EYFS Computing	Information Technology	Computer Science	Digital Literacy
EYFS Framework	**Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.**		
Willow	➢ I can play on a touch screen game and use computers/keyboards/mouse in role play ➢ I can record my voice over a picture. ➢ I can take a photograph	➢ I can follow simple oral algorithms	➢ I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. ➢ I can recognise some ways in which the internet can be used to communicate. ➢ I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).
Holly Reception	➢ I can type letters with increasing confidence using a keyboard and tablet. ➢ I can dictate short, clear sentences into a digital device. ➢ I can create a simple digital collage. ➢ I can move and resize images with my fingers or mouse. ➢ I know the difference between a photo and video. ➢ I can record a short film using the camera ➢ I can record and play a film ➢ I can watch films back	➢ I can spot simple patterns ➢ I can sequence simple familiar tasks ➢ I can use a mouse, touch screen or appropriate access device to target and select options on screen ➢ I can input a simple sequence of commands to control a digital device with support (Bee Bot)	➢ I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. ➢ I can explain how this could be either in real life or online. ➢ I can give examples of how I (might) use technology to communicate with people I know. ➢ I can identify ways that I can put information on the internet. ➢ I can describe ways that some people can be unkind online. ➢ I can offer examples of how this can make others feel.

	➢ I can take a photograph and use it in an app ➢ I can use a painting app and explore the paint and brush tools		➢ I can describe the people I can trust and can share this with; I can explain why I can trust them.
Vocabulary	device, touchscreen mouse, video, image, photo, app	algorithms, instruction, mouse, touch screen, command	technology, communicate, information

KS1 Computing	**Computing Systems and Networks**	**Programming**	**Data and Information**	**Creating Media**
KS1 Computing National Curriculum statement	Children should understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They should create and debug simple programs. They should use logical reasoning to predict the behaviour of simple programs. They should use technology purposefully to create, organise, store, manipulate and retrieve digital content. They should recognise common uses of information technology beyond school. They should 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.			
Y1	➢ Talk about some of the IT uses in their own home ➢ Use technology safely ➢ Keep personal information private	➢ Create a series of instructions and plan for a journey for a programmable toy ➢ Create, store and retrieve digital content	➢ Use technology safely ➢ Keep personal information private	➢ Use a website ➢ Use a camera ➢ Record sound and play back

Y2	➢ Know how technology is used in school and outside of school ➢ Know where to go for help if concerned	➢ Use a range of instructions (eg. direction, angles, turns). ➢ Test and amend a set of instructions. ➢ Find errors and amend (debug). ➢ Write a simple program and test it. ➢ Predict what the outcome of a simple program will be (logical reasoning). ➢ Understand that algorithms are used on digital devices. ➢ Understand that programs require precise instructions.	➢ Use technology respectfully ➢ Know where to go for help if concerned ➢ Know how technology is used in school and outside of school	➢ Organise digital content. ➢ Retrieve and manipulate digital content ➢ Navigate the web to complete simple searches.
Vocabulary	technology, Computer, mouse, trackpad, keyboard, screen, double-click, typing	forwards, backwards, turn, clear, go, commands, instruction,directions, sequence, clear, unambiguous, algorithm, program, debugging,	object, label, group, search, image, property, colour, size, shape, value, organise, data, tally chart, votes, total, group, attribute,	paint program, tool, paintbrush, erase, fill, undo, shape tool, fill tool, website, camera, digital content, image, capture, word processor, keyboard, keys, letters, type, capital letters, toolbar, bold, italic, underline, undo, redo, font, format
End of KS expectations	Children can: Begin to understand what information technology (IT) is and will begin to identify examples. Discuss where they have seen IT in school and beyond, in settings such as shops, hospitals, and libraries. Use technology safely and know where to go for help if concerned.	Children can: Understand that algorithms are used on digital devices Write a simple program and test it Predict what the outcome of a simple program will be (logical reasoning).	Children can: Use a computer program to present information in different ways. Give simple examples of why information should not be shared.	Children can: Use a website and camera. Record sound and play it back. Organise, retrieve and manipulate digital content

KS2 Computing	Computing Systems and Networks	Programming	Data and Information	Creating Media
Computing National Curriculum Y3 and 4 Year 5 and 6	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			
Year 5 and 6				
Y3	➢ Navigate the web to complete simple searches ➢ understand what computer networks do and how they provide multiple services	➢ Write programs that accomplish specific goals ➢ Design a sequence of instructions, including directional instructions ➢ Work with various forms of input ➢ Work with various forms of output.	➢ Understand what computer networks do and how they provide multiple services ➢ Use a range of software for similar purposes ➢ Collect and present information	➢ Use technology respectfully and responsibly ➢ Know different ways they can get help, if concerned ➢ Manipulate and improve digital images

	➢ Discern when it is best to use technology and where it adds little or no value		➢ Design and create content ➢ Present information ➢ Search for information on the web in different ways	
Y4	➢ Know how to search for specific information and know which information is useful and which is not ➢ Select and use software to accomplish given goals	➢ Experiment with variables to control models ➢ Give an "on-screen" robot specific instructions that takes them from A and B ➢ Make an accurate prediction and explain why they believe something will happen (linked to programming) ➢ De-bug a program	➢ Select and use software to accomplish given goals ➢ Collect and present data ➢ Produce and upload a podcast	➢ Recognise acceptable and unacceptable behaviour using technology
Vocabulary	Digital device, input, process, output, Network cables, network sockets, Network switch, server, wireless access point (WAP), router, World Wide Web, internet, content, website, web page, links, files	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, repetition, design, algorithm, duplicate, debug, refine, evaluate	groups, branching database, database, attribute, value, questions, objects, input device, sensor, data logger	Animation, media, import, transition, flipbook, Image, publication, elements, original, font style, shapes, border, layer
Y5	➢ Understand how search results are selected and ranked	➢ Use technology to control an external device ➢ Combine sequences of instructions and procedures to turn devices on and off ➢ Develop a program that has specific variable identified	➢ Analyse information ➢ Evaluate information ➢ Understand how search results are selected and ranked	➢ Understand that they have to make choices when using technology and that not everything is true and/or safe ➢ Edit a film.

		➢ Design algorithms that use repetition and 2-way selection. ➢ Analyse and evaluate information reaching a conclusion that helps with future developments		
Y6	➢ Be aware that some search engines may provide misleading information	➢ Design a solution by breaking a problem up ➢ Recognise that different solutions can exist for the same problem ➢ Use logical reasoning to detect errors in algorithms ➢ Use selection in programs ➢ Work with variables ➢ Explain how an algorithm works ➢ Explore "what if" questions by planning different scenarios for controlled devices	➢ Present the data collected in a way which makes it easy for others to understand	➢ Be increasingly aware of the potential dangers in using aspects of IT and know when to alert someone if feeling uncomfortable ➢ Discuss the risks of online technology. ➢ Identify how to minimise risks. ➢ I select, use and combine software on a range of devices. ➢ I use a range of technology for a specific project.
Vocabulary	System, connection, digital, input, process, output , Search, search engine, Google, Bing, Yahoo!, refine	Microcontroller, components, connection, infinite loop, Selection, condition, action, repetition, debug	Variable, name, value, set, change, Task, algorithm, design, artwork, program, project, code, test, debug	Video camera, microphone, lens, close up, mid range, long shot, moving subject, side by side, high angle, low angle, normal angle, Import, split, trim, clip, edit, reshoot Website, web page, browser, media, Hypertext Markup Language (HTML), Hyperlink, evaluate, website, web page, implication, external link, embed
End of KS2 expectations	Children can: Complete a web search to find specific information.	Children can: Write a program that combines more than one attribute	Children can:	Children can: Plan, develop and improve media.

	Refine my search. Compare different methods of communicating on the internet. Decide when I should and should not share. Explain that communication on the internet may not be private.	Develop a sequenced program that has repetition and variables identified Design algorithms that use repetition and 2-way selection	Present the data collected in a way which makes it easy for others to understand	Design, develop and improve a 3D model.