St Mary's Catholic Primary School Computing Curriculum

	Autumn 1 E-Safety	Autumn 2 Programming	Spring 1 Multimedia	Spring 2 Handling Data	Summer 1 Technology in our lives	Summer 2 Consolidation /Transition
EYFS	E-safety: Using the internet safely. (What you see)	Exploring technological toys such as Beebots.	Using a computer/device for a given purpose. IWB	Knows how to operate simple equipment, e.g. turns on CD player and uses remote control.	Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobiles.	
Year 1	E-safety: Using the internet safely	Coding with Beebots/Beebot App Create a series of instructions/Plan a journey for a programmable toy. **Programming A**	Word processing Typing/Symbols and save/Editing **Digital Writing**	Use a website/Create, store and retrieve digital content. **Data Information (link to Maths, no computer)**	Use a camera/Record sound and playback. **Digital Painting**	Use taught skills within other subjects, e.g. publish a piece of work for History.
Year 2	E-safety: Staying safe on the internet	Coding: Scratch Jnr - introduction and fundamentals Write a simple program and test it. Use a range of	Word processing Undo/redo/Select and format/formatting text	Understand digital content. **Pictograms – Linked to Maths**	Navigate the web to complete simple searches/Retrieve and manipulate digital content. **IT Around Us**	Use taught skills within other subjects, e.g.

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		instructions e.g. directions. Test and amend a set of instructions. Find errors and amend (debug) **Programming B**				
Year 3	E-safety: Google (Internet Legends) Share with care	Coding: Animations – Scratch Jr Design a sequence of instructions, including directional instructions. Write programs that accomplish specific goals. **Scratch – Programming A**	Word processing Change case/Align text/bullets and numbering Advanced select and keyboard shortcuts/Using text boxes and text wrap	Design and create content/Present information. Manipulate and improve digital images/Use a range of software for similar purpose. **Desktop Publishing**	Search for information on the web in different ways/Collect information. **Connecting Computers**	Use taught skills within other subjects, e.g.
Year 4	E-safety: Google (Internet Legends) Don't fall for fake	Coding: Interactive – Give an on-screen robot specific instructions that takes them from A to B. Experiment with variables to control models. De-bug a program. **Programming B**	Word processing Formatting images/create a layout/spellcheck	Select and use software to accomplish given goals. **Photo Editing (Chromebook App – Google Photos)**	Collect and present data. **Computing systems and networks – The internet**	Use taught skills within other subjects, e.g.
Year 5	E-safety: Google (Internet Legends) Secure your secrets	Coding: Scratch – Use technology to control an external device. Combine sequences of instructions and procedures to turn devices on and off.	Word processing Insert a table/change the layout/create hyperlinks	Analyse and evaluate information. **Flat File Databases**	Understand how search results are selected and ranked **Vector Drawing (Scratch or Word)** **Video Editing** **Google Drawings**	Use taught skills within other subjects, e.g.

		Programming A (with kit) **Programming B (no kit)**				
Year 6	E-safety: Google (Internet Legends) It's cool to be kind	Coding: Scratch – Use technology to control an external device. **Variables in games - Scratch**	Word processing Select, use and combine software on a range of digital devices	Use a range of technology for a specific project **3D Modelling TinkerCad**	SATS **Computing systems and networks - Communication**	Start/continue work on google drive/google classroom ready for secondary

Purpose of study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing 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

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Schools are not required by law to teach the example content in [square brackets].

Subject content

Key stage 1

Pupils should be taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.