










Holy Family Catholic Primary School

Design and Technology Long Term Plan

Year Groups	Autumn	Spring	Summer												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="4" data-bbox="555 512 1980 600"><b>Working as a Designer</b></th> </tr> <tr> <th data-bbox="555 600 911 676"><b>Design</b></th> <th data-bbox="911 600 1267 676"><b>Make</b></th> <th data-bbox="1267 600 1624 676"><b>Evaluate</b></th> <th data-bbox="1624 600 1980 676"><b>Apply</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="555 676 911 863">The art or process of deciding how something will look or work.</td> <td data-bbox="911 676 1267 863">Create something by combining materials or putting parts together.</td> <td data-bbox="1267 676 1624 863">Form an opinion of the value or quality of something after careful thought.</td> <td data-bbox="1624 676 1980 863">Use something or make something work in a particular situation.</td> </tr> </tbody> </table>				<b>Working as a Designer</b>				<b>Design</b>	<b>Make</b>	<b>Evaluate</b>	<b>Apply</b>	The art or process of deciding how something will look or work.	Create something by combining materials or putting parts together.	Form an opinion of the value or quality of something after careful thought.	Use something or make something work in a particular situation.
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<b>EYFS</b>	<p><b>16. Creating with Materials ELG</b></p> <p><b>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; Make use of props and materials when role playing characters in narratives and stories.</b></p> <p><b>Explore, use and refine a variety of artistic effects to express their ideas and feelings</b></p>														
	Use a range of tools to be imaginative Sculptures and materials Manipulating materials	Tools and techniques for food preparation	Design and construct buildings, houses and homes												



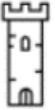





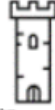
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<p><b>Year 1</b></p> <p><b>Each unit lasts 3 weeks</b></p>	<p><b>Mechanisms</b></p> <p><b>Sliders and levers</b></p> <p><b>How can you make a picture move?</b></p> <p>Know common uses of sliders            Know different methods to create card sliders            Know how sliders can create simple mechanisms            Be able to design and make a slider product            Be able to evaluate the success of their outcomes and recommend improvements</p> 	<p><b>Food and Nutrition</b></p> <p><b>Exploring food senses</b></p> <p><b>How does food affect your senses?</b></p> <p>Know why colourful food can be healthier            Know how different foods can affect senses            Be able to peel, chop and grate a selection of vegetables            Be able to modify food to suit food senses</p> 	<p><b>Textiles</b></p> <p><b>Joining techniques</b></p> <p><b>How can two squares of fabric keep you warm?</b></p> <p>Know fabric can be joined together using a running stitch            Know the types and names of tools needed for sewing            Be able to create a running stitch            Be able to select tools for sewing            Be able to thread a needle</p> 
	<p><b>Structures</b></p> <p><b>Freestanding structures</b></p> <p><b>How can you stop a tower from toppling over?</b></p> <p>Know a freestanding structure is a structure that stands on its own foundation or base without attachment to anything else            Be able to build structures that are freestanding using a range of different materials</p> 	<p><b>Understanding Materials</b></p> <p><b>Selecting materials</b></p> <p><b>Can you build with bread?</b></p> <p>Know building materials have different properties which enable them to be used for different purposes            Be able to identify, sort and select materials that can be used in construction            Be able to combine materials</p> 	<p><b>Food and Nutrition</b></p> <p><b>Vitamins in food</b></p> <p><b>Why are vegetables the best?</b></p> <p>Know the importance of including a range of vegetables in a diet            Be able to peel, grate, season and breadcrumb a range of vegetables</p> 
<p><b>Year 2</b></p> <p><b>Each Unit lasts 3 weeks</b></p>	<p><b>Textiles</b></p> <p><b>Exploring shape using a template</b></p> <p><b>How can you repurpose an item of clothing?</b></p> <p>Know how to cut out shapes which have been created by using a template            Know how to use a range of basic sewing skills            Be able to use a template to transfer a pattern            Be able to cut out and join fabric shapes using a template</p> 	<p><b>Mechanisms</b></p> <p><b>Axles and wheels</b></p> <p><b>Are bigger wheels always better?</b></p> <p>Know how wheels and axles work together            Know the size and position of wheels affects how they move            Be able to create a simple wheel mechanism            Be able to use wheel mechanisms to propel a simple vehicle</p> 	<p><b>Food and Nutrition</b></p> <p><b>Processed food</b></p> <p><b>How healthy is your food?</b></p> <p>Know the difference between fresh food and ultra-processed foods            Be able to shape and form ingredients to make delicious food            Be able to use a range of culinary techniques</p> 





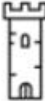



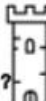
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	<p><b>Food and Nutrition</b> <b>Nutrients and the body</b> <b>What does healthy mean?</b></p> <p>Know why vegetables are so important to our health Know what processed foods are Be able to prepare a range of salad vegetables Be able to shape and season a bread snack</p> 	<p><b>Understanding Materials</b> <b>Manipulating materials</b> <b>How can you waterproof a hat?</b></p> <p>Know materials can be modified to become waterproof Know origami comes from the Japanese words: ori - folding and kami - paper Be able to make paper waterproof Be able to transform flat paper by folding and creasing to form a hat</p> 	<p><b>Structures</b> <b>Developing strength in structures</b> <b>How strong is a piece of paper?</b></p> <p>Know paper becomes stronger when it is folded Know a load is the amount of weight a structure must carry Be able to fold paper to increase strength and stability Be able to test and record how much weight paper can hold</p> 
<p><b>Year 3</b>  <b>Each Unit lasts 3 weeks</b></p>	<p><b>Textiles</b> <b>Stiffening and strengthening fabric</b> <b>How can you make a box out of cloth?</b></p> <p>Know fabric can be stiffened Know stiffened fabric can hold a form Be able to select and apply solutions to stiffen fabric Be able to make a box using stiffened fabric</p> 	<p><b>Mechanisms</b> <b>Levers and linkages - mechanical advantage</b> <b>How can you do a lot of work with little effort?</b></p> <p>Know types of levers and linkages Know key terminology relating to levers and linkages Know how levers and linkages can change the direction of movement Be able to design and make simplistic lever and linkage products Be able to evaluate the success of outcomes and recommend improvements</p> 	<p><b>Systems</b> <b>How things are powered</b> <b>How are things powered?</b></p> <p>Know different types of energy Know why designers need to carefully consider energy sources Be able to identify how things are powered Be able to suggest appropriate energy sources for design problems</p> 
	<p><b>Food and Nutrition</b> <b>Individual diets</b> <b>What do we mean by a balanced diet?</b></p> <p>Know what is meant by the term balanced Know why fresh foods are better Be able to make a fruit and yoghurt dessert Be able to make homemade chips Be able to flavour foods to increase their sensory qualities</p> 	<p><b>Food and Nutrition</b> <b>Food as medicine</b> <b>How does food affect your body and mind?</b></p> <p>Know food can help body and mind Know how to prepare and cook a range of vegetables Be able to peel and grate a range of vegetables Be able to add flavour and texture to foods</p> 	<p><b>Structures</b> <b>Spanning gaps</b> <b>What makes a bridge strong?</b></p> <p>Know bridges are structures that allow people and vehicles to cross over an open space Know towers, piers and arches provide strength to a bridge Be able to design and build a beam bridge that can hold the weight of 100 pennies Be able to identify and name parts of a bridge</p> 










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<p><b>Year 4</b></p> <p><b>Each Unit lasts 3 weeks</b></p>	<p><b>Food and Nutrition</b></p> <p><b>Ultra-processed food</b></p> <p><b>What's really in your food?</b></p> <p>Know processed foods have many added ingredients Be able to make, roll and shape bread dough Be able to make a soup</p> 	<p><b>Textiles</b></p> <p><b>Fixings and fastenings</b></p> <p><b>How do you keep a tea towel from slipping off a hook?</b></p> <p>Know fastenings have different functions Know a shank provides a small amount of space between the button and fabric Be able to select appropriate fastenings and attach them to fabric Be able to make a shank for a button</p> 	<p><b>Electrical Systems</b></p> <p><b>Switches and circuits revisited</b></p> <p><b>How useful are switches?</b></p> <p>Know a switch is an interruption in a circuit Know switches are widely used in a range of products Be able to incorporate different types of switches into circuits to perform a function</p> 
	<p><b>Mechanisms</b></p> <p><b>Hinges</b></p> <p><b>How many ways are there to open a door?</b></p> <p>Know types of hinges and the related terminology Know common uses for hinges Be able to make a variety of model hinges Be able to make and evaluate hinged products using modelling materials</p> 	<p><b>Structures</b></p> <p><b>Designing structures using a frame to make them stronger and sturdier</b></p> <p><b>Which shapes will give a structure stability?</b></p> <p>Know triangles provide stability in a structure Know structural engineers work with architects to ensure structures withstand forces Be able to make triangles to form and join trusses Be able to identify the forces that affect structures</p> 	<p><b>Food and Nutrition</b></p> <p><b>Benefits of fresh food</b></p> <p><b>Is cheap food always worse for you?</b></p> <p>Know that cheap processed food often contains additives, salt and sugar, which makes it less healthy than unprocessed food Be able to peel, grate and chop vegetables to make economical, tasty and healthy food</p> 
<p><b>Year 5</b></p> <p><b>Each Unit lasts 3 weeks</b></p>	<p><b>Food and Nutrition</b></p> <p><b>Food choices</b></p> <p><b>Why are our diets so different?</b></p> <p>Know some foods and key ingredients from other cultures Know how other cultures' food can be nutritious Be able to make, roll and cook a flatbread Be able to prepare a range of vegetables Be able to present foods to a high standard</p> 	<p><b>Textiles</b></p> <p><b>Durability of fabric</b></p> <p><b>Which fabric is ideal for creating a functional and hardwearing lunch bag?</b></p> <p>Know how to waterproof cotton fabric Know which fabrics are both functional and hardwearing Be able to use beeswax to waterproof cotton fabric Be able to repurpose a pair of jeans</p> 	<p><b>Structures</b></p> <p><b>Developing structures that are fit for purpose</b></p> <p><b>How are frames strengthened, reinforced and made rigid?</b></p> <p>Know engineers use a range of methods to strengthen and reinforce structures Be able to identify and describe ways that frames are strengthened and reinforced</p> 

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	<p><b>Systems</b>  <b>Using technology to design and control</b>  <b>How can we keep ourselves safe on the road?</b></p>  <p>Know technology can be used to program and control a product          Be able to combine elements of their design knowledge to fulfil a brief</p>	<p><b>Food and Nutrition</b>  <b>Cultural influences on diet</b>  <b>What can you learn from different cultures' diets?</b></p>  <p>Know how foods can be used as medicines          Know how eating food from different countries can help us be healthy          Be able to roll and shape ingredients          Be able to slice and ribbon a range of vegetables          Be able to stir-fry vegetables</p>	<p><b>Mechanisms</b>  <b>Pulleys and gears - transferring rotational force</b>  <b>How can you lift a car onto a roof?</b></p>  <p>Know types of gears and terminology relating to gears          Know common uses of pulleys and gears          Know how pulleys and gears can change the direction of movement          Be able to design and make products that use pulleys and gears to lift loads          Be able to evaluate the success of outcomes and recommend improvements</p>
<p><b>Year 6</b>   <b>Each Unit lasts 3 weeks</b></p>	<p><b>Food and Nutrition</b>  <b>Multicultural influences on food</b>  <b>Can street foods save us?</b></p>  <p>Know what street foods are          Know how snacks can be good foods to eat          Be able to make a burrito          Be able to make and roll bread dough          Be able to make a savoury pastry</p>	<p><b>Food and Nutrition</b>  <b>Food and mood</b>  <b>Does food affect the way you feel?</b></p>  <p>Know the difference between slow release and quick release carbohydrates          Know how food can improve mood and energy levels          Be able to dice, slice, peel, grate and cook a range of vegetables          Be able to make a sauce and a stock          Be able to use height and colour to improve the visual appeal of food</p>	<p><b>Electrical Systems</b>  <b>Complex switches and circuits</b>  <b>Can switches perform more than one function?</b></p>  <p>Know more than one switch can be used to change the functionality of a product          Be able to use switches to adapt a product in response to a design brief</p>
	<p><b>Mechanisms</b>  <b>Pulleys and gears - rotary and linear movement</b>  <b>How do pulleys and gears let you see the world?</b></p>  <p>Know types of pulley systems and gears          Know common uses of pulleys and gears          Know how pulleys and gears can create simple mechanisms and change direction of movement          Be able to design and make a model Ferris wheel powered by gears          Be able to evaluate the success of their outcomes and recommend improvements</p>	<p><b>Structures</b>  <b>Designing structures revisited - combining skills and knowledge</b>  <b>How strong is a piece of spaghetti?</b></p>  <p>Know structures can be supported with guy lines and flying buttresses          Know the shorter the piece of spaghetti, the stronger it will be          Be able to construct a flying buttress to support a tower          Be able to use appropriate lengths of spaghetti to increase strength and stability</p>	<p><b>Textiles</b>  <b>Sustainable materials</b>  <b>How can you reduce, recycle, repurpose?</b></p>  <p>Know plastic waste can be recycled and repurposed into practical, useful items          Be able to make a crochet hook out of a chopstick          Be able to use plastic bags and snack packets to create practical items</p>

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Reviewed May 2025