



# Design & Technology

## Intent, Implementation and Impact Statement

This document outlines: the intent and rationale behind the DT curriculum at Beaconside Primary & Nursery School, how we deliver it and how we measure pupil progress.

# Intent

Beaconside Primary and Nursery School's DT scheme of work aims inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through our scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

Our DT scheme of work enables pupils to meet the end of key stage attainment targets in the National Curriculum and the aims also align with those in the National curriculum.

# Implementation

The DT National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National Curriculum organises the DT attainment targets under four subheadings: Design, Make, Evaluate, and Technical Knowledge. We have taken these subheadings to be our four key concepts:

- Design
- Make
- Evaluate
- Technical knowledge

Cooking and nutrition is given a particular focus in the National curriculum and we have made this one of our six key areas that pupils revisit throughout their time at Beaconside:

- Cooking and nutrition
- Mechanisms/ Mechanical systems
- Structures
- Textiles
- Electrical systems (KS2 only)
- Digital world (KS2 only)
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Our DT curriculum has a clear progression of skills and knowledge within these strands and key areas across each year group.

The National Curriculum overview shows which of our units cover each of the National Curriculum attainment targets as well as each of the four strands.

The Progression of Skills document shows the skills and knowledge that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage.

The DT curriculum allows pupils to respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas.

Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. Our DT offer is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Guidance is available for

## Implementation

adaptations for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust DT curriculum. Each unit of lessons includes multiple teacher videos to develop subject knowledge and support ongoing CPD. Kapow Primary, our curriculum provider of choice, has been created with the understanding that many teachers do not feel confident delivering the full DT curriculum and every effort has been made to ensure that they feel supported to deliver lessons of a high standard that ensure pupil progression.

Design Technology (and Art are taught in alternate half-terms, a structured approach that yields considerable advantages. This interleaving not only allows pupils to engage deeply with the unique methodologies and skills of each discipline but also enhances their creative thinking and problem-solving abilities. By alternating these subjects, pupils are encouraged to make connections between the practical, technical aspects of DT and the expressive, imaginative facets of Art. This synergy fosters a holistic understanding of the creative process, ultimately enriching their overall learning experience and promoting a more dynamic and versatile skill set.

The impact of the DT curriculum is constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. Furthermore, each unit has a unit quiz and knowledge catcher which can be used at the start and/ or end of the unit.

After the implementation of our DT offer, pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society.

The expected impact of the DT scheme of work is that pupils will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National Curriculum for Design and technology.

Progress (knowing more and remembering more) is assessed using a variety of formative assessment tools. Formative assessment tools are a range of procedures/activities that provide information to enable teachers to adjust instruction, adapt their teaching and provide feedback. These tools will include, but not restricted to:

- Questioning: teachers ask a range of questions, in various ways, to gauge pupil understanding, identify knowledge gaps, and tailor instruction to meet individual need
- Think-Pair-Share: pupils individually think about a question, discuss it with a partner, and then share their thoughts with the class
- Whiteboard Checks: pupils write down answers or solutions on whiteboards for the teacher to read/assess
- Quizzes: low-stakes, brief quizzes to gauge understanding
- Self-Assessments: pupils reflect on their own learning and understanding
- Peer Assessments: pupils provide feedback to each other's work or ideas
- Observation: teachers observe pupils' work and participation to assess understanding
- Exit Tickets: pupils briefly summarise key points from a lesson before leaving class
- Hand Signals: Students can use hand gestures to indicate their understanding of a concept.

These tools are all evidence-based strategies and promote the following:

- Clarifying, sharing and understanding learning intentions and success criteria
- Engineering effective discussions, tasks, and activities that elicit evidence of learning
- Providing feedback that moves learners forward
- Activating students as learning resources for one another
- Activating students as owners of their own learning.

Formative assessment ensures that both teacher and pupil know the areas of strength and improvement and is by its nature a low stakes form of assessment.

Evidence of progress is captured in pupil books, through observation, against intended lesson outcomes, and feedback, ensuring that each child's development in DT is clearly mapped and celebrated.

Progress is tracked through a combination of activities including work scrutinies, ongoing observations, as well as summative judgements at the end of each unit which are recorded on a tracker.

The combination of these activities ensures that learning is not only captured at a single point in time but is evidenced through various stages of learning throughout the year.