Barnacre Road Primary School

BARNACRE ROAD
— PRIMARY SCHOOL —

Design Technology Intent Statement
November 2025

At Barnacre Road Primary School, our vision is to provide for our children a broad and balanced curriculum which is ambitious for all learners. We aim to ensure that children leave our school equipped with the knowledge, skills, cultural capital and qualities to succeed in the next stage of their education and to make a positive contribution to their local community and society as a whole.

We believe that it is our duty to make learning fun, engaging, memorable, accessible and ambitious for all children, instilling in them a love of learning.

We take seriously our duty to teach children about the fundamental British Values of mutual respect and tolerance, democracy, the rule of law and individual liberty. These values are woven through our curriculum so that our learners leave us prepared for life in modern Britian.

Design Technology at Barnacre Road: Our Intent

The Design and technology scheme of work aims to 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 Design and technology 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. EYFS (Reception) units provide opportunities for pupils to work towards the Development matters statements and the Early Learning Goals.

Design Technology will develop children's

- Practical skills
- Communication skills

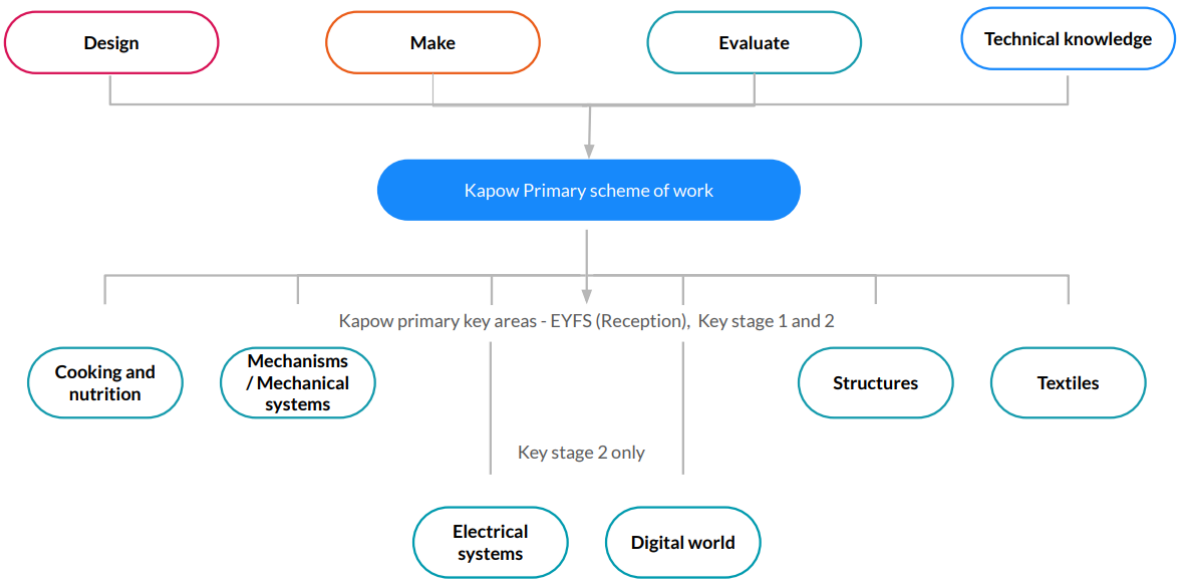
- Innovation skills
- Understanding of nutrition and healthy eating

Knowledge in our Design Technology Curriculum

In the Early Years Foundation Stage, Design Technology is delivered within the 'Understanding the World' part of the EYFS Curriculum. By the end of reception, children will learn to:

- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- 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.
- Manage their own basic hygiene and personal needs, including… understanding the importance of healthy food choices.

From year one onwards, our Design Technology Curriculum explores the four key strands of knowledge from the National Curriculum:



By the end of Key Stage One, children will be able to:

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.
- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.
- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.
- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
- Use basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

By the end of Key Stage Two, children will be able to:

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.
- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.
- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
- Apply their understanding of computing to program, monitor and control their products.
- Understand and apply principles of a healthy and varied diet.
- Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.
- Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Key Concepts within our Design Technology Curriculum

We believe that, in order to succeed, our children should be given regular opportunities to develop- and add to- their understanding of the key design technology concepts. For the purposes of our curriculum, we have identified these key concepts as:

- Design
- Make
- Evaluate
- Technical knowledge
- Understanding of nutrition and healthy eating.

From the very beginning of our Design Technology curriculum in the EYFS, children begin to encounter these key concepts. They are revisited regularly to allow children to consolidate and develop their understanding. Our document, progression of Design Technology concepts (appendix 1) details this further.

Our Design Technology Curriculum Content

	Autumn	Spring	Summer
Nursery	Throughout the year, we will: 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.		
Reception	Structures – Junk Modelling	Cooking and nutrition	Structures – boats
Year 1	Mechanisms – slider game	Textiles – puppets	Cooking and nutrition – fruits and vegetables
Year 2	Structures – baby bear's chair	Mechanisms – fairground wheel	Mechanisms – making a moving monster
Year 3	Autumn – Cooking and nutrition – eating seasonally	Wearable technology	Structure - castles
Year 4	Structures – Pavilions	Spring – Mechanical systems – slingshot cars	Summer – Electrical systems - torches
Year 5	Electrical systems - Doodlers	Mechanical systems – Making a pop up book	Cooking and Nutrition – What could be healthier
Year 6	Textiles - waistcoats	Structures - playgrounds	Digital world – navigating the world

Our progression document (appendix 1) details the precise knowledge taught in each unit of work.

Implementation

In the EYFS, DT is taught through themes which run concurrently with the rest of the curriculum. DT topics are flexible depending on the topic/theme being taught and this aims to provide children with real world context where they can use their knowledge and transfer their skills between theory and practise.

From year one onwards, Design Technology is taught as a discrete subject discipline for approximately one hour per week, in alternate half terms. Teachers follow the progression guidance from the Kapow Scheme of work to plan what will be taught in what order.

Our Design Technology curriculum has been designed to be a spiral curriculum. This means that essential knowledge and skills are revisited in new contexts with a higher degree of complexity, allowing pupils to revise and add to their existing knowledge. Teachers are familiar with the whole school progression document and revisit prior learning at the beginning of, and regularly throughout, units of work.

Knowledge organisers are provided to children for each unit of work. These include key knowledge and vocabulary as well as links to prior learning. These are shared with parents via our school website.

Each unit of work provides children with an opportunity to develop their skills by taking part in practical work. Teachers support pupils to follow the practical work process of question, observe, measure, record and present.

Design Technology lessons begin with a recap of prior learning, from prior year groups, terms or lessons. Key vocabulary is included in lesson starters, modelled by adults within lessons and displayed on classroom Design Technology displays. Lessons incorporate various learning strategies, including independent work, paired or team work, practical tasks and tasks using ICT. Teachers adapt lessons to best meet the needs of their class.

Written work is completed in Design Technology exercise books. Practical work is photographed and stored on children's SeeSaw profiles.

Children with Special Educational Needs and Disabilities

Our Design Technology curriculum is inclusive and ambitious for all learners and we expect that all children should be successful, regardless of any special educational need. All learners are given full access to the Design Technology curriculum. Class teachers will adapt teaching inputs and provide additional support through scaffolding for any child who requires support. Strategies to support children with Special Educational Needs or Disabilities might include adaptation of resources, adult support, pre-teaching of vocabulary or content and alternative ways of recording understanding. Class teachers are supported by our SENDCo, Mrs Mellor, in meeting the needs of all learners.

More Able Children

Teachers may identify children as more able in Design Technology, either through end of unit summative assessments or through questioning, discussion and formative assessments. We seek to plan for specific questioning opportunities which require higher order thinking skills. Children who are considered more able in Design Technology may:

• Understand concepts clearly so that they can apply this understanding to new situations in order to make interpretations, develop hypotheses, reach conclusions and explore situations.

• Communicate effectively using both the written and spoken word.

• Enjoy using diagrams and other visual methods to present information.

• Have a wide-ranging general knowledge about how the information they have learnt can be applied elsewhere.

Impact

The expected impact of our curriculum is that children 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.
- Meet the end of key stage expectations outlined in the National curriculum for Computing.

The impact of our curriculum is constantly monitored by class teachers through formative and summative assessments. Our scheme of work includes guidance for teachers in assessing pupils against learning objectives. Teachers use lesson starters (recaps) to identify gaps in children's knowledge and subsequently plan opportunities to close any identified gaps.

At the end of each unit of work, assessment quizzes are undertaken and 'knowledge catchers' are completed in order for children to demonstrate what they have learned and remembered. At the end of each unit of work, children are assessed based on their performance in lessons and summative assessment quizzes and recorded on the school's internal tracking system as working below the expected standard, working at the expected standard or exceeding the expected standard. Assessments are moderated in staff teams annually.

Standards of teaching and learning in Design Technology are monitored by the subject leader, curriculum leader (deputy headteacher) and the headteacher, as well as the SENDCo who will monitor Design Technology provision for children with Special Educational Needs and Disabilities. Monitoring may include: pupil interviews, work scrutiny and lesson observations.