

Design Technology



Curriculum Booklet

Design Technology Intent

The intent of Tanners Brook Primary School's Design Technology curriculum is to ensure that all children are inspired and motivated by the creative opportunities that the subject offers. We would like Design Technology to be an inspiring, practical subject that encourages all children to strive for their personal best by instilling qualities such as curiosity, enquiry and determination.

Our Design Technology curriculum encourages children to use their imagination and natural curiosity to think creatively and solve problems both as individuals, and as members of a team.

Children are inspired, engaged and excited through carrying out research, designing and making tasks. We want our children to love Design and Technology and understand the opportunities that this exciting lesson can provide, leading to the development of budding designers, carpenters, architects, engineers and more. We aspire for the children to have no limits to their ambitions.

In order for our children to reach their full potential, we will ensure that they acquire subject knowledge; and draw on existing knowledge from mathematics, science, computing and art. These connections will enable them to unlock their potential, making products that solve problems within a variety of contexts which consider their own and others' needs, wants and values.

The skills developed in Design and Technology, such as evaluating their own designs and the designs of others, can be used across the curriculum and in situations throughout life.

We aim for all pupils to:

- Develop their creative, technical and practical expertise in order to confidently complete a range of tasks.
- Develop skills, and use their creativity and imagination, to design, make and evaluate a range of products that solve real life problems.
- Reflect upon and evaluate their products, its uses and its effectiveness.
- Develop an appreciation of design, and natural curiosity that inspires them to constantly want to strive for their personal best via evaluating their work.

Tanners Brook pupils will not only be equipped to meet the requirements from the National Curriculum but to prepare them for the opportunities, responsibilities, and experiences of later life. This will enable all children to achieve their personal best, acquiring fundamental life skills, such as feeding themselves healthily and independently, learning where food comes from and making connections with their geographical and scientific knowledge.

Design Technology Implementation

At Tanners Brook Primary School, and in accordance with the National Curriculum's expectations, we aim 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 world.
- Build upon their knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- Evaluate and test their ideas and products and the work of others.
- Understand and apply the principles of nutrition and learn how to cook.

The foundations of Design Technology learning and understanding starts in the Early Years under the area of learning Expressive Arts and Design, most suitably through the Early Learning Goal (ELG) of Creating with Materials. Reaching this goal can be demonstrated in many learning opportunities and it is likely to see:

- Children taking part in cooking and baking activities
- Children talking about their creations, explaining the choices they have made, using range DT language such as; joining, building, heavier, lighter, etc
- Disassembling of everyday objects to learn how they work and how they are put together
- Exploration of different materials, textures and fabrics
- Construction with a range of loose parts, crates, planks, cardboard, etc
- The creation of temporary and more permanent models, both individually and collaboratively
- Using a range of tools such as scissors and paint brushes to develop fine motor skills (Physical Development – Fine Motor Skills ELG)

These foundations will support our children when they start to learn the National Curriculum for DT in KS1 and KS2.

Key skills and key knowledge for Design Technology are mapped across the school, to ensure progression between year groups. This progression document is used to plan lessons, making sure all skills are covered across the academic year. By mapping Design Technology across the school, we provide a context for the children's learning that focuses on the importance of real-life structures and the purpose of specific examples.

At Tanners Brook, Design Technology is taught in every year group, with one unit usually being taught each term. Children access all areas of the Design Technology curriculum with cross-curricular links being made where appropriate.

Children follow the 6 principles of Design Technology and following these enable teachers to clearly see the progression of skills, enabling children to build on their existing knowledge and challenge children in line with their year group expectations:

- USER – children will have a clear idea of who they are designing/making the product for.
- PURPOSE – children will be able to communicate the purpose of the product they are designing/making.
- FUNCTIONALITY – children will design a product that works and functions effectively to fulfil the user's needs.
- DESIGN DECISIONS – children will make their own decisions and choices enabling them to design a product that meets the needs of their audience.
- INNOVATION – children will have the opportunity to think creatively, develop and explore their own ideas incorporating the essential skills involved in the process.
- AUTHENTICITY – children will make products that are unique, believable, real, and meaningful to themselves and others.

As part of these 6 principles the children will:

- Research and explore existing products to gain firsthand experience of existing items.
- Children are provided with product to develop for a specific user. They will develop their own designs and initial sketches, using technical knowledge and vocabulary to add detail to their designs. They will make connections with their learning across the curriculum.
- Showcase their skills in their finished product.
- Children will use a range of tools and materials to make their products.
- Evaluate their finished product.

Children record their Design and Technology work in a Design and Technology book to keep their projects clearly organised and to allow our children a space to demonstrate their skills and knowledge.

To raise the profile of DT across the school, we ensure we celebrate the subject and provide opportunities for children to grow their skillset. We have run a range of short-term clubs at different points in the year to promote DT including model making, cooking and nutrition and structures. These have been tailored to one Key Stage at a time. We have invited parents for skills-based sessions, working with their children on a DT project.



Our aim is for all children to be included in our DT lessons and our staff work hard to ensure any barriers to learning are supported and key knowledge and skills are made accessible. Some children with SEND might find accessing the DT curriculum difficult. Their barriers may include:

- Difficulties with attention/concentration
- Understanding of language, in particular subject specific vocabulary
- Difficulties with retaining new information
- Lack of fine and gross motor skills

At Tanners Brook we will support all our children to reduce these barriers through:

- Pre-teaching
- Clear vocabulary teaching, using dual coding to support learning
- Clear modelling of tasks with examples
- Minimising distractions in the classroom
- Designing tasks into manageable chunks that are repeated
- Finding other ways for the children to record their learning beyond writing, for example through drawing
- Incorporate practical resources to support understanding
- Following a clear lesson structure in all lessons

Whole School Provision Map

Key Strands	Cooking and Nutrition	Structures	Textiles	Mechanisms/mechanical systems	Electrical Systems
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EY	Area of Learning – Expressive Arts and Design Development Matters Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings & a park. Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.		Area of Learning – Expressive Arts and Design Development Matters Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.		Area of Learning – Expressive Arts and Design Early Learning Goal: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Early Learning Goal: Fine Motor Skills (Physical Development) - Use a range of small tools, including scissors, paint brushes to develop fine motor skills.	
1	Salad (face shaped)			Sewing- bookmarks with initials		Structures - tents
2		Moving vehicles	Sewing – puppets		Winding mechanisms	
3		Pneumatic moving monsters		Pizza making		Picture frames
4	Sewing - Purses		Torches		Pop up books	
5	Healthy Eating and Seasonal Produce		Land yachts		Micro:bit (computing link)	
6		Structures – bridges and towers				Sewing – toys for EY

Design Technology Impact

At Tanners Brook Primary School, we pride ourselves on inspiring children to produce high quality outcomes where they have achieved their personal best.

The impact of our Design and Technology curriculum can be seen not only in our children's work but also through classroom displays and the school environment. The skills the children learn in their DT work impact their performance across the curriculum as they become more creative and resilient. The curriculum at Tanners Brook focuses on the importance of children reflecting upon their work when they complete it. This skill is transferable and will support them across the curriculum as they strive for their personal best in all subjects.

We measure the impact of our curriculum through the following methods:

- Conducting pupil interviews to discuss their learning.
- Images of the children's practical learning.
- Pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work.
- Annual reporting of standards across the curriculum.
- Marking of work in books

The children in all year groups are enthusiastic and positive about their DT work. The learning is memorable, and children remember products they had made many years before.

Everything we do is with the child in mind, and strong relationships are built between pupils and staff which create an atmosphere for learning which is conducive to success.

By the time children leave Tanners Brook School they are equipped with the skills, knowledge, passion and enthusiasm to continue their Design Technology learning in Key Stage 3. They will have developed transferrable skills that can help them throughout their education and everyday life.