

Year: 8

Subject: Computer science

Autumn Term		
Overarching Topic: Python & Networks		
What has come before and what comes later:	Year 7 gives students a taste of both computer science and ICT. At the start of year 8 students spend some time recapping on how to stay safe in a digital world and then continue to build upon the programming they completed in year 7 using Python.	
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> <li>• What does independent working look like?</li> <li>• How do you spot online dangers?</li> <li>• What legislation applies to computer science &amp; ICT?</li> <li>• How do you output and format text on screen?</li> <li>• What is debugging?</li> <li>• How are inputs handled?</li> <li>• What is a string?</li> <li>• What is selection?</li> <li>• What is a network?</li> <li>• What is the difference between a LAN &amp; WAN?</li> <li>• What hardware is required for a network?</li> <li>• What is the internet?</li> <li>• What is a protocols?</li> </ul>	<ul style="list-style-type: none"> <li>• Research real world examples of where people have been convicted for breaking laws related to computer science &amp; ICT.</li> <li>• How do you use iteration in Python?</li> <li>• How can you “catch errors”?</li> <li>• What are the other data types?</li> <li>• What are the factors that affect the performance of a network?</li> <li>• How are networks kept secure?</li> <li>• What is a network topology?</li> </ul>
	Skill/Technique	How students will develop and demonstrate this
Key skills	Evaluating websites and text Sequencing instructions Reviewing and refining solution	During assessments, classwork and homework, students will: <ul style="list-style-type: none"> <li>• Explain how to stay safe online</li> <li>• Discuss relevant legislation</li> </ul>

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		<ul style="list-style-type: none"><li>• Write programs using Python to solve a range of problems</li><li>• Identify the advantages and disadvantages of networking</li><li>• Explain the role of networking hardware</li></ul>
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