Holy Family Catholic High School

Subject	Year	Term
Computer Science	**10**	

Topic

Memory and Storage

Content - Intent

Prior Learning (Topic): Key Stage 3 National Curriculum

How RAM and ROM interact with CPU and what they contain during operation of the CPU
The need for secondary storage. Understand how secondary storage is used and which secondary storage media is appropriate for a given set of circumstances.

Bits, bytes and nibbles. Students will be able to understand fundamental role of binary in how computers work. They will know how binary controls sound and image quality, how the processor uses bits and bytes to do calculations, how the communication media uses electrical signals, as binary, to transmit data.

Future Learning: Networks, Programming

What Knowledge and Skills will be Taught (Implementation)	How will your understanding be assessed and recorded (Impact)
Memory How RAM and ROM interact with the CPU, The reason for, and effects of, secondary storage media. Knowledge of their capacity, read and write times, expensiveness, size and robustness	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.
Units Manipulation of binary and the use of binary in character sets, audio, images. How to add up binary, convert to hexadecimal and decimal	A series of exercises where students change binary to hexadecimal and back, convert sound waves and images to digital for transmission, compression of data. Google Forms will give access to AO1, and a series of question and answers will give AO2 and AO3

How can parents help at home?

Parents can read the content list and test knowledge on the specific items. Having quick access to facts can be a very useful tool when tackling questions that have AO1 (knowledge and understanding) and AO2 (applying knowledge and understanding)

Helpful further reading and discussion (Including reading and Vocabulary List)

Reading
CGP Computer Science revision book
GCSE pod
Smart Revise
Computer Science UK
Teach ICT
ISAAC Computing
YouTube – Craig ‘n’ Dave

Vocabulary List
Program Counter
Accumulator
RAM and ROM
CD
DVD
ROM
Capacity
Megabyte
Gigabyte
Terabyte