



Topic Name	Term	Skills Developed	Next link in curriculum	Other Notes
Algorithms. 2.1	Autumn 1	<ul style="list-style-type: none">• Abstraction, decomposition and pattern recognition skills for problem solving.• Flowchart and pseudocode representation of algorithms.• Understanding of the bubble sort, merge sort and insertion sort algorithms.• Understanding of the linear and binary search algorithms.	<ul style="list-style-type: none">• Computational Thinking / Computational Methods – Year 12 (Summer ½)	Single lessons. Links to Prior Learning: Year 9 – Sorting Algorithms
Creating Robust Programs. 2.3	Spring 1	<ul style="list-style-type: none">• Defensive design methods.• Testing methods.• Test data.• Error types/handling.• Code maintainability.	<ul style="list-style-type: none">• Programming techniques/paradigms (Autumn 1 Year 12)	Preparing for A level section 2.2 Links to Prior Learning: Y10 Programming Techniques
Social, Moral, Legal and Cultural Aspects of Computing	Autumn 1	<ul style="list-style-type: none">• Legal factors in computing such as Data Protection Act, Computer Misuse Act etc.• Cultural factors in computing such as use of colour and character representation.• Skills developed in answering high mark, essay style, questions for this topic.	<ul style="list-style-type: none">• Computer related legislation. Moral, legal, ethical and cultural issues (Autumn Year 12 –will be added to Y12 curriculum map next year)	Preparing for A Level section 1.5 Links to Prior Learning: Y9 – Impacts of Computing Project



Network Security	Spring 1	<ul style="list-style-type: none">• <i>Forms of attack to networks</i>• <i>Methods of preventing attacks/minimising threats.</i>	<ul style="list-style-type: none">• <i>Networks and Web technologies (Spring 1 Year 13)</i>	<p><i>Preparing for A level section 1.3</i></p> <p>Links to Prior Learning:</p> <p>Y10 Networks, Communications and Protocols</p>
Boolean Logic. 2.4	Spring 2	<ul style="list-style-type: none">• <i>Logic gates (AND/OR/NOT)</i>• <i>Truth tables</i>• <i>Logic Circuits with 2 or 3 inputs.</i>	<ul style="list-style-type: none">• <i>Data Types and Boolean Logic (Y13 – Autumn 2)</i>	<p>Links to Prior Learning:</p> <p>Data Representation 1 (Year 7 – Autumn 2) Programming Techniques (Year 10 – Autumn 1) – Boolean operator concepts.</p>