SSCA Skill progression in computing

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Word processing & typing	Generate their own work, (with help where appropriate) with multimedia combining text and graphics. Save and retrieve and edit their work.	Generate their own work, (with help where appropriate) with multimedia combining text and graphics. Save and retrieve and edit their work.	Record and present information integrating a range of appropriate media combining text and graphics in printable form. Begin to show an awareness of the intended audience and seek feed-back.	Record and present information integrating a range of appropriate media combining text and graphics in printable form. Use tools in word processing / DTP software appropriately to create quality presentations appropriate for a known audience.	Record and present information integrating a range of appropriate media combining text and graphics in printable form. Use advanced tools in word processing / DTP software such as tabs, appropriate text formatting, line spacing etc appropriately to create quality presentations appropriate for a known audience.	Produce multimedia work which shows restrained use of effects that help to convey meaning rather than impress. Demonstrate fluency in using tools and manipulation of text and format in word processing and DTP applications.
Research and Publishing	Research using technology safely and produce their own work, (with help where appropriate) with multimedia. Save and retrieve and edit their work. Show an awareness that what they create on a computer or tablet device can be shared and interacted with by others.	Research using technology safely and produce their own work, (with help where appropriate) with multimedia. Save and retrieve and edit their work. Show an awareness that what they create on a computer or tablet device can be shared and interacted with by others.	Generate their own work using new applications. Share and seek feedback from peers on learning and provide feedback for others in an online community space.	Using another curriculum area as a starting point, children ask their own questions then use ICT sources to find answers, making use of search engines, an index, menu, hyperlinks as appropriate. Children use the information or resources they have found to generate their own work using word processing DTP packages. Share and seek feedback from peers on learning and provide feedback for others in an online community space.	Using another curriculum area as a starting point, children ask their own questions then use ICT sources to find answers. They make use of copy and paste, are beginning to understand the purpose of copyright regulations and the need to repurpose information for a particular audience. They show an understanding that not all information on the internet is accurate. Children use the information or resources they have found to generate their own work using word processing DTP packages.	Using another curriculum area as a starting point, independently and with due regard for safety, search the internet using a variety of techniques to find a range of information and resources on a specific topic. Use appropriate methods to validate information and check for bias and accuracy. Repurpose and make appropriate use of selected resources for a given audiences.

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Data Collecting and Analysis	As a class or individually with support, children use a simple pictogram program to develop simple graphical awareness / one to one correspondence.	Use a graphing package to collect, organise and classify data, selecting appropriate tools to create a graph and answer questions. Enter information into a simple branching database and use it to answer questions. They save, retrieve and edit their work.	Children use a simple database (the structure of which has been set up for them) to enter and save information on a given subject. They follow straight forward lines of enquiry to search their data for their own purposes.	Children use a simple database (the structure of which has been set up for them) to enter and save information on a given subject. They follow straight forward lines of enquiry to search their data for their own purposes.	Children work as a class to create an enquiry then individually research safely using the internet to set up a straight forward database to answer questions. Enter information and interrogate it (by searching, sorting, graphing etc). Begin to reflect on how useful the collected data and their interrogation was and whether or not their questions were answered.	Independently solve a problem by planning and carrying out data collection, by organising and analysing data involving complex searches using a database, and by drawing conclusions and presenting findings. The need for accuracy is demonstrated and strategies for spotting implausible data are evident. Children should be able to talk about issues relating to data protection and the need for data security in the world at large (e.g. health, police databases).
Programmable robots	Control a device, on and off screen, making predictions about the effect their programming will have. Write and use simple algorithms.	Control a device, on and off screen, making predictions about the effect their programming will have. Children will be able to plan ahead.	Control a device, on and off screen, making predictions about the effect their programming will have. Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen.	Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen. Engage in based problem solving activities that require children to write procedures etc. and to predict, test and modify. Use control software to control devices (using output commands) or to simulate this on screen. Predict, test and refine their programming.	Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen. Engage in based problem solving activities that require children to write procedures etc. and to predict, test and modify. Use control software to control devices (using output commands). Predict, test and refine their programming.	Independently create sequences of commands to control devices in response to sensing (i.e. use inputs as well as outputs). Design, build, test, evaluate and modify the system; ensuring that it is fit for purpose.

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Digital Art	Use a range of tools in a paint package / image manipulation software to create / modify a picture to communicate an idea. Create a simple animation to tell a story.	Use a range of tools in a paint package / image manipulation software to create / modify a picture to communicate an idea. Create a simple animation to tell a story.	Children engage in Logo based problem-solving activities that require children to write procedures etc. and to predict, test and modify.	Use software to record, create and edit sounds and capture still images; change recorded sounds, volume, duration and pauses; use software to capture video for a purpose; crop and arrange clips to create a short film; plan an animation and move items within each animation for playback.	Engage in Logo based problem solving activities that require children to write procedures etc. and to predict, test and modify. Expand their knowledge of Logo programming by experimenting with code writing to create complex shapes and patterns.	Collect audio from a variety of resources including own recordings and internet clips; use a digital device to record sounds and present audio; trim, arrange and edit audio levels to improve quality; publish their animation and use a movie editing package to edit/refine and add titles.
Code Programming and debugging	Create simple algorithms to make a graphic object move. Make a sprite move. Debug an algorithm moving the code around.	Make a sprite move. Debug an algorithm moving the code around. Understand how block coding works and program a simple algorithm using block coding.	Expand the understanding of block coding, create a simple animation and know how to add a condition to a program.	Know how to add a condition to a program, use coordinates including negative numbers to place a sprite and test coordinates using “if do else”.	Use “if do else” to create a simple game, detect and correct errors within a program; to write a program that tells a simple story, analyse and explain how an existing program works, use input from keyboard or mouse to control part of a program.	Write a program that tells a simple story, analyse and explain how an existing program works, use input from keyboard or mouse to control part of a program and use variables in the context of a game.