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| Unit | Working towards the skills and knowledge needed | Acquiring the skills and knowledge needed | On track with the skills and knowledge needed | Advancing the skills and knowledge needed | Extending the skills and knowledge needed |
| Unit 15 |  |  | I can identify the main hardware components (CPU, RAM, HDD, PSU and motherboard) and software components (operating system, application software) that make up a computer system. | I can explain the role the main hardware components (CPU, RAM, motherboard, HDD, PSU and motherboard) and software components (operating System, application software) that make up a computer system. | I can select the components of a computer system to ensure that they meet the needs of a user. |
|  |  |  | I understand that devices such as smart phones and tablets are computer systems. | I understand the role of input, output and storage devices. |  |
|  |  |  | I understand how instructions are stored and executed within a computer system. | I can explain how instructions are stored and executed within a computer system. |  |
|  |  |  | I understand the fetch–decode–execute cycle. | I can explain the fetch–decode–execute cycle. |  |
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| Unit 10 |  |  | I understand the difference between binary and decimal numbers. | I can convert numbers (up to 256) from decimal to binary and from binary to decimal. | I can add two binary numbers together. |
|  |  |  |  | I can explain how instructions are stored and executed within a computer system. | I understand how the different parts of a computer system communicate with one another and with other systems by sending and receiving packets of data. Including the Client-Server model and LANs and WAN. |
|  |  |  | I understand the fetch–decode–execute cycle. | I can explain the fetch–decode–execute cycle. |  |
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|  |  |  | I understand the terms algorithm, decompose, abstraction, generalisation and pattern recognition. | I can apply the terms algorithm, decompose, abstraction, generalisation, pattern recognition | I can design and develop a modular program that solves a problem using procedures or functions. |
|  Unit 11 |  |  | I can produce a simple algorithm that solves a problem. |  | I can test a program using a test plan to detect and correct errors. |
|  |  |  | I can create a simple program that solves a problem using a visual or a textual programming language. | I can create a program that solves a problem using a visual or a textual programming language. |  |
|  |  |  | I can create a simple program that uses sequences, selection and iteration. | I can create a program that uses sequences, selection, iteration, nesting and variables. |  |
|  |  |  | I can look for and correct errors in a simple program. | I can look for and correct syntax errors in a program. |  |
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|  |  |  | I can produce a simple algorithm that solves a problem. | I understand a number of key algorithms including – linear search vs. a binary search | I understand a number of key algorithms including – a bubble sort vs. a Bogo sort. |
| Unit 13 |  |  | I can create a simple program that solves a problem using a visual or a textual programming language | I can create a program that solves a problem using a visual or a textual programming language. | I can compare two algorithms that perform the same task and understand why one algorithm is more efficient than another algorithm. |
|  |  |  | I can create a simple program that uses sequences, selection and iteration. | I can create a program that uses sequences, selection, iteration, nesting and variables. | I can design and develop a program that uses data structures e.g. lists, tables or arrays. |
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|  Unit 14 |  |  | I understand how data from text, audio and images are represented in the form of binary digits. | I can explain how data from text, audio and images are represented in the form of binary digits. | I can explain how data from text, audio and images are represented and manipulated digitally in the form of binary digits. |
|  |  |  | I can produce a simple plan to help me design my digital artefact. | I can produce a plan to help me design my digital artefact. | I can produce an effective plan to help me design my digital artefact. |
|  |  |  | I can re-use, revise and re-purpose a simple digital artefact to ensure that it meets the needs of a self-selected audience. | I can re-use, revise and re-purpose a digital artefact for a given audience. | I can create, re-use, revise and re-purpose a complex digital artefact for a given audience. |
|   |  |  |  | I have evaluated my digital artefact in relation to its usability. | I have carried out detailed testing to evaluate my digital artefact in relation to its usability. |
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