Computing
Computer Science, Information Technology and Digital Literacy

Computer Science

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can explain that an algorithm is a set of instructions I know that a computer program turns an algorithm into code that the computer can understand. I can work out what is wrong when the steps are out of order in the instructions I can try and fix my code if it isn't working properly I can make good guesses of what is going to happen in a program	I can explain an algorithm is a set of instructions to complete a task. (2.1) I know I need to carefully plan my algorithm so it will work when I make it into code. (2.1) I can find and correct some errors in my program. (2.1 I can say what will happen in a Program. (2.1) I can spot something in a program that has an action or effect (does something). (2.1)	I can base a written algorithm for a program upon a real-life situation. (3.1) I can design an algorithm carefully, thinking about what I want the program to do and how I could turn my algorithm into code. (3.1) I am able to design a program thinking logically about the sequence of steps required. (3.1 Coding) I can experiment with timers in my programs. (3.1) I can experiment with the effect of using repeat commands. (3.1) I can identify the difference in using the effect of a timer or repeat command in my code. (3.1) I can identify an error in my program and fix it. (3.1) I can read programs with several steps and predict what it will do. (3.1) I can identify different ways that the Internet can be used for communication. (3.5) I can use email such as 2Email to respond to others appropriately and attach files. (3.5)	I can turn a real-life situation to solve into an algorithm, using a design that shows how I can accomplish this in code. (4.1, 4.5) 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. (4.1) I can use timers within my program designs more accurately to create repetition effects. (4.1) 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. (4.1) I can use variables within my program and know how to change the value of variables. (4.1) I can use the user inputs and output features within my program, such as 'Print to screen'. (4.1) I can identify errors in my code by using different methods, such as stepping through lines of code and fixing them. (4.1) I can read programs that contain several steps and predict the outcomes with increasing accuracy. (4.1, 4.5) I recognise the main component parts of hardware which allow computers to join and form a network. (4.8) I understand that network and communication components can be found in many different devices which allow them to join the internet. (4.2, 4.7, 4.8)	I can make more complex real-life problems into algorithms for a program. (5.1) I can test and debug my programs as I work. (5.1, 5.5) I can convert (translate) algorithms that contain sequence, selection and repetition into code that works. (5.1) I can use sequence, selection, repetition, and some other coding structures in my code. (5.1) I can organise my code carefully for example, naming variables and using tabs. I know this will help me debug more efficiently. (5.1) I can use logical methods to identify the cause of any bug with support to identify the specific line of code. (5.1) I know the importance of computer networks and how they help solve problems and enhance communication. (5.2) I recognise the main dangers that can be perpetuated via computer networks. (5.2) I can explain what personal information is and know strategies for keeping this safe. (5.2) I can use the most appropriate form of online communication according to the digital content. For example, use 2Email, 2Blog and Display Boards. (5.2 & others)	I can turn a complex programming task into an algorithm. (6.1) I can identify the important aspects of a programming task (abstraction). (6.1) I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work. (6.1) I can test and debug my program as I work on it and use logical methods to identify a cause of a bug. (6.1) I can identify a specific line of code that is causing a problem in my program and attempt a fix. (6.1) I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other. (6.1) I can use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object. (6.1, 6.7) 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. (6.1) I can explain the difference between the Internet and the World Wide Web. (6.2, 6.4,6.6) I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible. (6.2,6.6)

Information Technology

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can sort sound, pictures and text. (1.2) I can add sound, pictures and text to a program such as 2Create a Story. (1.6) I can change content on a file such as text, sound and images. (1.3, 1.6, 1.7, 1.8) I can name my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can save my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can find my work. (1.2, 1.3, 1.6, 1.7, 1.8)	I can organise data – for example, using a database such as 2Investigate. (2.3, 2.4) I can find data using specific searches – for example, using 2Investigate. (2.4, 2.5) can use several programs to organise information – for example, using binary trees such as 2Question or spreadsheets such as 2Calculate. (2.4, 2.8) I can edit digital data such as data in music composition software like 2Sequence. (2.7 and most units) I can name, save and find my work. (2.3, 2.4, 2.6, 2.7, 2.8 & most units) I can include photos, text and sound in my creations. (2.8, 2.6)	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. (Across units) I can collect data and input it into software. (3.3, 3.6, 3.8) I can analyse data using features within software to help such as, formula in 2Calculate (spreadsheets). (3.3, 3.6, 3.8) I can present data and information using different software such as 2Question (branching database) or 2Graph (graphing tool). (3.3, 3.6, 3.8,3.9) I can consider what the most appropriate software to use when given a task by my teacher. (Across units) I can create purposeful (appropriate) content and attach this to emails. (3.3, 3.5, 3.6, 3.7, 3.8, 3.9)	I understand the purpose of a search engine and the main features within it. (4.7) I can look at the information on a webpage and make predictions about the accuracy of information contained within it. (4.7) I can create and improve my solutions to a problem based on feedback. For example, create a program using 2Code. (4.1, 4.2) I can review solutions that others have created, using a checklist of criteria. (4.1, 4.2) I can work collaboratively to create content and solutions. (4.1, 4.3, 4.4,48) I can share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards. (Across units)	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. (5.2) I can explain in detail how accurate, safe and reliable the content is on a webpage. (5.2) can make appropriate improvements to digital work I have created. (Across units) 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. (Across units) I can work collaboratively with others creating solutions to problems using appropriate software such as 2Code. (Across units) I can use collaborative modes such as within 2Connect to work with others and share it. (5.7)	I can use filters when searching for digital content. (6.2,6.9) I can explain in detail how accurate and reliable a webpage and its content is. (6.2) I can compare a range of digital content sources and rate them in terms of content quality and accuracy. (6.1, 6.3, 6.4, 6.5, 6.7,6.9) I can consider the intended audience carefully when I design and make digital content. (6.1, 6.3, 6.4, 6.5, 6.7,6.9) I can design and create my own online blogs. (6.4) I can use criteria to evaluate the quality of my own and others digital solutions, suggesting refinements. (6.1, 6.3, 6.4, 6.5, 6.7,6.9)

Digital Literacy

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can say what technology is. I can say what examples of technology are in school. (1.9) I can say what examples of technology are at home. (1.9) I know that a chair uses old technology and a smart phone uses new technology. (1.9) I can keep my login information safe. (1.1 and most units) can save my work in a safe place such as 'My Work' folder. (1.1 and most units)	I can find information I need using a search engine. (2.5) I know the consequences of not searching online safely. (2.2, 2.5) I can share work and communicate electronically – for example using 2Email or the display boards. (2.2 and others) I can report unkind behaviour and things that upset me online, to a trusted adult. (2.2) I can see where technology is used at school such as in the office or canteen. (2.2) 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. (2.1)	I can create a secure password. (3.2) I can explain the importance of having a secure password and not sharing it with others. (3.2, 3.5) I can explain the negative consequences of not keeping passwords safe and secure. (3.2, 3.5) I understand the importance of keeping safe online and behaving respectfully. (3.2) I can use communication tools such as 2Email respectfully and use good etiquette. (3.2, 3.5) I can report unacceptable content and contact online in more than one way to a trusted adult. (3.2)	I have a good understanding of the online safety rules we learn at school. (4.2 & across curriculum) I can demonstrate how to use different online technologies safely. (4.2 & across curriculum) I can demonstrate how to use a few different online services safely. (4.2 & across curriculum) I know I have a right to privacy both on and offline. (4.2 & across curriculum) I recognise that my well-being can be affected by how I use technology. (4.2 & across curriculum) I can report with ease any concerns with content and contact online and know immediate strategies to keep safe. (4.2 & across curriculum)	I have a secure knowledge of online safety rules taught at school. (5.2 & across units) I can demonstrate the safe and respectful use of different online technologies and online services. (5.2 & across units) I always relate appropriate online behaviour to my right to have personal privacy. (5.2 & across units) I know how to not let my mental wellbeing or others be affected by use of online technologies and services. (5.2 & across units)	I can demonstrate safe and respectful use of a range of different technologies and online services. (6.2, 6.4) I can identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else. (6.2) I can use critical thinking to help me stay safe online. (6.2 know the value of protecting my privacy and others online. (6.2, 6.4)