

Design and Technology Curriculum Overview

INTENT

Design and Technology at Nanstallon sits within our STEM curriculum, where pupils develop curiosity about the world and learn to design and engineer products that help society and individuals to function well.

Our DT curriculum is built around three BIG IDEAS

1. Problem solving
2. Design
3. Skills and expertise

We aim for pupils to:

- Develop creative, technical and practical expertise to perform everyday tasks confidently
- Design and make high quality prototypes and products for a wide range of users
- Critique, evaluate and test ideas and products, including the work of others
- Understand and apply the principles of nutrition and learn how to cook

IMPLEMENTATION

DT is taught through an iterative process where pupils regularly:

- Investigate and evaluate existing products
- Design with purpose for a user and context
- Make using appropriate tools, techniques and materials
- Test, evaluate and improve

Pedagogy and curriculum features

Teaching is structured so pupils have time and space to explore materials and products, then move into more deliberate designing and making, supported by modelling, vocabulary, and step by step techniques.

DT is strengthened through lived experiences and practical expertise across the year:

- Tool use and making through Forest School and woodworking
- Sewing and textiles experiences each year
- Cooking and nutrition each year

Simplified progression of skills and knowledge

Area	KS1 building foundations	KS2 developing expertise
Evaluating products	Identify what a product is and what it is for. Describe simple features and who it is for.	Research and evaluate products, giving reasons for designers' decisions and using this to improve own ideas.
Designing	Generate ideas and communicate them using pictures and words. Begin to consider materials and features.	Produce labelled sketches and step by step plans, justify choices, make prototypes, adapt ideas and solve problems as they happen.
Making with materials and structures	Measure, mark, cut safely, and use simple joins. Aim for a neat finish.	Select appropriate materials and joins, measure accurately, cut and shape precisely, test construction methods, refine for quality and purpose.

Area	KS1 building foundations	KS2 developing expertise
Textiles	Explore fabrics, join using glue and simple stitch, begin weaving.	Choose textiles for function, measure and cut accurately, use a range of stitches and techniques to create durable and desirable outcomes.
Mechanisms and electrical systems	Explore simple movement and mechanisms where appropriate.	Investigate and apply mechanisms and circuits, combine components, create purposeful movement or illumination, test and improve outcomes.
Cooking and nutrition	Hygiene, basic food preparation, safe tool use, simple recipes and understanding how heat changes food.	Plan and prepare healthy meals, measure accurately, use multiple processes, understand ingredients, seasonality, and food choices.

Inclusion

All pupils are enabled to succeed through:

- Hands on exploration before written recording
- Scaffolds such as templates, word banks, worked examples and guided tool practice
- Mixed ability collaboration and purposeful roles in teams
- Alternative ways to record, including photos, labelled diagrams, talk and demonstration

Assessment

Assessment is primarily formative and focuses on:

- The quality of designing, making and evaluating over time
- Secure use of technical vocabulary
- Increasing independence with tools, techniques and decision making
- Evidence of testing, refinement and improvement within the process

IMPACT

By the end of Key Stage 2, pupils can independently follow an iterative design process to create purposeful products.

They demonstrate growing competence in selecting tools and materials, planning and communicating ideas, testing and refining, and explaining decisions using appropriate vocabulary.

Pupils leave with the National Curriculum outcomes, including the ability to design and make high quality products for real users, evaluate and improve ideas, and apply principles of nutrition and cooking.