

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 1	Computer Systems (Paper 1)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. Computer systems and system software</li> <li>✓ 2. Introduction to the CPU</li> <li>✓ 3. The FDE cycle</li> <li>✓ 4. Main memory</li> <li>✓ 5. Secondary storage</li> <li>✓ 6. Optical and magnetic storage</li> <li>✓ 7. Selecting a storage device</li> <li>✓ 8. Computer specification</li> <li>✓ 9. Computer systems quiz</li> <li>✓ 10. Logic gates</li> <li>✓ 11. Logic problems</li> <li>✓ 12. Assembly language programming 1</li> <li>✓ 13. Assembly language programming 2</li> <li>✓ 14. Revision activities</li> </ul>	Computer systems – Summary assessment
		Algorithms (Paper 2)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. Computational thinking</li> <li>✓ 2. Representing algorithms</li> <li>✓ 3. Tracing algorithms</li> <li>✓ 4. Linear search</li> <li>✓ 5. Binary search</li> <li>✓ 6. Comparing search algorithms</li> <li>✓ 7. Bubble sort</li> <li>✓ 8. Insertion sort</li> <li>✓ 9. Coding sorting algorithms</li> <li>✓ 10. Merge sort</li> <li>✓ 11. Algorithms review</li> <li>✓ 12. Revision activities</li> </ul>	Algorithms – Summary assessment

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 2	Cyber security (Paper1)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. The cost of cybercrime and hacker motivation</li> <li>✓ 2. Non-automated cybercrime</li> <li>✓ 3. Automated cybercrime</li> <li>✓ 4. Protecting systems with software</li> <li>✓ 5. Network design as defence</li> <li>✓ 6. Where is the danger?</li> <li>✓ 7. Being part of the solution</li> </ul> <p>✓ Revision activities</p>	Cyber security – Summary assessment
		Programming (Paper 2)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. Translators</li> <li>✓ 2. Sequence</li> <li>✓ 3. Variables</li> <li>✓ 4. Inputs</li> <li>✓ 5. Flowcharts</li> <li>✓ 6. Randomization</li> <li>✓ 7. Arithmetic expressions</li> <li>✓ 8. Selection</li> <li>✓ 9. Selection challenge</li> <li>✓ 10. Logical expressions</li> <li>✓ 11. Nested selection</li> <li>✓ 12. While loops</li> <li>✓ 13. Trace tables</li> <li>✓ 14. For loops</li> <li>✓ 15. Data validation</li> </ul> <p>✓ Revision activities</p>	Programming – Summary assessment

	Term	Topic	Learning Outcomes	Assessment
Year 10		Databases and SQL (Paper 1)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. Database essentials</li> <li>✓ 2. SQL searches</li> <li>✓ 3. Insert, delete, update</li> <li>✓ 4. Swim challenge part 1</li> <li>✓ 5. Swim challenge part 2</li> </ul> <p>✓ Revision activities</p> <p>Year 10 exam revision activities</p>	<p>Swim challenge – Summary assessment</p> <p>End of Year 10 Exam</p>
	Term 3	HTML (Paper 1)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. Introduction to HTML</li> <li>✓ 2. Images and links</li> <li>✓ 3. Mini project</li> <li>✓ 4. Introduction to CSS</li> <li>✓ 5. DIVs and classes</li> <li>✓ 6. Layout and the CSS box model</li> <li>✓ 7. Final project</li> <li>✓ 8. Project completion</li> </ul> <p>✓ Revision activities</p> <p>✓ Year 10 exam revision activities</p>	<p>HTML – Summary assessment</p> <p>End of Year 10 Exam</p>

Term 3	Programming Challenges (Paper 2)	<ul style="list-style-type: none"> <li>✓ 16. Pseudocode 1</li> <li>✓ 17. Pseudocode 2</li> <li>✓ 18. Subroutines</li> <li>✓ 19. Functions</li> <li>✓ 20. Scope</li> <li>✓ 21. XOR</li> <li>✓ 22. Structural programming</li> <li>✓ 23. Create a program 1</li> <li>✓ 24. Create a program 2</li> <li>✓ 25. GUIs</li>   <li>✓ Year 10 exam revision activities</li> </ul>	Programming challenges – Summary assessment
			End of Year 10 Exam

**End of year assessment**  
**This will include all Year 10 topics**  
**Misconceptions will be addressed as part of the end of year assessment review process**

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 1	Data representations (Paper 1)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. What is representation?</li> <li>✓ 2. Number bases</li> <li>✓ 3. Binary addition</li> <li>✓ 4. Binary subtraction</li> <li>✓ 5. Binary shifts</li> <li>✓ 6. Signed binary integers</li> <li>✓ 7. Hexadecimal</li> <li>✓ 8. Representing text</li> <li>✓ 9. Unicode and file size organization</li> <li>✓ 10. Representing bitmap images</li> <li>✓ 11. Bitmap file size calculations</li> <li>✓ 12. Representing sound</li> <li>✓ 13. Sound file size calculation</li> <li>✓ 14. Measurements of storage</li> <li>✓ 15. Lossy and lossless compression</li> <li>✓ 16. Run length encoding</li> <li>✓ 17. Huffman encoding</li> </ul> <ul style="list-style-type: none"> <li>✓ Revision activities</li> <li>✓ Year 11 mock exam revision activities</li> </ul>	<p>Data representations – Summary assessment</p> <p>Year 11 Mock exam</p>
		Dictionaries and datafiles (Paper 2)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ ?????</li> <li>✓ ?????</li> </ul> <ul style="list-style-type: none"> <li>✓ SB7 – Revision activities</li> <li>✓ Year 11 mock exam revision activities</li> </ul>	<p>Dictionaries and datafiles – Summary assessment</p> <p>Year 11 Mock exam</p>

## Year 11 Mock exams

This will include all topics to date

Misconceptions will be addressed as part of the end of year assessment review process

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 2	Networks (Paper 2)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. What is a computer network</li> <li>✓ 2. The client-server model</li> <li>✓ 3. Network hardware</li> <li>✓ 4. Network topologies</li> <li>✓ 5. Wired and wireless transmission media</li> <li>✓ 6. Network performance and routing costs</li> <li>✓ 7. What is the internet?</li> <li>✓ 8. Hostin services</li> <li>✓ 9. Protocols</li> <li>✓ 10. The TCP/IP model</li> <li>✓ 11. The OSI model</li> <li>✓ 12. Protecting a network</li> </ul> <p>✓ Revision activities</p>	Networks – Summary assessment
		Impacts of technology (Paper 2)	<p>To know about:</p> <ul style="list-style-type: none"> <li>✓ 1. How does technology impact us?</li> <li>✓ 2. The law, data protection and copyright</li> <li>✓ 3. The FIA and CMA</li> <li>✓ 4. Cultural impacts</li> <li>✓ 5. Privacy and surveillance</li> <li>✓ 6. Environmental impacts</li> <li>✓ 7. Ethical impacts</li> <li>✓ 8. Putting it all together</li> </ul> <p>✓ Revision activities</p>	Impacts of technology – summary assessment

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 3	Exam Preparation	<ul style="list-style-type: none"> <li>✓ Exam techniques</li> <li>✓ Past exam papers</li> <li>✓ 6-mark questions</li> <li>✓ Programming challenges</li> </ul>	Paper 1 - mock exam papers Paper 2 - onscreen examination assessments

**Exam dates:**

**Paper 1 exam dates:**

**Principles of computer science (written examination) – Monday 13<sup>th</sup> May 2024**

**Paper 2 exam dates:**

**Application of computational thinking (onscreen examination) – Friday 24<sup>th</sup> May 2024**