Nun Monkton Foundation Primary School

"Be curious, be brave and believe"

DESIGN & TECHNOLOGY AT NUN MONKTON

Our Design Technology curriculum is ambitious, broad, and balanced, carefully planned and sequenced to meet the needs of mixed-age classes and ensure progression for all learners. We are committed to providing a high-quality Design and Technology education that builds creativity, resilience, and technical expertise through thoughtfully structured learning journeys. Led by a subject leader with expert knowledge of the DT curriculum, our provision ensures clear progression of skills, knowledge, and vocabulary across year groups. Enrichment through Forest School further strengthens our offer, providing meaningful, hands-on opportunities for children to apply, refine, and deepen their practical skills in real-world contexts, fostering independence, problem-solving, and a lifelong enthusiasm for design and innovation.

Cycle A	Cooking & nutrition	Mechanisms/Mechanical systems	Structures	Textiles	Electrical Systems	Digital World
Class 1	Teddy Bear's Picnic	Moving Pictures	Homes	Decorations	N/A	N/A
Class 2	Sandwich Snacks	Moving Monsters	Mini Greenhouses	Puppets	N/A	N/A
Class 3	Bread	Moving Toys	Bridges	Fashion & Textiles	Torches	Programming Pioneers

Cycle B	Cooking & nutrition	Mechanisms/Mechanical systems	Structures	Textiles	Electrical Systems	Digital World
Class 1	Perfect Pizzas	Vehicles	Wacky WIndmills	Bunting	N/A	N/A
Class 2	Seasonal Foods		Photograph Frames	Pencil cases	N/A	N/A
Class 3	Great British Dishes		Birdhouse Builders	Funky Furnishings	Fairground	Light up signs

Early Years Foundation Stage Framework and National Curriculum Coverage			
EYFS	Key Stage 1	Key Stage 2	
Nursery & Reception	Year 1 & 2	Year 3 and 4	Year 5 & 6
In EYFS, DT draws mainly from **Creating with Materials** (Expressive Arts & Design) and elements of **The Natural World / Technology** (Understanding the World). Progression moves from exploration → purposeful construction → planning and evaluation.	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to: Design • 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 Make • 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 Evaluate • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria Technical knowledge • build structures, exploring how they can be made stronger, stiffer and more stable	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to: Design • 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 Make • 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 Evaluate • 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 Technical knowledge	

	• explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	• 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.
Cooking and nutrition Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.	Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 1 • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from.	Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 2 • understand and apply the principles of a healthy and varied diet • prepare and cook a 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.

EYFS Progression Steps			
	Nursery 1	**Nursery 2**	**Reception**
Early Years Development Journal Steps	**Developmental Steps linked to DT:** • Explores construction materials (blocks, boxes, loose parts) • Stacks, joins and balances objects • Manipulates malleable materials (dough, clay) • Explores tools (spoon, scoop, rolling pin) • Investigates how objects fit together • Engages in exploratory building without a fixed plan **What this looks like in provision:** • Large block play • Junk modelling exploration • Playdough tool experimentation • Water/sand construction	**Developmental Steps linked to DT:** • Builds for a purpose (e.g., "This is a house") • Selects materials for intended use • Begins simple joining techniques (tape, glue, slotting) • Uses tools safely with support (scissors, hole punch) • Talks about what they are making • Makes adaptations during construction **What this looks like in provision:** • Junk modelling with a goal • Building bridges/towers with intention • Choosing materials based on need • Adult-supported evaluation ("Is it strong?")	**Developmental Steps linked to DT:** • Plans what they are going to make • Chooses appropriate tools independently • Uses joining techniques effectively • Builds stable, functional structures • Evaluates and improves designs • Explains how their product works **What this looks like in provision:** • Designing and building vehicles or houses • Testing strength and stability • Modifying models to improve function • Talking through design choices

<u>Design & Technology Intent</u>

Our Design and Technology curriculum is structured around clearly defined units, each with a specific end point that sets out the key knowledge and skills pupils are expected to secure. These end points provide opportunities for pupils to apply and refine their learning in response to a design brief. Vocabulary progression is explicitly mapped across the curriculum to ensure precise technical language is taught, revisited and built upon. The curriculum follows a cyclical model, enabling pupils to build on prior knowledge, skills and vocabulary over time.

At Nun Monkton Primary School, our approach enables children to design and make purposeful products that solve problems and improve user experiences across a range of contexts. Pupils develop knowledge and skills drawn from mathematics, science, engineering, computing, forest skills and art. They are encouraged to generate, test and adapt their own ideas in response to design criteria. Through direct teaching of tools, techniques and their appropriate applications, pupils gain practical competence and confidence. The design, make and evaluate process underpins all learning, promoting creative thinking, technical accuracy and critical reflection.

Design & Technology Implementation

In Nursery and EYFS, children access Design and Technology through continuous provision, following a simplified design, make, evaluate process. They are provided with regular opportunities to explore, create and refine their ideas through practical experiences. Specific skills are taught within focused sessions, and adults model the safe and effective use of basic tools used within arts and design. Children are encouraged to talk about their creations, developing their ability to verbally evaluate their work and use subject-specific vocabulary.

In Key Stages 1 and 2, pupils follow the design, make, evaluate process as set out in the National Curriculum. Each unit clearly identifies the key knowledge, technical skills and subject-specific vocabulary to be taught and secured. Teachers plan structured units that make purposeful links to other subjects where appropriate. Pupils analyse existing products to understand design features, materials and user needs, applying key knowledge and vocabulary within discussion and written work before developing their own designs. During the make phase, specific skills and techniques are explicitly taught to enable increasing independence, precision and quality. Evaluation is conducted through structured discussion or written reflection, with pupils using accurate technical vocabulary to assess how effectively their product meets the design criteria. Forest School provides additional opportunities to apply, reinforce and extend the skills, knowledge and vocabulary taught within DT lessons in practical, real-world contexts.

Design Technology Impact

Assessment is integral to our Design and Technology curriculum. Teachers assess pupils at the end of each unit against the identified key knowledge, skills and vocabulary. Outcomes are recorded on Insight, our whole-school assessment tracker, enabling teachers and leaders to analyse pupil progress over time and identify trends, strengths and areas for development. Assessment also informs teaching throughout each unit, ensuring that misconceptions are addressed and learning is adapted to meet pupils' needs.

At Nun Monkton Primary School, pupils develop secure practical skills, technical knowledge and the ability to apply the design, make, evaluate process effectively. They demonstrate increasing competence in selecting and using tools, materials and techniques safely and accurately across a range of disciplines, including mathematics, science, engineering, computing, forest skills and art. Pupils use subject-specific vocabulary confidently and apply prior learning to new contexts.

By the end of their journey at Nun Monkton Primary School, children will have a strong foundation in design and technology, preparing them with essential skills for the future and instilling a lifelong appreciation for creativity, craftsmanship, and innovation.

Skills Progression

Central themes	Cooking & nutrition	Mechanisms/Mechanical systems	Structures	Textiles	Electrical Systems	Digital World
Class 1	**Design** • Talk about foods they like and dislike. • Choose ingredients for a simple food product. • Begin to understand food is designed for a purpose (healthy, tasty). **Make** • Wash hands and follow basic hygiene routines. • Use simple tools safely with support. • Chop, tear, grate, spread and mix ingredients. • Follow simple instructions or recipes. **Evaluate**	**Design** • Talk about moving products. • Identify simple mechanisms. **Make** • Create simple sliders and wheels. • Assemble moving parts. **Evaluate** • Test movement. • Explain what happens. **Knowledge** • Mechanisms help objects move. • Sliders move in one direction.	**Design** • Talk about what they want to build. • Make simple plans using talk or drawings. **Make** • Join materials in different ways. • Build simple freestanding structures. • Explore balance and stability. **Evaluate** • Talk about what works well. • Identify what could be improved.	**Design** • Design simple patterns. • Choose materials. **Make** • Thread needles with support. • Use running stitch. • Join fabrics using glue or stitching. **Evaluate** • Talk about finished products. **Knowledge** • Fabrics have different textures.	N/A	N/A

	• Taste food and describe look, smell and taste. • Say what they like and dislike. • Suggest simple changes. **Knowledge** • Food comes from plants or animals. • Fruit and vegetables grow in different ways. • A recipe gives instructions. • Eating some foods helps us stay healthy. **Vocabulary** ingredient, recipe, healthy, unhealthy, fruit, vegetable, plant, animal, wash, hygiene, chop, grate, mix, spread, taste, smell, texture, instructions	• Wheels turn on axles. **Vocabulary** mechanism, movement, slider, wheel, axle, turn, push, pull, assemble, direction	**Knowledge** • Structures are made from parts. • Stable structures do not topple. • Wide bases make structures stable. **Vocabulary** structure, build, join, stable, unstable, balance, base, freestanding, materials, design, improve	• Sewing joins fabric together. **Vocabulary** fabric, material, texture, pattern, stitch, running stitch, thread, needle, join, design		
Class 2	**Design**	**Design**	**Design** • Design structures for	**Design**	N/A	N/A

	• Use a simple design brief to plan a food product. • Choose ingredients based on taste, appearance and purpose. • Consider user preferences. • Design simple packaging or labels. **Make** • Follow a recipe independently. • Measure ingredients using standard units. • Use tools safely (knives, peelers, graters). • Apply preparation techniques (cutting, mixing, shaping). **Evaluate** • Evaluate food against design criteria. • Describe flavour, texture and appearance.	• Design products using movement. • Use labelled diagrams. **Make** • Create levers, linkages and pneumatic systems. • Adjust mechanisms to improve function. **Evaluate** • Test movement against design criteria. • Suggest improvements. **Knowledge** • Mechanisms have inputs and outputs. • Linkages and levers change movement.	a purpose and user. • Use labelled drawings. **Make** • Strengthen structures using folding, layering or reinforcement. • Use nets to create 3D shapes. • Build frame and shell structures. **Evaluate** • Test strength and stability. • Identify weak points. • Suggest improvements. **Knowledge** • Shape affects strength. • Materials can be manipulated	• Design using templates. • Write simple design criteria. **Make** • Cut fabric accurately. • Sew running stitch and cross stitch. • Decorate using appliqué. **Evaluate** • Evaluate stitching quality. • Suggest improvements. **Knowledge** • Seams join fabric. • Templates help create accurate shapes. **Vocabulary** template, seam, seam allowance, running		

	• Suggest improvements. **Knowledge** • A balanced diet includes different food groups. • Foods have different nutritional values. • Seasonal foods grow at certain times of year. • Hygiene keeps food safe. **Vocabulary** design brief, user, criteria, measure, grams (g), kilograms (kg), millilitres (ml), balanced diet, food groups, nutrition, seasonal, prepare, peel, slice, flavour, appearance, texture, evaluate, improve, hygiene	• Air can be used to create movement. **Vocabulary** input, output, lever, linkage, pivot, pneumatic system, air pressure, diagram, function, adjust, improve	to improve stability. • Structures need strength and stiffness. **Vocabulary** purpose, user, labelled diagram, net, 3D shape, frame structure, shell structure, reinforce, strengthen, layer, fold, stability, stiffness, weak point, test	stitch, cross stitch, appliqué, decorate, criteria, evaluate, accuracy		
Class 3	**Design** • Research and adapt recipes. • Write detailed design criteria including nutrition,	**Design** • Design complex mechanical systems. • Use exploded and cross-	**Design** • Design load-bearing structures. • Use annotated and technical drawings.	**Design** • Design complex textile products.	**Design** • Design products using electrical systems.	**Design** • Design products that collect or use data.

	cost and sustainability. • Design food for specific dietary needs. • Design packaging with purpose. **Make** • Work independently and hygienically. • Accurately measure, prepare and cook food. • Adapt recipes confidently. • Manage time and resources. • Prevent cross-contamination. **Evaluate** • Evaluate against complex criteria. • Analyse nutritional content. • Taste test and score products.	sectional diagrams. • Prototype and refine ideas. **Make** • Build systems using cams, gears and pulleys. • Combine mechanisms. • Select tools independently. **Evaluate** • Test efficiency and function. • Refine designs based on feedback. **Knowledge** • Mechanical systems transfer force and motion. • Gears and pulleys change speed and direction.	• Consider real-world constraints. **Make** • Use triangulation and reinforcement. • Build complex frame and shell structures. • Select materials based on properties. **Evaluate** • Test, adapt and refine structures. • Evaluate against complex criteria. **Knowledge** • Structures are strengthened through triangulation,	• Use pattern pieces and annotations. **Make** • Measure and cut accurately. • Sew strong stitches (e.g. blanket stitch). • Attach fastenings. **Evaluate** • Test durability and appearance. • Refine designs. **Knowledge** • Different stitches serve different purposes. • Fastenings are chosen for function. **Vocabulary** pattern piece, annotation, measure, cut, blanket stitch, fastening, durability,	• Write detailed design criteria. • Use circuit diagrams. **Make** • Build series circuits. • Use switches, buzzers, motors and bulbs. • Integrate circuits into products safely. **Evaluate** • Test circuits for reliability. • Modify designs to improve function. **Knowledge** • Electrical systems require	• Use CAD and digital modelling. • Design with a user and purpose in mind. **Make** • Use digital tools to control or program products. • Combine physical and digital components. **Evaluate** • Test accuracy and usability. • Refine designs based on feedback. **Knowledge** • Digital systems can monitor and control products.

	• Consider environmental impact. **Knowledge** • Nutrition supports health. • Food labels show nutritional information. • Recipes can be adapted for dietary needs. • Food follows a farm-to-fork journey. • Sustainability affects food choices. **Vocabulary** nutrition, nutrients, carbohydrates, protein, fat, vitamins, dietary requirements, allergy, intolerance, sustainability, seasonal produce, farm-to-fork, cross-contamination, adapt, modify, packaging, labelling, cost, environmental impact, criteria, analyse	• Different cams produce different movements. **Vocabulary** mechanical system, gear, pulley, cam, follower, rotation, force, motion, transfer, speed, direction, efficiency, prototype, cross-sectional diagram, exploded diagram, refine	lamination and ribbing. • Material properties affect performance. **Vocabulary** load-bearing, triangulation, lamination, ribbing, reinforcement, properties, compress, tension, technical drawing, annotated diagram, prototype, constraint, durability, refine	function, reinforce, aesthetic, refine	complete circuits. • Components have different functions. • Motors convert electricity into movement. • Safety is essential. **Vocabulary** circuit, component, series circuit, switch, buzzer, motor, bulb, battery, wire, conductor, insulator, integrate, reliability, function, safety, diagram	• Sensors collect data. • Digital design improves precision and efficiency. **Vocabulary** digital system, data, sensor, input, output, CAD (computer-aided design), modelling, program, control, monitor, precision, efficiency, user, usability, refine