|  | **Computer Science** | **Information Technology** | **Digital Literacy** | **Year 7** | **Year 8** | **Year 9** |
| --- | --- | --- | --- | --- | --- | --- |
| **1** | **CS 1.1:** I understand what an Algorithm is  **CA 1.2:** I can create simple programs in Scratch | * I can use technology purposefully to create digital content * I can save my work properly into folders * I can save images from the internet * Use technology purposefully to retrieve digital content | * I Use technology safely * I know how to keep information private * I Keep personal information private * I know how technology can be used outside of school | **101** |  |  |
| **2** | **CS 2.1:** Understand that algorithms are implemented as programs on digital devices  **CS 2.2:** Understand that programs execute by following precise and unambiguous instructions  **CS 2.3:** I can fix errors (debug) errors in computer programs I make  **CS2.4:** Use logical reasoning to predict the behaviour of simple programs | * I can save and store files into meaningful folders with suitable file names to keep my user area organised * Use technology purposefully to manipulate digital content * I know that computers have different input and output devices and can use them * I know that a variety of digital devices can be classed as a computer | * Use technology respectfully * Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies | **101** |  |  |
| **3** | **CS 3.1:** I can write programs in Scratch that accomplish specific goals  **CS 3.2:** I can use sequence in programs such as “If” and “Else”  **CS 3.3:** Work with various forms of input  **CS 3.4:** Work with various forms of output | * I can search the internet effectively using suitable keywords and operators * I can use a variety of software programs to produce my work and complete projects * I can collect information * I can design and create content * I can present information | * I use technology responsibly * I can Identify a range of ways to report concerns about contact online | **102** | **101** |  |
| **4** | **CS 4.1:** Design programs that can accomplish specific goals  **CS 4.2:** Design and create program in Scratch or Python  **CS 4.3:** I can fix errors in my programs that accomplish specific goals  **CS 4.4:** I can create programs that contain basic loops  **CS 4.5:** Use logical reasoning to detect and correct errors in programs  **CS 4.6:** I understand how computer networks can provide multiple services, such as the world wide web  **CS 4.6:** I know how search results are selected | * Select a variety of software to accomplish given goals * Select, use and combine internet services   Analyse information   * I can evaluate the information that I get to use in my work * I can collect suitable data for my work * I can present data, such as using graphs | * I Understand the opportunities computer networks offer for communication * I can Identify a range of ways to report concerns about content online * I can Recognize acceptable / unacceptable behaviour | **103** | **102** | **101** |
| **5** | CS 5.1: I can solve problems by decomposing them into smaller parts  **CS 5.2:** I can work with variables  **CS 5.3:** I can explain logically how some simple algorithms work  **CS 5.4:** I use logical reasoning to detect and correct errors in algorithms   * Understand computer networks including the internet and what they’re for * I understand how search results are ranked | * I can use more than one piece of software to accomplish given goals/tasks. * I can select use and combine software on a range of digital devices * I can Analyse data * I can Evaluate data * I can Design and create systems | * I Understand the opportunities computer networks offer for collaboration * I can effectively evaluate digital content and know what is plausible. | **104** | **103** | **102** |
| **6** | * I can use a programming language to solve computational problems * Understand simple Boolean logic * Understand how numbers can be represented in binary * Understand how text can be represented digitally in the form of binary digits * Understand how pictures can be represented digitally in the form of binary digits | * Undertake creative projects with challenging goals * Use multiple [Work with] applications across a range of devices * I can effectively and carefully collect data for my work * I can list various computer hardware components associated with networks * Understand the hardware components that make up computer systems | * Understand a range of ways to use technology respectfully * Recognise inappropriate content * Recognise inappropriate contact * Recognise inappropriate behaviour * I know how to report concerns   Reuse digital artefacts for a given audience  Attend to usability of digital artefacts   * Understand a range of ways to use technology safely |  | **104** | **103** |
| **7** | * Evaluate computational abstractions (effectiveness of code for example) * Use at least one additional programming language (that must be textual) to solve real world problems (such as Python) * Make use of appropriate data structures * Design modular programs that use procedures or functions * Understand uses of Boolean logic in programming * Be able to carry out simple operations on binary numbers such as addition * Understand the software components that make up computer systems, such as Operating systems * I Understand how instructions are stored by computer systems * I Understand how text can be manipulated digitally in the form of binary digits * I Understand how sounds can be represented digitally in the form of binary digits * Understand how pictures can be manipulated digitally in the form of binary digits | * Combine multiple applications to achieve challenging goals * I know how to analyse data * I can meet the needs of my audience when producing my project work. * I can list and explain the purpose of hardware associated with computer networks | * I can improve digital artefacts for a given audience * Attend to trustworthiness of digital artefacts * I know/can protect my online identity * I know how and can protect my online privacy. |  |  | **104** |
| **8** | * I can model behaviour of physical systems such as networks * Use logical reasoning to compare the utility of alternative algorithms for the same problem * Develop modular programs that use procedures or functions * Understand uses of Boolean logic in circuits * Understand how computer systems components communicate with one another * Understand how computer systems communicate with other systems * I Understand how instructions are executed by computer systems * I Understand how sounds can be manipulated digitally in the form of binary digits | * I can create digital artefacts for a given audience * I Select multiple applications to achieve challenging goals | * Repurpose digital artefacts for a given audience * Attend to design of digital artefacts * Understand a range of ways to use technology securely * Understand a range of ways to use technology responsibly |  |  |  |