

Subject: **Computer Science**

Year group: 9

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...)	• Cybersecurity • Threats to networks • Prevention of threats	• Data Science
Skills: (know how...)	• Identify cyber security risks. • Be able to prevent/reduce these risks.	• Be able to implement basic formulae • Be able to format conditionally. • Be able to filter and sort data

Key vocabulary	• Malware • Trojan Horse • Anti-virus • Firewall • SQL Injection • White hat hackers • Black hat hackers • Penetration Testers • Two factor authentication	• Cells • Rows • Columns • Conditional formatting • Formula • Sort • Filter
Mid Term Assessment	Types of threats and ways to prevent it.	Implement formula and format correctly.
End Term Assessment	Types of threats and ways to prevent it.	Implement formula and format correctly.
	Spring 1	Spring 2
Content: (Know what...)	• HTML programming • CSS style sheet	• Advanced Python programming • Nested loops • String manipulation

Skills: (Know how...)	• Use HTML tags to create a website. • Identify HTML tags and be able to describe what they do. • Link a CSS to a HTML page.	
Key vocabulary	• HTML • <BODY> • <HEADER> • Tags • Style sheet • Body	• Iteration • Sequence • Range • Shape • Sides • Length • Edge •
Mid Term Assessment	• Identifying tags and understanding the construct of HTML coding.	• Demonstrates how arithmetic operators, if statements, and nested loops, are used within programs. • Declares and assigns variables.
End Term Assessment	• Create a website using HTML code.	• Demonstrates how arithmetic operators, if statements, and nested loops, are used within programs. • Declares and assigns variables.
	Summer 1	Summer 2

Content: (Know what...)	• Advanced Python programming • Nested loops • String manipulation	• World of work • Computer Science careers • How AI works . • Benefits and drawbacks of AI.
Skills: (Know how...)	• To understand how an iteration statement is constructed. • To be able to implement an iteration statement in Python. • To be able to implement string manipulation. Return certain letters from a string of words.	• To understand how the world of work has changed drastically over the years. • There are many advantages and disadvantages. • To understand how accessibility can be accommodated. • AI how it works. • Benefits and drawbacks.
Key vocabulary	• Iteration • Upper text • Lower text • Upper() • lower() • Append • Remove • sub.string()	• Commute • Working from home • Remote working • Collaborative working • Cloud • Supervised learning • Reinforcement learning • Clusters
Mid Term Assessment	• Demonstrates how nested loops are used within programs. • Able to manipulate strings. • Declares and assigns variables.	• Be able to describe the advantages and disadvantages of certain work methods. • Define what the cloud is. • Explain collaborative working.
End Term Assessment	• Demonstrates how nested loops are used within programs. • Able to manipulate strings. • Declares and assigns variables.	• Be able to describe the advantages and disadvantages of certain work methods. • Define what the cloud is.
Additional information		

Homework	• Revision for EUA and MUA • Knowledge based assignments • Writing and debugging code
Extra curricular and enrichment opportunities	Tech Ambassadors. Coding Club Techni Girls Club.
Useful links that will support learning	Codecademy Download Python/ use repl.it so students can practice coding at home Buy the CGP OCR GCSE Computer Science Revision Guide
How parents can support learning	Help students to revise their assessments by testing their key words knowledge.