



Sandon Road, Meir, Stoke-on-Trent, ST3 7DF Telephone: 01782 377100 Fax: 01782 377101

Email: info@omera.co.uk Website: www.ormistonmeridianacademy.co.uk

Principal: Mrs C Stanyer

Subject: Computing

Year 8 Curriculum Map 2024 - 25

Week Commencing	Topic (including links to additional resources)	Assessment Window
Staff INSET 02/09 Students Return 03/09	<u>Induction</u> , welcome, logging into Teams, health and safety, computer user agreement	
09/09/2024	<u>Introduction to programming</u> – Using Python, students will use input, output and variables to store data and return this to the user.	
16/09/2024	<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	
23/09/2024	<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.	
30/09/2024	<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.	
07/10/2024	<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	
14/10/2024	Programming – learning checkpoint	
21/10/2024	Revision	Achievement Round 1
October Half Term		
04/11/2024	AR1 in lessons / CR to follow	Achievement Round 1
11/11/2024	<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.	
18/11/2024	<u>Data representation</u> - Binary addition. Students will learn to be able to add two 8 bit binary numbers, identifying overflow errors where appropriate.	
25/11/2024	<u>Data representation – text</u> – Students will learn how text is represented using ASCII and Unicode character sets	
02/12/2024	<u>Data representation – images</u> – Students will learn how images are represented with bitmaps and vector graphics.	

Ormiston Meridian Academy is committed to safeguarding and promoting the welfare of children and young people and expects all staff and volunteers to share this commitment.



09/12/2024	<u>Data representation – sound.</u> Students will learn how sound is represented using sound sampling.	
16/12/2024	Data representation – learning checkpoint	
Christmas Break		
06/01/2025	Cybersecurity – You and your data. The aim of this lesson is to introduce the learners to the unit and to help them understand the value of data to companies. The focus will be on what data companies collect from their users and how they use it.	
13/01/2025	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.	
20/01/2025	Cybersecurity – Script kiddies. Part 1 This lesson allows the learners to explore the concept of hacking and the techniques used by hackers to exploit computer systems.	
27/01/2025	Cybersecurity – Script kiddies. Part 2 This lesson allows the learners to explore the concept of hacking and the techniques used by hackers to exploit computer systems.	
03/02/2025	Cybersecurity – Rise of the bots. 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.	
10/02/2025	Cybersecurity – There's no place like 127.0.0.1. 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	
February Half Term		
24/02/2025	The processor – lesson 1. Students will learn to identify the main components of a computer processor and understand its basic functions. They will explore the role of the processor in a computer, executing instructions and performing calculations	
03/03/2025	The processor – lesson 2. Students will describe the fetch-decode-execute cycle and its importance in processing instructions. They will use diagrams and simple simulations to visualise how instructions are retrieved, decoded, and executed by the processor.	
10/03/2025	The processor – lesson 3. Students will learn to identify different parts of the CPU architecture, such as the ALU (Arithmetic Logic Unit) and registers. They will explore how these components work together to perform various tasks and operations within the computer	
17/03/2025	The processor – lesson 4. Students will learn to compare different types of processors based on factors like clock speed, core count, and cache size. They will analyze how these factors influence overall computer performance and task efficiency.	
24/03/2023	The processor – lesson 5. Students will learn to explain the relationship between the processor and different types of memory (RAM, cache, etc.). They will explore how memory hierarchy affects processing speed and overall system performance	
31/03/2025	The processor – lesson 6	
07/04/2025	The processor – learning checkpoint	

Easter Break		
28/04/2025	Creative IT project – lesson 1- Students will learn about the influence of digital media and marketing.	
05/05/25	Creative IT project – lesson 2 – Students will plan out a marketing or digital media campaign	
12/05/2025	Creative IT project – lesson 3 – Students will learn the skills to create their own digital media or marketing campaign.	
19/05/2025	Creative IT project – lesson 4 – Students will develop and complete their own digital media or marketing campaign.	
May Half Term		
02/06/2025	Creative IT project – lesson 5 – Students will learn how to evaluate the influence of their digital media or marketing campaign.	
09/06/2025	Creative IT project – learning checkpoint	
16/06/2025	Revision	Achievement Round 3
23/06/2025	AR3 in lessons	Achievement Round 3
30/06/2025	Python programing revision. Students will revisit their Python programming lessons from the start of the year and will complete independent programming tasks.	Achievement Round 3
07/07/2025	E-safety week	
14/07/2025	Review of the year in Computing	