Computer Science – KS3 Curriculum Threshold

Year/Progress Thresholds					
Year 7 Expectations	Year 8 Expectations	Year 9 Expectations	Strand A - Information Technology	Strand B – Digital Literacy	Strand C – Computer Science
		Fluent	• Demonstrates a comprehensive understanding of the ethical, legal, and social implications of IT, including data security, privacy, and digital rights. • Proficient in analysing complex datasets, using data analysis tools and techniques, conditional formatting, and creating custom reports.	• Demonstrates fluency with a wide range of software, tools, and platforms, including the ability to learn and adapt to new technologies quickly. • Fully understands the implications of data privacy, digital footprints, and the ethical use of technology. • Demonstrates advanced research skills, able to independently locate, evaluate, and synthesize information from a variety of sources.	• I can write highly efficient and complex programs by breaking down complex problems into manageable tasks and implementing effective solutions. • I can confidently debug programs I have written, distinguishing between syntax errors and logical errors with precision. • I have a deep understanding of ethical, legal, and societal implications of technology, able to form well-reasoned arguments about contemporary issues.
	Fluent	**Complete**	• Can present data effectively, using a variety of visualization techniques, and draw informed conclusions. • Can plan, execute, and evaluate IT projects independently, such as creating a website, database, or multimedia presentation. • Can use more advanced spreadsheet functions (e.g., sorting data, using simple formulas like MIN/MAX).	• Able to use advanced features of software (e.g., using formulas in spreadsheets, creating interactive presentations). • Demonstrates a thorough understanding of online safety, including managing digital footprints, recognizing threats, and protecting personal data.	• I can convert numbers between decimal (base 10) and hexadecimal (base 16) and vice versa. • I understand the difference between while loops and for loops, including when to use each based on the presence and use of a loop counter.
Fluent	**Complete**	**Substantial**	• Can manage files effectively across different devices and platforms, including transferring files via email or cloud storage.	• Can effectively collaborate with others using a wide range of digital tools, managing shared projects and demonstrating leadership in digital tasks. • Understands concepts like digital footprints and the potential long-term impacts of online behaviour.	• Ability to independently create more complex programs that combine multiple programming constructs, such as loops, conditional statements, and functions. • I can use sequence, selection, and iterative structures to write efficient code. • I understand hexadecimal and more complex character encoding (e.g., ASCII and Unicode).
Complete	**Substantial**	**Establishing**	• Understands how to protect personal data online and can explain the importance of cybersecurity. • Able to use search functions within software (e.g., finding words in a document or using "Find and Replace").	• Can identify more sophisticated online threats, such as identity theft or advanced phishing scams, and knows how to respond. • Able to critically evaluate online sources for reliability, bias, and accuracy.	• Develop debugging skills to identify and fix errors in their code, such as using print statements to check variable values or using error messages to guide corrections. • Start using external libraries (e.g., random) to enhance their programs.
Substantial	**Establishing**	**Initial**	• Able to collaborate with peers using online tools (e.g., sharing and editing documents, using discussion forums or chats). • Understands the basics of online privacy and security, such as using strong passwords and recognizing suspicious emails.	• Can navigate and use different types of software (e.g., word processors, presentation software, and spreadsheets) with growing confidence. • Recognizes a wider range of online dangers (e.g., cyberbullying, inappropriate content) and takes steps to protect themselves.	• Understands the importance of writing clear, readable, and reusable code. • Understands simple algorithms and can identify the basic flow of control (e.g., sequences and loops). • Can create simple programs using Python and introduce basic constructs like loops and conditional statements (e.g., if-else).

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Establishing	**Initial**		• Integrate text and images into documents and presentations with basic formatting. • Sort and filter data in spreadsheets. • Use transitions and basic animations in presentations. • Can organize files into structured folders without assistance and use cloud storage options (e.g., Google Drive) to save and access work. • Collaborate on group tasks using digital tools, showing initial awareness of file-sharing.	• Able to use multiple search terms to find more accurate information. • Perform basic data analysis in spreadsheets. • Manage basic privacy settings. • Use email and simple communication tools.	• Understand the purpose and use of variables, different data types (integers, floats, strings), and basic operators (addition, subtraction, multiplication, division). • Understands basic programming constructs like sequences (performing steps in order). • Begin to develop problem-solving skills, such as using print statements to debug and identify errors in code. • Understands basic binary concepts and can convert simple binary to decimal and vice versa.
Initial			• Use basic features of word processors and presentation software to create simple documents and slideshows. • Perform basic data entry and calculations in spreadsheets. • Understands how to create, rename, and organize files and folders with guidance. • Able to input simple data into spreadsheets and perform basic calculations (e.g., addition or subtraction). • Basic awareness of how technology affects everyday life.	• Understand basic online safety principles. • Recognize and avoid common online risks. • Can search for information on the internet with guidance.	• With some support, I can write simple programs with basic syntax in a high-level programming language (e.g., Python). • Ability to write and execute very simple Python commands (e.g., printing text to the screen using print). • Basic understanding of what programming is and why Python is useful.