St Anthony's Catholic Primary School

Computing Curriculum

Year 6

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
6.1 **We are toy makers** Coding and physical computing	Pupils learn: • How computers use stored programs to connect input and output • How to generate and evaluate designs in response to a brief • To plan a complex project by decomposing it into smaller parts • To work with physical components of a system • How to design and write a program for an embedded system • To use criteria to provide others with feedback	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. 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.	MakeCode Scratch	Laptops/desktops Chrome books tablets	Accelerometer Bluetooth Controller System Decomposition Edge Connector Embedded system Input output Interactive Light-emitting diode (LED) Simulator MakeCode Micro:bit Microprocessor

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6.2 **We are computational thinkers** Mastering algorithms for searching, sorting and mathematics	Pupils learn to: • Develop the ability to reason logically about algorithms. • Understand how some key algorithms can be expressed as programs. • Understand that some algorithms are more efficient than others for the same problem. • Understand common algorithms for sorting and searching. Appreciate algorithmic approaches to problems in mathematics.	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.	Google maps Scratch	Laptops/desktops Chrome books tablets	Abstraction Algorithm Binary search Decomposition Divide and conquer Graph Greedy algorithm linear search quicksort search search algorithm selection sort sort
6.3 **We are Publishers** Creating a yearbook or magazine	Pupils learn to: • Manage or contribute to large collaborative projects, facilitated using online tools • Write and review content • Source digital media while demonstrating safe, respectful and responsible use • Design and produce a high quality print document	Understand computer networks including the Internet 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.	Google Docs Publisher	Laptops/desktops Chrome books Tablets Digital cameras	Creative Commons Desktop publishing (DTP) eBook ePub folder Image Portable document format (PDF) Text

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6.4 **We are connected** Developing skills for social media	Pupils learn: • About appropriate rules or guidelines for a civil online discussion • How search results are selected and ranked • How to argue their point effectively, supporting their views with sources • How to counter someone else's argument while showing respect and tolerance • How to judge the reliability of an online source • Some strategies for dealing with online bullying	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. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	School blogging platform (WordPress)	Laptops/desktops Chrome books Tablets	Anchor Tag bias Blog Fake news Hyperlink Neutral point of view Online bullying (cyberbullying) Plausible Reliable Social media Source
6.5 **We are advertisers** Creating a short televised advert	Pupils learn to: • Think critically about how video is used to promote a cause • Storyboard an effective advert for a cause • Work collaboratively to shoot original footage and source additional content • Acknowledge intellectual property rights • Work collaboratively to edit the assembled content to make an effective advert	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.	iMovie	Laptops/desktops Chrome books Tablets	Creative commons Export Final cut Rough cut Rushes storyboard

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6.6 **We are AI developers** Learning about artificial intelligence and machine learning	Pupils learn: • How decision trees can be trained automatically to classify data • How speech recognition works • How a neural net recognises images • To train a neural net to classify images • To train a machine learning system to identify sentiments • To consider some ethical principles in designing AI systems	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use and combine a variety of software 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.	Scratch Google chrome	Laptops/desktops Chrome books Tablets	Artificial intelligence Classifier Decision tree image recognition label layer machine learning model natural language processing