Progression of skills – **Computer Science**		
	Year 1	**Year 2**
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	• Explain that an algorithm is a set of instructions. • Know that a computer program turns an algorithm into code that the computer can understand. • Work out what is wrong when the steps are out of order in instructions. • Say that if something does not work how it should it is because my code is incorrect. • Try and fix my code if it isn't working properly. • Make good guesses of what is going to happen in a program. For example, where the turtle might go	• Explain that an algorithm is a set of instructions to complete a task. • Know that I need to carefully plan my algorithm so it will work when I make it into code. • Design a simple program using 2Code that achieves a purpose. • Find and correct some errors in my program. • Say what will happen in a simple program. • Spot something in a program that has an action or effect (does something).
Create and debug simple programs.		
Use logical reasoning to predict the behaviour of simple programs.		

Progression of skills – **Computer Science**				
	Year 3	**Year 4**	**Year 5**	**Year 6**
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	• Make a real-life situation into an algorithm for a program. • Design an algorithm carefully, thinking about what I want it to do and how I can turn it into code. • Identify an error in my program and fix it. • Experiment with timers in my programs. • Identify the difference between the effect of using a timer or repeat command in my code. • Know that a variable stores information while a program is running (executing). • Identify 'If' statements, repetition and variables. • Read programs with several steps and predict what it will do. • Identify different ways that the internet can be used for communication. • Use email such as 2Email to respond to others appropriately and attach files.	• Turn a real-life situation into an algorithm, using a design that shows how I can accomplish this in code. • Use repetition in my code. For example, using a loop that continues until a condition is met such as the correct answer being entered. • Use timers within my program designs more accurately to create repetition effects. For example, I can create a counting machine. • 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. • Use variables within my program and know how to change the value of variables. • Use the user inputs and output features within my program, such as 'Print to screen'. • Identify errors in my code by using different methods, such as steeping	• Make more complex real-life problems into algorithms for a program. • Test and debug my programs as I work. • Convert (translate) algorithms that contain sequence, selection and repetition into code that works. • Use sequence, selection, repetition, and some other coding structures in my code. • Organise my code carefully for example, naming variables and using tabs. I know this will help me debug more efficiently. • Use logical methods to identify the cause of any bug with support to identify the specific line of code. • Know the importance of computer networks and how they help solve problems and enhance communication. • Recognise the main dangers that can be perpetuated via computer networks.	• Turn a complex programming task into an algorithm. • Identify the important aspects of a programming task (abstraction). • Decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work. • Test and debug my program as I work on it and use logical methods to identify a cause of a bug. • Identify a specific line of code that is causing a problem in my program and attempt a fix. • Translate algorithms that include sequence, selection and repetition into code and nest these structures within each other. • Use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object. • Interpret (understand) a program in parts and can make logical attempts to
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.				
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.				
Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.				

		through lines of code and fixing them. • Read programs that contain several steps and predict the outcomes with increasing accuracy. • Recognise the main component parts of hardware which allow computers to join and form a network. • Understand that network and communication components can be found in many different devices which allow them to join the internet.	• Explain what personal information is and know strategies for keeping this safe. • Use the most appropriate form of online communication according to the digital content and intended audience. For example, use 2Email, 2Blog and Display Boards.	put the separate parts together in an algorithm to explain the program as a whole. • Explain the difference between the internet and the World Wide Web. • Explain what a WAN and LAN is and describe the process of how access to the internet in school is possible.

Progression of skills – **Information Technology**		
	Year 1	**Year 2**
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	• Sort sound, pictures and text both away from and on computers. • Add sound, pictures and text to a program such as 2Create a Story. • Change content on a file such as text, sound and images. • Name, save and find my work.	• Organise data on computers – for example, using a database such as 2Investigate. • Find data using specific searches – for example, using 2Investigate. • Use several programs to organise information – for example, using binary trees such as 2Question or spreadsheets such as 2Calculate. • Edit digital data such as data in music composition software like 2Sequence. • Name, save and find my work. • Include photos, text and sound in my creations.

Progression of skills – **Information Technology**				
	Year 3	**Year 4**	**Year 5**	**Year 6**
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	• Carry out searches to find digital content on a range of online systems, such as within Purple Mash or on an internet search engine. • Collect data and input it into software. • Analyse data using features within software to help such as, formula in 2Calculate (spreadsheets). • Present data and information using different software such as 2Question (branching database) or 2Graph (graphing tool). • Consider what the most appropriate software to use when given a task by my teacher. • Create purposeful (appropriate) content and attach this to emails.	• Understand the purpose of a search engine and the main features within it. • Look at information on a webpage and make justified predictions about the accuracy of information contained within it. • Create and improve my solutions to a problem based on feedback. For example, create a program using 2Code. • Review solutions that others have created, using a checklist of criteria. • Work collaboratively to create content and solutions. • Share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards.	• Search precisely when using a search engine. For example, I know I can add additional words or removes words to help find better results. • Explain in detail how accurate, safe and reliable the content is on a webpage. • Make appropriate improvements to digital work I have created. • Comment on how successful a digital solution is that I have created. For example, a program built in 2Code that sorts decimals numbers. • Work collaboratively with others creating solutions to problems using appropriate software such as 2Code. • Use collaborative modes such as within 2Connect to work with others and share it.	• Use filters when searching for digital content. • Explain in detail how accurate and reliable a webpage and its content is. • Compare a range of digital content sources and rate them in terms of content quality and accuracy. • Consider the intended audience carefully when I design and make digital content. • Design and create my own online blogs. • Use criteria to evaluate the quality of my own and others digital solutions, suggesting refinements.

Progression of skills – **Digital Literacy**		
	Year 1	**Year 2**
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.	• Say what technology is. • Say what examples of technology are in school. • Say what examples of technology are at home. • Keep my login information safe. • Save my work in a safe place such as 'My Work' folder.	• Find information I need using a search engine. • Know the consequences of not searching online safely. • Share work and communicate electronically – for example using 2Email or the display boards. • Report unkind behaviour and things that upset me online, to a trusted adult. • See where technology is used at school such as in the office or classroom • 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.

Progression of skills – **Digital Literacy**				
	Year 3	**Year 4**	**Year 5**	**Year 6**
Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.	• Create a secure password. • Explain the importance of having a secure password and not sharing it with others. • Explain the negative consequences of not keeping passwords safe and secure. • Explain the importance of keeping safe online and behaving respectfully. • Use communication tools such as 2Email respectfully and use good etiquette. • Report unacceptable content and contact online in more than one way to a trusted adult.	• Explain the online safety rules we learn at school and why we must follow them. • Demonstrate how to use different online technologies safely. • Demonstrate how to use a few different online services safely. • Explain what 'having a right to privacy both on and offline' means and understand that I have this right. • Explain how my wellbeing can be affected by how I use technology. • Report with ease any concerns with content and contact online and know immediate strategies to keep safe.	• Clearly explain the online safety rules taught at school and why we must follow them. • Demonstrate the safe and respectful use of different online technologies and online services. • Always relate appropriate online behaviour to my right to have personal privacy. • Explain strategies I can follow to not let my mental wellbeing or others be affected by use of online technologies and services.	• Demonstrate safe and respectful use of a range of different technologies and online services. • Identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else. • Use critical thinking to help me stay safe online. • Explain the value of protecting my privacy and others online.