DEPARTMENT: **Computer Science**

Year	Term 1		Term 2		Term 3		Term 4		Term 5		Term 6	
9	Topics: Algorithms, Programming Techniques and Producing Robust Programs. Translators		Topics: Algorithms, Programming Techniques and Producing Robust Programs. Translators		Topics: Computational Logic + Data Representation		Topics: Computational Logic + Data Representation		Topics: Systems Architecture, Memory and Storage		Topics: Networking, Systems Security and Software	
	Knowledge & Skills: Pyhton basics to competent programmers. Computational Thinking (think like a computer), algorithms and programming techniques.	Why? Develop understanding of coding constructs. Develop the Computational Thinking skills required to access Unit 2.	Knowledge & Skills: Pyhton basics to competent programmers. Computational Thinking (think like a computer), algorithms and programming techniques.	Why? Develop understanding of coding constructs. Develop the Computational Thinking skills required to access Unit 2.	Knowledge & Skills: Why and how data is represented in Binary form. Applying Computational Maths and working with different data sizes	Why? A complex unit, mainly classroom based; supports Unit 1 theories.	Knowledge & Skills: Why and how data is represented in Binary form. Applying Computational Maths and working with different data sizes	Why? A complex unit, mainly classroom based; supports Unit 1 theories.	Knowledge & Skills: Internal workings of a PC and how the components fit together. Knowledge of storage media, capacity and usage.	Why? Supports Unit 2 programming; thinking like a Computer, now they look in to how a computer works and why.	Knowledge & Skills: How computer systems work together, secure, efficiently and intelligently. Networking attributes and protocols and system software.	Why? Build a bigger picture of how computers communicate world-wide looking at how laws are govered.
	Group Differentiation D1, D2, D3 + D6 Initial differentiation to ascertain quality of knowledge	Links to careers Program Developers + Problem Solving generic to all careers	Group Differentiation D1, D2, D3 + D6 Initial differentiation to ascertain quality of knowledge	Links to careers Program Developers + Problem Solving generic to all careers	Group Differentiation D1, D3, D4, D5, D6, D7 To change depending on the class	Links to careers Backend programmers and Computer Engineers	Group Differentiation D1, D3, D4, D5, D6, D7 To change depending on the class	Links to careers Backend programmers and Computer Engineers	Group Differentiation D1, D3, D4, D5, D6, D7 To change depending on the class	Links to careers Sales of Computer Hardware	Group Differentiation D1, D3, D4, D5, D6, D7 To change depending on the class	Links to careers IT Technicians, Network Managers, Secuity Specialist
	Reading & Extended Writing Using algorithms to clearly set out the step to solve simple to complex problems	Numeracy Ensuring you have to correct logic symbols and notation for programs to work as expected.	Reading & Extended Writing Using algorithms to clearly set out the step to solve simple to complex problems	Numeracy Ensuring you have to correct logic symbols and notation for programs to work as expected.	Reading & Extended Writing Limited	Numeracy Boolean algebra abd Binary/Hexadecimal addition/division	Reading & Extended Writing Limited	Numeracy Boolean algebra abd Binary/Hexadecimal addition/division	Reading & Extended Writing Accurately describing the purpose of different registers and why certain storage devices are used.	Numeracy Capacity of storage devices	Reading & Extended Writing Licensing agreements and producing network and usage policies	Numeracy Network Speeds
	SMSC Why should you annotate your code for someone else to use?		SMSC Why should you annotate your code for someone else to use?		SMSC N/A		SMSC N/A		SMSC Use of certain brand of hardware.		SMSC Fair use of licensing and policies. Access rights to users and positions	
10	Topics: Ethical Issues and Laws		Topics: Computational Logic + Data Representation		Topics: Computational Logic + Data Representation		Topics: Systems Architecture, Memory and Storage		Topics: Networking, Systems Security and Software		Topics: Algorithms, Programming Techniques and Producing Robust Programs. Translators	
	Knowledge & Skills: Understand how Computer Technology has affected the world around us and the laws that govern it.	Why? Builds on moral standings and being a better citizen.	Knowledge & Skills: Why and how data is represented in Binary form. Applying Computational Maths and working with different data sizes	Why? A complex unit, mainly classroom based; supports Unit 1 theories.	Knowledge & Skills: Why and how data is represented in Binary form. Applying Computational Maths and working with different data sizes	Why? A complex unit, mainly classroom based; supports Unit 1 theories.	Knowledge & Skills: Internal workings of a PC and how the components fit together. Knowledge of storage media, capacity and usage.	Why? Supports Unit 2 programming; thinking like a Computer, now they look in to how a computer works and why.	Knowledge & Skills: How computer systems work together, secure, efficiently and intelligently. Networking attributes and protocols and system software.	Why? Build a bigger picture of how computers communicate world-wide looking at how laws are govered.	Knowledge & Skills: Pyhton basics to competent programmers. Computational Thinking (think like a computer), algorithms and programming techniques.	Why? Develop understanding of coding constructs. Develop the Computational Thinking skills required to access Unit 2.
	Group Differentiation D4 + D6 - group discussion and arguments	Links to careers Every career in IT as well as many in all aspects of working life.	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Backend programmers and Computer Engineers	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Backend programmers and Computer Engineers	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Sales of Computer Hardware	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers IT Technicians, Network Managers, Secuity Specialist	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Program Developers + Problem Solving generic to all careers
	Reading & Extended Writing Laws specific to Computer Usage and keep people and their personal data safe	Numeracy N/A	Reading & Extended Writing Limited	Numeracy Boolean algebra abd Binary/Hexadecimal addition/division	Reading & Extended Writing Limited	Numeracy Boolean algebra abd Binary/Hexadecimal addition/division	Reading & Extended Writing Accurately describing the purpose of different registers and why certain storage devices are used.	Numeracy Capacity of storage devices	Reading & Extended Writing Licensing agreements and producing network and usage policies	Numeracy Network Speeds	Reading & Extended Writing Using algorithms to clearly set out the step to solve simple to complex problems	Numeracy Ensuring you have to correct logic symbols and notation for programs to work as expected.
	SMSC How IT is used and accessed throughout the county and world? Your rights and a user and as a company?		SMSC N/A		SMSC N/A		SMSC Use of certain brand of hardware.		SMSC Fair use of licensing and policies. Access rights to users and positions		SMSC Why should you annotate your code for someone else to use?	
11	Topics: Algorithms, Programming Techniques and Producing Robust Programs. Translators ****NEA TASK****		Topics: Computational Logic + Data Representation		Topics: Systems Architecture, Memory and Storage		Topics: Networking, Systems Security and Software		Topics: Ethical Issues and Laws		Topics: Gap fills and Revision Techniques	
	Knowledge & Skills: Pyhton basics to competent programmers. Computational Thinking (think like a computer), algorithms and programming techniques. NEA TASK set by Exam Board	Why? Develop understanding of coding constructs. Develop the Computational Thinking skills required to access Unit 2.	Knowledge & Skills: Why and how data is represented in Binary form. Applying Computational Maths and working with different data sizes	Why? A complex unit, mainly classroom based; supports Unit 1 theories.	Knowledge & Skills: Internal workings of a PC and how the components fit together. Knowledge of storage media, capacity and usage.	Why? Supports Unit 2 programming; thinking like a Computer, now they look in to how a computer works and why.	Knowledge & Skills: How computer systems work together, secure, efficiently and intelligently. Networking attributes and protocols and system software.	Why? Build a bigger picture of how computers communicate world-wide looking at how laws are govered.	Knowledge & Skills: Understand how Computer Technology has affected the world around us and the laws that govern it.	Why? Builds on moral standings and being a better citizen.	Knowledge & Skills: Various - fill in gaps and revisit topics highlights to be difficult	Why? Preparation for GCSE Exams.
	Group Differentiation	Links to careers	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Backend programmers and Computer Engineers	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers Sales of Computer Hardware	Group Differentiation D1, D2 + D5 Topics covered - now stretching and embeddeding knowledge	Links to careers IT Technicians, Network Managers, Secuity Specialist	Group Differentiation D4 + D6 - group discussion and arguments	Links to careers Every career in IT as well as many in all aspects of working life.	Group Differentiation D1, D3, D4 + D6 Lots of small group intervention	Links to careers All aspects of course
	Reading & Extended Writing	Numeracy	Reading & Extended Writing Limited	Numeracy Boolean algebra abd Binary/Hexadecimal addition/division	Reading & Extended Writing Accurately describing the purpose of different registers and why certain storage devices are used.	Numeracy Capacity of storage devices	Reading & Extended Writing Licensing agreements and producing network and usage policies	Numeracy Network Speeds	Reading & Extended Writing Laws specific to Computer Usage and keep people and their personal data safe	Numeracy N/A	Reading & Extended Writing Various - depending on the particular section of need	Numeracy Mainly boolean algerba and working with binary.
	SMSC		SMSC N/A		SMSC Use of certain brand of hardware.		SMSC Fair use of licensing and policies. Access rights to users and positions		SMSC How IT is used and accessed throughout the county and world? Your rights and a user and as a company?		SMSC Various - depending on the particular section of need	