St Anne's Catholic Primary School

'Loving God in all we do'

St Anne's curriculum aims to inspire pupils to learn.
The school's carefully sequenced curriculum provides the opportunities for children to develop their knowledge, understanding and skills in all aspects of their education

Early Years Foundation Stage Curriculum Understanding of the World - Computing	
Understanding the World EYFS Statutory Educational Programme Understanding the world involves guiding children to make sense of their physical world and their community. ***Through the children's learning opportunities*** they will foster their understanding of our ***technologically*** diverse world.	
3 and 4-year-olds:	<u>Understanding the World</u> • Explore how things work. • Begin to understand the need to respect and care for the natural environment and all living things (using online resources) • Know that there are different countries in the world and talk about the differences they have experienced or seen in photos. • Describe a familiar route – Numerical Patterns • Discuss routes and locations, using words like 'in front of' and 'behind' – Numerical Patterns <u>Personal, Social and Emotional Development</u> • Remember rules without needing an adult to remind them.
Reception:	<u>Understanding the World</u> • Comment on images of familiar situations in the past (using online resources) • Draw information from a simple map. (retrieve digital content) • Recognise some similarities and differences between life in this country and life in other countries (use images and video clips to bring the wider world into the classroom) • Recognise some environments that are different from the one in which they live (use images and video clips to bring the wider world into the classroom) • Understand the effect of changing seasons on the natural world around them *with the use of technology to support learning.* <u>Personal, Social and Emotional Development</u> • Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: - sensible amounts of 'screen time'.

	Expressive Arts and Design
	• Explore, use and refine a variety of artistic effects to express their ideas and feelings.
End of Reception Early Learning Goals	ELG – Understanding the world • Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. • Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps • Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and, when appropriate, maps. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class ELG - Personal, Social and Emotional Development – Managing self • Explain the reasons for rules, know right from wrong and try to behave accordingly. ELG - Expressive Arts and Design – Creating with materials • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

National Curriculum Key Stage 1 and 2
Computing

The National Curriculum for Computing

The National Curriculum aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing
- computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Aims	Digital Literacy	Information Technology	Computer Science
Year 1	• Recognise common uses of information technology beyond school. • Understand the rules and responsibilities outlined by the school's acceptable use policy and begin to understand where to go for help when they have concerns.	• Use technology with support, to create, store and retrieve digital content such as text and images. • Use a simple search to find information or files. • Develop understanding of how simulations work through exploring simple examples.	• Understand what algorithms are and develop strategies to help find bugs in them. • Make very simple programs.

	• Develop an understanding of how to keep their personal information private and understand they need to use technology safely and respectfully.		
Year 2	• Know their responsibilities from their school's acceptable use policy and how to report any concerns they have. • Recognise situations using technology and the internet involving content and contact that are not safe and know where to go for help. • Begin to develop an understanding of the importance of computers and the internet to communicate. • Develop their knowledge of the technology used in everyday life in a range of situations and be able to discuss their ideas.	• Use technology with purpose to create, store, organise, retrieve and manipulate digital content. • Learn to make a range of simple digital assets such as presentations, movies, audio files and graphs. • Navigate the web and carry out simple searches using suitable search engines and begin to understand that not everything on the internet is true. • Use simple simulations and understand how they work.	• Use algorithms and know that they can be implemented as programs on devices. • Know what debugging is and find errors in their programs. • Understand that programs execute by following a precise set of instructions. • Create simple programs and further develop their strategies and logical thinking to find bugs and predict outcomes in their algorithms and programs.
Year 3	• Use technology safely and respectfully and have an understanding of how to keep information secure. • Realise the importance of reporting any concerns they have using the internet and other communication technologies, and know some ways in which they can do it. • Develop an understanding of what is acceptable and unacceptable online behaviour. • Realise that not all information on the internet is trustworthy and	• Use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose. • Develop their search strategies further by refining their use of keywords and starting to use appropriate key phrases and questions. • Use more complex simulations and understand the effects of changing variables.	• Plan and write algorithms and programs using sequence and repetition and further develop their computational thinking strategies to solve problems and errors in their algorithms and programs. • Have knowledge and experience of using a range of different inputs and outputs. • Describe some of components of a computer network and some of the ways in which computer networks can be used.

	there is a need to verify its reliability.		
Year 4	• Use technology respectfully, responsibly and safely, knowing how to keep their information and passwords secure. • Know different ways of reporting concerns about content and contact involving the internet and other communication technologies. • Have a greater understanding of what is acceptable and unacceptable online behaviour. • Start to develop strategies to verify the reliability and accuracy of information on the internet and develop an awareness of copyright.	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content. • Understand how Boolean operators can change searches and select appropriate information for their tasks. • Use models and simulations to produce graphs and explore patterns and relationships.	• Design and write more complex algorithms and programs using sequence, repetition and selection. • Further develop their computational thinking to help debug their programs and design and solve problems and tasks. • Have a simple understanding of how search engines work. • Develop their understanding of inputs and outputs further, demonstrating how they can use programs to control external devices such as sensors, motors and robots. • Understand the difference between the internet and World Wide Web.
Year 5	• Use technology respectfully, responsibly and safely, knowing how to keep their information and passwords secure. • Know different ways of reporting concerns about content and contact involving the internet and other communication technologies. • Have a greater understanding of what is acceptable and unacceptable online behaviour. • Start to develop strategies to verify the reliability and accuracy of information on the internet and develop an awareness of copyright.	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content. • Understand how Boolean operators can change searches and select appropriate information for their tasks. • Use models and simulations to produce graphs and explore patterns and relationships.	• Design and write more complex algorithms and programs using sequence, repetition and selection. • Further develop their computational thinking to help debug their programs and design and solve problems and tasks. • Have a simple understanding of how search engines work. • Develop their understanding of inputs and outputs further, demonstrating how they can use programs to control external devices such as sensors, motors and robots.

			• Understand the difference between the internet and World Wide Web.
Year 6	• Be competent users of technology using it safely, respectfully and responsibly and know about digital footprints and 'strong' passwords. • Demonstrate that they can identify the risks involved with content and contact and they know a wide range of ways of reporting any concerns they have. • Understand what acceptable and unacceptable online behaviour is. • Use strategies to verify and evaluate the reliability and accuracy of information on the internet and understand what copyright and plagiarism is and how it relates to their work.	• Independently select, use and combine a wide range of software on a variety of devices. • Design and create a range of digital assets such as programs, systems and multimedia content for a defined purpose and audience. • Use advanced searches including the use of operators. • Create spreadsheet models to investigate real life problems, using their knowledge to make predictions.	• Know how search engines work and what 'ranking' is when related to search engines. • Design and create more complex programs using sequence, repetition, selection and variables appropriately. • Develop their computational thinking can demonstrate that they can decompose and evaluate their tasks and correct errors in their algorithms and programs. • Be confident in their knowledge of inputs and outputs and plan and write programs to solve tasks to control external devices such as sensors and motors. • Know how different computer networks work, including the roles of the components and the opportunities and benefits that they offer for communication and collaboration. • Understand the difference between the internet and internet services.