



St Mary's Catholic Primary School

Living and Learning Together – Shining in our Faith

DESIGN TECHNOLOGY– Essential Knowledge Cycle A

The substantive knowledge will be taught across all terms and topics and will include:

Design – discuss ideas and design purposeful, functional, appealing products.

Make -select tools, perform practical tasks and use a wide range of materials to make high quality prototypes.

Evaluate – explore and evaluate existing products and evaluate own work against design criteria.

Technical knowledge- build, explore and understand different systems and develop skills.

Cooking & Nutrition – understand the principles of healthy and varied diet and prepare and cook using different techniques.

	Autumn Term	Spring Term	Summer Term
EYFS / Year 1	STRUCTURES 3D models – Recycled materials *To collect and explore recycled materials and talk about how they can be stacked, rolled, joined, etc. *To discuss what kind of models the children would like to create ie animals, fish, buildings. *To create models using different techniques to cut, join, decorate. *To talk about models made and evaluate if they fit the design criteria, what could be improved or altered and what worked well.	TEXTILES Weaving *To explore different clothing, pictures that involve weaving and discuss what this means. *Explore weaving different materials of different thickness, material, etc and discuss which are hard or easy to weave and why. *Create simple weaving looms and weave chosen materials in different ways. *Use DT vocabulary to discuss own weaving and say what they like, what could be improved in both their own work and that of others.	MECHANISMS Cars & Vehicles *Investigate a variety of moving vehicles and how they move, their uses, types of wheels, etc. *Use some DT vocabulary when discussing vehicles. *Investigate wheels and axles and how they move, make simple versions of these. *design and create a body to fit on wheels and axles using own ideas. *Evaluate own and others work relating to the design criteria.
Vocabulary	Build, layer, join, attach, cut, recycled	Explore, design, create, evaluate, materials, weave	Wheels, axles, body, uses, movement, explore, design, create, evaluate.
Years 2 & 3	STRUCTURES Towers *To explore pictures of different structures and discuss how they are made, materials, shapes, etc. *Explore creating towers using different materials ie marshmallows and spaghetti / building toys / rolled up newspaper. *Create a design for a tower that is tall and strong.	TEXTILES Puppets *To explore different types of puppets and discuss how they are made, how they move, etc. *To create a design for a sock puppet of own choice. *To use different materials, joining techniques and decorations when creating own sock puppet.	MECHANISMS Moving Pictures *To explore picture books with moving mechanisms and discuss their purpose and how they are made. *Explore making small prototypes of different moving mechanisms ie pop ups, slides, levers.

	<ul style="list-style-type: none"> *Select materials and create tower from design. *Evaluate own and others work for strength, shape, usability, etc and discuss with others. 	<ul style="list-style-type: none"> *Explore different types of glove puppet and how created, decorated, etc. *Design own glove puppet using a blank template, use DT vocabulary to explain features. *Use different materials, sewing techniques and decorations to create own glove puppet. *Evaluate own and others work relating to the design criteria. 	<ul style="list-style-type: none"> *Design a page form a well-known story and a moving part to this. *Create a moving mechanism using one of the practised techniques to be part of the page. *Evaluate own and others work relating to the design criteria.
Vocabulary	Pattern. Shape, structure, joins, strength, design criteria, design, explore, evaluate.	Explore, create, join, decorate, materials, stitch, attach, evaluate	Mechanism, pop-up, slide, lever, materials, join, attach, cut, design, create, explore, evaluate.
Years 4, 5 & 6	<p style="text-align: center;">STRUCTURES</p> <p style="text-align: center;">Building Bridges</p> <ul style="list-style-type: none"> *To explore pictures of different bridges and discuss how they are made, materials, shapes, etc. *Explore creating bridges using different materials ie marshmallows and spaghetti / building toys / rolled up newspaper. *Create a design for a bridge that is tall and strong and can carry a specific weight. *Select materials and create bridge from design. *Evaluate own and others work for strength, shape, usability, etc and discuss with others. 	<p style="text-align: center;">TEXTILES</p> <p style="text-align: center;">Tote Bag</p> <ul style="list-style-type: none"> *To explore different types of bags and discuss how they are made, how they are decorated, their purpose, etc *To create a design for a bag of own choice. *To use different materials, joining techniques, sewing techniques and decorations when creating own bag. *Evaluate own and others work relating to the design criteria. 	<p style="text-align: center;">ELECTRICAL SYSTEMS</p> <p style="text-align: center;">Design a game</p> <ul style="list-style-type: none"> *To explore simple games that use electrical components in them. *Discuss these games using DT vocabulary to explain how they work and what their purpose is. *Work in small groups to design a simple educational toy / quiz game to be used with a younger class. *Groups to create their game using the electrical circuit equipment and other materials as needed. *Test the game on younger children and discuss its purpose and how it meets the criteria, evaluate.
Vocabulary	Pattern. Shape, structure, joins, strength, design criteria, design, explore, evaluate.	Explore, create, join, decorate, materials, stitch, attach, evaluate	Electrical components, circuits, switch, wires, crocodile clips, battery, bulb