Kenyngton Manor Primary School

Subject Profile: Design Technology

At Kenyngton Manor we know that curriculum is the key vehicle for 'Bringing out the Best' in all of our children, ensuring that all of our children are well prepared for the next stage of their learning and for life.

At Kenyngton Manor Primary School we are ***'bringing out the best'*** in all our pupils by giving them access to a broad and rich curriculum, enabling our children to **'stretch and reach':**

UP – to achieve academically
IN – to have a strong sense of who they are and be able to express it
OUT – to relate well with, and share responsibility for, others
FORWARDS – to be equipped with a 'spirit of adventure'

This is reflected in our curriculum approach to learning Design Technology, using the aims set out in Development Matters (2021) and the National Curriculum (2014) as frameworks for how we map content, ensure progression in knowledge and sequence our units of work.

Intent

At Kenyngton Manor, our Design and Technology (DT) curriculum aims to prepare children with the appropriate **knowledge**, **skills** and **subject-specific vocabulary** to be successful and ready for the next stage of their education.

Children will develop positive learning attitudes towards the subject, demonstrating the specific disciplines and behaviours in design and technology.

Our approach to DT will therefore ensure that children experience a high-quality education, whereby children:

- are able to apply creativity and innovation through design
- have the creative, technical and practical expertise needed to perform everyday tasks confidently
- are able to explore and ask questions about the designed, made and technological world in which they live and work.
- have a repertoire of knowledge and skills
- can design and make simple products for a range of users
- evaluate and test ideas and products
- understand and apply the principles of nutrition as they prepare basic foods

Implementation

At Kenyngton Manor, teaching, learning and assessment (**assessment as learning** and **assessment for learning**) of the DT curriculum is implemented:

- within the early year's foundations stage, where DT is regularly and frequently part of direct teaching and continuous provision as part of expressive art and design.
- using the kapow scheme of work where each lesson builds upon previous DT knowledge learned
- DT lessons are alternated with Art and Design every other half term
- with a key focus on learning and applying technical subject-specific vocabulary
- with a strong emphasis on the application of spoken language, reading, early reading and where appropriate the application of phonic knowledge and mathematics.

This ensures that children 'know more, remember more, and do more' building on and connecting what they have learned across lessons, between units within a subject and then across the curriculum between subjects.

Impact

We know we are successful when our children:

- have a positive attitude towards learning DT – understanding its importance and its application in their world
- are able to articulate in speech and writing what they have learnt previously, applying a rich range of subject-specific vocabulary.
- can apply their DT skills in making products for a given purpose
- can evaluate their own and others' products effectively in order to know how to improve it further
- children **know more, remember more, and do more**: connecting what they have learned across lessons, between units within a subject and then across the curriculum between subjects. This will be evident in contributions made by children in lessons, conversations with children and work produced by children.
- children have the knowledge and skills they need, to continue to be successful in their next DT lesson, unit, year group, Key Stage and school.

	End Points (unit outcomes)	Substantive Strands (facts/ideas/themes/schema) Cooking and nutrition Construction and mechanisms Electrical circuits textiles	Disciplinary Knowledge (walk in the experts' shoes) Investigate Design Make Evaluate
EYFS	To know how to use some different techniques, safely: to join materials; to apply paint; to print; to create rubbings; to construct using malleable materials; to sculpt. To know how to describe what they see or feel in response to an artwork, image or object. To know how to generate an idea before they build/make/create. To know how to talk about the process they took. Reflect on what they are doing and creating, building on previous experiences and learning. Collaborate with others, sharing skills, ideas and materials. Key vocabulary: Plan, join, improve, line, model, sculpture		
Year 1			
Making a windmill	To follow a design that creates a moving model using leavers and sliders. To know that a mechanism is the parts of an object that move together.	Construction and mechanisms	Investigate Design Make Evaluate
Textile: Puppets	To know that 'joining technique' means connecting two pieces of material together. To use a variety of joining methods to create a puppet.	Textiles	Investigate Design Make Evaluate
Cooking and nutrition: Smoothies	To know and explain the difference between fruits and vegetables.	Cooking and nutrition	Investigate Design Make

	To know how to safely prepare fruits and vegetables.		Evaluate
YEAR 2			
Structures – Baby bear's chair	To know some factors that might affect a structures property e.g. strength/ stiffness etc. To make a structure that follows a design criteria using joints from paper/card/tape.	Construction and mechanisms	Investigate Design Make Evaluate
Fairground wheel	To know the key features of wheels and axils (wheels are round and rotate and be must be attached to a rotating axle) To know how to select the correct materials for a wheel.	Construction and mechanisms	Investigate Design Make Evaluate
Mechanisms: Making a moving monster	To know what is meant by an input and output within a mechanism. To know how to create a moving product for a specific audience using different linkages.	Mechanisms	Investigate Design Make Evaluate

YEAR 3			
Cooking and nutrition: Eating Seasonally	To know that seasonal means foods that grow in a given season in a given country and to know some seasonal foods that grow within the UK.	Cooking and nutrition	Investigate Design Make Evaluate

	To know that eating seasonal foods can have a positive impact on the environment. To know that similar coloured fruits and vegetables often have similar nutritional benefits.		
Digital world: Wearable technology	To know how to use code to program and control a product. To know how to develop ideas through computer aided design (CID)	Electrical circuits	Investigate Design Make Evaluate
Structures: Constructing a castle	To know that wide and flat based objects are more stable. To know the importance of strength and stiffness in structures. To know that a facade is the front of a structure.	Construction and mechanisms	Investigate Design Make Evaluate
YEAR 4			
Structures: Pavilions	To know how to create a stable framed structure that is aesthetically pleasing. To know how to effectively evaluate a product.	Structure	Investigate Design Make Evaluate
Electrical systems: Torches	To know how to create simple electrical circuits including electrical items such as buzzers, switches and bulbs To know how to use circuit knowledge to design and make a product	Electrical systems	Investigate Design Make Evaluate

Mechanical systems Making a slingshot car	To know the impact of air resistance on movement and to design a shape that reduces air resistance. To know how to choose the shape of a product for a specific purpose.	Construction and mechanisms	Investigate Design Make Evaluate
YEAR 5			
Electrical systems: Doodlers	To know how to create a series circuit that includes a motor. To know how to isolate a single factor in a product that could change it's function/design.	Electrical systems	Investigate Design Make Evaluate
Mechanical systems: Making a pop-up book	To know how to use sliders, pivots and folds to produce movement. To know how mechanisms can be used to change motion.	Construction and mechanisms	Investigate Design Make Evaluate
Cooking and nutrition: Designing a recipe	To know where meat comes from and some welfare issues around meat. To know that recipes can be adapted to suit nutritional needs and dietary requirements. To know that coloured chopping boards can prevent cross-contamination.	Cooking and nutrition	Investigate Design Make Evaluate
YEAR 6			
Mechanical systems : Playground	To know how to strengthen a structure though manipulating materials.	Construction	Investigate Design Make

	To know how designers might use a prototype. To know how to evaluate the effectiveness of a structure.		Evaluate
Textiles: Waistcoats	To know how to create and annotate a design for a piece of clothing, justifying decisions. To know some of the design techniques involved in producing a piece of clothing with a customer in mind e.g., stiches/use of pins etc	Textiles	Investigate Design Make Evaluate
Navigating the digital world	To know key companies that use computer aided design (CAD) and why they use them. To know how to use CAD to develop a design using criteria submitted by a client.	Electrical circuits	Investigate Design Make Evaluate