



**ST CHARLES' CATHOLIC PRIMARY
SCHOOL**



DT MEDIUM TERM PLANNING

	AUTUMN	SPRING	SUMMER
NURSERY	<p>To explore printing.</p> <p>To explore a variety of tools and materials to create.</p> <p>To explore how to use simple construction equipment.</p> <p>To use simple tools safely and with increasing control and intent.</p>	<p>To begin to join different materials and explore different textures.</p> <p>To explore more complex construction equipment, with a goal in mind.</p> <p>To use a range of one-handed tools competently, safely and confidently.</p>	<p>To use different tools and materials for a purpose and to achieve a goal.</p> <p>To make imaginative and complex small worlds with blocks and construction kits.</p> <p>To use a comfortable grip with good control when holding pens, pencils and other small tools.</p>
RECEPTION	<p>To use different tools and materials for a purpose and to achieve a goal.</p> <p>To use a comfortable grip with good control when holding pens, pencils and other small tools.</p> <p>To show a preference for a dominant hand.</p> <p>To explore a range of small tools and begin to use these competently and safely.</p>	<p>To return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>To create props that I can then use to enhance my role play.</p> <p>To use a range of small tools with increasing efficiency and precision.</p>	<p>To create collaboratively, sharing ideas, resources and skills.</p> <p>To share my creations, explaining the process I have used and the choices I have made.</p> <p>To use a range of small tools including scissors, paintbrushes, tweezers, threading, pens and pencils competently, safely and confidently.</p>
YEAR 1	<p align="center">Textiles – Puppets</p> <p>Explore different ways of joining fabrics before creating hand puppets based upon characters from a well-known fairy-tale. Develop technical skills of cutting, glueing, stapling and pinning.</p>	<p align="center">Food – Fruit and Vegetables</p> <p>Handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish chosen ingredients for a smoothie they will make, with accompanying packaging.</p>	<p align="center">Structures – Windmill</p> <p>Design, decorate and build a windmill for a mouse (client) to live in, develop an understanding of different types of windmill, how they work and their key features. Look at real existing examples and the functions that they carry out.</p>
	<p align="center">Vocabulary</p> <p>Decorate, Design, Fabric, Glue, Model, hand puppet, Safety pin, Stencil, technique, Template.</p>	<p align="center">Vocabulary</p> <p>Blender, carton, fruit, Healthy, Ingredients, Peel, Peeler, Recipe, Slice, Smoothie, Stencil, Template, vegetable.</p>	<p align="center">Vocabulary</p> <p>Client, Design, Design criteria, Evaluation, Net, Stable, Strong, Structure, Test, Weak, Windmill, Windmill axle, Windmill structure, Windmill turbine.</p>
	<p>Drawing techniques – Annotated drawing Inventor/Designer – Leonardo da Vinci: creative and imaginative</p>		
YEAR 2	<p align="center">Mechanisms – Moving monster</p> <p>After learning the terms: pivot, lever and linkage, pupils design a monster that will move using a linkage mechanism. Pupils practise making</p>	<p align="center">Food – A balanced diet</p> <p>Explore and learn what forms a balanced diet, pupils will taste test ingredient combinations from different food groups that will inform a wrap</p>	<p align="center">Structures – bed/chair</p> <p>When designing the chair/bed, they consider the needs and what they like and explore ways of building it so that it is a strong and stable structure and doesn't break.</p>

	linkages and experiment with various materials to bring their monsters to life.	design of their choice which will include a healthy mix of protein, vegetables and dairy.	
	Vocabulary Design criteria, Evaluation, Input, Linkage, Mechanical, mechanism, Output, Pivot, Survey.	Vocabulary Alternative, Diet, Balanced diet, Evaluation, Expensive, Healthy, Ingredients, Nutrients, packaging, Refrigerator, Sugar.	Vocabulary Function, Man-made, Mould, natural, Stable, Stiff, Strong, Structure, Test, Weak.
	Drawing techniques – Annotated drawing Inventor/Designer – Madhur Jaffery (Indian chef): Her ideas came from her community and experiences.		
YEAR 3	Mechanical systems – A slingshot car Transform lollipop sticks, wheels, dowel and straws into a moving car. Pupils use a glue gun to construct, make the launch mechanism, design and create the chassis of a vehicle using nets.	Digital World – Electronic charm Design, code, make and promote a Micro:bit electronic charm to use in low-light conditions, developing their understanding of programming to monitor and control products to solve a design scenario.	Structures – Pavilions Exploring pavilion structures, learning about what they are used for and investigate how to create strong and stable structures before designing and creating their own pavilions, complete with cladding
	Vocabulary Aesthetic, Air resistance, Chassis, Design, Design criteria, Function, Graphics, Kinetic, energy, Mechanism, Net, Structure.	Vocabulary Control, Electronic, Function, Initiate, programming loop, Monitor, program, Sensor, Simulator, User.	Vocabulary Aesthetic, Cladding, Design criteria, Evaluation, frame structure, Function, Inspiration, pavilion, Reinforce, Stable, Structure, target audience, Target customer, texture, theme.
	Drawing techniques – Annotated drawing, Exploded diagram Inventor/Designer – Garrett Morgan: inventor of the gas mask		
YEAR 4	Food – Eating seasonally Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They look at the relationship between the colour of fruits and vegetables and their health benefits by making three dishes.	Electrical systems – Torches Pupils apply their scientific understanding of electrical circuits to create a torch made from recycled and reclaimed materials and objects. They design and evaluate their product against set design criteria.	Textiles – Fastenings Building upon their sewing skills from previous years, pupils design and create a book sleeve; exploring a variety of fastenings and selecting the most appropriate for their design based on strength and appropriate-use.
	Vocabulary Climate, Dry climate, Exported, Imported, Mediterranean climate, Nationality, Nutrients, Polar climate, Recipe, Seasons, Seasonal food, Temperate climate, Tropical climate.	Vocabulary Battery, Bulb, Buzzer, Cell, Conductor, Copper, Design criteria, Electrical item, Electricity, Electronic item, Insulator, Series circuit, Switch, test, Torch, Wire.	Vocabulary Aesthetic, Assemble, Book sleeve, Design criteria, Evaluation, Fabric, Fastening, Prototype, Net, Running – stitch, Stencil, Target audience, Target customer, template.
	Drawing techniques – Annotated drawing, exploded diagram, cross section drawing Inventor/Designer – Stephanie Kwolek: Chemist who invented kevlar		
YEAR 5	Food – What could be healthier?	Mechanical systems – Pop-up book	Structures – Bridges

	<p>Research and modify a traditional bolognese sauce recipe to make it healthier. Cook improved versions, creating appropriate packaging and learn about where the ingredients the importance of animal welfare when farming cattle.</p>	<p>Create a four-page pop-up story book design, incorporating a range of functional mechanisms that use levers, sliders, layers and spacers to give the illusion of movement through interaction.</p>	<p>After learning about various types of bridges and exploring how the strength of structures can be affected by the shapes used, create their own bridge and test its durability - using woodworking tools and techniques.</p>
	<p>Vocabulary Beef, Cross-contamination, Farm, Method, Packaging, Research, Welfare.</p>	<p>Vocabulary Aesthetic, CAD, Caption, Design, Design brief, Design criteria, Exploded-diagram, Function, Input, Linkage, Mechanism, Motion, Output, Pivots, Prototype, Sliders, Structure, Template.</p>	<p>Vocabulary Accurate, Arch bridge, Beam bridge, Bench hook, Compression, Coping saw, File, Mark out, Reinforce, Sand paper, Set square or try square, Shape, Structure, Suspension bridge, Tenon saw, Tension, Truss bridge.</p>
	<p>Drawing techniques – Orthographic projection, exploded diagram, cross section drawing Inventor/Designer – James Dyson: designer of the Dyson vacuum cleaner</p>		
YEAR 6	<p>Electrical systems – Steady hand game Design and create a steady hand game, use nets to create the bases and apply knowledge of electrical circuits to build an operational circuit with a buzzer that completes the circuit when the handle makes contact with the wire.</p>	<p>Food – Come dine with me Research and prepare a three-course meal and taste-test and score their food. Research the journey of their main ingredient from ‘farm to fork’ or write a favourite recipe.</p>	<p>Textiles – waistcoat Select fabrics, use templates, pin, decorate and stitch materials together to create a waistcoat for a person or purpose of their choosing. Create or use a pattern template to fit a desired person or item (e.g. teddy bear).</p>
	<p>Vocabulary Backboard, Battery, Bulb, Buzzer, Circuit, Conductor, Copper, Function, Insulator, LED, Magnetic field, Net, Pliers, prototype, Series circuit, Slide view drawing, Switch, Test, Top view drawing</p>	<p>Vocabulary Accompaniment, Cookbook, Cross-contamination, Equipment, Farm, Flavour, Imperative verb, Ingredients, Method, Nationality, Preparation, Processed, reared, Recipe, Target audience, Unit of measurement.</p>	<p>Vocabulary Adapt, Annotate, Detail, Fabric, Fastening, Knot, properties, Running-stitch, Seam, Sew, Shape, target audience, Target customer, Template, Thread, unique, Waistcoat, Waterproof.</p>
	<p>Drawing techniques – Annotated drawing, exploded diagram, cross section drawing, orthographic projection. Inventor/Designer – Gladys west: mathematician developed GPS</p>		