Computing Progression of skills Wootton St Peter's

"The People That Have Really Made The Contributions Have Been The Thinkers And The Doers." Steve Jobs

National Curriculum Overview	
Key Stage 1	Key Stage 2
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.	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.

Multimedia and Word Processing			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
• I am beginning to use the mouse and keyboard. • I use ICT hardware to interact with age appropriate computer software.	• I can word process a range of short texts • I can use editing skills to improve my work • I select different presentational features • I can save, print and retrieve my work • I can use the mouse, arrow keys or touchscreen to insert text • I can use graphics, video and sound to enhance my work • I can talk about how my use of graphics, sound and video enhance the mood • I can use different layouts and templates for different purposes	• I can evaluate a range of electronic multimedia • I can plan the structure and layout of a document/presentation • I can select and import graphics from digital media and the Internet • I can select and import sounds and video/ visual effects • I choose freely from a range of text styles • I use more than two fingers to enter text	• I can plan the structure of a presentation • I can use a multimedia program to organise, refine and present information for a specific audience • I can use a hyperlinks in my work • I can format text to indicate relative importance. I can justify text where appropriate. • I can cut and paste between applications. • I can delete/insert and replace text to improve clarity and mood. • I can make corrections using spell check • I can use both hands when typing

Digital Media			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
• I can begin to make simple marks on a computer drawing program. • I select and use technology for a particular purpose.	• I can use ICT to source, generate and amend ideas for their art work • I can talk about the advantages and disadvantages of using a graphics package over paper based art activities • I can use a variety of skills using a range of tools and techniques to communicate a specific idea or artistic style /effect • I can choose an art programme or APP for a purpose and explain my choice • I can manipulate digital stills or video • I can select and edit and change images • Begin to change or enhance photographs and pictures (crop, re-colour) • I can use a sequence of still images which together form a short animated sequence • I can create a simple animation to illustrate a story or idea I can upload images to a	• I can import photos and explore effects • I can use visual effects such as filters, hues and painting over photographs. • I can create patterns and montages • I can plan and create audio for a podcast	• I can use different filming techniques and camera angles • I can plan a video or animation by drawing a storyboard • I can use sound effects, music and voice-overs to create mood/ atmosphere • I can select and edit sounds, text and movie clips to suit a purpose • I can evaluate and improve work with a view to purpose and audience • I can record and import sounds using sound editing software • I use sounds from a variety of sources • I can layer and edit sounds • I can save work as a web compatible format for uploading

	safe website, blog, iCloud or server		

Programming			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
• I can complete a simple program on a computer.	• I can talk about how everyday devices can be controlled • I can control actions on screen by sequences of instructions • I can create a sequence of instructions to control a programmable robot to include direction, distance and turn • I can use a range of control devices and programmes/APPs • I can control music software through sequencing icons • I can talk about how to improve/change their sequence of commands	• I can navigate a programming APP • I can create a sprite for a game. • I can add inputs to control my sprite. • I can use conditional statements (if… then) within my game. • I can create a 3D digital world for a game with land, water and scenery. • I can program my sprite to navigate my 3D world I can use conditional statements ('if…then') to give objects behaviours	• I can create a basic HTML page with head and body sections. • I can create more complex games • I can create a user controlled sprite and sprites with different behaviours. • I can shift camera angles in settings and in the code

Communication and Collaboration			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
• I recognise that a range is technology is used in places such as homes and schools.	• I can contrast the different ways that messages can be sent • I can contribute/respond to emails, forums and blogs • I can talk about benefits of using online communications with a wider audience • I can look and talk about other people's contributions on the learning platform • I consider who can see their contributions on the learning platform	• I can select my best work to organise and save • I can use different online communication methods to share my work • I can discuss advantages and disadvantages of different communication methods • I can use different levels of formality when I communicate with different people online	• I can register a blog: selecting a url and navigate to my blog once it is created • I can create and publish a new post • I understand that websites such as Wikipedia are made by users • I use strategies to check the reliability of information and websites • I can save/upload/download files in iCloud and on servers

Data			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
	• I can present data in range of ways • I can use a graphing package to record information, adding labels • and numbers • I can use ICT to edit and change the information quickly. • I can talk about how ICT helps them to organise their information	• I can enter data into a graphing package to create a range of graphs, and to interpret data across all subjects • I can compare how different graphs can be used for different purposes • I can create and use a branching database to organise and analyse information	• I can change variables in a spreadsheet to solve problems • I can enter formulae for the four • operations (+-x/) into a spreadsheet • I can use 'SUM' to calculate the total of a set of numbers in a range • of cells

		• compare the use of graphing software, branching database and card-based database for organising and interpreting data • I can explore real-life examples of branching databases, such as keys for animal identification	• I can change data in a spreadsheet • to answer 'what if...?' questions • I can create a simple spreadsheet model and use it to solve problems • I can plan and carry out an investigation using data logging • technology • I make predictions for my • investigation and know how to • make it a fair test • I can interpret results and draw • conclusions from my investigation

E-Safety			
Nursery and Reception	Years 1 and 2	Years 3 and 4	Years 5 and 6
• I demonstrate the school's e- safety rules in all aspects of my ICT work	• I demonstrate the school's e- safety rules in all aspects of my ICT work	• I demonstrate the school's e- safety rules in all aspects of my ICT work	• I demonstrate the school's e- safety rules in all aspects of my ICT work