

Computing Progression

Computing	Skill	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	C1	I can explain that an algorithm is a set of instructions	I can explain an algorithm is a set of instructions to complete a task.	I can spot something in a program that has an action or effect (does something).	I can turn a real-life situation to solve into an algorithm, using a design that shows how I can accomplish this in code.	I can make more complex real-life problems into algorithms for a program.	I can turn a complex programming task into an algorithm.
	C2	I can understand that a computer program turns an algorithm into code that the computer can understand	I can carefully plan my algorithm so it will work when I make it into code.	I can design an algorithm carefully, thinking about what I want the program to do and how I could turn my algorithm into code	I can use repetition in my code. For example, using a loop that continues until a condition is met such as the correct answer being entered.	I can test and debug my programs as I work.	I can identify the important aspects of a programming task (abstraction).
	C3	I can work out what is wrong when the steps are out of order in instructions	I can design a simple program using 2Code that achieves a purpose.	I am able to design a program thinking logically about the sequence of steps required.	I can use timers within my program designs more accurately to create repetition effects.	I can convert (translate) algorithms that contain sequence, selection and repetition into code that works	I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work.
	C4	I can say that if something does not work how it should, it is because my code is incorrect.	I can find and correct some errors in my program.	I can experiment with timers in my programs.	I can use selection (decision) in my programming. For example, using an 'if statement' for a question being asked and the program takes one of two paths.	I can use sequence, selection, repetition, and some other coding structures in my code	I can test and debug my program as I work on it and use logical methods to identify a cause of a bug.
	C5	I can try and fix my code if it isn't working properly	I can say what will happen in a program	I can experiment with the effect of using repeat commands. (3.1)	I can use variables within my program and know how to change the value of variables.	I can organise my code carefully for example, naming variables and using tabs. I know this will help me debug more efficiently	I can identify a specific line of code that is causing a problem in my program and attempt a fix.

	C6	I can make good guesses of what is going to happen in a program	I can spot something in a program that has an action or effect (does something).	I can identify the difference in using the effect of a timer or repeat command in my code	I can use the user inputs and output features within my program, such as 'Print to screen'.	I can use logical methods to identify the cause of any bug with support to identify the specific line of code	I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other.
	C7			I can identify an error in my program and fix it	I can identify errors in my code by using different methods, such as stepping through lines of code and fixing them.	I know the importance of computer networks and how they help solve problems and enhance communication	I CAN use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object
	C8			I can read programs with several steps and predict what it will do.	I can read programs that contain several steps and predict the outcomes with increasing accuracy	I recognise the main dangers that can be perpetuated via computer networks	I can interpret (understand) a program in parts and can make logical attempts to put the separate parts together in an algorithm to explain the program as a whole.
	C9			I can identify different ways that the Internet can be used for communication.	I recognise the main component parts of hardware which allow computers to join and form a network.	I can explain what personal information is and know strategies for keeping this safe	I can explain the difference between the Internet and the World Wide Web
	C10			I can use email such as 2Email to respond to others appropriately and attach files.	I can understand that network and communication components can be found in many different devices which allow them to join the internet.	I can use the most appropriate form of online communication according to the digital content. For example, use 2Email, 2Blog and Display Boards.	I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible.

Information Technology	IT1	I can sort sound, pictures and text.	I can organise data - for example, using a database such as 2Investigate.	I can carry out searches to find digital content on a range of online systems, such as within Purple Mash or on an internet search engine.	I can understand the purpose of a search engine and the main features within it.	I can search precisely when using a search engine. For example, I know I can add additional words or removes words to help find better results.	I can use filters when searching for digital content.
	IT2	I can add sound, pictures and text to a program such as 2Create a Story.	I can find data using specific searches - for example, using 2Investigate.	I can collect data and input it into software	I can look at information on a webpage and make predictions about the accuracy of information contained within it.	I can explain in detail how accurate, safe and reliable the content is on a webpage.	I can explain in detail how accurate and reliable a webpage and its content is
	IT3	I can change content on a file such as text, sound and images.	I can use several programs to organise information - for example, using binary trees such as 2Question or spreadsheets such as 2Calculate.	I can analyse data using features within software to help such as, formula in 2Calculate (spreadsheets)	I can create and improve my solutions to a problem based on feedback. E.g. create a program using 2Code.	I can make appropriate improvements to digital work I have created.	I can compare a range of digital content sources and rate them in terms of content quality and accuracy.
	IT4	I can name my work.	I can edit digital data such as data in music composition software like 2Sequence.	I can present data and information using different software such as 2Question (branching database) or 2Graph (graphing tool).	I can review solutions that others have created, using a checklist of criteria.	I can comment on how successful a digital solution is that I have created. For example, a program built in 2Code that sorts decimals numbers	I can consider the intended audience carefully when I design and make digital content.
	IT5	I can save my work.	I can name, save and find my work.	I can consider what the most appropriate software to use when given a task by my teacher	I can work collaboratively to create content and solutions.	I can work collaboratively with others creating solutions to problems using appropriate software such as 2Code.	I can design and create my own online blogs.
	IT6	I can find my work.	I can include photos, text and sound in my creations.	I can create purposeful (appropriate) content and attach this to emails.	I can share digital content using a variety of applications such as:	I can use collaborative modes such as within 2Connect to work with others and share it.	I can use criteria to evaluate the quality of mine and others digital

					2Blog, 2Email and Display Boards.		solutions, suggesting refinements.
Digital Literacy	D1		I can find information I need using a search engine.	I can create a secure password.	I have a good understanding of the online safety rules we learn at school.	I can demonstrate a secure knowledge of online safety rules taught at school.	I can demonstrate safe and respectful use of a range of different technologies and online services.
	D2			I can explain the importance of having a secure password and not sharing it with others.	I can demonstrate how to use different online technologies safely.	I can demonstrate the safe and respectful use of different online technologies and online services.	I can identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else.
	D3	I can say what examples of technology are at home.	I can share work and communicate electronically - for example using 2Email or the display boards.	I can explain the negative consequences of not keeping passwords safe and secure.	I can demonstrate how to use a few different online services safely.	I always relate appropriate online behaviour to my right to have personal privacy.	I can use critical thinking to help me stay safe online
	D4	I know that a chair uses old technology and a smart phone uses new technology.	I can report unkind behaviour and things that upset me online, to a trusted adult.	I understand the importance of keeping safe online and behaving respectfully.	I know I have a right to privacy both on and offline.	I can understand how to not let my mental wellbeing or others be affected by use of online technologies and services.	I understand how to protect my privacy and others online.
	D5	I can keep my login information safe.	I can see where technology is used at school such as in the office or canteen.	I can use communication tools such as 2Email respectfully and use good etiquette.	I recognise that my wellbeing can be affected by how I use technology.		
	D6	I can save my work in a safe place such as 'My Work' folder.	I understand that my creations such as programs in 2Code, need similar skills to the adult world. e.g. The program used for collecting money for school trips.	I can report unacceptable content and contact online in more than one way to a trusted adult.	I can report with ease any concerns with content and contact online and know strategies to keep safe.		