

Nursery

Design and Technology

Nursery – Year 6

It's Cold out there



Children will design and make a simple vehicle using junk modelling materials such as boxes, tubes, bottle tops, and other recycled items. They will explore how materials can be joined, stacked, and balanced while experimenting with ways to make their vehicle move or represent wheels and parts.



People Who Help Us



Make a bag for a doctor - during this activity, children will design and make a simple doctor's bag using materials such as card, paper, fabric, boxes, and recycled items. They will explore how to fold, join, and attach materials to create a container that can hold pretend medical tools used in role play.

What's in the garden?



Children will create flowers using a variety of materials such as paper, card, fabric, pipe cleaners, recycled materials, and natural objects. They will explore different ways to cut, stick, layer, and assemble materials to represent parts of a flower such as petals, stems, and leaves.

(Throughout the Nursery year, children will be continually manipulating, exploring, playing and creating with different materials.)

Reception

Let's Explore



Colourful homes - Children will focus on structures and will use various resources and materials to make a house.

Adventures – Children will look at a generation of ideas, focusing on where shall we go? They will build dens outside using a range of materials and resources.

Mini project: Build it up

Children will discuss the different jobs on a building site, such as bricklaying, carpentry, operating machinery and roofing. Children will make vehicles using the construction kits.

Marvellous Machines

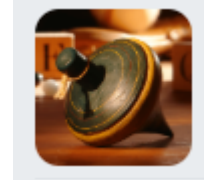


Design a robot – children will create a 3D robot. They will add different features, such as antennae or buttons.

Mini project: Puppets and Pop Ups.

Children will use practical resource and create a paper plate puppet. They will develop their cutting and joining skills and will be encouraged to talk about how their puppet will speak.

Long Ago



Children will step back in time and explore toys from the past. Using a range of resources, children will make a cart for horses using wheels and axles.

On the Beach



Children will explore structures, focusing on sea voyages. They will design a boat using different building resources.

Animal Safari



Children will play with a range of small world animals and use natural resources such as pebbles, straw, branches and log slices to build a home for them.

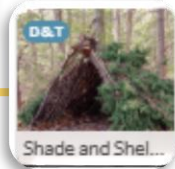
Year 2

Year 1



Chop, Slice and Mash

This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.



Shade and Shelter

This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product.



London Bus

This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.



Push and Pull

This project teaches children about three types of mechanism: sliders, levers and linkages. They make models of each mechanism before designing and making a greetings card with a moving part.

(Could be linked to Christmas Greetings Card)



Cut, stitch & join

This project teaches children about fabric home products and the significant British brand Cath Kidston. They learn about sewing patterns and using a running stitch and embellishments before making a sewn bag tag.



Beach Hut

This project teaches children about making and strengthening structures, including different ways of joining materials.

Year 3

Year 4



Cook well eat well

This project teaches children about food groups and the Eatwell guide. They learn about methods of cooking and explore these by cooking potatoes and ratatouille. The children choose and make a taco filling according to specific design criteria.



Making it move

This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy.

DT (Cross-curricular with Science – Electricity)– Construct simple series circuits. Identify components (cells, wires, bulbs, switches)
Recognise whether a lamp will light.



This project teaches children about electrical appliances and safety. They construct simple series circuits and name their parts and functions, including switches, wires and cells. They investigate electrical conductors and insulators and identify common features of conductors. It also teaches children about programmable devices. They combine their learning to design and make a nightlight.

Tomb Builders

This project teaches children about simple machines, including wheels, axles, inclined planes, pulleys and levers, exploring how they helped ancient builders to lift and move heavy loads.



‘Understand how key events and individuals in design and technology have helped shape the world’



Curriculum Enhancement Project - Viking Longhouses (Hamilton Trust Project)

This project teaches children about Viking longhouses, exploring how they were designed and built to suit the needs of Viking families and communities. Children will investigate structure and stability, considering materials, frames and joins, before planning and creating their own model longhouses. Through practical work, they will develop their design, making and evaluation skills, while learning how homes can reflect culture, lifestyle and environment.

Year 5



Architecture

Architecture

This project teaches children about how architectural style and technology has developed over time and then use this knowledge to design a building with specific features.

Key Architects

Andrea Palladio (Renaissance – symmetry and proportion)
Thomas Farnolls Pritchard (Industrial – engineering and materials)
Frank Gehry (Postmodern – bold, unusual forms)
Stefano Boeri (Sustainable – green architecture)



Moving Mecha...

Moving Mechanisms

This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function.



Eat the Seasons

Eat the Seasons

After farm visit

This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking

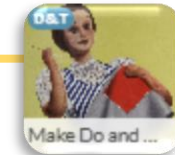
Year 6



Engineer

Engineer

This project teaches children about remarkable engineers and significant bridges, learning to identify features, such as beams, arches and trusses. They complete a bridge-building engineering challenge to create a bridge prototype.



Make Do and ...

Make do and mend

This project teaches children a range of simple sewing stitches, including ways of recycling and repurposing old clothes and materials.



Electrical Circu...

Designing and making programmable home devices

This project teaches children about electrical circuits, their components and how they function. They recognise how the voltage of cells affects the output of a circuit and record circuits using standard symbols. It also teaches children about programmable devices, sensors and monitoring. They combine their learning to design and make programmable home devices.

