



Progression of Skills in Computing - Digital Literacy, Information Technology & Computer Science

	Caterpillars	Nursery	Reception	Year One	Year Two
Digital Literacy - Using the Internet					
Can find content from the world wide web using a web browser.	Use a computer, tablet or devise to play a game from the internet.	Use the school program Espresso to search for content and interact with these activities on a computer or tablet.	Use Espresso to search for topic related information. Use the safe search engine KidRex to safely search the internet for topic related subjects directed by a teacher	Knows what safe search engines to use online. Use safe search engines in school and at home.	Knows what safe search engines to use online and understand the need to search the internet safely. Recognise when something is bad or wrong as well as good or helpful on the internet. Knows what searching the internet means.
Knows the importance of communicating safely and respectfully online, and the need for keeping personal information private.	To use the internet on a computer, tablet or device when an adult is present.	To follow internet safety rules in school and at home. To ask an adult to access internet on computers, tablets and phones.	To understand the story of Smarty the penguin and explain what the important messages are to stay safe while using the internet	Knows the difference between public and private. Can explain what information should be kept private. Can use the internet without giving away information. Can explain some dangers when using the internet.	Explain why it is important to stay safe when using the internet at school and at home. Can send messages without upsetting anyone.
Knows what to do when concerned about content or being contacted.	Listen to the story of Smarty the penguin and sing his simple song about e-safety.	To understand the message being given in the Smarty the penguin story and sing the song to reinforce this.	To know how to report a concern about internet safety. To give a list of people who they can ask for help in school and at home.	Can explain what they must do if they see something bad online.	Can explain what they must do if they see something bad online and take measures to stop others seeing unsuitable content.



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Computer Science - Algorithms and Coding					
Know what an algorithm is and record using simple symbols.	Understand arrows pointing forwards and backwards.	Understand that arrows are used to point forwards, backwards, left and right.	To know that an algorithm is a set of instructions. To know that coding is making an algorithm of instructions.	Explain steps in an algorithm. Explain how a computer follows an algorithm. Understand that an algorithm is a set of instructions done in order.	Can recognise an error in an algorithm. Can write a simple program. Can write and follow algorithms without a computer.
Know that computers need precise instructions.	Investigate beebots and program it to move 1-3 steps forwards and backwards.	Investigate beebots and know that the different buttons move forwards, backwards and turn the beebot left and right.	To know how to use directions to describe how a beebot may move around a beebot mat to get to a specific destination	Break a problem down into smaller steps. Knows what a computer program is and how to run it.	Can predict how a computer program will behave. Can use a program to solve a problem. Can compare different algorithms in terms of speed and how easy they are to follow.
Can show care and precision to avoid errors.	To know that the X on the beebot cancels the sequence.	To know how to start the beebot and use the X to erase previous code. To count accurately the number of times a button is pressed to move the beebot forwards a given number of moves.	Understand that the beebot needs precise instructions to go to a specific destination on a beebot mat. Understand that the error in coding is from the coder and not the beebot.	Knows what a bug in the program is. Understands that a bug in a program needs to be fixed to allow the program to work correctly.	Can debug, find errors in a program and fix it. Can explain why debugging is useful.



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Information Technology - Communicating and Presenting					
Can use software under the control of the teacher to create, store and edit digital content using appropriate file and folder names.	Use and interact with technology in the classroom.	Can select a program they want to use by clicking an icon to open a game on a computer or tablet.	Can use a range of software to record their thoughts and ideas. Use software to show their understanding of given topics using art packages and simple publishing programmes.	Can create something useful on a computer such as a drawing or piece of writing. Knows what a file on a computer is. Can save and retrieve their own work.	Can create documents on a computer or tablet such as a poster or simple presentation. Can save, edit, retrieve open and organise files.
Can talk about their work and make changes to improve it.	Talk about how a toy with batteries works in simple ways.	Use a simple paint program to represent their thoughts, ideas and representations of plants and animals. Say what they like about their own computer generated artwork.	Talk about their work on a computer in their own words. Think critically about it and suggests ways in which it can be improved.	Suggest ways of improving a picture produced on a computer or tablet. Think critically about their own work.	Implement changes to a piece of stored work by editing it and resaving it using the same filename.
Knows that people interact with computers.	Know that to make a battery operated toy work you need to switch it on.	To understand that computers help us in school and at home and also in our future lives.	To use a range of programmes effectively for a given purpose.	Can explain when it is more useful or better to use a computer and when it is better not to. Understand that computers, phones and tablets need programmes to make them work successfully.	Can explain why computers are better at completing some tasks rather than others. Understand that computers do not have intelligence themselves and need programmes to run.
Can share use of technology in school. Knows common uses of information technology beyond the classroom.	Can name technological gadgets used at home.	Can talk about different technological gadgets that they use at school and at home. Can name a given game that they like and talk about what it does in simple terms.	Can talk about technology in school and in the local community. Understand how technology is used by different people in the local community.	Can make a list of activities that are done on computers and tablets in school and at home.	Can make a list of activities that are done on computers and tablets in school and at home.



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