

Subject: **Computer Science**

Year group: 10

Department Curriculum Vision: Enabling students to understand and learn how to use technology effectively and safely,as well as, developing their computer coding skills, preparing them for the increasingly digital world.

	Autumn Term 1	Autumn Term 2
Content: (Know what...)	• Boolean Logic • Programming Techniques (Python)	• Programming Techniques (Python) • Algorithms
Skills: (know how...)	• Be able to identify the different logic gates. • Understand the rules when applying the logic gates. • Construct logic gate diagrams involving a maximum of four logic gates combined. • Be able to program various solutions to problems using the different constructs in programming. Such as iteration, selection and sequence.	• Be able to program various solutions to problems using the different constructs in programming. Such as iteration, selection and sequence.

Key vocabulary	AND OR NOT Input Output Process Inverse	Selection Sequence Iteration Nested if statements While For
Mid Term Assessment	Unit test identifying and implementing logic gates.	Coding solution to problems using different constructs.
End Term Assessment	Unit test identifying and implementing logic gates.	Coding solution to problems using different constructs.
	Spring 1	Spring 2
Content: (Know what...)	• Programming Techniques (Python) • Algorithms	• Wired and Wireless Networks • Networks and topologies

Skills: (Know how...)	• Be able to program various solutions to problems using the different constructs in programming. Such as iteration, selection and sequence.	Describe wired and wireless. Pros and cons of different network topologies. Draw how different topologies look.
Key vocabulary	• Selection • Sequence • Iteration • Nested if statements • While • Fo	• Star • Mesh • Bus • Wired • Wireless • Interference • Bandwidth •
Mid Term Assessment	Coding solution to problems using different constructs.	Identifying which topologies would be suitable for various scenarios. Identifying pros and cons for each. Being able to draw out specific topologies for different scenarios.
End Term Assessment	Coding solution to problems using different constructs.	Identifying which topologies would be suitable for various scenarios. Identifying pros and cons for each. Being able to draw out specific topologies for different scenarios.

	Summer 1	Summer 2
Content: (Know what...)	Ethical, legal, cultural and environmental impact	- Data Storage- characters (Data Types) - Data storage of sound and images
Skills: (Know how...)	- Understand the different areas that can affect decisions. - Understand the difference between moral and ethical. - Describe pros and cons for different scenarios. - Describe and apply different Laws.	- Understand how data is stored. - Understand how sound is converted from analogue to digital. - Understand what affects the quality of images.
Key vocabulary	- Moral - Ethical - Environmental - Legal	- Sound - Bytes - Bits - Pixels - Resolution
Mid Term Assessment	Essay based on a controversial issue.	Understanding of sounds and images tested.

End Term Assessment	Essay based on a controversial issue.	Understanding of sounds and images tested.
Additional information		
Homework	Revision for tests Knowledge based assignments Worksheets to support Unit 1 and 2	
Extra curricular and enrichment opportunities	Drop in sessions at lunch time for extra help.	
Useful links that will support learning	Download Python to help students with coding. Sign up to Codeacademy to help with coding Buy the CGP GCSE Computer Science OCR Revision Guide	
How parents can support learning	Encourage students to code at home. Encourage students to keep abreast of the latest news in technology Buy the OCR GCSE Computer Science OCR Revision Guide	