Carmel College Curriculum Implementation – KS 4 Long term plan

Subject: GCSE Computer Science (J277)

	Year 10	Year 11
Autumn half term 1 Sequential knowledge and skills	1.1 Systems Architecture – including the structure, function and performance of the processor. 2.1 Algorithms – including computational thinking and programming skills development.	1.5 Systems Software – The need for operating systems and utilities. 2.4 Boolean Logic including the use of AND, OR and NOT gates in both algebra and circuits.
Assessment Content and methods used to judge learning	1.1 Assessment and Programming task	1.5 Assessment and 2.4 Assessment
Autumn half term 2 Sequential knowledge and skills	1.2 Memory and Storage – where students will learn about the way that computers store and use binary. 2.1 Algorithms - including designing, creating and refining algorithms and programming skills development.	1.5 Systems Software – The need for operating systems and utilities. 2.5 Programming languages and Integrated Development Environments
Assessment Content and methods used to judge learning	1.2 Assessment and 2.1 Assessment	Mock exam based on previous summer exam. 1.5 Assessment and 2.5 Assessment
Spring half term 3 Sequential knowledge and skills	1.3 Computer networks, connections and protocols – including topologies and different network configuration suited to purpose. 2.2 Programming Fundamentals - including programming fundamentals and programming skills development.	1.6 Ethical, legal, cultural and environmental impacts of digital technology 2.5 Programming languages and Integrated Development Environments Recapping previous work based on confidence scores and prior assessment grades. Making connections. Retrieval practice
Assessment Content and methods used to judge learning	1.3 Assessment and Programming task	1.6 Assessment and 2.5 Assessment Assessment in preparation for the final examinations.
Spring half term 4 Sequential knowledge and skills	1.4 Network Security – including threats to systems and the methods used to prevent vulnerabilities. 2.2 Programming Fundamentals - including data types and additional programming techniques and programming skills development.	Recapping previous work based on confidence scores and prior assessment grades. Deeper topics, longer, more detailed.
Assessment Content and methods used to judge learning	1.4 Assessment and 2.2 Assessment	Assessment in preparation for the final examinations.
Summer half term 5 Sequential knowledge and skills	1.5 Systems Software – The need for operating systems and utilities. 2.3 Producing Robust Programs - including defensive design and testing.	Revision and Preparation for External Exams.

Assessment Content and methods used to judge learning	1.5 Assessment and 2.3 Assessment	Final external examination has taken place by this time.
Summer half term 6 Sequential knowledge and skills	1.6 Ethical, Legal, cultural and environmental impact – a wide range of issues and concerns that will be discussed 2.3 Producing Robust Programs - including defensive design and testing.	N/A
Assessment Content and methods used to judge learning Assessment	EOY Assessments Including 1.6 Assessment and 2.3 Assessment	N/A