Design Technology Subject Overview

'Good buildings come from good people, and all problems are solved by good design.' **Stephen Gardiner.**

Curriculum Aims and Principles

At Greet, we are driven by a collective mission of ensuring that children understand that there are **no limits to what they can achieve**. It is through this relentless ambition and high expectations that we seek to **achieve excellence** for our children, to develop their **social intelligence** and their understanding of how to live **ethical lives**. Our school mission and values form the drumbeat of day-to-day life at Greet. They are the driving forces behind our curriculum design.

Our curriculum has the children of Greet at its heart. It is rooted in our school, our families and our local community whilst ensuring learners are also taught about national and global issues. We endeavour to give our children a strong sense of their own identity and their place in the world, and to respect the same for others. They will know the story of humankind, its place in history and how they can have a positive impact on the future, so they are fully prepared for the challenges of the 21st Century.

All of our curriculum areas are carefully planned and mapped using **our core curriculum principles**. These ensure our curriculum is: **values driven**; focused on **the essentials; coherent, connected** and **cumulative;** incorporates **carefully selected knowledge; vocabulary rich; ambitious;** and **builds cultural capital.** Please see our 'Curriculum Aims and Principles' document for more details.

For all subject areas we have **carefully selected and sequenced the key knowledge and vocabulary** our children need to build the foundations of future academic success. Knowledge and vocabulary are **explicitly mapped on our medium term plans**. This knowledge and vocabulary is **delivered as a minimum requirement**. Content is arranged sequentially and logically with key concepts are revisited in a range of contexts within a year group, across year groups and across subjects. Our curriculum threads link key themes across the school.

Design Technology at Greet

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Children acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art.

Our design and technology curriculum **aligns closely to the National Curriculum** and provides our children with the opportunity to:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological 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 Greet Primary School we teach **an ambitious, knowledge rich design technology curriculum** through the use of the Cornerstones curriculum. This ensures that our design technology curriculum content is mapped **sequentially and logically** with **key vocabulary and knowledge revisited** to support children to **know more and remember more**.

Projects develop children's designing, planning, making and evaluating skills. Each project is based around a design and technology core concept: structures, mechanisms, cooking and nutrition or textiles.

We teach design technology as a discrete subject so children have the opportunity to think like 'designers', **understanding the subject as a discipline in its own right**. Projects are placed alongside other subject projects where there are **opportunities for making meaningful connections**. For example, in Year 5 the cooking and nutrition project Eat the Seasons is taught alongside the geography project Sow, Grow and Farm.

All projects follow a clear structure: design, make, test and evaluate. This allows opportunities for deliberate practice with content becoming progressively more challenging as children progress through school. Children are introduced to key concepts and build up knowledge over time, using a more comprehensive range of equipment and building, cutting, joining, finishing and cooking techniques. Throughout the projects, children are taught to work hygienically and safely.

EYFS
In EYFS children are taught the foundation skills needed for the design and technology curriculum through the specific area of Expressive Art and Design (EAD). Children are encouraged and supported to experiment with an increasing range of media and movement through multi-sensory exploration and expression. Children begin to notice and become interested in the transformative effect of their action on materials and resources.

Key Stage 1
In the spring term of Year 1, children study the project Taxi!, they learn the term 'mechanism' and assemble and test wheels and axles. In the summer term, children begin to learn about food sources in the project Chop, Slice and Mash and use simple preparation techniques to create a supermarket sandwich.

In Year 2, children develop their knowledge of structures further, learning to cut, join and strengthen wood for the first time in the project Beach Hut.

Lower Key Stage 2
In Year 3, children learn about home furnishings and the significant designer William Morris in the project Functional and Funky Fabric. They learn techniques for decorating fabric, including block printing, hemming and embroidery and use them to design and make a fabric sample.

In Year 4, children continue to develop their understanding of food in the project Fresh Food, Good Food. They learn about food safety and preservation technologies before designing and making packaging for a healthy snack.

Upper Key Stage 2
In Year 5 children learn more about structures in the project Architecture, studying the history of architecture and developing new ways to create structural strength and stability. They use computer-aided design and consolidate their making skills to produce scale models. They also explore the electrical conductivity of materials before making products incorporating circuits in the science project Properties and Changes of Materials.

In Year 6 children extend their knowledge of textiles by learning new stitches to join fabrics and using pattern pieces to create a range of products in the project Make Do and Mend.

Entitlements
Through the DT curriculum every child will:

- receive an hour of discrete art or DT teaching each week.
- produce products that will be exhibited around school as well as being added to each child's exhibition portfolio.

Assessment
We assess children' learning of DT in the following ways:

- work seen in sketch books.
- Cornerstones assessment criteria.