

Year: 12

Subject: Computer science

Spring Term		
Overarching Topic: Software development & the types of programming language		
	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 do we mean by the term programming paradigm?</li> <li>• How does memory addressing work?</li> <li>• What is inheritance?</li> <li>• What is object-oriented programming?</li> <li>• What is compression?</li> <li>• What is hashing?</li> <li>• What is a database?</li> <li>• How can data be captured and exchanged for databases?</li> <li>• What is the purpose of normalisation?</li> <li>• What is SQL?</li> <li>• What is referential integrity?</li> <li>• What is a protocol?</li> <li>• How does the internet work?</li> <li>• What are the threats to network security?</li> <li>• What is networking?</li> <li>• What hardware is required to create a network?</li> <li>• How does a web browser display a webpage?</li> </ul>	<ul style="list-style-type: none"> <li>• How have advances in memory changed computing?</li> <li>• Would the internet be the same without compression?</li> <li>• How are large databases like those in use by Amazon managed?</li> </ul>
	Skill/Technique	How students will develop and demonstrate this
Key skills	Writing and following algorithms Refine and improve solutions Working independently Solving problems Programming in high and low level languages Drawing ERDs	During assessments, classwork and homework, students will: <ul style="list-style-type: none"> <li>• complete tasks that test the knowledge and understanding.</li> </ul>

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		<ul style="list-style-type: none"><li>• Students create a summary sheet for each topic that requires them to condense the topic into one A3 piece of paper.</li><li>• solve problems in VB.NET &amp; other languages</li></ul>
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