Design and Technology

In Foundation Stage Holy Family children are encouraged to do junk modelling and use a variety of ways to join one material to another using different tools and resources. By Key Stage 1 children are taught a process in Design and Technology. The first stage is to communicate their ideas through talking, drawing and templates. The second stage is to explore a range of existing products and evaluate their ideas against the design criteria. The third stage is to select a range of tools and materials including construction materials, textiles and ingredients. The fourth stage is to create their own product. Through their project's children learn how products can be made stronger or more stable. As well as how to incorporate levers, slides wheels or axels.

In Key Stage 2 Holy Family children expand upon the above skills and knowledge by using annotated sketches or exploded diagrams to present their ideas; using a wider range of tools, materials and components; and gaining an understanding of the key individuals and companies who have helped shape the world around them e.g. Thomas Edison or Mulberry. At Holy Family the children have the opportunity to use electrical systems in their products and apply their understanding of computing to programme, monitor and control their designs.

Children also learn about key principles in cooking, nutrition and healthy eating.

At Holy Family school we aim to give those children with inventive and creative potential opportunities to explore their ideas and imaginations.

Overview of DT

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 1	Structures: Photo Frames			Mechanisms: Moving Pictures		Food Tech: Fruit Salad Structures: Playground models
Year 2	Mechanisms: model vehicles		Textiles: Puppets			Food: Savoury Salads
Year 3		Structures: Chocolate box design		Food: Healthy plate		Textiles: pouches
Year 4	Textiles: Bean bag animals			Mechanical Systems: Easter cards	Food: Naan bread/Papo Secos	Electrical Systems: Light boxes
Year 5		Mechanical Systems: Automata		Electrical Systems: moving vehicles		Food: Pizza
Year 6	Structures: STIXX workshop	Textiles: Make do & mend bags				

Year 1

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Structures: *Photo Frames* Know how freestanding structures can be made stronger, stiffer and more stable			***Mechanisms:*** Moving Pictures Develop and communicate ideas by talking and drawing Know about the movement of simple mechanisms such as sliders		***Food:*** *Fruit Salad* Use a range of food ingredients Follow procedures for safety and hygiene ***Structures:*** *Playground models* Select from a range of materials and components according to their characteristics Assemble, join and combine materials and components
Key Vocabulary					
fold structure reinforce freestanding			Movement Slider		ingredients hygiene taste names of fruit used

Year 2

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Mechanisms: *Model Vehicles* Know about the movement of simple mechanisms such as wheels and axles Know about the characteristics of components			***Textiles:*** *Puppets* Know that a 3Dtextiles product can be assembled from 2 identical fabric shapes		***Food:*** *Savoury Salads* Know that food ingredients should be combined according to their sensory characteristics
Key Vocabulary					
Axel wheel			Felt Needle Thread Running stitch Hand puppet		ingredients hygiene taste names of ingredients used

Year 3

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
	Structure: *Chocolate box design* How to use learning from mathematics to help design and make products that work How to make strong, stiff shell structures		***Food:*** *Healthy Plate* That food ingredients can be fresh, pre-cooked and processed		***Textiles:*** *Pouches* Know that materials have functional properties
Key Vocabulary					
	Net face		ingredients hygiene taste names of ingredients used		Needle Thread Fabric Fastening Running stitch Whip stitch

Year 4

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Textiles: *Bean bag animals* Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, including some of those from art and design, with some accuracy			***Mechanical Systems:*** *Easter Cards* How mechanical systems such as levers and linkages or pneumatic systems create movement That mechanical and electrical systems have an input, process and output	***Food:*** *Breads* (this alternates between India and Portugal with Diversity Day)	***Electrical Systems:*** *light Boxes* How to use learning from science to help design and make products that work How simple electrical circuits and components can be used to create functional products
Key Vocabulary					
Felt Needle Thread Stuffing/filling Applique pattern			Lever Linkage Pivot Input Output Linear Oscillating	*Naan* *Papo Secos* *The appropriate ingredients*	Switch Wire Bulb circuit

Year 5

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
	Mechanical Systems: *Automata* How mechanical systems such as cams and gears create movement		***Electrical Systems:*** *moving vehicles* (workshop run by visiting engineer) Use a range of electrical components		***Food:*** *pizza* That a recipe can be adapted by adding or substituting one or more ingredients
Key Vocabulary					
	Cam Gear automata		Be able to name the components used		Ingredients used baking

Year 6

Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Structures: *STIXX* Workshop run by visiting engineer How to reinforce and strengthen a 3D framework Demonstrate resourcefulness when tackling practical problems	***Textiles:*** *Make Do and Mend bags* That a 3D textiles product can be made from a combination of fabric shapes Accurately apply a range of finishing techniques, including those from art and design. That materials have aesthetic qualities				
Key Vocabulary					
	Fabric types (where appropriate) Needle Thread Applique Pattern Prototype Exploded diagram				

How Design & Technology Shapes the World

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Steiff	Wheel and axel mechanisms	The History of Packaging Design	The History of Electricity	The Greatest Pizzaiolo	Mulberry: The Story of a British Designer
Textiles & Moving parts	Mechanisms	Structures	Electrical Systems	Food	Textiles
Toys	Model vehicles	Chocolate boxes	Light Boxes	Pizzas	Make Do & Mend Bags