The Berrywood Way
Computing
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.

EYFS
ELG: Past and Present
- Talk about the lives of the people around them and their roles in society
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.

ELG People, Culture and Communities
- Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps

Key Stage 1	Key Stage 2
• 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.	• 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.

Vocabulary			Vocabulary			
<u>Year R</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Choices Internet Buttons Screen Keyboard On Off Safety	Instructions Buttons Robots Patterns Photographs Videos Sounds Rules Private information Choices	Forward Backward Right turn Left turn Algorithm Sequence Debug Enter/return Caps lock Back space Cyber bullying Keyword searching	Alignment Sequence Instructions Sequence debugging Test and improve Copy Paste Devices Collaborate Search tools Appropriate websites E-safety rules Secure passwords	E-safety rules Secure passwords Reporting abuse buttons Creating and modifying Debugging Reliabilty of sources Keyboard short cuts Appropriate online communication	Responsible online communication Informed choices Variables Multimedia effects Hyperlinks Collaboration Responsibility Decompose	Responsible online communication Informed choices Messaging Predicting outputs Plan, program, test and review Create variables Logical reasoning Complex algorithms

Digital Literacy - E-Safety						
Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Keeping themselves safe	Keeping safe in the digital world Making choices Stranger danger	Identify obviously false information Recognise different ways devices connect users Identify personal information that should be kept private Know different ways to keep safe in 'online' world Consider other people's feelings on the internet	Use technology safely and recognise acceptable and unacceptable behaviour Discuss reliability of information online Use a search engine Use of identities and passwords to protect yourself Discuss why keeping safe online is important Use technology safely and respectfully, keeping personal information private	Discuss reasons why false information might be given online – *Viking hook* Navigate browsers and use a search engine to find a range of media, e.g. images, text, video Think before sending and suggest consequences of sending/posting on social media Learning how to make passwords strong and secure Discuss social networking through games consoles and phone apps. Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour	Understand the need to only select age appropriate content Discuss impact of false information might be given online Navigate browsers, bookmarks and history Discuss Cyberbullying Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour	#Discuss reasons why false information might be given online – *Fake News* Use Family Gaming Database to identify the target audiences of video games/online apps. Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour, identify a range of ways to report concerns about content and contact

Information Technology						
Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Role play areas – remotes, tills, phones, laptops, ipads etc… Links to technology in books Talk about the importance of technology and how they use it at school/at home	Recognise common uses of information technology in the home and school environment Use technology to purposely create digital content Able to log on and log off Explore and use functions of paint program Save and retrieve independent work on a computer	Recognise common uses of information technology beyond school Use technology to purposely create, organise, store, manipulate and retrieve digital content Able to independently log on and log off Use formatting features in Word to present text - font size/colour choice - copy/paste - snipping tool - print Save online photos and insert, position and resize	NEW With support PowerPoint skills: - background - transitions - animations - add pictures/text - text direction - rotate objects - font choice Retrieval of prior skills to include: - Snipping tool - Copy/paste - Print and save *Outcome: Romans PPT and Gift box* Save and open documents in specific folders on the network	NEW With support use Padlet. - Insert image - Insert hyperlink - Font families - Retrieve digital content - Design background – colour choices etc.. Retrieval of prior skills to include: - Snipping tool - Copy/paste - Print and Save *Outcome: Arctic Animals information* Save and open documents in specific folders on the network Use shortcuts on the keyboard when using word e.g. ctrl v for paste	NEW With support use Prezzi and Canva - Insert image - Insert hyperlink - Font families - Retrieve digital content - Design background – colour choices etc.. Retrieval of prior skills to include: - Snipping tool - Copy/paste - Print and Save *Outcome: Space Presentation and Fridge poster*	Opportunities to apply and embed previous learning throughout the Year 6 curriculum.

Computer Science						
Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Following instructions e.g. how do I get from A to B? What if there is an obstacle in my way? Sequencing events	Understand that programming is a set of instructions (algorithm) Give and follow individual instructions Build a sequence of instructions and test it e.g. when using beebots Improve instructions when using Beebots.	Create and debug simple programs Debug simple programs by using logical reasoning to predict the actions instructed by the code Understand that programs execute by following precise and unambiguous instruction	Design, write and debug programs that control. Use logical reasoning to explain how some simple algorithms work Understand the term ‘decomposing’ breaking down the programming elements Use sequence, selection and repetition in programs	Design, write and debug programs that control. Use logical reasoning to detect and correct errors in algorithms and programs Decompose programs into smaller parts Use sequence, selection and repetition in programs	Design, write and debug programs that control or simulate virtual events Can explain programming elements such as conditionals and can debug these Can work with others to decompose, program and improve programs Use sequence, selection and repetition in programs; working with variable and various forms of input and output Use logical reasoning to detect and correct errors in algorithms and programs Can begin to write a program from an initial brief	Design, write and debug programs that control or simulate virtual events Independently, solve problems by decomposing them into smaller parts Use sequence, selection and repetition in programs; working with variable and various forms of input and output Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently Create programs which use variables