



Subject		Year	Term
Computer Science			
Topic			
System Architecture			
Content - Intent			
Prior Learning (Topic): Key Stage 3 National Curriculum			
<p>Von Neumann architecture: Students should be able to take a series of simple low-level instructions and understand how the processor uses the various general-purpose registers to do calculations during the fetch decode and execute cycle. They will be able to understand what general-purpose register is responsible for holding data, which decodes data, which points to different memory addresses while the ALU and the accumulator do the calculation. How RAM and ROM interact with CPU and what they contain during operation of the CPU.</p>			
Future Learning: Networks, Programming			
What Knowledge and Skills will be Taught (Implementation)		How will your understanding be assessed and recorded (Impact)	
<p>Von Neuman architecture. How the fetch, decode, and execute cycle is accomplished. How RAM and ROM interact with the CPU.</p>		<p>A test in class based on past questions and on those provided by the exam board which are part of the end of unit test package. Students will be given a grade based on published grade boundary data. Suggestions on how to improve answers to the next grade boundary will be provided. There will be interim on-line testing throughout the unit.</p>	
<p>How common characteristics of CPUs affect their performance including clock speed, cache size and number of cores. Examples of embedded systems and their purpose</p>		<p>A test in class based on past questions and on those provided by the exam board which are part of the end of unit test package. Students will be given a grade based on published grade boundary data. Suggestions on how to improve answers to the next grade boundary will be provided. There will be interim on-line testing throughout the unit.</p>	
How can parents help at home?			
<p>Parents can help by ensuring revision and homework is completed.</p>			
Helpful further reading and discussion (Including reading and Vocabulary List)			
<p>Reading CGP Computer Science revision book GCSE Pod Smart Revise Computer Science UK Teach ICT ISAAC Computing YouTube – Craig ‘n’ Dave</p>	<p>Vocabulary List Von Neuman Fetch Decode Execute MAR (Memory Address Register) MDR (Memory Data Register) Program Counter (PC)</p>	<p>Accumulator Clock Speed RAM and ROM Cache Embedded Systems</p>	