



Computing and ICT						
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 7	Introduction to E-Safety	Introduction to Spreadsheet Modelling	Word Processing	Scratch Programming	Digital Graphics	Project
Year 8	Social Media and Cyberbullying	Computer Systems	Web Design & HTML	Databases	2D Animation	Python Basics
Year 9 Computer Science	System architecture	Software	Data representation	Sound images	Logic	Algorithms
Year 10 Computer Science	Networks	Protocols	Operating systems and software	System security	Ethics and law	Programming
Year 11 Computer Science	Programming	NEA	NEA	Hardware Software Legal	Data Logic	Constructs Algorithms



Computer Science – Year 10

Knowledge and Skills Students will be taught to....	Reading, Oracy, Literacy and Numeracy	Formative Assessment	Summative Assessment	Link to reformed GCSE Content
<p>Explain what a network is and evaluate star and mesh topologies. Discuss the use of specific network hardware and the need for each piece of hardware.</p> <p>Explain protocols and give examples and their uses. Justify the use of specific protocols for their purposes.</p> <p>Discuss operating systems and explain the functions of an operating system. Evaluate interfaces such as command line and GUI etc.</p> <p>Discuss Ethics, law, moral and cultural issues. Describe each law and the purpose. Evaluate scenarios and give opinions.</p>	<p>Reading</p> <ul style="list-style-type: none">Information from the internet and summarise into own words <p>Numeracy</p> <ul style="list-style-type: none">Speed of performanceBandwidth and speed of networks. <p>Oracy and Literacy (including key words for practical subjects)</p> <ul style="list-style-type: none">Key wordsStudent discussionWritten and extended questions	<p>Questioning in lessons</p> <p>Whole class feedback during lessons</p> <p>Low stakes quizzing</p> <p>Exit Strategies</p>	<p>2 assessments throughout the academic year</p> <p>1 PPE</p> <p>Topic tests for each completed unit.</p>	<p>Operating systems</p> <p>Network</p> <p>Ethics and law</p> <p>Protocols</p>



Assessment Skills, Knowledge and Concepts Map (These need to be mapped backwards from GCSE and ensure that all students can access their target percentage) – what do all students need to achieve in year 10 to be able access their target grade and be on track for their year 11 target grade?

Computer Science – Year 10

Computer Science – Year 10		
Key Learning Questions	Networks	Literacy and Numeracy
<ul style="list-style-type: none">• What is a network?• What is a star and mesh topology?• Which topology is better?	<ul style="list-style-type: none">• Explain what a network is• Evaluate topologies• Justify the use of specific network hardware	<ul style="list-style-type: none">• Extended writing• Writing balanced arguments• Key terminology
Key Learning Questions	Protocols	Literacy and Numeracy
<ul style="list-style-type: none">• What is a protocol?• Give an example of a protocol?• What is FTP?• What is the difference between SMTP and IMAP?	<ul style="list-style-type: none">• Explain protocols• Give examples and their uses• Justify the use of specific protocols	<ul style="list-style-type: none">• Extended writing• Writing balanced arguments• Key terminology
Key Learning Questions	Operating systems and software	Literacy and Numeracy
<ul style="list-style-type: none">• What is an operating system?• What are the features of operating systems?• What are the advantages and disadvantages of different OS?• What is CL, GUI and menu driven?	<ul style="list-style-type: none">• Give examples of Operating systems• Explain why an operating system is needed• Evaluate interfaces within different operating systems	<ul style="list-style-type: none">• Extended writing• Writing balanced arguments• Key terminology
Key Learning Questions	System security	Literacy and Numeracy
<ul style="list-style-type: none">• What is system software?• Why do you need system software?• What is examples of system security?•	<ul style="list-style-type: none">• Explain why system software is needed• Justify the use of specific system software•	<ul style="list-style-type: none">• Extended writing• Writing balanced arguments• Key terminology
Key Learning Questions	Ethics and law	Literacy and Numeracy
<ul style="list-style-type: none">• What are computer laws?• Do you think driverless cars are good for the future?	<ul style="list-style-type: none">• Explain computer laws• Describe computer laws for scenarios• Evaluate scenarios by applying laws and ethics	<ul style="list-style-type: none">• Extended writing• Writing balanced arguments• Key terminology
Key Learning Questions	Programming	Literacy and Numeracy



- What is selection, sequence and iteration
- What does the program need to do?
- How are you going to make it more efficient?

- Explain programming constructs
- Create a program for a given scenario
- Evaluate the success of programs

- Operators
- Calculations
- Breaking down the scenario
- Key terminology