a learning tool, not just an assessment tool. It allows children to transfer their ideas from their working memory into the long-term memory. Retrieval encourages children to memorise knowledge and skills. In D&T, each lesson begins with a recap of the last lesson and the skills/knowledge acquired.

D&T begins with retrieval practice (prerequisite quiz) based on the learning from the previous year group to support long-term memory, help form connections to what we already know and increase fluency, helping to free up space in the short-term memory. In KAPOW units, a quiz will be completed before the start of the unit and then again at the end of the unit.
Our approach to retrieval practice ensures pupils in D&T know and remember more, easily helping them to connect their learning in D&T to other areas of the curriculum.
Retrieve and recall questions are recorded in D&T booklets/folders and end of unit reviews are crucial.