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| Learner stage | What I should know, understand, be able to explain or do |
| Exceptional Mastery (E) | I know the function of the main internal parts of basic computer architecture.  I know the concepts behind the fetch execute cycle.  I know that there is a range of operating systems and application software for the same hardware.  I can explain the terms “internet”, “world wide web” and “cloud computing”.  I can break down a problem and find alternative solutions for small sections of the overall problem.  I can transfer ideas and solutions from one problem to another  I can create algorithms that give good solutions  I can create a flow chart which includes selection allowing for different routes to be taken  I can write pseudocode that includes nested statements and iteration  I can write multiple possible solutions to the same problem  I can find solutions to problems within algorithms |
| Advancing mastery (A) | I know why and when computers are used.  I know the main functions of the operating system.  I know the difference between physical, wireless and mobile networks.  I can break down a problem into manageable sections  I can write instructions which reduce repetition unnecessarily  I can write instructions that, if followed in a given order, achieve a desired effect  I can draw flow charts using the correct symbols for Start/Stop, Input/Output, Process and Decisions  I can write pseudocode which includes IF…THEN…ELSE and understand why some lines are indented  I can write pseudocode which includes FOR, REPEAT and WHILE correctly  I can assess whether a solution meets the specification |
| Secure mastery (S) | I know that computers collect data from various input devices, including sensors and application software.  I know the difference between hardware and application software, and their roles within a computer system.  I understand that breaking down a problem can become simpler to solve (Decomposition)  I can spot where sections of a problem are repeated (pattern recognition)  I can abstract data and understand why it is important to ignore irrelevant information  I can describe the logic of a simple flow chart  I can write simple pseudocode including INPUT and OUTPUT  I can step through algorithms step by step to work out what they do |
| Developing mastery (D) | I know that a range of digital devices can be considered a computer.  I know and can use a range of input and output devices.  I know how programs specify the function of a general purpose computer.  I can explain what computational thinking is.  I can explain what each symbol is on a flow chart.  I can explain what an algorithm is. |
| Emerging mastery (F) | I know that computers have no intelligence and that computers can do nothing unless a program is run.  I know that all software executed on digital devices is programmed.  I know what computational thinking is.  I know what a flow chart is.  I know what an algorithm is. |