



## St Mary's Catholic Primary School

*Living and Learning Together – Shining in our Faith*

### DESIGN TECHNOLOGY– School Curriculum Map Cycle B & C

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                                                                                                                                                                                                                                                                                                                                                        |
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| EYFS / Year 1 | <b>STRUCTURES</b><br><b>3D models – Building materials</b><br><br>*To collect and explore different materials and talk about how they can be stacked, rolled, joined, etc.<br>*To discuss what kind of models the children would like to create ie animals, fish, buildings.<br>*To create models using different techniques to stack, join, extend.<br>*To talk about models made and evaluate if they fit the design criteria, what could be improved or altered and what worked well. | <b>MECHANISMS</b><br><b>Pop Ups</b><br><br>*To explore different moving parts in cards and books.<br>*Explore ways to make things move upwards and how easy they are to create.<br>*Create simple pop ups using different materials and tools to cut, join, decorate, etc.<br>*Use DT vocabulary to discuss own mechanisms and say what they like, what could be improved in both their own work and that of others. | <b>COOKING &amp; NUTRITION</b><br><b>Where does food come from?</b><br><b>How does food taste?</b><br><br>*Investigate the labels on foods for their country of origin and locate on a world map.<br>*Investigate how different foods taste – be able to describe tastes and say foods they like or dislike.<br>*Record some of their ideas in words and pictures. |

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|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vocabulary                | Build, layer, join, attach, stack, roll                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Explore, design, create, evaluate, materials, tools                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Origins, farms, tastes, preferences, likes, dislikes                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Years 2 &amp; 3</b>    | <p align="center"><b>ENGINEERING</b><br/><b>Paper Planes</b></p> <p>*To explore different paper plane structures and discuss how they are made, materials, shapes, etc.<br/>           *Explore creating own paper planes following instructions, using different materials and tools.<br/>           *Create a design for a paper plane using the ideas from known models.<br/>           *Select materials and create paper plane from design.<br/>           *Evaluate own and others work for strength, shape, usability, etc and discuss with others.</p>                                                                | <p align="center"><b>STRUCTURES</b><br/><b>Kites</b></p> <p>*To explore different types of kites and discuss how they are made, how they move, the main parts, etc.<br/>           *To practice making diamond kites and delta kites.<br/>           *To create a design for a diamond kite and a<br/>           *To use different materials, joining techniques, tools and decorations when creating own kites.<br/>           *Design own kite in a group, using a blank template, use DT vocabulary to explain features.<br/>           *Use different materials, cutting and joining techniques and decorations to create own kite.<br/>           *Evaluate own and others work relating to the design criteria.</p> | <p align="center"><b>COOKING &amp; NUTRITION</b><br/><b>Food Preparation</b><br/><b>Fruit Kebabs</b></p> <p>*To explore different fruits and look at how they can be cut and prepared for eating.<br/>           *Explore using tools for cutting and how they should be handled safely.<br/>           *Design a fruit kebab and create by cutting, preparing and assembling.<br/>           *Evaluate own and others kebabs relating colour, design, taste, etc.</p> |
| Vocabulary                | Pattern. Shape, structure, joins, strength, design criteria, design, explore, evaluate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Explore, create, join, decorate, materials, tools, attach, evaluate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Prepare, cut, design, create, explore, evaluate.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Years 4, 5 &amp; 6</b> | <p align="center"><b>MECHANISMS</b><br/><b>Levers and Pulleys</b></p> <p>*To explore different types of levers and pulleys and how they work in real life situations.<br/>           *Explore different levers and pulleys used in toys and books and compare to real life objects.<br/>           *Explore creating own levers using different materials<br/>           *Create a design for a card or picture using a lever or pulley design.<br/>           *Select materials and tools to create own design<br/>           *Evaluate own and others work for strength, shape, usability, etc and discuss with others.</p> | <p align="center"><b>STRUCTURES</b><br/><b>Build a Marble Maze</b></p> <p>*To explore different types of marble runs and mazes in order to design own using a variety of different materials.<br/>           *To create a design for a marble maze as a small group and collect materials, tools, etc that are needed.<br/>           *To use different materials, tools and joining techniques when creating marble maze.<br/>           *Evaluate own and others work relating to the design criteria.</p>                                                                                                                                                                                                              | <p align="center"><b>COOKING &amp; NUTRITION</b><br/><b>Fruit Smoothies</b></p> <p>*To explore different fruits and look at how they can be cut and prepared for eating.<br/>           *Explore using tools for cutting and how they should be handled safely.<br/>           *Design a fruit smoothie and create by cutting, preparing and assembling.<br/>           *Evaluate own and others smoothies relating colour, design, taste, etc.</p>                    |
| Vocabulary                | Pattern. Shape, structure, joins, strength, design criteria, design, explore, evaluate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Explore, create, join, decorate, materials, cut, attach, design, design criteria, evaluate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Prepare, cut, design, create, explore, evaluate                                                                                                                                                                                                                                                                                                                                                                                                                        |

| <b>Years 4, 5, 6</b><br><b>Cycle C</b> | <b>ELECTRICAL SYSTEMS</b><br><b>Floor Robots</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>TEXTILES</b><br><b>Felt Toy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>COOKING &amp; NUTRITION</b><br><b>Healthy Sandwiches</b>                                                                                                                                                                                                                                                                                                                                         |
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|                                        | <p>*To explore floor robots and how they can be made to stop / start and move in different directions.</p> <p>*Discuss these robots using DT vocabulary to explain how they work and what their purpose is.</p> <p>*Work in small groups to design a simple educational toy / quiz game to be used with a younger class that includes the use of the floor robot.</p> <p>*Groups to create their game using the equipment and other materials as needed.</p> <p>*Test the game on younger children and discuss its purpose and how it meets the criteria, evaluate.</p> | <p>*To explore different types of soft toys and discuss how they are made, how they move, the main parts, etc.</p> <p>*To practice making simple designs for a felt toy using paper templates.</p> <p>*To create a design for a soft toy with a paper template and a plan for each stage of the construction process.</p> <p>*To use different materials, joining and sewing techniques, tools and decorations when creating own toy, use DT vocabulary to explain features.</p> <p>*Evaluate own and others work relating to the design criteria.</p> | <p>*To explore different breads and look at how they look, feel and taste.</p> <p>*Explore using tools for cutting and how they should be handled safely.</p> <p>*Design a healthy sandwich with a bread, spread and set of healthy fillings.</p> <p>*Create the sandwich by cutting, preparing and assembling.</p> <p>*Evaluate own and others sandwiches relating colour, design, taste, etc.</p> |
| <b>Vocabulary</b>                      | <b>Explore, investigate, movements, design, try, create, evaluate.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Explore, practice, design, template, materials, tools, sewing, attach, join, stitch, decorate, evaluate.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Prepare, cut, design, create, explore, evaluate</b>                                                                                                                                                                                                                                                                                                                                              |