

# COMPUTING PROGRESSION OF SKILLS



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Computer Science</b>	<ul style="list-style-type: none"> <li>I can explain that an algorithm is a set of instructions.</li> <li>I know that a computer program turns an algorithm into code that the computer understands</li> <li>I can work out what is wrong with a simple algorithm when the steps are out of order</li> <li>I can write my own simple algorithm</li> <li>I can make logical attempts to fix my code if it isn't working properly</li> <li>I can read code - one line at a time - and make a good prediction about what may happen in a programme</li> </ul>	<ul style="list-style-type: none"> <li>I can explain that an algorithm is a set of instructions to complete a task</li> <li>I know I need to carefully plan my algorithm so that it will work when I make it into a code</li> <li>I can design a simple program, using 2Code, that achieves a purpose</li> <li>I can find and correct errors in my program</li> <li>I can design a program with logical, programmable steps</li> <li>I can spot something in a program that has an action or effect</li> </ul>	<ul style="list-style-type: none"> <li>I can turn a simple real life situation into an algorithm for a program</li> <li>I can design an algorithm carefully thinking about what I want it to do and how I can turn it into a code.</li> <li>I can identify an error in my program and fix it.</li> <li>I can experiment with timers</li> <li>I can design and code a program that follows a simple sequence</li> <li>I can experiment with timers in my program</li> <li>I can identify the difference between using the effect of a timer or a repeat command in my code</li> <li>I can read programs with several steps, and predict the outcome</li> <li>I can identify different ways that the internet can be used for communication</li> <li>I can use email, such as 2Email, to respond to others appropriately and attach files.</li> </ul>	<ul style="list-style-type: none"> <li>I can turn a real life situation to solve into an algorithm using a design that shows how I can accomplish this in code.</li> <li>I can use repetition in my code.</li> <li>I can use timers within my program designs more accurately to create repetition effects</li> <li>I can use selection in my programming - for example, using an IF statement for a question being asked and the program takes 1 of 2 paths</li> <li>I can use variables within my program and know how to change the value of these.</li> <li>I can use the user inputs and output features within my program, such as 'Print to Screen'</li> <li>I can identify errors in my code by using different methods and make logical attempts to correct this.</li> <li>I can read programs that contain several steps and predict the outcomes with increasing accuracy</li> <li>I recognise the main component parts of hardware, allowing computers to join and form a network.</li> </ul>	<ul style="list-style-type: none"> <li>I can make more complex, real life problems into algorithms for a program</li> <li>I can test and debug my programs as I work</li> <li>I can convert algorithms that contain sequence, selection and repetition into code that works.</li> <li>I can use sequence, selection, repetition and some other coding structures in my code.</li> <li>I can organize my code carefully and know that this will help me debug more efficiently</li> <li>I can use logical methods to identify the cause of any bug with some to identify the specific line of code</li> <li>I know the importance of computer networks and how they solve problems and enhance communication</li> <li>I recognise the main dangers that can come from computer networks</li> <li>I can explain what personal information is and know strategies for keeping this safe</li> <li>I can use the most appropriate form of online communications according to the digital content - for example, 2Email and 2Blog</li> </ul>	<ul style="list-style-type: none"> <li>I can turn a more complex programming task into an algorithm,</li> <li>I can identify the most important aspect of a programming task (abstraction)</li> <li>I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work</li> <li>I can test and debug my program and use logical methods to identify the cause of a bug</li> <li>I can identify a specific line of code that is causing a problem in my program and attempt to fix it</li> <li>I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other</li> <li>I can use inputs and outputs within my coded programs, such as sound, movement and buttons.</li> <li>I can interpret a program in parts and make logical attempts to put the separate parts together in an algorithm to explain the program as a whole.</li> <li>I can explain the difference between the internet and the world wide web and I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible</li> </ul>

<p><b>Information Technology</b></p>	<ul style="list-style-type: none"> <li>I am able to sort, collate, edit and store simple digital content (<i>name, save and retrieve their work</i>)</li> <li>I can follow simple instructions to access online resources</li> <li>I can begining to use Purple Mash software to complete tasks (<i>2Quiz, 2Code or 2Count</i>)</li> </ul>	<ul style="list-style-type: none"> <li>I can organise data - for example, using a database such as 2Investigate.</li> <li>I can find data using specific searches - for example, using 2Investigate.</li> <li>I can edit digital data - such as data in music composition software like 2Sequence.</li> <li>I can name, save and find my work.</li> <li>I can include photos, text and sound in my creations.</li> <li>I can use a Purple Mash program to organize information - such as 2Question or 2Calculate.</li> </ul>	<ul style="list-style-type: none"> <li>I can carry out simple searches to retrieve digital content on a range of online systems both within Purple Mash and on internet search engines.</li> <li>I can collect, analyse, evaluate and present data and information using a selection of software (2Question, 2Graph)</li> <li>I can consider the most appropriate software to use when given a task by my teacher</li> <li>I can create purposeful content and attach this to email</li> </ul>	<ul style="list-style-type: none"> <li>I understand the purpose of a search engine and the main features within it</li> <li>I can look at information on a webpage and make predictions about the accuracy of information contained within it</li> <li>I can create and improve my solutions to a problem based on feedback - for example, creating a program on 2Code</li> <li>I can review solutions that others have created using the checklist criteria</li> <li>I can work collaboratively to create content and solutions</li> <li>I can share digital content using a variety of applications, such as 2Blog and 2Email.</li> </ul>	<ul style="list-style-type: none"> <li>I can search precisely when using a search engine</li> <li>I can explain in detail how accurate, safe and reliable content is on a webpage</li> <li>I can make appropriate improvements to digital work I have created</li> <li>I can comment on how successful a digital solution is that I have created</li> <li>I can work collaboratively with others creating solutions to problems using appropriate software, such as 2Code.</li> <li>I can use collaborative modes, such as within 2Connect, to work with others and share it</li> </ul>	<ul style="list-style-type: none"> <li>I can use filters when searching for digital content</li> <li>I can explain in detail how accurate and reliable a web page and its contents is</li> <li>I can compare a range of digital content sources and rate them in terms of content quality and accuracy</li> <li>I can consider the intended audience carefully when I design and make digital content</li> <li>I can design and create my own online blogs and I can use criteria to evaluate the quality of my own and others' digital solutions suggesting refinements</li> </ul>
<p><b>Digital Literacy</b></p>	<ul style="list-style-type: none"> <li>I can say what technology is</li> <li>I can say what examples of technology can be found in school</li> <li>I can say what examples of technology can be found at home</li> <li>I can use technology safely and respectfully, keeping personal information private</li> <li>I know where to go for help and support if I am concerned about content or contact from the internet or other online technologies</li> <li>I can save my work in a safe place, such as 'My Work' folder</li> </ul>	<ul style="list-style-type: none"> <li>I can find information I need using a search engine</li> <li>I know the implications if inappropriate online searches</li> <li>I can safely share work and communicate electronically - through using 2Email or posting to the Purple Mash display board.</li> <li>I can report unkind behaviour and things that upset online to a trusted adult.</li> <li>I can see where technology is used at school, such as in the office or the lunch hall.</li> <li>I understand that my creations, such as programs in 2Code, need similar skills to the adult world (e.g. program used for collecting dinner money)</li> </ul>	<ul style="list-style-type: none"> <li>I can create a secure password</li> <li>I can explain the importance of having a secure password and not sharing it with others</li> <li>I can explain the negative consequences of not keeping passwords safe and secure</li> <li>I understand the importance of keeping safe online and behaving respectfully</li> <li>I can use communication tools, such as 2Email, respectfully</li> <li>I can report unacceptable content and contact online in more than one way to a trusted adult</li> </ul>	<ul style="list-style-type: none"> <li>I have a good understanding of the online safety rules learnt at school</li> <li>I can demonstrate how to use different online technologies safely</li> <li>I can demonstrate how to use a variety of online services safely</li> <li>I know I have a right to privacy both on and off line.</li> <li>I recognise that my wellbeing can be affected by how I use technology</li> <li>I can report with ease any concerns with content and contact online and know immediate strategies to keep safe.</li> </ul>	<ul style="list-style-type: none"> <li>I have a secure knowledge of online safety rules taught at school</li> <li>I can demonstrate the safe and respectful use of different online technologies and online services</li> <li>I always relate appropriate online behaviour to my right to have personal privacy</li> <li>I know how to not let my mental wellbeing, or others, be affected by the use of online technologies and services.</li> </ul>	<ul style="list-style-type: none"> <li>I can demonstrate safe and respectful of a range of different technologies and online services</li> <li>I can identify more discrete inappropriate behaviours online through developing critical thinking</li> <li>I know the value of protecting my privacy and the privacy of others online.</li> </ul>