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Principal: Mrs C Stanyer

Subject: COMPUTING

Year 8 Curriculum Map 2025 - 26

Week Commencing	Topic (including links to additional resources)	Assessment Window
Staff INSET 01/09 Students Return 02/09	<u>Induction</u> , welcome, logging into Teams, health and safety, computer user agreement	
08/09/2025	<u>Introduction to programming</u> – Using Python, students will use input, output and variables to store data and return this to the user.	
15/09/2025	<u>Programming – Selection</u> . Students will learn how to use IF and MATCH / CASE keywords to allow Python to make decisions and follow programmatic paths	
22/09/2025	<u>Programming – FOR loops</u> . Students will learn how to use count-controlled iteration to allow Python to repeat program code a specific number of times.	
29/09/2025	<u>Programming – WHILE loops</u> . Students will learn how to use condition-controlled iteration to allow Python to repeat program code until a condition is met.	
06/10/2025	<u>Programming – combining keywords</u> . Students will learn how to combine IF / WHILE / FOR / INPUT and PRINT into cohesive and well-planned out programs to solve problems	
13/10/2025	Programming – learning checkpoint	
20/10/2025	Revision	AR1
October Half Term		
03/11/2025	AR1 in lessons / CR to follow	AR1
10/11/2025	Bebras National Computing Challenge	
17/11/2025	<u>Data representation – Binary</u> . Students will learn how to represent denary numbers between 0 and 255 in 8 bit binary, plus be able to convert denary to binary / binary to denary.	
24/11/2025	<u>Data representation</u> - Binary addition. Students will learn to be able to add two 8 bit binary numbers, identifying overflow errors where appropriate.	
01/12/2025	<u>Data representation – ASCII</u> – Students will learn how text is represented using ASCII and Unicode character sets	

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08/12/2025	<u>Data representation – images</u> – Students will learn how images are represented with bitmaps and vector graphics.	
15/12/2025	<u>Data representation – sound</u> . Students will learn how sound is represented using sound sampling. Data representation – learning checkpoint.	
Christmas Break		
05/01/2026	Cybersecurity – Social engineering. The aim of this lesson is for learners to become aware of how humans can be a weak point in the system, as well as looking at the social engineering tactics deployed by cybercriminals to dupe users into giving away data that could lead to further crime.	
12/01/2026	Cybersecurity – Script kiddies. This lesson allows the learners to explore the concept of hacking and the techniques used by hackers to exploit computer systems.	
19/01/2026	Cybersecurity – Malware. The purpose of this lesson is to make learners aware of malware and the different categories of malware, as well as understanding how they work and the potential damage they can do. This lesson focuses more on the technical side than on prevention methods, which will be covered in the next lesson.	
26/01/2026	Cybersecurity – Protection against Malware. The aim of this lesson is for learners to develop their understanding of the risks that cyber threats pose to a network, followed by an exploration of some of the more common methods of defending a network against attacks, such as firewalls and anti-malware. The learners will look at the more common threats that exist globally before thinking of the threats at the level of a school network + learning checkpoint	
02/02/2026	Low Level Computing– Logic Gates. The aim of this is lesson is to understand the use of Boolean Logic using True/False and 1/0 and for students to know the shapes of AND, OR and NOT gates. Students will learn how to explain the outputs given by AND, OR and NOT gates based on their inputs.	
09/02/2026	Low Level Computing - Transistors and Logic. The aim of this lesson is to understand how logic gates can be made from switches, describe a transistor as an electronic switch and be aware of the approximate size of a transistor and how many transistors are contained within a typical device.	
February Half Term		
23/02/2026	Low Level Computing - Building Logic Systems. The aim of this lesson is to be able to describe the output of AND, OR and NOT gates based on their inputs and also describe the output of logic systems, with multiple gates connected together. Students will also learn to complete a truth table for a given logic system and predict outputs.	
02/03/2026	Low Level Computing - The CPU. Students will learn to explain the purpose of the CPU as a component that fetches and executes instructions, discuss each step of the fetch – decode – execute cycle and describe what is meant by an embedded system.	
09/03/2026	Low Level Computing - CPU Performance. The aim of this lesson is to be able to define the term clock speed, use the unit of Hertz to define clock speed. Students will understand the benefit of a CPU having multiple cores and also the benefit of a CPU having cache memory.	
16/03/2026	Low Level Computing – Hardware components. Students will be able to state the name and define the purpose of other hardware devices that exist alongside the CPU (motherboard, RAM, Graphics Processing Unit).	
23/03/2026	Learning checkpoint	
Easter Break		
13/04/2026	Creative IT project – lesson 1- Students will learn about the influence of digital media and marketing.	

20/04/2026	Creative IT project – lesson 2 – Students will plan out a marketing or digital media campaign	
27/04/2026	Creative IT project – lesson 3 – Students will learn the skills to create their own digital media or marketing campaign.	
04/05/2026	Creative IT project – lesson 4 – Students will develop and complete their own digital media or marketing campaign.	
11/05/2026	Creative IT project – lesson 5 – Students will learn how to evaluate the influence of their digital media or marketing campaign.	
18/05/2026	Creative IT project – lesson 6 – Students will learn how to evaluate the influence of their digital media or marketing campaign.	
May Half Term		
01/06/2026	Programming challenges – students will create, debug and expand simple Python programs given to them to meet set criteria.	
08/06/2026	Programming challenges – students will create, debug and expand simple Python programs given to them to meet set criteria.	
15/06/2026	AR3 Revision and preparation	AR3
22/06/2026	AR3 in lessons	AR3
29/06/2026	Critical Reflection Lesson	AR3
06/07/2026	E-Safety Week	
13/07/2026	Enrichment	
20/07/2026	Flexi INSET	