Year 4 – Computing Overview

Information Technology

NC Objectives	Computing strand	Skills/Knowledge	Apps/Software	Subject/Lessons
Select, use and combine a variety of software (including internet services) on a range of digital devices Design and create a range of programs, systems and content that accomplish given goals including collecting, analysing, evaluating and presenting data and information	Word processing / typing	• Combine digital images from different sources, objects and text to make a final piece of work (e.g. posters, scripts, information texts, powerpoint) • Confidently and regularly use shortcuts such as cut, copy and paste • Use font sizes appropriately • Use spell check and the thesaurus	Pic collage Seesaw Google Docs Book creator Popplet	Literacy History Geography
	Data handling	• Create online multiple choice questionnaire • Input data into a spreadsheet and create a graph/chart • Understand how data is collected	Seesaw Graphs Numbers Google docs Kahoot	Science Maths
	Presentations, web design and eBook creation	• Create an ebook with text, images and sound • Create a presentation demonstrating of a range of media like photos, videos or voice • Create a digital timeline/mindmap	Seesaw Adobe Spark page Keynote Powerpoint	Literacy
	Animation	• Take multiple animations of a character and edit them together • Use software to create a 3D animated story • Use line draw tool to create animations	Puppetpals Chatterkid Seesaw Puppetmaster	Literacy
	Video Creation	• Add music and sound effects to films • Add animated titles and transitions • Add simple subtitles to a video clip • Confidently use green screen adding animated backgrounds	puppet Edu Doink Adobe Spark video	PSHE Literacy
	Photography and digital art	• Enhance digital images and photographs using crop, brightness, contrast • Manipulate shapes to create digital art • Draw a series of images	iPad camera Mark up Pic collage Sketches pro	Art
	Augmented reality and virtual reality	• Create own 360 video • Use the camera to create a 360 image • Add multiple objects into surrounds through AR to explain a concept	AR makr Figment AR Google expeditions	Geography
	Sound	• Edit sound effects for a purpose • Create a simple four-chord song following the correct rhythm • Record a radio broadcast or audiobook	Seesaw Keezy Voice Memos Garageband	Literacy Music

Year 4 – Computing Overview

Computer Science

NC Objectives	Computing strand	Skills/Knowledge	Apps/Software	Subject/Lessons
Design, write and debug programs that accomplish specific goals including controlling or simulating physical systems Solve problems by decomposing them into smaller parts 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 Understand computer networks including the internet; how they can provide multiple services such as the WWW and the opportunities they offer for communication Use search technologies effectively and appreciate how results are selected and ranked	Computational thinking	• Use abstraction to focus on what's important in my design • Write increasingly more precise algorithms for use when programming • Use simple selection in algorithms • Use logical reasoning to detect and correct errors in programs	Code Studio Alex	Computing unplugged week Literacy
	Coding and programming	• Use simple selection in programs • Work with various forms of output • Use logical reasoning to systematically detect and correct errors in programs • Work with various forms of output	Code Studio Alex	Computing
	Computer networks	• Understand that servers on the internet are located across the planet • Understand how email is sent across the internet • Understand how the internet enables us to collaborate		Computing unplugged

Year 4 – Computing Overview

Digital literacy

NC Objectives	Computing strand	Skills/Knowledge	Apps/Software	Subject/Lessons
Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact 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	Self-image and identity	• Explain how my online identity can be different to the identity I present in 'real life' • Describe the right decisions about how I interact with others and how others perceive me	Puppet Edu Chatterkid iPad Video Snapseed	PSHE 'Being Me' PSHE 'Relationships' Safer Internet Day
	Online relationships	• Describe strategies for safe and fun experiences in a range of online social environments • Understand how to be respectful to others online	Puppet Edu iPad Video Chatterkid Social Media (Snapchat, Facebook, Tik Tok) Messaging/Video Chat	PSHE 'Relationships' Safer Internet Day Anti-Bullying Week
	Online reputation	• Describe how others can find out information about me by looking online • Explain ways that some of the information about me online could have been created, copied or shared by others	Social Media School Website (class pages) School Twitter iPads	Safer Internet Day Mental Health Week
	Online bullying	• Identify some online technologies where bullying might take place • Describe ways people can be bullied through a range of media (e.g. image, video, text, chat) • Explain why the content I post might affect others, their feelings and how it may affect how others feel about them (their reputation)	Voice Memos Puppet Edu Video Recording Chatterkid iPad Camera/Video	PSHE 'Relationships' PSHE 'Celebrating Differences' Anti-Bullying Week
	Managing online information	• Analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. Understand what criteria have to be met before something is a 'fact' • Search for information within a wide group of technologies (e.g. social media, image sites, video sites) • Describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online	Search Engines Google Maps YouTube iPads Computer Voice activated Searching (Siri, Alexa)	**All subjects** Safer Internet Week Literacy

Year 4 – Computing Overview

		• Explain that some people online (e.g. through social media) may be computer programmes pretending to be real people • Explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true	Social Media	
	Health, well-being and lifestyle	• Explain how using technology can distract me from other things I might do or should be doing • Identify times or situations when I might need to limit the amount of time I use technology and strategies to help me limit this time	YouTube Stop Watch Alarm	Safer Internet Day P.E. Timetable
	Privacy and security	• Explain what a strong password is • Describe strategies for keeping my personal information private, depending on context • Explain that others online can pretend to be me or other people, including my friends and suggest reasons why they might do this • Explain how internet use can be monitored	iPad Games Social Media Snapseed Purple Mash	Safer Internet Day
	Copyright and ownership	• When searching on the internet for content to use, explain why I to consider who owns it and whether I have the right to reuse it	Search Engines	**All Subjects**