



Waterloo Primary School

Design and Technology

Intent

We are committed to developing pupils' academic resilience, to enable them to access and fully engage with the progressive and connected curriculum we provide. Pupils will learn about, and from, inspiring designers and inventors who have shaped our world through skill, determination and resilience. With our pupils' wellbeing at the forefront, we deliver a curriculum which fulfils all statutory requirements. Teaching and learning opportunities are thoughtfully mapped to enable pupils to develop the necessary knowledge, skills and understanding to contribute successfully in the modern world. Pupils revisit, apply and deepen their understanding within and across subject areas, whilst maintaining DT as an independent discipline with its own unique set of skills.

We believe that British values are fundamental to cohesion and successful participation in society and we promote these values as we teach about British and world history.

We recognise that our children reflect our socially diverse community and believe it is crucial for them to develop a strong vocabulary that enables them to articulate their opinions, academic understanding and emotions. Key vocabulary is mapped across the curriculum and opportunities to revisit and embed learnt vocabulary are planned for. Key knowledge and vocabulary for units of work are shared with families in order to further consolidate learning. Opportunities to develop speaking and listening skills are planned to equip pupils to ask questions, think critically and work collaboratively.

We regard reading as an essential building block for learning across all subject areas. Taught reading skills are embedded and applied throughout our DT curriculum. Questioning, tasks and resources are skilfully planned to scaffold and challenge, ensuring every child, whatever their starting point, can deepen their understanding. Design and technology is an integral part of our day to day lives and it is therefore important that our children are taught how this subject is of great importance in our rapidly changing world.

Our aim is for each child to confidently enter the next stage of their education with the necessary skills, knowledge and mind-set to reach their academic potential and to thrive, knowing and understanding their place in the world and their importance and value to society as global citizens.

Aims:

Our aims in the teaching of design and technology are:

- To provide opportunities for all children to design and make quality products.
- To understand the importance of design and technology in the wider world.
- To develop design and making skills, knowledge and understanding to the best of each child's ability; using and selecting a range of tools, materials and components.
- To develop an ability to criticise constructively and evaluate their own products and those of others.
- To follow safety procedures when using equipment.

Teaching and learning:

Teaching at Waterloo Primary is performed in a variety of ways dependent upon the class' needs, but the principal aim is to develop children's knowledge, skills and understanding in Design and Technology. Teachers ensure that the children have a clear understanding of the design criteria whilst allowing them to use and build upon their designing, creating, analysing and evaluating skills. We encourage the use of the children's critical thinking techniques as they encounter problems or difficulties during the process. Within lessons we give the children the opportunity to work on their own and to collaborate with others, listening to other children's ideas and treating them with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including computing.

Adaptive Teaching:

At Waterloo Primary School, we ensure that we maximise learning opportunities for all by using adaptive teaching.

At Waterloo Primary School, we ensure that we maximise learning opportunities for all. Adaptive teaching means lessons and tasks are appropriate for all pupils and they can access and be successful in their learning. All children receive high quality teaching and reasonable adjustments are made to resources and approaches.

In DT, this may take the form of:

- Breaking down content into smaller chunks/steps
- Scaffolding and modelling, using a 'thinking out loud' technique
- Pre-teaching and pre-reading about a subject
- Varying levels of support
- Removing unnecessary expositions (unnecessary language)
- Alternative methods of recording
- Adapted physical tools/resources
- Reframing questions
- Intervening appropriately
- Flexible groupings
- Make connections to previous learning and supporting children to remember more through various strategies through quizzes, mind maps
- Adapting thinking time to process information
- Use of visuals such as task planners, pictures and diagrams

- Extending tasks with more choice, freedom to select resources and open ended challenges

Seeking to understand pupils' differences, including their differing prior knowledge and experience and potential barriers to learning, is an essential part of teaching.

Adapting teaching in a responsive way is likely to increase pupil success.

Where, despite adaptive teaching approaches, a pupil is working significantly below age related expectations, they may require a more bespoke and personalised curriculum in order to achieve success.

Curriculum Design:

Our curriculum has been designed to be innovative, progressive and balanced. Each year group will take part in a cooking project, building upon the skills that have been developed in previous years. As seen in our progression grid, the skills developed are built upon in each subsequent topic, whilst the same process for creating a product is used throughout the year groups; research, design, create, evaluate. Topics are revisited at least twice throughout the school to allow for skills to be refined and developed.

We ensure a progression of skills across the year groups in the following areas:

- Food
- Electrical systems (KS2 only)
- Textiles
- Structures
- Mechanisms

EYFS

The Early Years curriculum has been carefully planned to ensure progression from the Early Years to Year 6. The curriculum is taught through a balance of teacher-led inputs, teacher-directed activities and free exploration. Activities are planned within continuous provision to allow children to develop the skills needed to support their wider curriculum learning throughout school. Our DT Curriculum leader spends time in the Early Years to ensure curriculum coverage and progression.

Key Stage 1 and 2

All children will take part in three DT projects throughout the year, including one which is based upon food technology. Key stage 1 children will record their work through the form of a class PowerPoint, whilst Key Stage 2 children will have individual DT books that will follow them up through the school. The 5 strands of the subject - textiles, food technology, mechanisms, structures and electrical systems are covered at least twice throughout the child's school life, enabling them to be built upon and developed further.

Year 1:

- Mechanisms – slider and levers/making a moving book character
- Food Technology – preparing a salad
- Textiles – making a sock puppet

Year 2:

- Mechanisms – making a moving vehicle
- Food Technology – fruit kebabs (healthy snacks)
- Structures – building a bridge and checking its strength

Year 3:

- Structures – shell structure/ making a board game
- Food Technology – pitta pockets (healthy snacks)
- Textiles – designing and making a pencil case

Year 4:

- Food Technology – making an Italian dish
- Electrical Systems – designing and making an electrical night light
- Mechanisms – levers/ constructing a Viking Ship

Year 5:

- Food Technology – making scouse
- Mechanisms – mechanical cam toys
- Textiles – sewing/making a shopping bag

Year 6:

- Food Technology – making chapati bread
- Structures – building an air raid shelter
- Electrical Systems and Programming – Programmable Disco Light

Assessment:

To ensure consistency, all year groups will be assessed based upon the curriculum statements made available on Target Tracker. All teachers will ensure that their children are regularly updated on the system to ensure that children's progress is charted on a half termly basis. Teacher judgements will be supported with ongoing assessments.

D&T is a practical process based subject. For assessments to be successful in Design & Technology, teachers need to apply their skills in listening, observing, questioning and evaluating activities and products. Products should not be assessed in isolation from the process of designing, making and evaluating.

Health and safety:

Children are taught how to safely use appropriate tools and have an awareness of situations where danger may exist. Appropriate risk assessments will be carried out.

Monitoring and Evaluating:

Monitoring and evaluation will be completed by the DT lead when the time is made available as part of a subject leadership rota. The DT lead will ensure that Target Tracker is monitored and evaluated on a half termly basis to ensure that objectives are covered and that children are placed within the appropriate steps in terms of individual assessment. Monitoring and evaluation will include scrutiny of work, lesson observations, learning walks, pupil interviews and pupil/staff questionnaires.

This policy is open to regular review, based on present practice and consultation with members of staff.

Policy reviewed by: Louisa Rees

Date: February 2024

Review Date: February 2026