

Design Technology – The National Requirements

EYFS	Key Stage 1 Programme of Study	Key Stage 2 Programme of Study
<p>Children at the expected level of development will:</p> <p>PERSONAL, SOCIAL AND EMOTIONAL DEVELOPMENT</p> <p>ELG: Self-Regulation:</p> <ol style="list-style-type: none"> 1. Set and work towards simple goals, being able to wait for what they want and control their impulses when appropriate 2. Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions <p>ELG: Fine-Motor Skills</p> <ol style="list-style-type: none"> 1. Use a range of small tools, including scissors, paint brushes and cutlery 2. Begin to show accuracy when drawing <p>EXPRESSIVE ARTS AND DESIGN</p> <p>ELG: Creating with Materials</p> <ol style="list-style-type: none"> 1. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function 2. Share their creations, explaining the processes they have used 	<p>DESIGN</p> <ol style="list-style-type: none"> 1. Design purposeful, functional, appealing products for themselves and other users based on design criteria 2. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>MAKE</p> <ol style="list-style-type: none"> 1. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] 2. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>EVALUATE</p> <ol style="list-style-type: none"> 1. Explore and evaluate a range of existing products 2. Evaluate their ideas and products against design criteria <p>TECHNICAL KNOWLEDGE</p> <ol style="list-style-type: none"> 1. Build structures, exploring how they can be made stronger, stiffer and more stable 2. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products <p>COOKING AND NUTRITION</p> <ol style="list-style-type: none"> 1. Use the basic principles of a healthy and varied diet to prepare dishes 2. Understand where food comes from 	<p>DESIGN</p> <ol style="list-style-type: none"> 1. 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 2. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>MAKE</p> <ol style="list-style-type: none"> 1. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 2. 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 <p>EVALUATE</p> <ol style="list-style-type: none"> 1. Investigate and analyse a range of existing products 2. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work 3. Understand how key events and individuals in design and technology have helped shape the world <p>TECHNICAL KNOWLEDGE</p> <ol style="list-style-type: none"> 1. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures 2. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 3. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 4. Apply their understanding of computing to program, monitor and control their products <p>COOKING AND NUTRITION</p> <ol style="list-style-type: none"> 1. Understand and apply the principles of a healthy and varied diet 2. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques 3. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Teaching Units at Mayflower Primary School

Year	Taught through PBL	Taught as a Discrete Unit	Assemblies and Curriculum Days
	Autumn Term	Spring Term	Summer Term
EYFS*			
Year 1		How have toys changed over time?	How does where we live differ to other places?
		DME – Making our own toy linked to the historical period of the PBL Joining techniques	DME – Making an island
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world (see termly plan)	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)
Year 2	How do I become a better me?	Can past disasters bring positive change?	How do plants from around the world help humans?
	Cooking – Making a delicious and healthy fruit salad	DME – Making carts	DME – Moving pictures
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world (see termly plan)	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)
Year 3	How new was the Stone Age?		How was life in Ancient Egypt different from life in Egypt today?
	DME – Neolithic pouches, linked to sewing unit	DME – Moving monsters that use pneumatics Cooking – making a healthy sandwich	DME - Shadufs with moving mechanisms Packaging, including computer aided design
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)
Year 4	What did the Romans ever do for us?	What can we do to save our Rainforests?	Where do our favourite products and foods come from?
	DME – A Roman shield that will succeed in battle	Cooking using Fair Trade products	DME – A buzzer game that uses a simple circuit
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)
Year 5	How did life change for children during WW2?		How does climate change affect people and communities?
	DME a purse or Anderson Shelter, join materials using appropriate methods Making war cookies, Cooking Club	Cooking Club	Cams, pulleys and gears, linked to moving objects down a mountain Cooking Club
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)
Year 6	Does the punishment fit the crime?		
	Plan, draw templates, cut out and sew to create 3D soft toys of Dojo Characters Design and create punishment tools Make hardback books and insert secure pages to present Hare and Bear stories		DME activities for the mela using a range of materials and evaluate their success in-light of real experiences at the actual event
	EDOL, Black History Month, stories from History, including design achievements at the time (see termly plan)	Design achievements throughout history, leaders during their time, and the legacy of their work; this will include the UK and wider-world	To prepare the children for later PBLs, there will be a strong focus on myths from Ancient Greece, and some of their achievements (see termly plan)

Design Technology Curriculum – EYFS and Programmes of Study Coverage

This page provides a summary of how the EYFS and the National Curriculum Programmes of Study for Design Technology have been covered through the teaching units previously disclosed (see page 2). It can also serve as a useful planning aid, ensuring that staff can plan progressive learning experiences for our children, with due regard for their prior learning, which can also be accessed via the Digital Archive. From the planned units, it can be concluded that the curriculum has been covered in full, with a breadth of study in key Stage 2 that embraces all aspects of the Programmes of Study.

Year	Autumn Term	Spring Term	Summer Term
EYFS (ELG 13)	▪	▪	▪
Year 1	Transition term	Design, Make, Evaluate Process (1 and 2 from all sections) Technical Knowledge: Joining techniques (1 and 2)	Design, Make, Evaluate Process (1 and 2 from all sections) Technical Knowledge: TBC
Year 2	Cooking and Nutrition (1 and 2)	Design, Make, Evaluate Process (1 and 2 from all sections) Technical Knowledge: TBC	Design, Make, Evaluate Process (1 and 2 from all sections) Technical Knowledge: TBC
Year 3	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC Cooking and Nutrition (1-3)	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC
Year 4	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC Cooking and Nutrition (1-3)	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC
Year 5	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC Cooking and Nutrition (1-3)	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC Cooking and Nutrition (1-3)	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC Cooking and Nutrition (1-3)
Year 6	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC	Design, Make, Evaluate Process (1 and 2 from DM sections, and 1-3 from Evaluate section) Technical Knowledge: TBC

Design Technology Curriculum – Sequencing

Year	Autumn Term	Spring Term	Summer Term
EYFS	As part of free-flow, the children will encounter a range of different natural materials, and be given the support and guidance to build and make with them. Links will also be established with art, creativity, and (SED).	To reflect the developmental pathways the children have followed, the level of complexity will increase, especially in relation to the materials that the children encounter within and across the setting	A range of tools and materials will remain available to the children, and the majority of children will be ready to accept instruction and modelling from practitioners across all areas of Early Learning
Year 1	To support the children in their transition from EYFS to Key Stage 1, all children will continue to access a range of natural materials indoors and outside. Challenges will be available, linked to the ongoing PBL, but free expression will also be encouraged. Construction sets will be age-appropriate.	Joining techniques will be a feature of free-flow and direct-teaching will also take place to empower the children to design, make, and evaluate toys that are linked to the ongoing PBL. Key aspects of teaching will also be targeted towards the DME process and how outcomes should reflect initial designs.	Now that the children are familiar with the DME process, a more ambitious project can be explored that uses a range of different materials and techniques. Links will also be made with the Art and Design curriculum, given the creative requirements. Islands will be used to contrast with the locality in which we live.
Year 2	During this term, the requirements from Cooking and Nutrition will be covered within the context of healthy eating, that is also taught through the science curriculum. Given the PBL links from Year 1 (summer term), the children are now ready to work in more of a cross-curricular manner.	Again, linked to the ongoing PBL and developing some of the skills-based teaching in Year 1, the children will revise the DME process as they make carts of their own. Teachers will impose specific criteria in respect of what function the design will fulfil and how they will be deemed to be successful (or not)	As with the summer term in Year 1, this DME will develop links with the Art and Design curriculum, but techniques for moving will also be taught in-line with the skills progression in Year 2. Given the expected quality, all moving pictures will also be included as part of the digital archive.
Year 3	Now that the children have transitioned into Key Stage 2, they are ready for specific skills teaching, and sewing is both a complex and time-consuming process. Key Stage 2 children are ready for this. In-line with previous DME projects, links will be established with the ongoing PBL (How New was the Stone Age).	Provision will allow the children to revise the Cooking and Nutrition unit that was taught in Year 2, with due regard for what the children will encounter in Year 4 and Year 5. The DME is a discrete unit, enabling colleagues in Year 3 to teach the requisite skills from the agreed progression across the school.	As with the autumn term, and as a consequence of the skills teaching during the spring term, the children will again be working within the context of their PBL. Pivots will be a specific focus, and a range of joining techniques will also be taught as part of the overall skills progression.
Year 4	As with the majority of DT teaching, the children will again be working within their PBL, and they must be mindful of the specific design requirements that the Romans mastered in terms of strength, weight, shape, and allegiance. Testing can also be considered to inform evaluations.	With specific links to the PBL, the children will be able to deepen their knowledge and understanding of Cooking and Nutrition taught in years 2 and 3. This will help to prepare them for the enrichment opportunities that they will encounter when they move into Year 5. DME will again be part of the teaching sequence.	Strong links are established with the PBL and also the science units that are taught in Year 4. Having a good working understanding of electricity will enable them to understand the design requirements, and DME will help to ensure that the products they create both work, and are fit-for-purpose.
Year 5	In Year 5, all of the children will encounter both curriculum-based and enrichment opportunities in respect of Cooking and Nutrition. The DME will again be linked to the ongoing PBL, and the children will intuit their understanding of the requirements through the history teaching they encounter.	Cooking and Nutrition will provide the primary basis for DY provision, and this will also include extra-curricular opportunities (Cooking Club). The Space Camp sleepover will also create opportunities for the children to design, make, and evaluate products that have a specific purpose.	Given that the children will be learning about Uttarakhand, direct teaching about pulleys and gears will enable the children to incorporate this understanding in their designs. Testing the designs will be a core part of the evaluative process, linked to the ongoing PBL for the summer term.
Year 6	There will be a strong DT focus, with direct skills teaching, and also a DME that develops some of the skills taught in the autumn term of Year 3. Provision will also enrich what is being taught in Literacy.	Given the progression of teaching and also the way the curriculum has been weighted, the primary focus for DT will shift from the classroom to larger school events through assemblies and curriculum days.	To conclude their studies in DT, the products the children design and make will be effectively evaluated by others through the mela, the money raised, and the amount of fun the children had!!

