

CARRINGTON INFANT SCHOOL

 Computing Knowledge and Skills Progression	EYFS	Year 1	Year 2
	EYFS Statutory Educational Programme Understanding of the World states: Will foster their understanding of our culturally, socially, technologically and ecologically diverse world. *No ELG related to computing	National Curriculum 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	

CARRINGTON INFANT SCHOOL

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Identifying and operating hardware	To be able to understand what a computer keyboard is and recognising some letters and numbers. To know that a mouse can be used to click, drag and create simple drawings To know that you can take simple photographs with a camera or ipad To know that you must hold the camera still and ensure the subject is in the shot to take a photo Learning how to operate a camera to take photographs of meaningful creations or moments. Learning how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary Recognising and identifying familiar letters and numbers on a keyboard Developing basic mouse skills such as moving and clicking	To know the names of common digital devices (e.g. computer, tablet, camera) To know the names of the parts of the device (e.g. screen, keyboard, mouse) Using a mouse, trackpad and/or touchscreen to interact with digital devices. Using a keyboard to interact with a device. Describe where technology is used at home	To know that button presses and movements of the mouse, trackpad or on the touchscreen are inputs To know that the screen or speaker produces an output To know that IT is part of our everyday life and the world we live in. Using a mouse, trackpad and/or touchscreen for a specific purpose. Using a keyboard for a specific purpose Using inputs to create outputs Recognising that different devices have different parts Identifying common uses of IT in the wider world

CARRINGTON INFANT SCHOOL

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Digital literacy	To know that to use a computer you need to log in to it and then log out at the end of your session To know that different types of technology can be found at home and in school. Recognising that a range of technology is used for different purposes Learning to log in and log out	To know that computer files need a name so they can be found again To know that their work can be saved on a digital device. To know that people should have different passwords To know that passwords keep things safe Create and name a file with guidance Save and retrieve their work with guidance Using a password to log in and logout of a common platform Recognising a login screen	To know that their work can be organised into folders so that they can find it easily To know that icons are used across digital devices. To know that strong passwords can't be easily guessed by others To know that passwords mean that they can share devices in school. Naming and saving files so they can be found easily Recognising simple icons associated with saving their work Describing why passwords are important Beginning to use username and passwords independently to log in and out of a common platform

CARRINGTON INFANT SCHOOL

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Programming	Following instructions as part of practical activities and games. Learning to give simple instructions. Experimenting with programming a Bee-bot/Blue- bot and learning how to give simple commands. Learning to debug instructions, with the help of an adult, when things go wrong.	To know that humans need to give robots instructions to follow and that they will carry out these instructions exactly, even if they are wrong. To know that humans need to give instructions in the correct language for the robot to understand. Plan To know that instructions (algorithms) must give every step of a task. To know that an algorithm must give clear, sequenced instructions. Explaining what they are trying to achieve with their instructions (algorithms). Writing clear, sequenced instructions (algorithms) for familiar tasks. Using terms like 'start,' 'end' and 'next' to describe the steps in instructions (algorithms). Evaluate To know that there may be an error if a set of instructions (an	To know that programming a computer or device involves giving it instructions to perform specific tasks To know that video games, phones, websites and apps are all created using programming. To know that different devices and programs use different programming languages or 'codes'. Recognising examples of computers being programmed by humans to perform simple tasks (computer games, animations, computer-generated music). Plan To know that an algorithm is a set of instructions used to carry out a task. To know that an algorithm becomes a program when it is coded. To know that programs execute the exact instructions they are given, even if they are incorrect. To know that a program is a series of instructions (algorithms) that are written for a computer to follow.

CARRINGTON INFANT SCHOOL

		algorithm) does not give the expected result. To know that errors could result from sequencing, unclear instructions or missing steps. Beginning to identify errors in instructions (algorithms). Recognising that robots are programmed by humans. Making suggestions for how to fix errors in instructions (algorithms)	To know that a person can program a device by giving it an algorithm/algorithms to follow. Explaining what they are trying to achieve with their program. Verbally planning what they aim to achieve with a program. Create Using basic block code to implement an algorithm. Tinkering with a basic existing visual code to see how it affects a program. Evaluate To know that there must be an error if a program does not execute as expected. To know that an error in a computer program is known as a 'bug' and fixing errors is known as 'debugging'. Identifying errors in code within a simple program. Correcting errors or bugs in simple programs they have created.
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CARRINGTON INFANT SCHOOL

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E-Safety	To begin to understand the importance of keeping safe online and know to ask an adult if they are unhappy with something they see.	Being online To know that 'online' means being connected to other devices or the internet. (*Statement also found in Computing systems.) To know that an 'account' is a personal space within an online program. Recognising when they are online. Identifying programs (e.g. apps and websites) they use online. Recognising indicators of being logged into an account (e.g. avatar, username, initials). Online relationships - To know they should not speak to or message unfamiliar people online. To know that they can still hurt someone's feelings online. Recognising that being kind, polite and safe is just as important online as in-person. Risks and harms To know that passwords help keep online accounts and programs safe. To know that passwords help keep online accounts and programs safe. To know that logging in to their account helps keeps them safe online.	

CARRINGTON INFANT SCHOOL

		Describing how someone might change their account if they have their password. Responsible and safe use To know that using someone else's login is not safe or respectful. Checking with an adult before they use new apps or websites. Beginning to remember their username and password for an online account. Treating devices carefully. Reporting online - To know who to report concerns to about online content or if they receive messages from someone they don't know. To know they should tell an adult if something in their account has changed. Recognising when something online scares or worries them. Describing how to respond safely to an online message.
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CARRINGTON INFANT SCHOOL

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Networks		To know that online means to be connected to other devices on the internet To know that some digital devices are online Browsing and interacting with pre-selected websites, software or videos	To know that some parts of websites are linked together To know that there are visual clues on websites to show the links. Following links on websites to get to other parts of a page Beginning to recognise a search tool.
Data handling	To know that sorting objects into various categories can help you locate information. To know that using yes/no questions to find an answer is a branching database. To know that a pictogram is a way of showing information. Representing data through sorting and categorising objects in unplugged scenarios. Representing data through physical pictograms.	Understanding data To know that data can be organised into groups. To know different ways data can be shown on a screen. To know that digital data can be changed and updated. Recognising that data is collected for different purposes. Plan To know that labels describe groups of data.	

CARRINGTON INFANT SCHOOL

	Exploring branch databases through physical games.	To know that digital tools help us sort and record information. To know that each piece of data should go in the correct place. Collect simple data using a survey. Group data using simple digital tools (table, tally chart). Organise data using labels or categories. Create To know that colours, pictures, labels can be changed using digital tools. To know that digital tools organise data for you, once it is entered. To know that digital tools allow changes to be made as they create. Representing data using different features of digital tools (pictogram, bar chart). Evaluate To know that organising data makes it easier to understand. To know that the same data can be presented in different ways. Checking that data in a table or tally matches their collected data. Checking that data in a graph or pictogram matches the data in the table or tally.
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