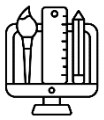
Design and Technology @ St Aloysius

Workshop

"Design and Technology should be the subject where mathematical brainboxes and science whizzkids turn their bright ideas into useful products." **James Dyson**

Phase		Curriculum Coverage – Threshold Concepts							
		Design		Make		Evaluate		Technical Knowledge	
Upper KS2	Y6 Felt Phone Cases		• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design		• select from and use a wider range of tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing, accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities		• investigate and analyse a range of existing products ☐ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world		• apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors • apply their understanding of computing to program, monitor and control their products.
	Y5 Fair Ground Rides								
Lower KS2	Y4 Creative Shoes								
	Y3 Branding & Packaging								
KS1	Y2 Patchwork		• design purposeful, functional, appealing products for themselves and other users based on design criteria *(a moving picture)* • generate, develop, model and communicate their ideas through talking, drawing, templates and mock-ups		• select from and use a range of tools and equipment to perform practical tasks for example, cutting, shaping, joining and finishing • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics		• explore and evaluate a range of existing products • evaluate their ideas and products against design criteria		• build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms for example, levers, sliders, wheels and axles, in their products.
	Y1 Moving Pictures								
EYFS	Reception Junk Modelling		• Begin to show accuracy and care when drawing		• Use a range of small tools including scissors & paintbrushes • Explore and play with a wide range of media and materials • Safely use and explore a variety of materials, tools and techniques experimenting with colour, design, texture and form		• Share their creations, explaining the process they have used		• Have a deep understanding of number to 10 • Compare quantities • Develop spatial reasoning skills including shape, space and measures
	Nursery Junk Modelling								

Intent



Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. At St Aloysius, our children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Implementation



The threshold concepts across the Design and Technology curriculum are taught sequentially over time to develop technical knowledge, skills and understanding from EYFS to Y6 and beyond. The curriculum aims to ensure that all children:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world

- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users

- Critique, evaluate and test their ideas and products and the work of others

Impact

The Design and Technology curriculum at St Aloysius Catholic Infant and Junior Schools allows all children:

- To develop their God given talents and gain the technical knowledge and skills needed to become confident individuals

- To understand and evaluate technical information.

- To make informed decisions that impact on their own lives and the lives of those around them.

- To develop an increasing awareness of the moral and ethical dilemmas technical discovery can bring.

- To become active citizens of the world.

- To receive regular oral and written feedback so children are aware of their position on the learning journey, their strengths and targets, which they consider when taking their next steps.