St Joseph's Catholic Primary School
Inspiring everyone to REACH through
Faith, Hope, Love

Design Technology progression of skills by Strand across all subjects

Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structures	Explore materials through construction, junk modelling and small-world building. Join materials using simple techniques. Select materials for a purpose.	**Freestanding Structures** Build stable structures Explore strengthening techniques Cut and join materials safely Evaluate effectiveness of designs	Apply previous joining and shaping skills within textiles projects.	**Shell Structures** Develop net concepts Strengthen structures Use appropriate joining methods Evaluate function and appearance.	Apply measuring and shaping skills when constructing textile products	**Frame Structures** Measure accurately Construct frameworks Reinforce structures using triangulation Modify and improve designs	Apply structural understanding within mechanical and electrical products. Evaluate complex designs against specific criteria.
Mechanisms & Mechanical Systems	Explore moving toys and objects. Observe how parts move.	**Sliders and Levers** Create simple mechanisms Understand movement through pivots Design moving pictures Test and improve mechanisms	**Wheels and Axles** Identify components Assemble wheel mechanisms Investigate movement and stability Evaluate products	**Levers and Linkages** Generate movement in products Use pivots and linkages effectively Refine mechanisms through testing	**Pneumatics** Understand air-powered systems Construct pneumatic systems Troubleshoot and improve performance	**CAMs** Understand rotary movement Design and construct CAM mechanisms Create purposeful movement	**Pulleys and Gears** Compare transmission systems Select appropriate mechanisms Build functioning products Evaluate efficiency and effectiveness
Electrical Systems	Explore technology and electrical items safely. Discuss what makes objects work.	Recognise products that use electricity.	Identify products that use electricity and understand basic safety.	Understand that products can be powered.	**Simple Circuits and Switches** Construct simple circuits Use switches effectively	Apply electrical understanding within design projects and CAD-supported products.	**Complex Circuits and Switches** Build and modify circuits

					Investigate inputs and outputs Evaluate design choices		Select components for purpose Solve technical problems Evaluate and improve final products
Textiles	Explore fabrics through play. Join materials using glue, weaving and simple threading. Develop fine motor control.	Use templates and simple joining methods. Begin to cut fabric accurately.	**Templates and Joining Techniques** Use templates accurately Join fabrics using a range of methods Select suitable materials Evaluate finished products	Apply textile understanding through design decisions in wider DT projects.	**2D Shape to 3D Product** Measure and mark accurately Stitch and assemble products Create functional textile items Evaluate outcomes	**Using CAD in Textiles** Design digitally Apply pattern-making skills Select appropriate materials Evaluate aesthetic and functional qualities	Select and combine textile techniques appropriately across design contexts.
Food & Nutrition	Prepare simple foods safely. Explore healthy food choices. Learn basic hygiene routines.	**Preparing Fruit and Vegetables** Identify healthy foods Use basic preparation techniques Follow hygiene procedures Evaluate products	**Preparing Fruit and Vegetables** Extend cutting and preparation skills Make informed food choices Follow recipes safely	**Healthy and Varied Diet** Understand food groups Prepare ingredients safely Design and make healthy products Evaluate outcomes	Apply healthy eating knowledge when considering users and purposes.	Consider nutritional needs when designing products for users.	**Celebrating Culture and Seasonality** Understand seasonality Prepare and cook savoury dishes safely Adapt recipes Evaluate products against design criteria

Progressive Design Skills Across all subjects

EYFS	KS1	Lower KS2	Upper KS2
Explore, investigate, build and talk about creations.	Design purposeful products for users. Generate simple ideas and communicate designs through drawings and templates.	Generate realistic ideas using annotated sketches. Select suitable materials and components.	Develop detailed design criteria. Communicate ideas through annotated drawings, prototypes and CAD.
Make and construct using a variety of materials.	Measure, mark, cut, shape and join materials with increasing accuracy.	Select tools appropriately and work safely with greater precision.	Use specialist tools, equipment and techniques accurately and independently.
Talk about what works well.	Evaluate existing products and their own work.	Test products and identify improvements.	Evaluate products against design criteria, user needs and technical knowledge.