



St Anthony's Catholic Primary School

Computing Curriculum

Year 4

Subject Cultural Capital = Using & Applying computing knowledge to solve problems
Differentiation = please see the differentiation for the EXC EM & SEND (Please see SEND pupils IEPs when planning)
Minimum expectations to check for understanding during lessons = targeted questioning / mini whiteboards/ peer talk /thumb signs
Long term memory skill development strategy = LAST, LAST, LAST linked to the WALT
Literacy & Numeracy skills development = ICT vocabulary bank linked to the WALT & include numeracy skills where they are linked to the WALT in the weekly planning

Unit	Expectations WALTS	National Curriculum Programme of Study	Software	Hardware	Vocabulary
4.1 We are software developers Developing a simple educational game	Pupils learn to: <ul style="list-style-type: none"> Develop an educational computer game using selection and repetition. Understand and use variables. Start to debug computer programs. Recognise the importance of user interface design, including consideration of input and output. 	Design, write and debug programs that accomplish specific goals. 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.	Scratch Google Suite for Education	All PC's with internet access	algorithm bug debug input output program repeat loop repetition Scratch Sequence Sprite variable

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4.2 We are Makers Coding for micro:bit	Pupils learn: <ul style="list-style-type: none"> About the input – process – output model of computation About the inputs and outputs available on a BBC micro:bit To program using the MakeCode block-based environment To test and debug programs they write, using an on screen simulator and the micro:bit How to convert and transfer a program written on screen to micro:bit 	Design, write and debug programs that accomplish specific goals Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work	Microsoft MakeCode	Computers BBC micro:bits	accelerometer algorithm Bluetooth If/else if/else JavaScript LED MakeCode Micro:bit Object code Runtime Simulator Source code variable
4.3 We are musicians Producing digital music	Pupils learn to: <ul style="list-style-type: none"> Create a repeating percussion instrument Play music using virtual instruments Compose or edit tunes using the piano roll (pitch and duration) tool Perform electronic music using pre-recorded loops and create their own loops Create a multi-track composition or performance using multiple instruments 	Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. 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. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour.	Garageband	Ipads Headphones Musical instruments	Beat sequencer Live loops MIDI Piano roll Sample Stave Touch instrument Tracks Velocity voice

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4.4 We are bloggers Sharing experiences and opinions	Pupils learn to: <ul style="list-style-type: none"> • Become familiar with blogs as a medium and a genre of writing • Create a sequence of blog posts on a theme • Incorporate additional media • Comment on the posts of others • Develop a critical, reflective view of a range of media, including text 	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 technology safely, respectfully and responsibly; know a range of ways to report concerns and unacceptable behaviour. Use a variety of software (including internet services) on a range of digital devices to design and create a range of content that accomplish given goals.	Blogging tool such as WordPress or Blogger Audacity Camera app	Laptops/desktops Digital cameras Audio recorders or tablets	Creative commons hyperlink Hypertext mark-up language (HTML) Internet Uniform resource locator (URL) Web server
4.5 We are artists Fusing geometry and art	Pupils learn to: <ul style="list-style-type: none"> • Develop an appreciation of the links between geometry and art • Become familiar with the tools and techniques of a vector graphics package • Develop an understanding of turtle graphics • Experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it and receive feedback from their peers. 	Use sequence, selection and repetition in programs; work with variables and various forms of output Select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of content that accomplish given goals.	Inkscape Scratch	Laptops/desktops Chromebooks	Abstraction Bitmap Fractal Pixel Repetition Sprite Tessellation Transform Turtle Vector graphics

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<p>4.6 We are meteorologists Presenting the weather</p>	<p>Pupils learn to:</p> <ul style="list-style-type: none"> • Understand different measurement techniques for weather, both analogue and digital. • Use computer-based data logging to automate the recording of some weather data • Use spreadsheets to create charts • Analyse data, explore inconsistencies in data and make predictions • Practise using presentation and video software 	<p>Work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work. 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.</p>	<p>Google sheets Google slides</p>	<p>Laptops/desktops Chromebooks Mart home weather station</p>	<p>Analogue Data Dataset Digital field filter (database) form input interface record sensor table</p>