Design Technology

We strive to ensure that all children enjoy DT and experience opportunities to explore the use of a wide range of resources in different ways. Our DT teaching aims to engage, inspire and challenge pupils and to promote habits of mind including creative problem solving, adapting, curiosity, resilience, collaboration, resourcefulness and reflection.

Intent

We aim to:

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in our increasingly technological world.
- To develop Oracy and vocabulary skills related to Design Technology.
- To build and apply a repertoire of knowledge, understanding and skills to design and make prototypes and products for a range of users.
- To critique, evaluate and test their ideas and products and the work of others.
- To understand and apply the principles of nutrition and learn how to cook and create simple dishes.

Implementation

How we achieve our aims:

Ambitious Curriculum for All

Our approach to teaching Design technology is underpinned by the EYFS Statutory Framework National Curriculum

and by evidence from Royal Academy Of Engineering

Substantive Knowledge

A spiral approach aligned with the National Curriculum, revisiting key concepts at greater depth as children progress and scaffolded by the CUSP curriculum: construction, textiles, structures, mechanisms, electrical systems, food and nutrition and applying computing.

Disciplinary Knowledge

Our DT curriculum teaches pupils how to:

- Make choices regarding which materials and resources to use and combine
- Consider and apply ways to attach and secure structures and materials
- Measure with accuracy
- Use equipment safely
- Design, evaluate and adapt.

Curriculum Links

DT links in various areas across the curriculum. Examples include:

- Maths- Measure, Shape and Space, Ratio and Proportion
- Science –Food and Nutrition and Properties of Materials
- Computing.

Enrichment

We enhance our Design Technology curriculum through:

- Use of visitors in and visits out of school
- Termly enrichment days across the school
- Webinars through STEM Learning

Inclusive and Adaptive Teaching

The expectation is that the majority of children will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of children' understanding and their readiness to progress. (National Curriculum)

Support

- Connections to previous learning are made in a clear manner, both verbally and visually
- Activities are adapted to meet need and avoid cognitive overload for all, especially SEND children
- Access to visual aids and vocabulary
- One to one and small group support within lessons
- Clarification and simplification of language and instruction

Challenge

- Higher level questioning throughout lesson.
- Pupils may be challenged to add further to their design or use different materials or resources.
- They may be challenged to apply more difficult techniques.

Components of Effective Lessons

- The use of carefully designed screens and images.
- Direct teaching which makes clear connections with previous learning
- High quality modelling
- Practice to embed learning and make progress
- Consolidation through revisiting and evaluation in order to deepen learning
- Teachers and LSAs supporting learning, asking skilful, probing questions.
- Opportunities for pupils to reflect upon their work as they creatively problem solve and make adjustments.

Assessment

Formative assessment takes place every lesson:

- Questioning
- Assessing if the children are ready to move on at the point of teaching through in-class observation discussion with pupils.
- Exemplification materials demonstrate the expected standard against which teachers can assess pupils' work and outcomes.

Subject Leadership

Resources

- Carefully designed screens using a range of images
- A wide range of materials and resources, for example, Lego Dacta, Duplo and Knex for construction.
- Video clips

CPD

CPD includes both in-house and online training.
Our subject lead has led an 'Enthuse Partnership' and has been on STEM Learning Design Technology CPD.

Quality Assurance

We quality assure through:

- Pupil book study
- Learning walks
- Staff voice

Impact

Our outcomes:

Children show an enjoyment of and curiosity for Design Technology.

Children develop their DT skills using a range of techniques, media and tools with increased proficiency.

Children understand where Design Technology fits into the real world and every day life.

Teaching teams are confident when teaching Design Technology

All children make progress from a range of starting points.