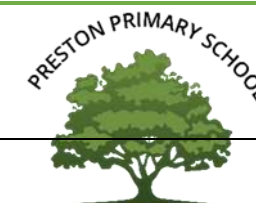


Long Term Framework for Design and Technology



	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Nursery						<p align="center"><u>I wonder what happens next</u></p> <p>To be able to make a choice from a range of materials (DT) To be able to say what they are going to make (DT) To be able to build a model using a range of construction materials and join together using tape, glue or string (DT) To be able to make changes to the material I am using (roll, squash, stretch etc.) (DT)</p>
Reception		<p align="center"><u>I wonder what is special</u></p> <p>Be able to verbally plan the best approach to the task (DT)</p>		<p align="center"><u>I wonder how things change</u></p> <p>Be able to select appropriate resources and tools. (DT)</p>		<p align="center"><u>I wonder what happens next</u></p> <p>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; Can construct a stable structure understanding the importance of a solid base and fix component parts independently (A) To be able to explain why a material / tool is appropriate for a task (DT) To be able to manipulate materials to create a planned effect (DT) To be able to identify success when making a model and identify next steps (DT)</p>
Year 1		<p align="center"><u>Christmas card with a slider or lever</u></p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <ul style="list-style-type: none"> • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project <p>Explore and use sliders and levers</p> <ul style="list-style-type: none"> • To plan using pictures, words and lists of what they will need. • To be able to orally evaluate what went well and what didn't from the planning and making process. 		<p align="center"><u>What can I make – freestanding structures</u></p> <p>build structures, exploring how they can be made stronger, stiffer and more stable</p> <ul style="list-style-type: none"> • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> • To plan using pictures, words and lists of what they will need. • To be able to orally evaluate what went well and what didn't from the planning and making process. 		<p align="center"><u>Healthy lifestyles – juicing</u></p> <p>use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p> <ul style="list-style-type: none"> • Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eat well plate. • Know and use technical and sensory vocabulary relevant to the project. <ul style="list-style-type: none"> • To plan using pictures, words and lists of what they will need. • To make juice through learning the skills of squeezing and juicing. • To be able to orally evaluate what went well and what didn't from the planning and making process.
Year 2		<p align="center"><u>Moving vehicles – Santa's sleigh</u></p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <ul style="list-style-type: none"> • Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles • Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> • To be able to design a purposeful product based on a design criteria. • To understand how the axle system works and makes the vehicle move 		<p align="center"><u>Freestanding structures – templates and joining</u></p> <p>build structures, exploring how they can be made stronger, stiffer and more stable</p> <ul style="list-style-type: none"> • Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. • Know and use technical vocabulary relevant to the project. 		<p align="center"><u>Healthy lifestyles – fruit and vegetables</u></p> <p>use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p> <ul style="list-style-type: none"> • To know that certain foods only grow in different countries due to weather conditions • To know the journey from farm to home with reference to a dairy farm. • To be able to design a purposeful product based on a design criteria. • To be able to effectively peel and chop hard fruits and vegetables safely.

		<ul style="list-style-type: none"> To be able to recognise what they have done well and what could be improved in a written format. 				<ul style="list-style-type: none"> To be able to recognise what they have done well and what could be improved in a written format.
Year 3		<p>Mechanism and Levers – Christmas Card Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <ul style="list-style-type: none"> Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots. Know and use technical vocabulary relevant to the project <ul style="list-style-type: none"> To be able to produce annotated sketches to inform them on materials required To be able to make a card that has a mechanism containing levers and linkages Be able to operate, discuss and evaluate how their pop up card works. 		<p>Reinforcing structures – bridges apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <ul style="list-style-type: none"> Develop and use knowledge of how to construct strong, stiff shell structures. Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> To be able to produce annotated sketches to inform them on materials required To be able to make a bridge structure that can hold a specific weight Be able to operate, discuss and evaluate how their pop up card works. 		<p>Healthy lifestyles –grating and spreading 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.</p> <ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Know and use relevant technical and sensory vocabulary appropriately. To be able to hygienically grate and spread to prepare food. To be able to assess how well their product works in relation to the purpose.
Year 4		<p>Different switches – Christmas Card Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p> <ul style="list-style-type: none"> Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. Apply their understanding of computing to program and control their products. Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> To be able to research using a search engine to find designs/products linked to their design brief Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. Be able to operate, discuss and evaluate how their pop up card works. 		<p>Pulleys and gears Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <ul style="list-style-type: none"> Understand that mechanical and electrical systems have an input, process and an output. Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> To be able to research using a search engine to find designs/products linked to their design brief Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. Be able to operate, discuss and evaluate how their product works 		<p>Healthy lifestyles- bridge and claw cutting 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.</p> <ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Know and use relevant technical and sensory vocabulary appropriately. To be able to prepare ingredients hygienically using bridge and claw cutting methods. To be able to assess how well their product works in relation to the purpose.
Year 5		<p>Christmas toy with a cam Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <ul style="list-style-type: none"> Understand that mechanical systems have an input, process and an output. Understand how cams can be used to produce different types of movement and change the direction of movement. Know and use technical vocabulary relevant to the project <ul style="list-style-type: none"> To have an understanding of and be able to complete cross-sectional and exploded diagrams as a planning tool To be able to make a simple moving toy To be able to use previous success and failure then reflect on that in the evaluation. 		<p>Electrical game apply their understanding of computing to program, monitor and control their products.</p> <ul style="list-style-type: none"> Understand and use electrical systems in their products. Understand the use of computer control systems in products. Apply their understanding of computing to program, monitor and control their products. Know and use technical vocabulary relevant to the project. <ul style="list-style-type: none"> To have an understanding of and be able to complete cross-sectional and exploded diagrams as a planning tool To be able to use previous success and failure then reflect on that in the evaluation. 		<p>Healthy lifestyles-savoury scones 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.</p> <ul style="list-style-type: none"> Know how to use utensils and equipment including heat sources to prepare and cook food. Understand about seasonality in relation to food products and the source of different food products. Know and use relevant technical and sensory vocabulary. To design and make product taking into account audience and purpose To be able to hygienically prepare food using the rubbing in method. – SCONES

Year 6		<p>Christmas decoration – joining materials apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <ul style="list-style-type: none"> • A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Fabrics can be strengthened, stiffened and reinforced where appropriate. <p>•To design an innovative, functional product that is fit for purpose and aimed at those identified as the target market. •To use sewing to create a Christmas decoration. •To be able to peer evaluate their products against the design criteria.</p>		<p>Healthy lifestyles-making bread 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.</p> <ul style="list-style-type: none"> •Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary. <p>• To design and make product taking into account audience and purpose •To use kneading to prepare a product – BREAD</p>		<p>Memory Sculpture apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <ul style="list-style-type: none"> • To design and make product taking into account audience and purpose •To be able to use previous success and failure then reflect on that in the evaluation.