

Progression in Skills & Knowledge: Computing

Aspect	EYFS	Year 1	Year 2	Year 3	Year 4
Computer Science	Children are introduced to things that 'work by themselves' and need programming. They experiment with different toys; remote control cars, toy microwaves etc. and explain how they work.	The children are introduced to programming and begin to understand sequence and algorithms. They learn how to use sequence instructions (commands) to achieve an objective. They begin to use distances in commands and learn how to execute and debug a simple program.	The children develop their programming skills. They learn how to create and debug simple programs; how to use logical reasoning to predict a simple program's behaviour and how to add a loop to a program. Children become familiar with the term 'algorithm'. They use Scratch Jr to program simple inputs and outputs.	The children use Scratch to design, write and debug programs that accomplish specific goals. They learn how to use repetition in programs, using various inputs (keyboard, mouse and touch screen); they learn how to write programs to simulate physical systems. They learn how to use Kodu to write a program with variables.	The children develop their use of Scratch, using logical reasoning to explain how some simple algorithms work. They learn how to detect and fix errors in programs and algorithms. They use sequence, selection and repetition in programs and work with variables and various forms of input and output.
Information Technology	Children begin to learn how to use computers and digital devices. They begin to understand how computers help us and the differences between different types of digital technology. They begin to recognise basic components and begin to learn important	The children begin to develop their mouse and keyboard skills. They learn to add and resize texts and add, move and resize images. They use technology purposefully to create comics; design and create digital art and experiment with digital music.	The children start to develop their typing skills, learning to touch type. They use technology purposefully to create digital art, making patterns and using pixels and colour to recreate graphics. They begin to experiment with animation, learning how to move objects and clone slides. They begin	The children continue to develop their typing skills, developing the correct hand and finger position for touch typing. They select, use and combine a variety of software. They create their own comics; begin to understand and use the features of word to create their own documents; use pixel art to create their own GIF images; they develop their 3D	The children develop correct hand and finger position for touch typing. They select, use and combine a variety of software. They learn how to use the internet efficiently for research; they use animation to create a stop motion video by duplicating slides; they use 3D design to recreate different types of

	mouse/trackpad and keyboard skills.		to create e-books, adding texts on multiple pages. Children are introduced to data handling, learning how to create their own tables and charts.	design skills; develop their own games and use music lab song maker to compose their own music.	buildings; they begin to use video editing, learning how to add voiceovers and music. They develop their e-book skills and use data handling to present a suitable chart for different types of information.	layer and edit tracks and how to create loops in order to build a song. They develop their data handling skills by using formulae to find a range of calculations and learn how to present data in different ways.	concept of virtual reality and how it can be used to help people. They develop their skills in web design learning to add hyperlinks, buttons and files. They learn to evaluate other websites and provide constructive feedback.
Digital Literacy	The children begin to learn how to stay safe online and that not everything on the internet is what it says it is. They learn how to use computers to make music and how computers can be used to help us create art and design things.	The children begin to learn the importance of E-safety. They learn how to keep personal information private; why websites want personal information and when and where to go for help when they are worried.	The children learn how to recognise uses of information technology beyond school. They understand how computers store and follow instructions and they learn how different technology helps us. They develop their understanding of E-safety, learning the dangers of sharing photos online and how to use the internet responsibly.	The children learn how to use technology safely, respectfully and responsibly. They identify a range of ways to report concerns about content and contact.	The children continue to develop their understanding of E-safety, learning how to use technology safely, respectfully and responsibly. They become more proficient in identifying a range of ways to report concerns about content and contact.	The children further develop their understanding of e-safety learning how to keep personal information private and how to protect themselves against online bullying. They also understand the term 'digital footprint'. They also learn how the internet can be used to create computer networks and how cloud computing is used.	The children further develop their understanding of e-safety learning how to keep personal information private and how to protect themselves against online bullying. They understand the consequences of sharing photos and videos online. The children learn how to check that online content is trustworthy and how, where and who they can report concerns to.